

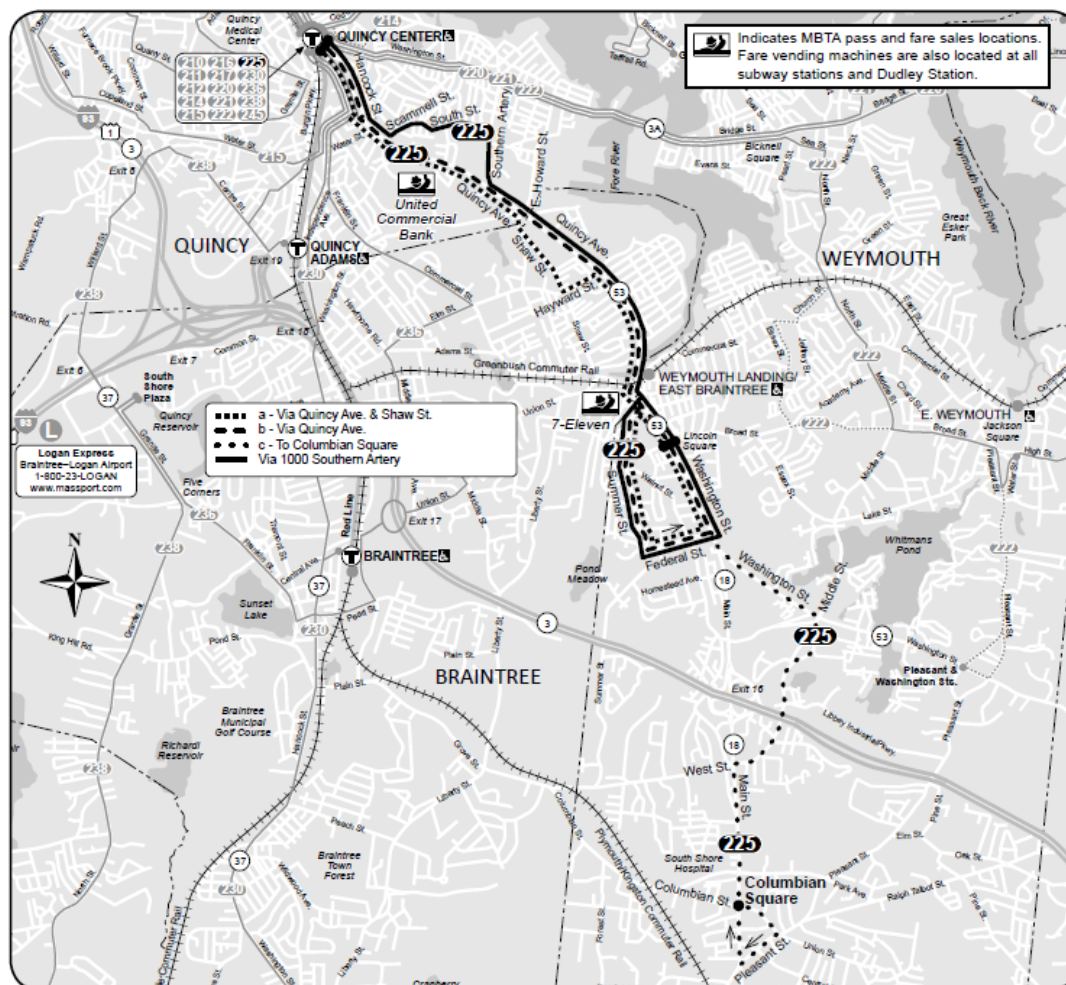
# Route 225

## Weymouth Landing or Columbian Sq. – Quincy Station

### Route Overview

Route 225 Weymouth Landing or Columbian Sq. – Quincy Station is a Local route that operates seven days a week between Quincy Station and Weymouth Landing with occasional service onto Columbian Square. Route 225 operates between Quincy Station and Weymouth Landing via one of three alignments: South Street, Quincy Avenue and Shaw Street, or Quincy Avenue only.

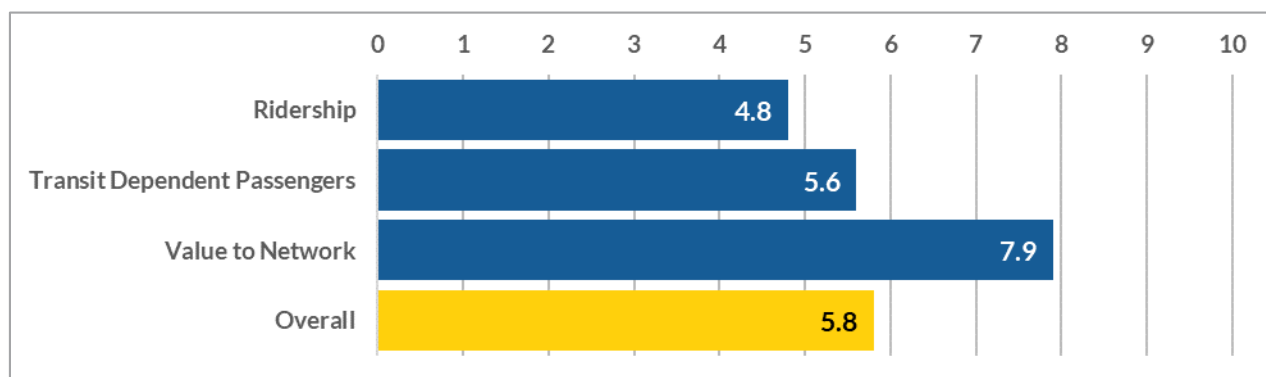
Figure 1 | Service Map



## Network Importance

Route 225 is a moderately important route with a significant number of transit dependent customers (see Figure 2). On a relative scale of 0 to 10, Route 225 rates 4.8 in terms of ridership, 5.6 in terms of transit dependent ridership, and 7.9 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 measure, is 5.8.

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



## Service Patterns

### Schedule

Route 225 operates every day of the week. On weekdays, frequencies are highly variable, primarily due to the multiple service patterns operated by Route 225. Throughout the day frequencies are as follows:

- 5:30 AM until 6:00 AM service operates every 15 to 25 minutes, but primarily every 15 minutes.
- 6:00 AM to 9:05 AM every 1 to 25 minutes, but primarily every 10 minutes.
- 9:05 AM to 2:00 PM every 1 to 37, but primarily every 30 minutes.
- 2:00 PM to 7:05 PM every 1 to 30, but primarily every 10 minutes
- 7:05 PM to 9:00 PM approximately every 30 minutes
- Approximately once per hour from 9:00 PM until the end of service.

