

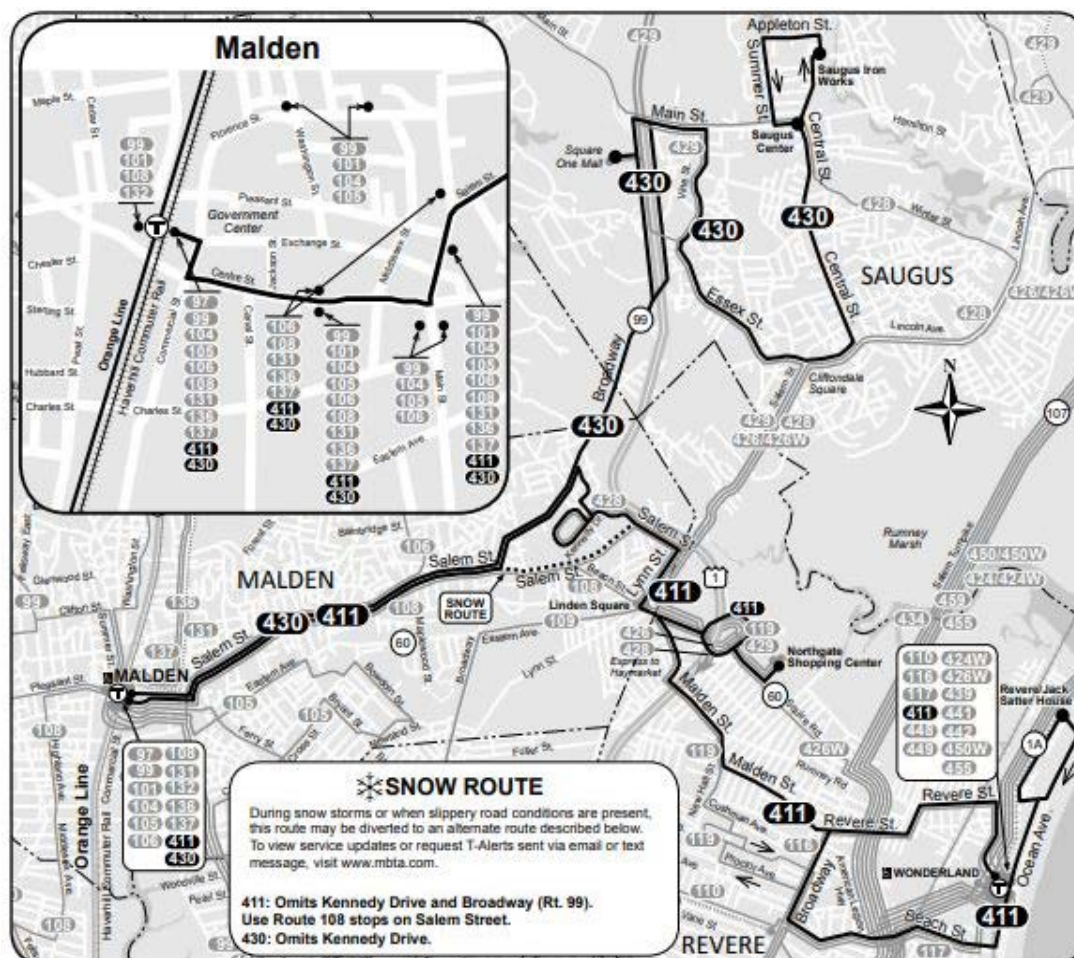
Route 430

Malden Center Station – Saugus Center

Route Overview

Route 430 Malden Center Station – Saugus Center operates between Saugus Center and Malden Center Station. The route operates very circuitously in Saugus, starting with a loop to the north of Saugus Center and then along a much longer near-loop to the south. It then operates via US Route 1, Broadway, and Salem Street to Malden Center Station.

