BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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MEMORANDUM

DATE **May 1, 2014**

TO **Congestion Management Process Committee**
Boston Region MPO

FROM **Ryan Hicks and Hiral Gandhi**
MPO Staff

RE **2012–13 Inventory of Park-and-Ride Lots at MBTA Facilities**

1 INTRODUCTON

The primary purpose of this memorandum is to present the results from the 2012–13 inventory of park-and-ride lots serving Massachusetts Bay Transportation Authority (MBTA) facilities. Comparisons to previous inventories are also included in this memorandum.

Between October 2012 and June 2013, Boston Region MPO staff inventoried MBTA, private, and town-operated parking facilities at 149 locations comprising 116 commuter rail stations, 28 rapid transit stations, three ferry terminals, and two express bus origin locations. Appendix A contains tables of parking utilization rates for all of the parking lots that were surveyed. Appendix E consists of detailed comparisons of the 2012–13 inventory with previous inventories by transit mode. Information about parking fees, and several maps that display inventoried data, are in Appendices B, C, D, and F.

This memorandum has five main sections and six appendices. The main sections are:

1. Introduction
2. Background
3. Inventory results: parking utilization
4. Major Regional Park-and-Ride Lots and Park-and-Ride Lots at Terminal Stations
5. Inventory Results: Amenities
6. Conclusion

2 BACKGROUND

The Congestion Management Process (CMP) is an ongoing Boston Region MPO program. One of the CMP's objectives is to monitor congestion-related performance measures for the region's transportation system. The monitored CMP facilities include arterial roadways, freeways, commuter rail, rapid transit, buses, park-and-ride, and bicycle/pedestrian facilities. As part of the CMP, data are collected, gathered, and analyzed on a periodic basis. Planners and decision makers can refer to these data to identify needs, and to prioritize transportation projects and program funds.

This memorandum uses primarily parking utilization rates to assess the surplus or deficiencies of parking capacity at park-and-ride lots that serve MBTA stations. Parking utilization is defined in this report as the percentage of nonaccessible spaces that do not require a permit that are used by the end of the MBTA-defined AM peak period, which ends after the last inbound peak-period train, bus, or ferry leaves its respective station, as indicated by the MBTA's online schedule.[1,2] Parking utilization rates can indicate how commuters are impacted by changes such as the addition of spaces, construction of a park-and ride lot, addition of a new station, or change in the cost of an MBTA transit pass. Data posted on the web can be used by the public to make decisions about travel plans, based on information about the capacity and utilization of a parking lot on a typical day.

Prior to the 2012–13 inventory, park-and-ride data for MBTA stations were last collected between January 2009 and August 2010.[3] Previous inventories were done in 2000, 2002, and 2005–06. The 2002 inventory included only park-and-ride lots that were located in the Boston Region MPO area, and used data from the 2000 inventory for lots that were located outside of the Boston Region MPO area.

2.1 Data Collection

Park-and-ride lots were inventoried by performing a one-time observation during the morning peak period of a typical weekday between October 2012

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[1] Accessible parking spaces are defined in this memorandum as parking spaces that are specifically designated to provide persons with disabilities better access to MBTA facilities by automobile. Refer to Section 5.2 for more information.

[2] The last peak-period commuter rail train typically begins its inbound trip before 9:00 AM and arrives at either North Station or South Station by 9:50 AM. The last peak-period rapid transit, bus, or ferry vehicle typically begins its inbound trip before 9:00 AM.

[3] Boston Region Metropolitan Planning Organization, memorandum titled "Inventory of Park-and-Ride Lots at MBTA Facilities," April 27, 2011

and June 2013. A typical weekday is defined as a Tuesday, Wednesday, Thursday, or Friday that is not a holiday. [4,5]

For the purpose of this survey, MPO staff developed a survey form (Appendix C). When completed, the form contains information about each parking lot, including the parking lot ownership, parking cost and restrictions, number of parking spaces, and number of parked vehicles. All of this information is summarized in Appendix A. The surveyors were instructed to survey each lot immediately after the last inbound peak-period trip. The time of the last inbound train, express bus, or ferry varies by station. After the last AM peak-period train, ferry, or express bus departed the station, the surveyor inventoried every parking lot that was used for a given station or express bus origin location. A separate survey form was filled out for each parking lot, as many stations have several nearby parking lots.