On Saturdays, there are 33 trips in each direction with an average service frequency of 32 minutes during its service span from 6:30 AM to 11:51 PM. On Sundays, there are 17 in each direction with an average service frequency of 60 minutes during its service span from 7:50 AM to 12:13 PM.

Route 225 exceeds the MBTA Span of Service and Frequency Standards for Local routes during all service periods.

**Table 1 | Schedule Statistics**

| SERVICEDAY           | SPAN OF SERVICE            | FREQUENCY (RANGE) | FREQUENCY (AVERAGE) | DAILY TRIPS (INBOUND/OUTBOUND) |
|----------------------|----------------------------|-------------------|---------------------|--------------------------------|
| <b>Monday-Friday</b> | <b>5:30 AM to 11:57 PM</b> |                   |                     | <b>67/64</b>                   |
| Sunrise              | 5:30 AM to 5:59 AM         | 15 - 25           | 22                  | 2/4                            |
| Early AM             | 6:00 AM to 6:59 AM         | 3 - 25            | 11                  | 5/6                            |
| AM Peak              | 7:00 AM to 8:59 AM         | 1 - 20            | 8                   | 14/9                           |
| Midday Base          | 9:00 AM to 1:29 PM         | 20 - 37           | 31                  | 9/9                            |
| Midday School        | 1:30 PM to 3:59 PM         | 1 - 24            | 20                  | 7/10                           |
| PM Peak              | 4:00 PM to 6:29 PM         | 2 - 30            | 10                  | 15/16                          |
| Evening              | 6:30 PM to 9:59 PM         | 1 - 57            | 17                  | 12/8                           |
| Late Evening         | 10:00 PM to 11:57 PM       | 47 - 68           | 57                  | 3/2                            |
| Night                | -                          | -                 | -                   | -                              |
| <b>Saturday</b>      | <b>6:30 AM to 11:51 PM</b> | <b>3 - 65</b>     | <b>32</b>           | <b>33/33</b>                   |
| <b>Sunday</b>        | <b>7:50 AM to 12:13 PM</b> | <b>60</b>         | <b>60</b>           | <b>17/17</b>                   |

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

### Service Patterns

Route 225 is one of the most complex in the MBTA System, operating six unique service patterns. Pattern 225.1 is the primary service pattern, providing inbound service between Lincoln Square and Quincy Center Station primarily via Quincy Avenue and Hancock Street. Outbound service operates along the same alignment and include a terminal loop on Summer Street, Federal Street, and Washington Street. In addition to this pattern, five other patterns are provided (see Table 2 and supporting Table 2 and Figure 3):

- Pattern 225.0 provides 10 inbound trips and 11 outbound trips from Lincoln Square to Quincy Center Station via Quincy Avenue. This service pattern is the only pattern that serves the Presidential Plaza strip mall and operate the full length of Quincy Avenue.
- Pattern 225.2 provides four inbound trips and one outbound trip between the defunct Quintree Mall at Shaw Street and Quincy Center Station only. These trips provide extra capacity primarily in the PM peak to alleviate overcrowding.
- Pattern 225.3 provides 14 inbound trips and 14 outbound trips, which operate from Columbian Square/South Shore Hospital to Quincy Center Station via South Street and Southern Artery.
- Pattern 225.4 provides 15 inbound trips and 13 outbound trips, which operate from Lincoln Square to Quincy Center Station via Quincy Avenue and Shaw Street, unlike the primary service pattern, which uses Quincy Avenue and South Street.

- Pattern 225.5 provides seven outbound trips and seven inbound trips which operate from Columbian Square to Quincy Center Station via Lincoln Square and Shaw Street. This pattern is similar to pattern 225.3, but uses Quincy Avenue and Shaw Street instead of Quincy Avenue and South Street.

Table 2 | Destinations & Corridors served on Weekday Trips

| CORRIDOR                  | NUMBER OF INBOUND WKD TRIPS | PERCENT OF INBOUND WKD TRIPS | NUMBER OF OUTBOUND WKD TRIPS | PERCENT OF OUTBOUND WKD TRIPS |
|---------------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|
| South St/Southern Artery  | 31                          | 46%                          | 32                           | 50%                           |
| Quincy Avenue Only        | 10                          | 15%                          | 11                           | 17%                           |
| Shaw Street/Quincy Avenue | 26                          | 39%                          | 21                           | 33%                           |
| Columbian Square          | 21                          | 31%                          | 21                           | 33%                           |