Figure 1 | Service Map

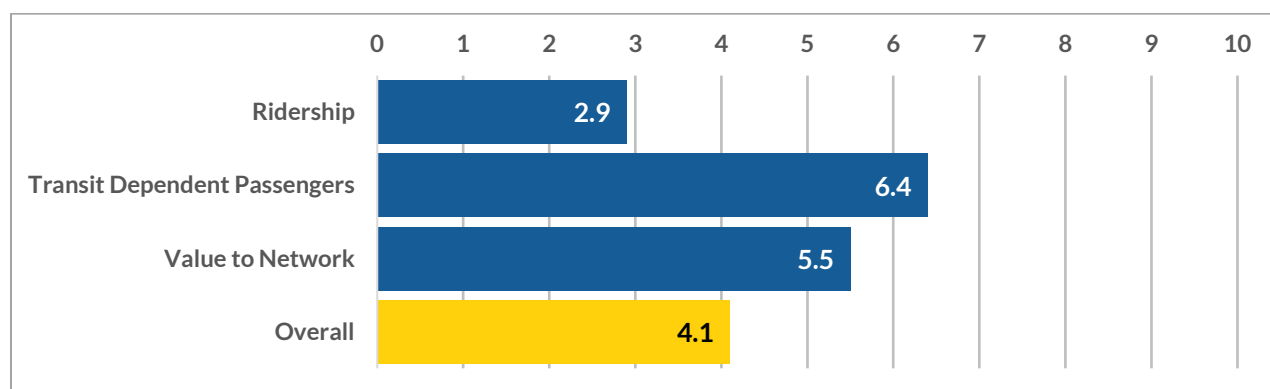


Route 430 is one of four routes that serves Malden’s Salem Street corridor, with the others being Route 106 Lebanon Street, Malden-Wellington, Route 108 Linden Square – Wellington Station, and Route 411 Malden Center-Revere/Jack Satter House. Together, these routes provide high frequency service on Salem Street in Malden. However, the schedules of these routes are not coordinated.

Network Importance

Route 430 is of moderate importance within the MBTA bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 2.9 in terms of ridership, 6.4 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 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 4.1.

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



Service Overview

Schedule

Route 430 operates on weekdays and Saturdays, providing infrequent service at all times (see Table 1).

On weekdays, Route 430 operates between 5:55 AM and 10:48 PM. On average, buses run every 32 minutes during the Early AM, every 38 minutes during the AM Peak, every 66 minutes during the Midday Base, every 50 minutes during the Midday School, every 34 minutes during the PM Peak, and every 70 minutes during the Evening.

On Saturdays, service operates every 60 to 70 minutes between 8:45 AM and 7:25 PM.

Route 430 does not meet several span of service and service frequency standards:

- Span of service: On Saturdays, service begins at 8:45 AM rather than at 8:00 AM or earlier.
- Service frequency: Per the Service Delivery Policy, service should operate at least every 30 minutes during weekday peak periods and every 60 minutes at other times. Weekday peak period average frequencies are as long as 34 minutes and off-peak average frequencies are as long as 70 minutes. Weekend frequencies are as long as 65 minutes.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	5:55 AM to 10:48 PM			20/21
Sunrise	5:55 AM to 5:59 AM	1 trip	-	0/1
Early AM	6:00 AM to 6:59 AM	25 - 40	36	2/1
AM Peak	7:00 AM to 8:59 AM	30 - 60	36	3/4
Midday Base	9:00 AM to 1:29 PM	40 - 70	67	4/4
Midday School	1:30 PM to 3:59 PM	5 - 65	49	3/3
PM Peak	4:00 PM to 6:29 PM	25 - 55	33	4/5
Evening	6:30 PM to 9:59 PM	35 - 95	79	3/3
Late Evening	10:00 PM to 10:48 PM	1 trip	-	1/0
Night	-	-	-	-
Saturday	8:45 AM to 7:57 PM	60 - 70	60	10/10
Sunday	-	-	-	-

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

Service Patterns

Most Route 430 trips on weekdays and all trips on Saturdays serve the full alignment from Saugus to Malden Center Station (Pattern 430.1). There are also three weekday only patterns:

- The first four inbound and outbound trips that operate before the Square One Mall opens do not serve the mall (Pattern 430.6). Inbound trips run past the mall on US Route 1. Outbound trips exit US Route 1 to Essex Street, bypassing both the mall and several stops on Main Street and Vine Street.
- The last two inbound and outbound trips deviate to Kennedy Drive to serve the Altitude Apartments (Pattern 430.2). These trips operate after Route 411 Malden Center-Revere/Jack Satter House, which normally serves the apartments, ends service.
- One afternoon outbound school trip operates between Salem and Sprague Streets in Malden Center to Square One Mall via Kennedy Drive/Altitude Apartments (Pattern 430.7).

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS per WKD	TRIPS per SAT	TRIPS per SUN
INBOUND				20	10	-
430.1	Saugus Center	Malden Center Station	Primary pattern	14	10	-
430.2	Saugus Center	Malden Center Station	Serves Altitude Apartments	2	-	-
430.6	Saugus Center	Malden Center Station	Skips Square One Mall	4	-	-
OUTBOUND				21	10	-
430.1	Malden Center Station	Saugus Center	Primary pattern	14	10	-
430.2	Malden Center Station	Saugus Center	Serves Altitude Apartments	2	-	-
430.6	Malden Center Station	Saugus Center	Skips Square One Mall	4	-	-
430.7	Malden High School	Square One Mall	School Trip; Serves Altitude Apartments	1	-	-

Ridership

Route 430 serves 1,020 passengers on weekdays and 540 passengers on Saturdays.