All park-and-ride lots that are known to serve MBTA commuters were surveyed. (Lots serving only commuters who use non-MBTA transportation were not surveyed.[6]) The lots surveyed included all MBTA-owned, privately owned, and town lots at all commuter rail, rapid transit, and commuter ferry stations, and at all express bus origin locations. The locations of these lots were ascertained from past inventories, information provided on the MBTA's website (www.mbta.com), and field visits performed by MPO staff.

All of the parking spaces referred to in this memorandum, unless otherwise indicated, are nonaccessible, non-permit parking spaces, and the total capacity and utilization rates were calculated for each station. Section 5.2 gives data on the availability of accessible parking along each transit line. Many stations have permit-only lots in addition to public lots. Most permit-parking lots are either municipally or privately owned, and their use is restricted to permit owners. In many cases, a local residency is required in order to obtain a permit. Because the focus of this memorandum is on the availability of parking to the general public at MBTA park-and-ride lots, the permit-only and resident-only parking spaces are excluded from totals and utilization percentages for all modes of transit. However, permit-only and resident-only parking spaces were included in

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[4] If unusual circumstances occurred during the day of observation such as delays in MBTA service, inclement weather, construction, major events, holidays, and traffic incidents, the survey of that parking lot was conducted again, on a different day.

[5] All public and private lots near MBTA stations are included in the analysis of this memorandum, the parking capacities of the MBTA stations that are listed in this memorandum may differ from the capacities that are displayed on the MBTA's website.

[6] Some MBTA stations also serve independent transportation entities, such as Logan Express or Amtrak. These stations sometimes have designated overnight parking lots for those services. These lots are excluded from the inventories reflected in this memorandum.

the survey, and this memorandum includes the discussion of the availability and utilization of these spaces in section 5.3.

2.2 Factors Impacting MBTA Parking Lot Utilization over Time

Since the earlier inventories were conducted, there have been many changes that could have affected parking lot utilization by MBTA customers: changes in the economy, MBTA fares, and the number of available parking spaces. Some of these changes are recent, while others are periodically recurring, regardless of the time period. Although it is not possible to estimate the degree of contribution of each of these factors to the utilization of parking spaces, the factors are summarized here so that the reader can take them into account while reviewing the 2012–13 inventory results.

Changes in Parking Capacity: 2009-10 and 2012-13 Inventories

There have been changes in parking capacity since the 2009–10 inventory was completed. One of the changes is a net increase of 1,846 public, non-permit parking spaces near MBTA stations since the 2009–10 inventory.[7] This resulted from the removal of 2,848spaces at certain stations and the addition of 2,832 spaces at other stations. In addition, a total of 1,668 spaces were added at the T. F. Green Airport and Wickford Junction stations, both of which opened since the previous inventory was conducted). There are 194 parking spaces at the Watertown Yard parking lot that are not included in this comparison because the station was not surveyed for in 2009–10 inventory.

The new T.F. Green Airport and Wickford Junction stations' parking capacity and utilization are included in the 2012–13 inventory analysis. The additional parking spaces associated with the new stations contribute to the perception that the overall utilization of a portion of the MBTA system has decreased. There have also been locations within the MBTA system where parking lots near stations have closed; the result is that nearby parking lots have experienced increases in utilization. This could imply that nearby stations have added new commuters, whereas these new commuters had been displaced from the closed parking lots. An example of a parking lot that was closed is the parking facility near the Quincy Center MBTA station, which provided 863 parking spaces; it was closed after the 2009–10 inventory.[8] Due in large part to

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[7] This figure includes the addition of 1,668 parking spaces at T. F. Green Airport and Wickford Junction, inclusion of the 194 parking spaces at Watertown Yard, and the addition or removal of spaces at various stations since the 2009–10 inventory.