Figure 3 | Destinations and Corridors Served on Weekday Trips

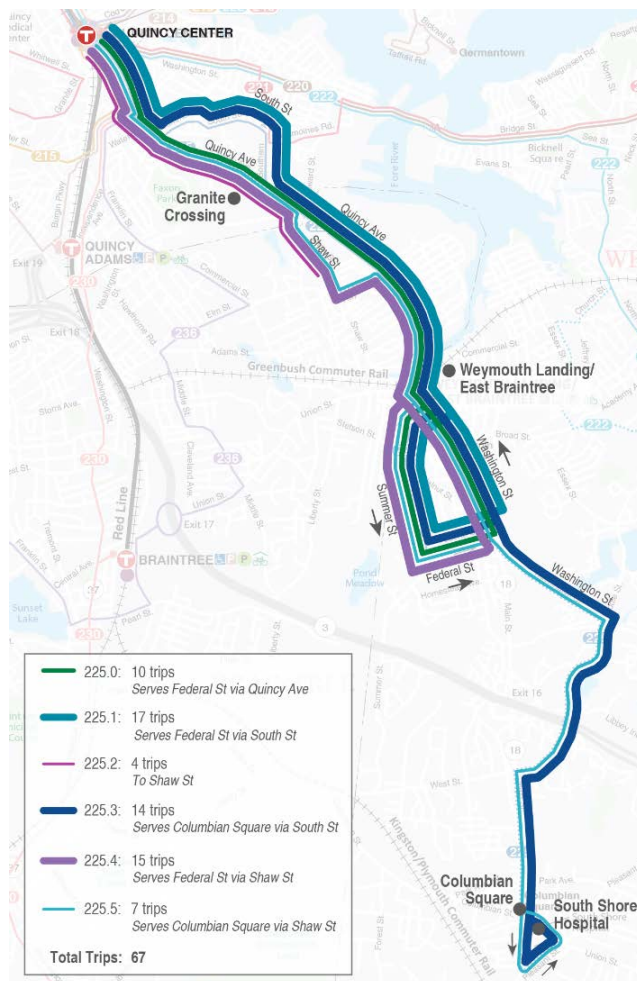


Table 3 | Service Patterns

| PATTERN         | ORIGIN   | DESTINATION  | UNIQUE FEATURE                                       | TRIPS per WKD | TRIPS per SAT | TRIPS per SUN |
|-----------------|--|--|--|---------------|---------------|---------------|
| <b>INBOUND</b>  |  |  |  | <b>67</b>     | <b>33</b>     | <b>17</b>     |
| 225.0           | Lincoln Square (Washington Street at Broad Street) | Quincy Center Station                              | Via Quincy Avenue                                    | 10            | 4             | -             |
| 225.1           | Lincoln Square (Washington Street at Broad Street) | Quincy Center Station                              | Via South Street                                     | 17            | 13            | 17            |
| 225.2           | Shaw Street at Quintree Mall                       | Quincy Center Station                              | From Quintree Mall                                   | 4             | -             | -             |
| 225.3           | Columbian Square                                   | Quincy Center Station                              | Via Lincoln Square and South Street                  | 14            | 2             | -             |
| 225.4           | Lincoln Square (Washington Street at Broad Street) | Quincy Center Station                              | Via Shaw Street and Quincy Avenue                    | 15            | 12            | -             |
| 225.5           | Columbian Square                                   | Quincy Center Station                              | Via Lincoln Square and Shaw Street and Quincy Avenue | 7             | 2             | -             |
| <b>OUTBOUND</b> |  |  |  | <b>64</b>     | <b>33</b>     | <b>17</b>     |
| 225.0           | Quincy Center Station                              | Lincoln Square (Washington Street at Broad Street) | Via Quincy Avenue                                    | 11            | 4             | -             |
| 225.1           | Quincy Center Station                              | Lincoln Square (Washington Street at Broad Street) | Via South Street                                     | 18            | 13            | 17            |
| 225.2           | Quincy Center Station                              | Shaw Street at Quintree Mall                       | To Quintree Mall                                     | 1             | -             | -             |
| 225.3           | Quincy Center Station                              | Columbian Square                                   | Via South Street and Lincoln Square                  | 14            | 2             | -             |
| 225.4           | Quincy Center Station                              | Lincoln Square (Washington Street at Broad Street) | Via Quincy Avenue and Shaw Street                    | 13            | 12            | -             |
| 225.5           | Quincy Center Station                              | Columbian Square                                   | Via Quincy Avenue, Shaw Street, and Lincoln Square   | 7             | 2             | -             |

## Ridership

Route 225 carries 3,000 passengers on the average weekday, which is above the Local routes average of 2,300. On Saturdays, Route 225 carries 1,277 passengers, above the Local routes average of 1,000 passengers. On Sundays, Route 225 carries 674 passengers, about average compared to other Local routes, which carry about 725 passengers.

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## Ridership by Stop

Route 225 generates relatively low ridership between South Shore Hospital and Weymouth Landing. Passenger activity picks up significantly after Weymouth Landing until Route 225 terminates at Quincy Center. On inbound weekday trips:

- On trips that start at South Shore Hospital 28 passengers board at the hospital
- At Pleasant Street at Main Street 35 passengers board and 23 alight near the Whole Foods.
- 11 passengers board and nine alight at the 10 stops along the 2.3 mile long corridor of Main Street and Middle Street.
  - The last stop at Middle Street opposite Circuit Avenue generates the most activity, with 20 boardings and six alightings near the Stop & Shop.
- As Route 225 turns north on to Washington Street 31 passengers board and 0 alight opposite Winter Court, near the Walgreens.
- Beyond Winter Court, there are three remaining stops served only by trips originating from South Shore Hospital. These three stops generate about four boardings each, a total of 12 boardings and four alightings.
- Between the Walgreens and Weymouth Landing 155 passengers board and 27 alight.
  - Union Towers generates the most activity along this segment with 65 boardings and four alightings. The other 12 stops generate relatively low ridership (two to 20 boardings).
- At Weymouth Landing, 72 passengers board and eight alight.
- Beyond Weymouth Landing, there are nine stops along Quincy Avenue prior to where the service patterns serving Shaw Street diverge (Howard Street). At these nine stops, there are 156 boardings and 13 alightings.
- Service patterns serving the Shaw Street generate 75 passengers board and six alight at the five stops along the 0.9 mile long corridor of Hayward Street and Shaw Street.
- All service patterns region at Quincy Avenue near Southern Artery. At that stop, 197 passengers board and 18 alight.
- Service patterns serving South Street generate 241 passengers board and 25 alight at the eight stops along the 1.0 mile long corridor of South Street and Southern Artery.
  - The first two stops on this service generate the majority of the boardings with, 15 boardings at Southern Artery at Presidential Drive and 105



boardings at Southern Artery at South Street. Both stops are adjacent to large housing complexes.

- Service patterns that remain on Quincy Avenue generate 175 passengers board and 19 alight at the four stops along Quincy Avenue between Southern Artery and Scammell Street.
  - The stop at 354 Quincy Avenue generates 119 of the 175 boardings in this segment.
- 150 passengers board and 142 alight at the 6 stops along Quincy Avenue and Hancock Street between Scammell Street and Burgin Parkway at Quincy Center, a 0.4 mile long corridor where all service patterns operate.
- 1,400 passengers alight at Quincy Center Station, a major transfer center and stop on the Red Line.

Ridership on the outbound direction mirrors inbound ridership, with one notable exception. Select service patterns utilize Front, Summer, and Federal Street as a large terminal loop to position the bus for return inbound trips. Ridership activity over these 11 stops generates 62 boardings and 142 alightings.