Ridership by Stop

Passengers primarily use Route 430 to travel to either Malden Center Station or the Square One Mall. On inbound trips (see Figure 3):

- 10 passengers board at the route’s first stop in Saugus Center.
- 10 passengers board and six alight on the loop north of Saugus Center along Central Street, Appleton Street, and Summer Street. The six alightings are passengers who ride through past the end of outbound trips to inbound stops on the loop.
- The nearly three-mile long deviation south of Saugus Center via Central Street, Essex Street, and Vine Street serves 80 boardings and 30 alightings.
 - Nearly all stops along this segment serve fewer than five boardings. Exceptions include Clifftondale Square, which has with 11 boardings, and Vine Street at Talbot Street, which has 21 boardings and is the stop closest to Saugus High School and the Saugus Housing Authority off Talbot Street
- About 70 passengers board at the Square One Mall. There are fewer than five alightings at this stop, indicating that few customers use Route 430 to travel between Saugus and the mall.

- 20 passengers board and six alight south of the Square One Mall on the portion of Broadway uniquely served by Route 430.
- The largest volume of Route 430 riders – 260 passengers – board between Broadway and Malden Center Station. These riders are also served by Route 106 Lebanon Street, Malden-Wellington Station, Route 108 Linden Square-Wellington Station, and Route 411 Malden Center Station-Revere/Jack Satter House, and generally choose Route 430 when it is the first bus to arrive. A total of 130 passengers alight along this segment.
- 340 passengers, or about 75% of inbound riders, alight at Malden Center Station.

In addition, as described above, the last two inbound and outbound trips serve the Altitude Apartments on Kennedy Drive. About 10 customers alight at the apartments on the outbound trips, representing about 15% of total ridership on those trips. Less than one passenger each day boards or alights on the inbound trips.

On Saturdays, Route 430 ridership is somewhat more oriented towards Square One Mall trips, when about 16% of Saturday trips begin or end at the mall (versus 9% on weekdays).

Ridership by Trip

Weekday inbound ridership is relatively even from the start of service through midday, with the exception of one AM peak trip that carries over 50 passengers, gradually decreasing until the end of service (see Figure 4). Outbound ridership begins increasing after the AM peak, and is highest during PM peak service. Both the first inbound trip and the last outbound trip have about 30 boardings, indicating some demand for earlier and later service (see Figure 5).

On Saturdays, ridership is relatively consistent throughout the day, with more boardings on outbound trips than on inbound trips. Most inbound trips serve about 25 passengers and most outbound trips serve about 35 passengers (see Figure 6 and Figure 7). This variation likely occurs in part due to the multiple service options available on Salem Street.