### Ridership by Trip

On weekdays, Route 225 experiences uncomfortably high passenger loads in the peak direction:

- The first inbound trips of the day have extremely high passenger loads of over 50 passengers, which nearly exceeds the MBTA passenger comfort standards beginning at 6:30 AM. This indicates that there exists unmet demand for service beginning earlier in the day on weekdays and that early AM and AM peak service frequencies should be improved.
- Weekday midday trips in both directions vary widely in ridership based on the service alignment. There is especially high ridership of 40 to 50 passengers that are at capacity on trips that go to Columbia Square, which indicates that there is unmet demand for more midday service to this destination.

On Saturdays, the first few inbound trips and last few outbound trips have relatively high passenger loads of over 18 passengers; service spans on Saturdays should be expanded and frequencies improved to serve demand during these periods.

On Sundays, the first few inbound trips have relatively high passenger loads of 25 passengers; Sunday service should begin earlier in the day to meet passenger demand.

Figure 4 | Weekday Inbound Ridership by Stop Map

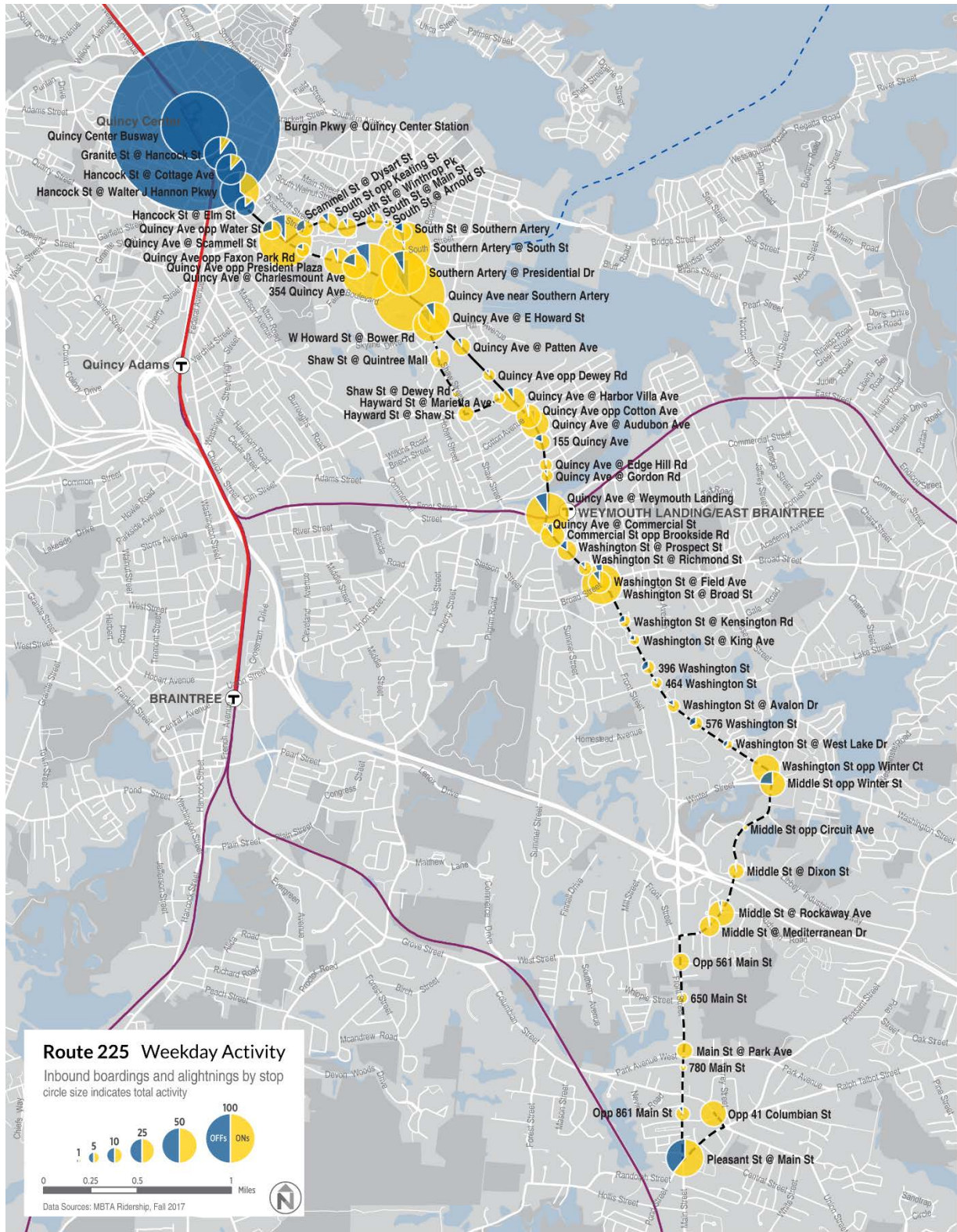




Figure 5 | Weekday Ridership by Trip: Inbound

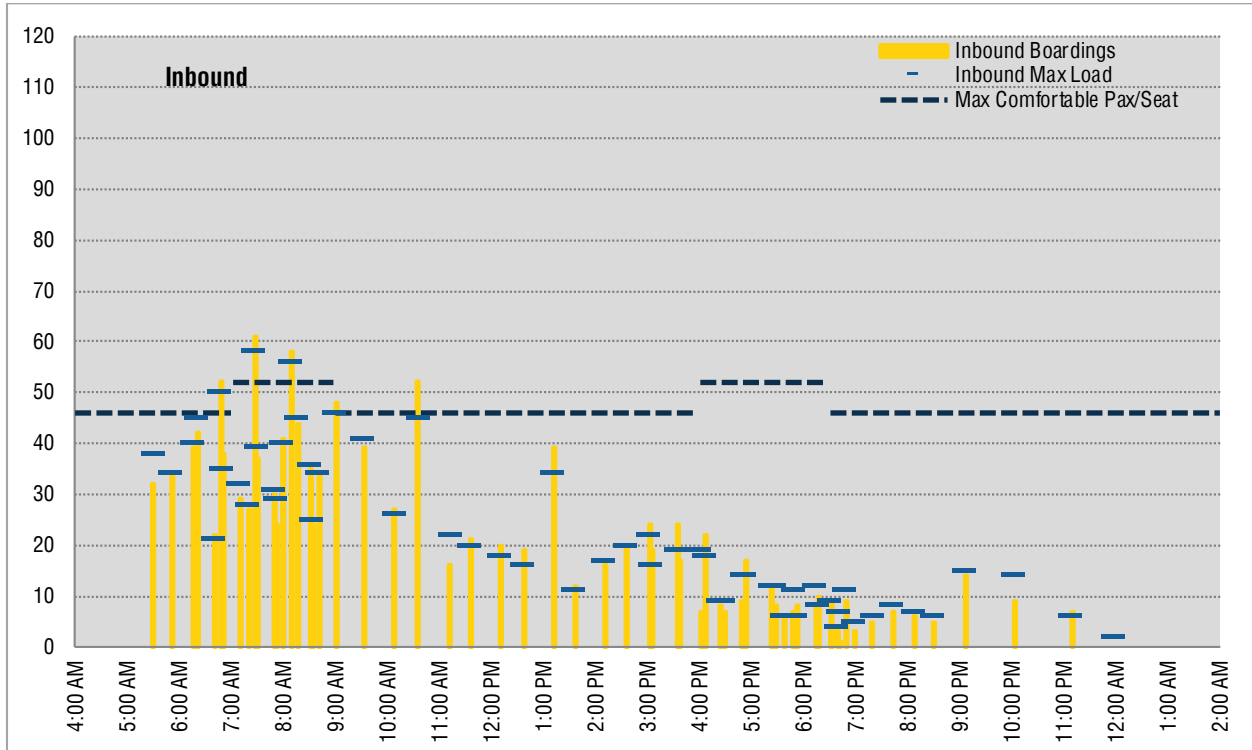


Figure 6 | Weekday Ridership by Trip: Outbound

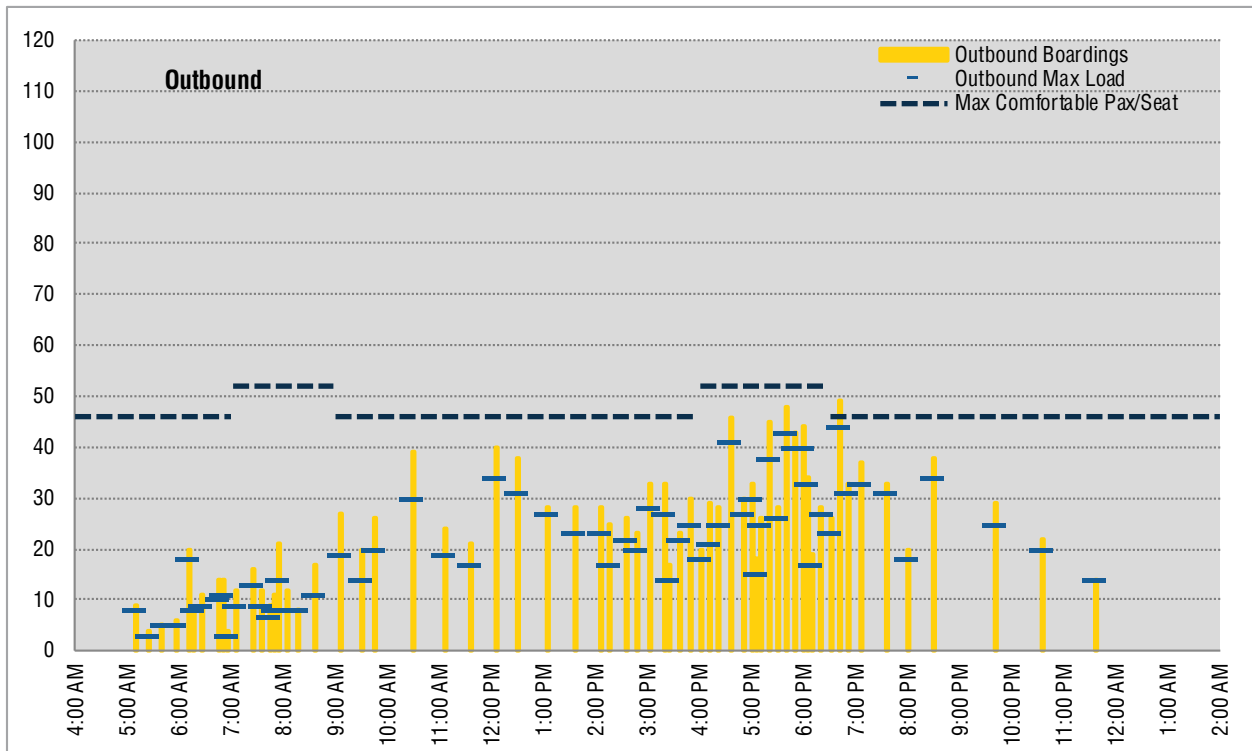


Figure 7 | Saturday Ridership by Trip: Inbound

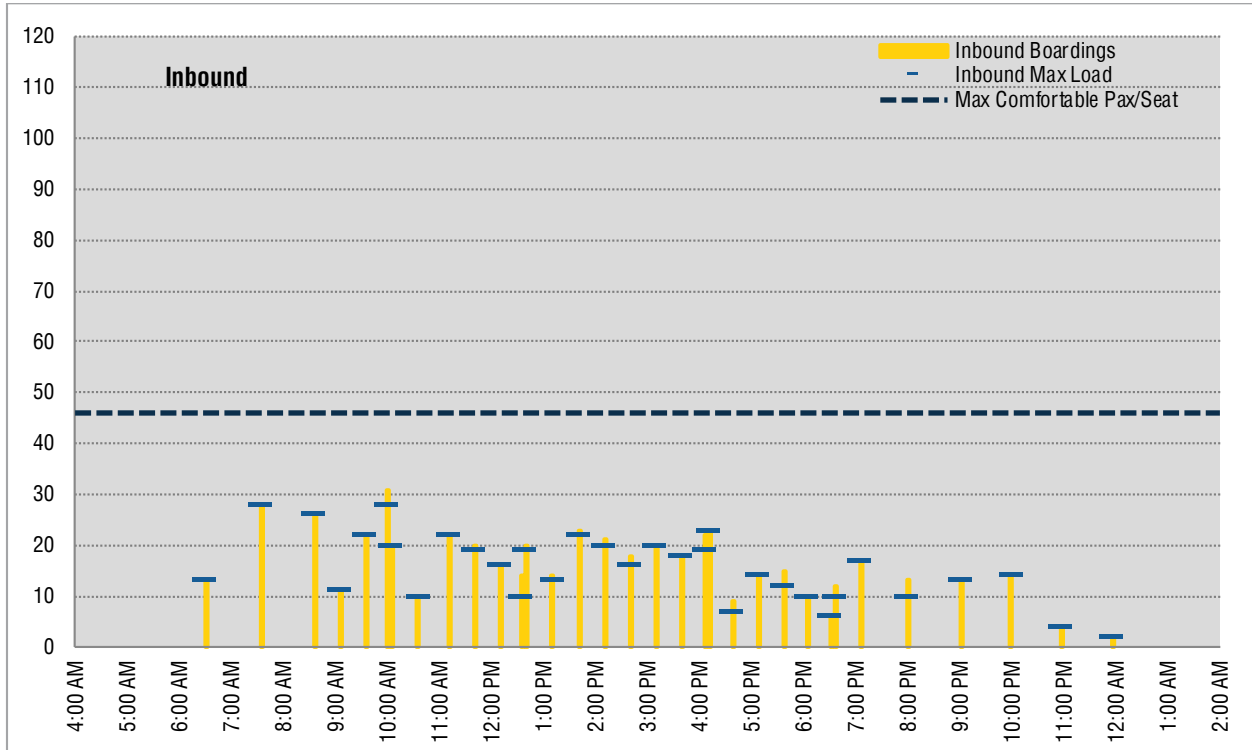


Figure 8 | Saturday Ridership by Trip: Outbound

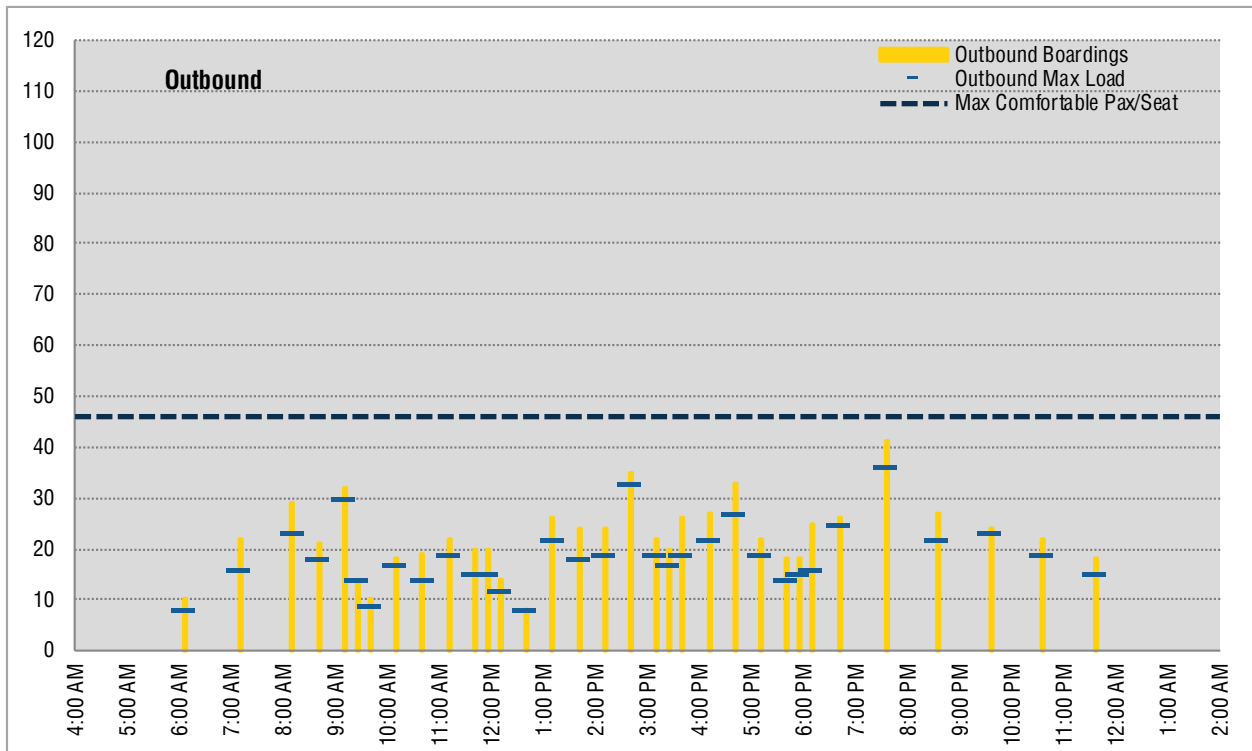


Figure 9 | Sunday Ridership by Trip: Inbound

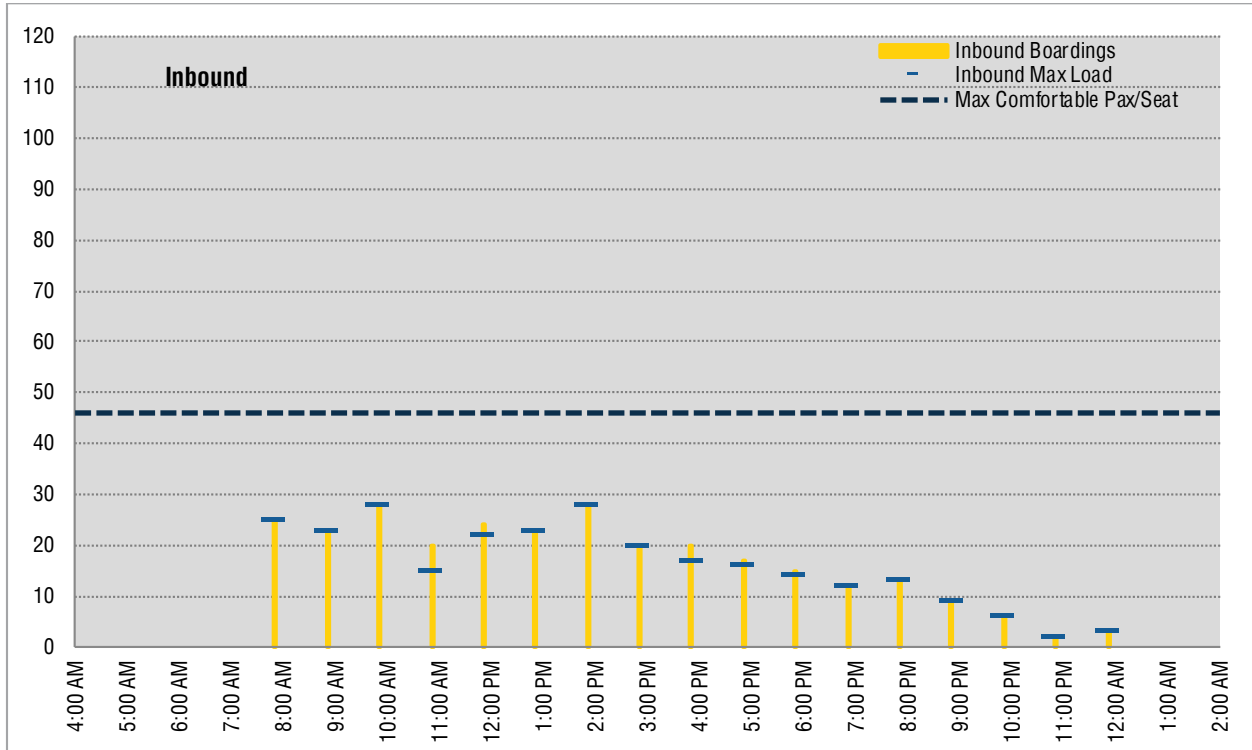
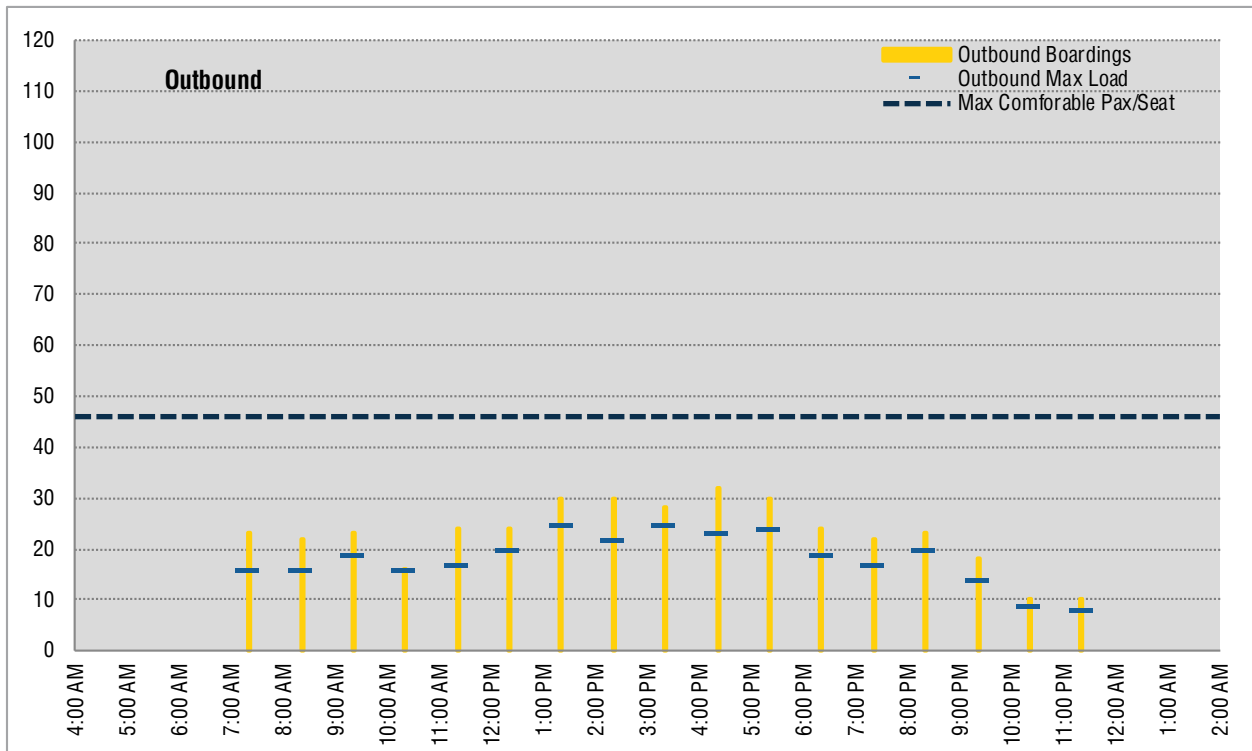