Figure 3 | Weekday Inbound Ridership by Stop Map

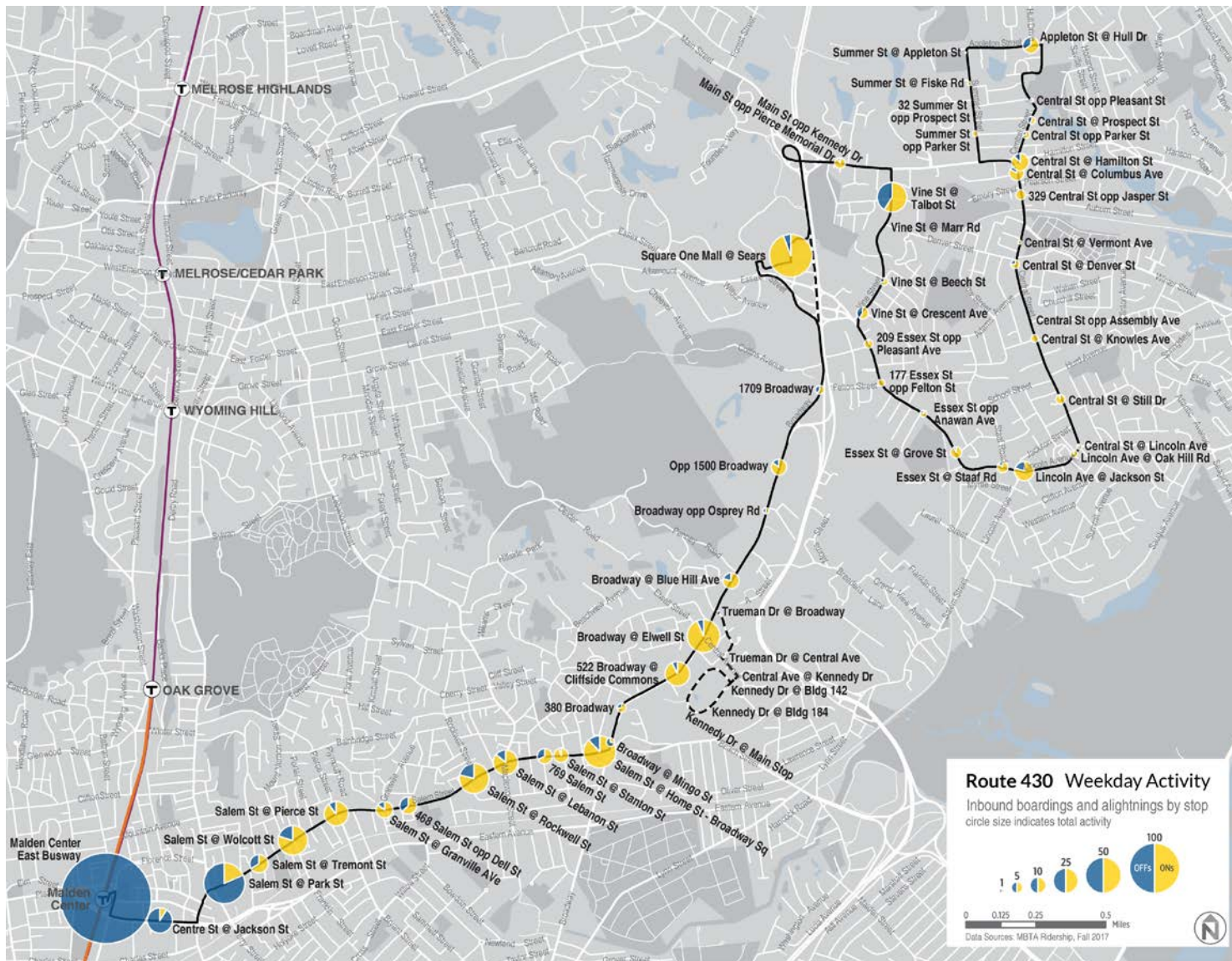


Figure 4 | Weekday Ridership by Trip: Inbound