Figure 10 | Sunday Ridership by Trip: Outbound



## 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 225, 90.8% of passenger minutes are in comfortable conditions, which is below the minimum standard (see Table 4).

Table 4 | 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>           | 90.8%    | 100%      | 100%    |

## Reliability and Speed

### Reliability

Route 225 has poor reliability on weekdays and average reliability on weekends. On weekdays, Route 225 has an overall reliability of 61%; this increases to 71% on Saturdays and 70% on Sundays. Dropped trips are a minor problem on this route, with 0.3% of all trips dropped.

Table 5 | Reliability

| SERVICE DAY          | ORIGIN/MID-ROUTE ON-TIME PERFORMANCE | DESTINATION ON-TIME PERFORMANCE | OVERALL RELIABILITY | DROPPED TRIPS |
|----------------------|--------------------------------------|---------------------------------|---------------------|---------------|
| <b>Monday-Friday</b> | 61%                                  | 65%                             | 61%                 | 0.3%          |
| <b>Saturday</b>      | 71%                                  | 71%                             | 71%                 | -             |
| <b>Sunday</b>        | 67%                                  | 86%                             | 70%                 | -             |

### Running Times

Most of Route 225’s inbound trips from the beginning of service until 3:30 PM run one to five minutes longer than scheduled. After 3:30 PM, trips run three minutes early to four minutes later than scheduled. In the outbound direction, trips run within two minutes of scheduled time until 10 AM when buses arrive two to five minutes earlier than scheduled. PM peak trips arrive three minutes early to five minutes late.