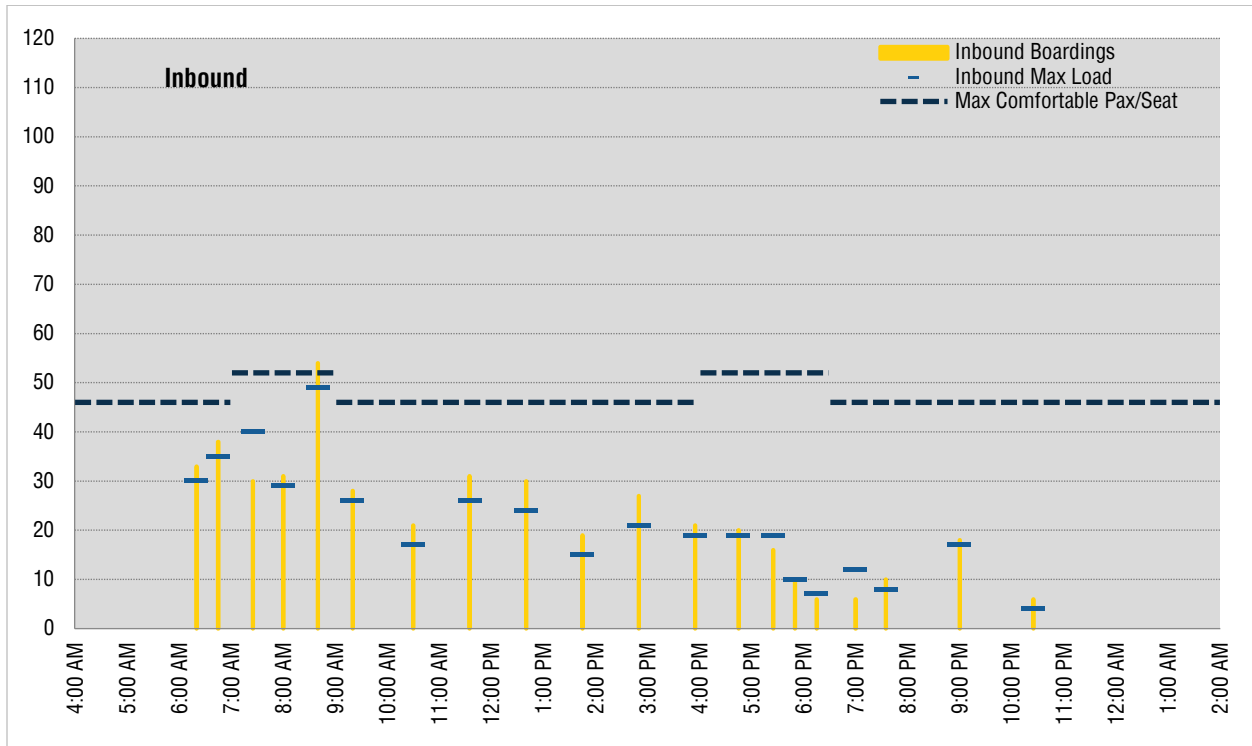


Figure 5 | Weekday Ridership by Trip: Outbound

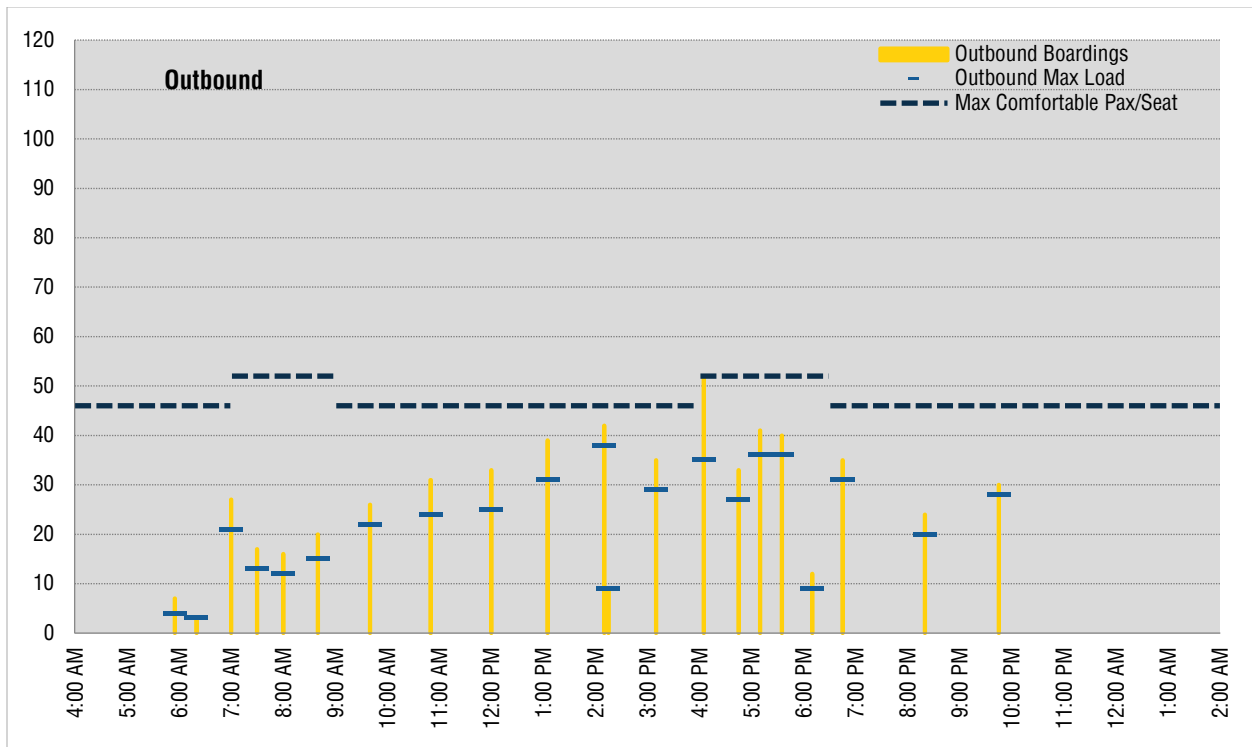


Figure 6 | Saturday Ridership by Trip: Inbound

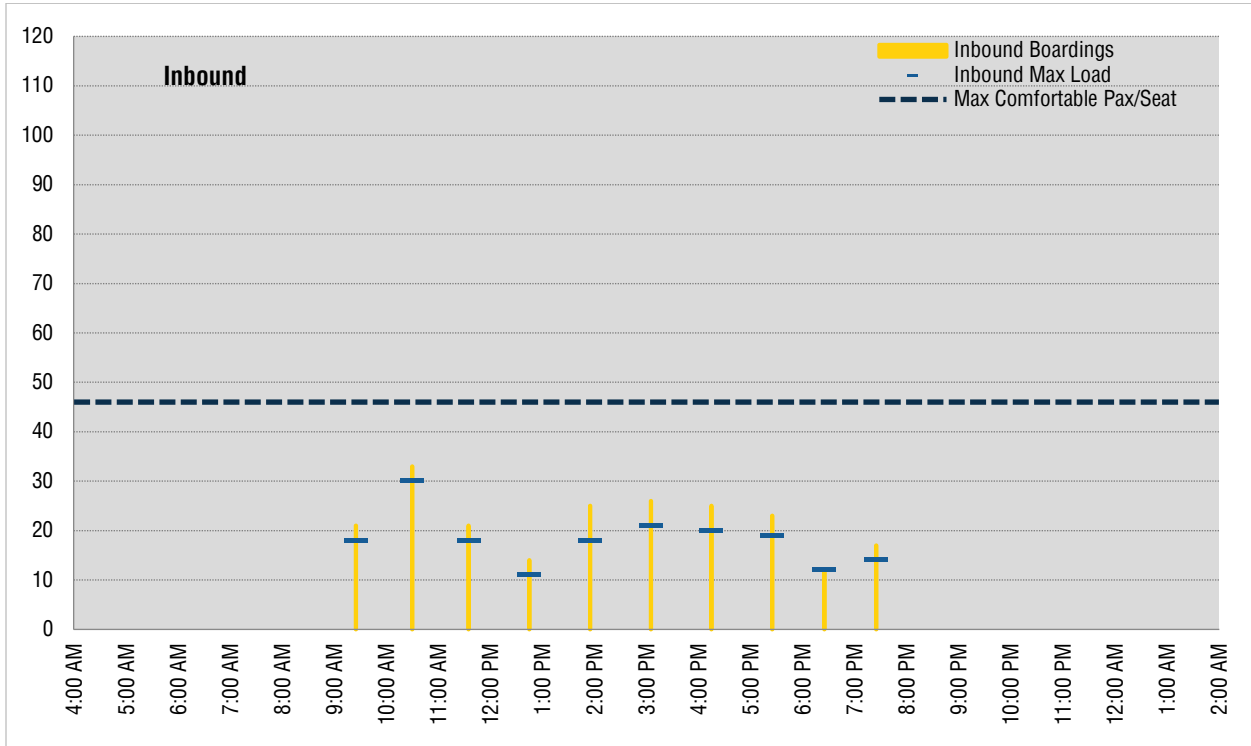
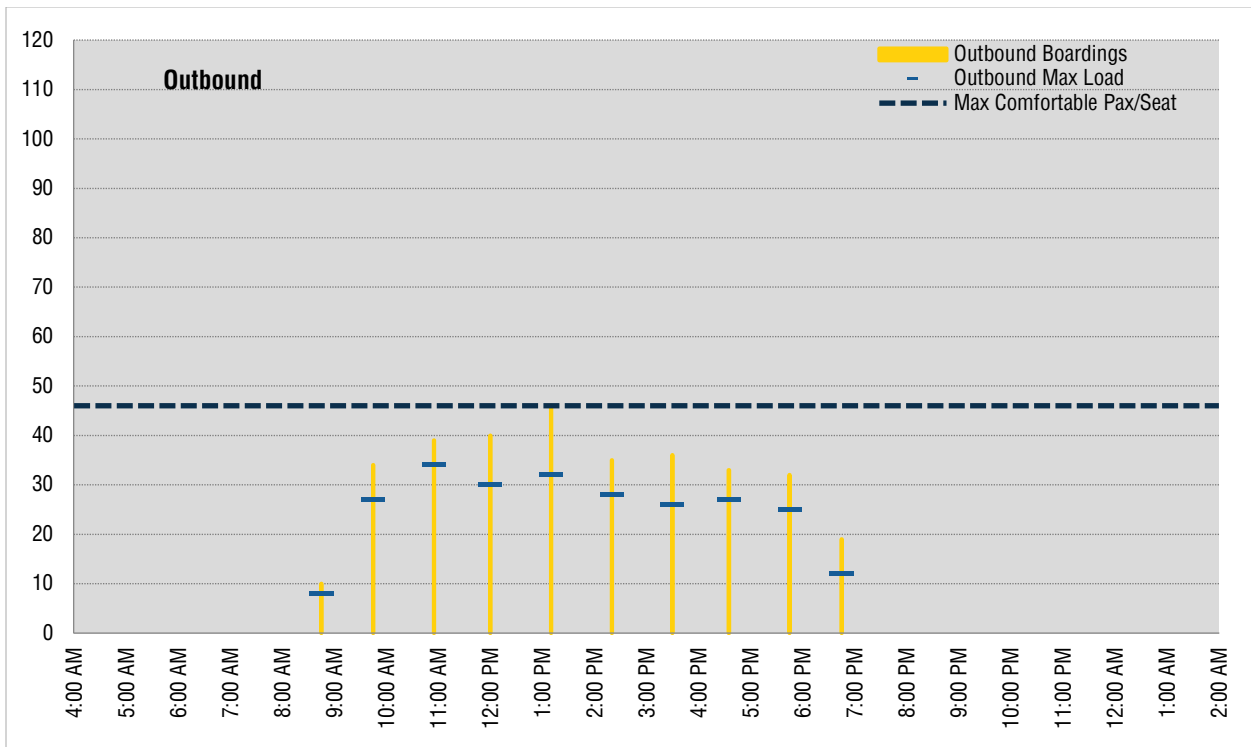