Figure 11 | Scheduled & Median Travel Time by Trip: Route 225 Inbound

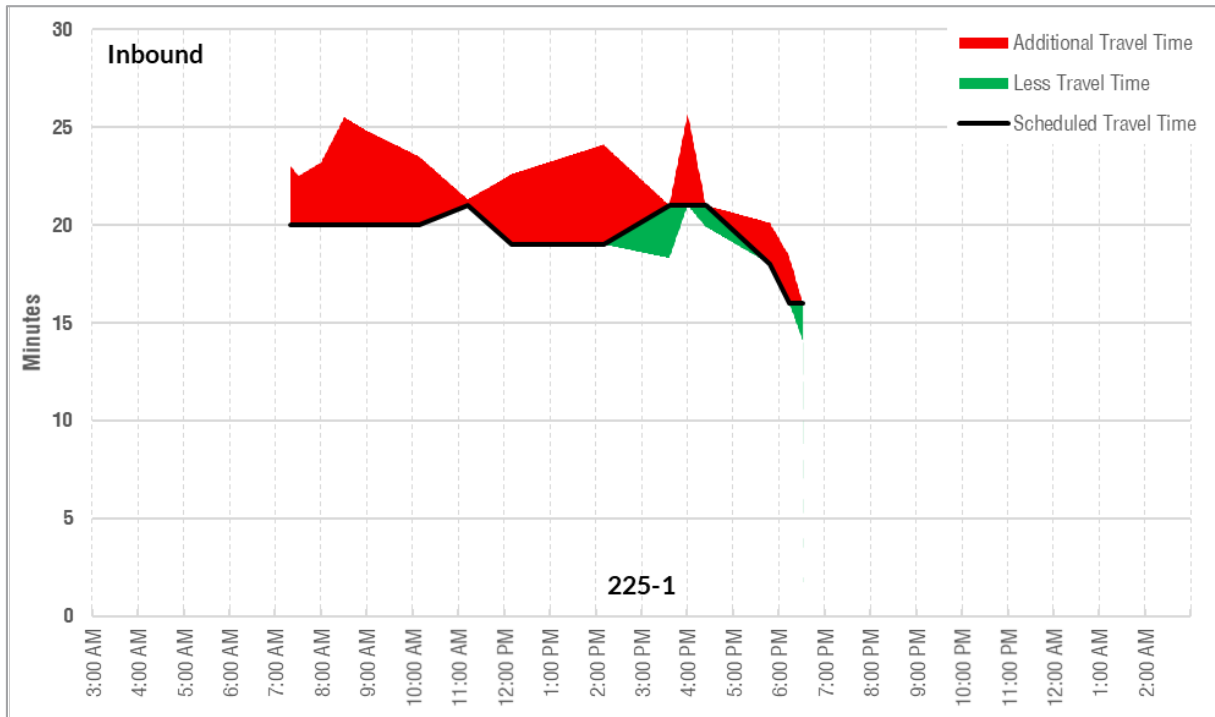
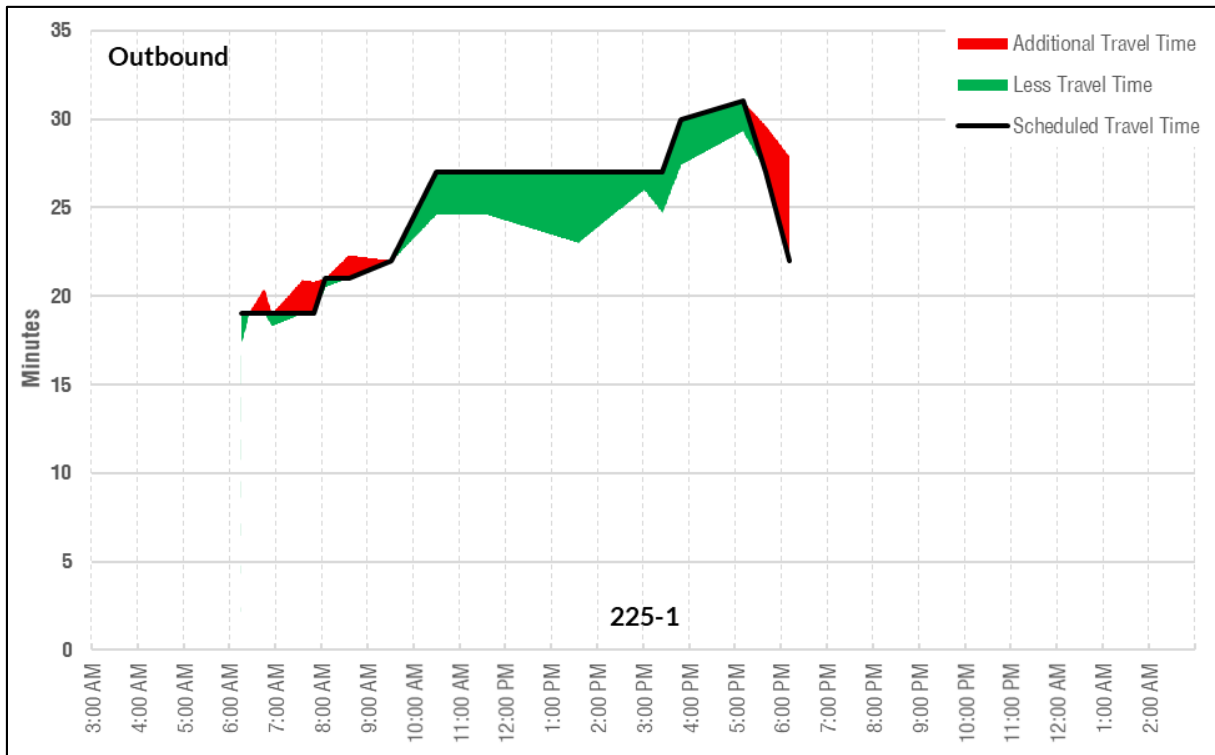


Figure 12 | Scheduled & Median Travel Time by Trip: Route 225 Outbound



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## Stop Spacing

Stops are too closely spaced along Route 225's alignment, with an average of 740 feet between each of the 53 stops along the alignment served by service pattern 225.3. Stops are especially closely spaced along Quincy Ave and Washington Street between Hayward Street and Middle Street. Consolidating stops could speed service and smooth boarding patterns.

## Summary

Route 225 is a high-performing route in an area with a relatively high number of transit-dependent passengers. A large number of service patterns means that Route 225 has a complex set of service alignments that make service confusing. Additionally, existing ridership patterns indicated there may be unmet demand for service frequencies and span on all service days. Route 225 is also challenged by poor on-time performance and unreliable service.