Figure 7 | Saturday Ridership by Trip: Outbound



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 430, 95% of passenger minutes are in comfortable conditions, which is above the minimum standard of 92% but slightly below the target of 96% (see Table 3). All customers on Saturdays travel in comfortable conditions.

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	95%	100%	-

Reliability and Speed

Reliability

Route 430 is one of the least reliable bus routes in the MBTA network, with only about half of trips running on-time on both weekdays and Saturdays (see Table 4). Dropped trips are not a significant issue on Route 430.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	47%	44%	47%	0.1%
Saturday	54%	54%	54%	-
Sunday	-	-	-	-

Running Times

Reliability is poor in large part because actual running times exceed scheduled running times (see Figure 4 and Figure 5). Trips in both directions are often more than five minutes behind schedule.

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

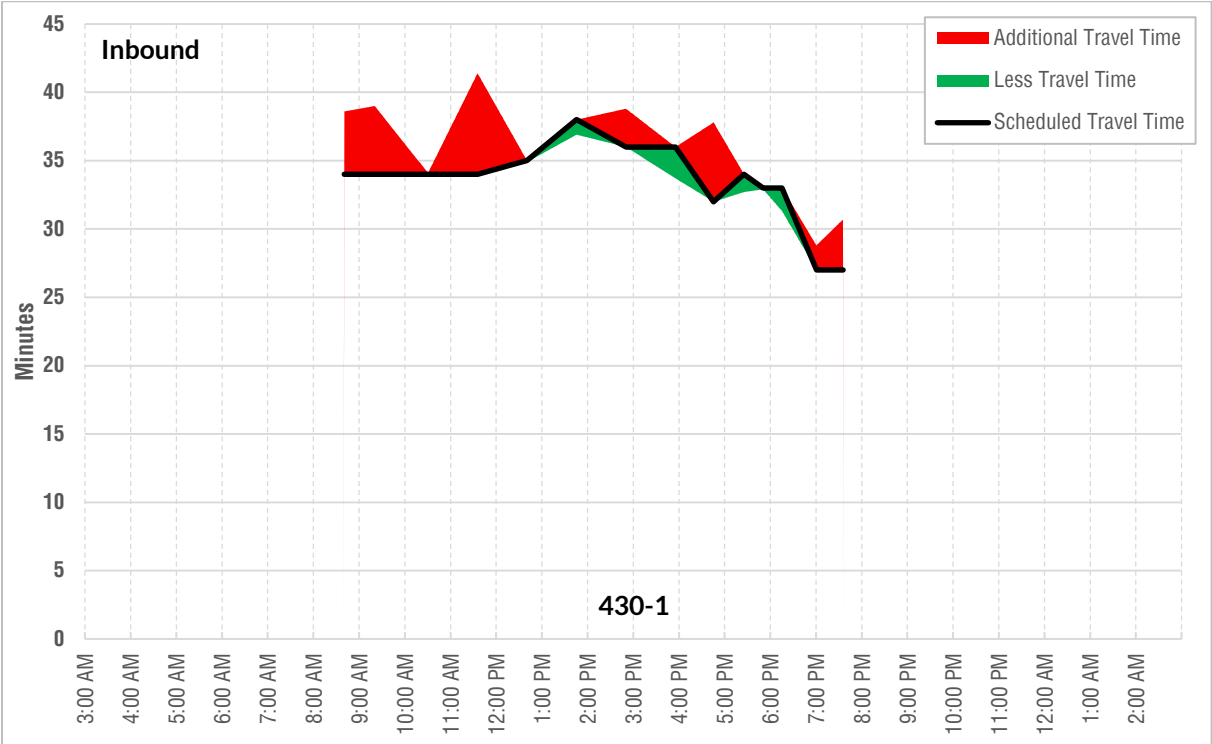
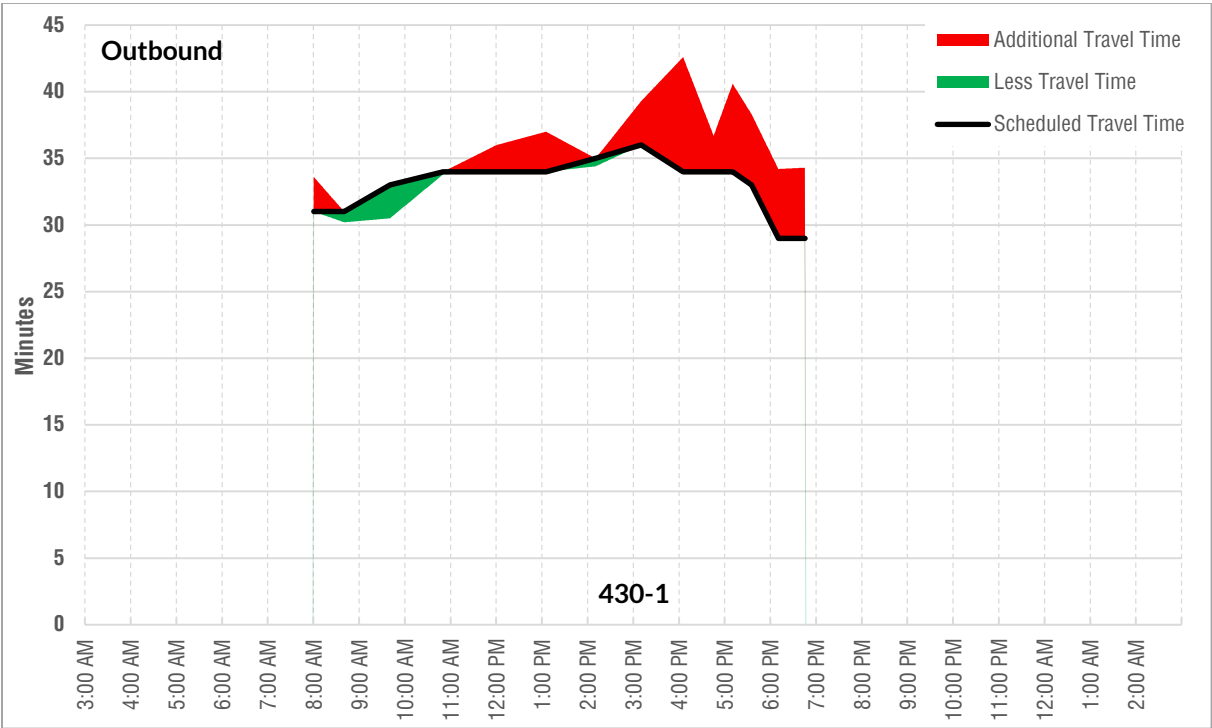


Figure 9 | Scheduled & Median Travel Time by Trip: Outbound



Stop Spacing

Route 430 stop spacing varies significantly on different parts of the route. On average, the route has approximately four stops per mile. However, in areas where stops are concentrated, there are six to seven stops per mile.

- Spacing near Salem Center is very close, with several stop pairs that are closer than 400 feet apart.
- Spacing south of Salem Center along Central Street, Essex Street, and Vine Street is inconsistent, with some stops spaced adequately apart and others spaced within a few hundred feet of each other.
- There are few stops on Broadway between Square One Mall and Saugus Street, reflecting the relatively undeveloped nature of the corridor.
- Salem Street has about seven stops per mile, at the top end of the MBTA's guidelines

Summary

Route 430 is one of two routes that provides connections between Saugus and the Orange Line. It also supplements service on Salem Street in Malden, one of the higher ridership corridors in the MBTA bus network. There are a number of issues with existing service:

- Service is very unreliable, with less than 50% of trips running on time
- It falls well short of providing the frequencies specified by the MBTA's Service Delivery Policy. Saturday service also starts later than it should.
- It has low ridership overall, and very low ridership in the residential neighborhoods in Saugus that it serves.