[8] The Quincy Center Garage was closed because of structural problems in July 2012. The reopening or redesign of the Quincy Center Garage is uncertain when the analysis for this memorandum was being conducted.

parking facility closures, the total public non-permit parking spaces near MBTA stations that were surveyed in both 2009–10 and 2012–13 has decreased by 16 spaces between those two inventories.

Table 1 lists the stations where the total number of parking spaces (not including permit–only or accessible spaces) had changed by either 150 or more spaces, or by more than 50 percent, since the 2009–10 inventory.

MBTA Parking Fare Changes

Since the 2009–10 inventory was conducted, daily parking fees have changed at 33 MBTA stations. At the time of the 2012–13 survey, most commuter rail stations charged $3.00 to $4.00 per day. At most of the rapid transit stations, parking fees ranged from $5.00 to $7.00. The stations that experienced changes in parking fees are listed in Table 2.

Previous parking rate increases took place on November 15, 2008, when the rates for most MBTA stations increased by $2.00, and on July 1, 2005, when the prices of rapid transit parking increased by 50 cents. There was also an increase on January 6, 2003, when prices increased by 50 cents at rapid transit stations and by $1.00 at commuter rail stations.

In January 2011, the MBTA announced the availability of monthly parking permits for selected MBTA stations. At the time of the 2012–13 inventory, there were 77 MBTA stations that had monthly parking available. The rate for most of the lots was $70.00, saving regular commuters approximately $10.00 a month compared to the cost of paying daily. Figure B-2, in Appendix B, is a map showing the minimum parking fee at each station.

TABLE 1
Stations with Significant Changes in the Number of Parking Spaces between the 2009–10 and 2012–13 Inventories

Station Name	Transit Line	Mode	Total Public Parking Spaces: 2009–10	Total Public Parking Spaces: 2012–13	Change in Total Spaces
North Leominster	Fitchburg/South Acton	Commuter rail	135	0	-135
Worcester	Framingham/Worcester	Commuter rail	323	500	177
Greenbush	Greenbush	Commuter rail	685	978	293
Reading	Haverhill	Commuter rail	71	112	41
Wedgemere	Lowell	Commuter rail	155	31	-124
Winchester	Lowell	Commuter rail	151	0	-151
Needham Heights	Needham	Commuter rail	243	80	-163
Providence	Providence/Stoughton	Commuter rail	369	695	326
South Attleboro	Providence/Stoughton	Commuter rail	1,009	715	-294
T. F. Green	Providence/Stoughton	Commuter rail	0	591	591
Wickford Junction	Providence/Stoughton	Commuter rail	0	1,077	1,077
Maverick	Blue Line	Rapid transit	58	21	-37
Wonderland	Blue Line	Rapid transit	2,643	2,326	-317
Green Street	Orange Line	Rapid transit	38	0	-38
Malden	Orange Line	Rapid transit	198	829	631
Braintree	Red Line	Rapid transit	981	1,244	263
Quincy Center	Red Line	Rapid transit	846	0	-846

TABLE 2
Stations with Parking Fare Changes between the 2009–10 and 2012–13 Inventories

Station Name	Transit Line	Minimum Parking Fee 2009–10	Minimum Parking Fee 2012–13	Change in Parking Fee
Littleton	Fitchburg/South Acton	$0.00	$4.00	$4.00
Auburndale[a]	Framingham/Worcester	$0.00	$4.00	$4.00
Newtonville	Framingham/Worcester	$0.00	$7.50	$7.50
Wellesley Square	Framingham/Worcester	$2.50	$4.50	$2.00
West Newton	Framingham/Worcester	$0.00	$4.00	$4.00
Lawrence	Haverhill	$3.00	$3.50	$0.50
Melrose Cedar Park	Haverhill	$2.00	$3.00	$1.00
Melrose Highlands	Haverhill	$2.00	$3.00	$1.00
Wyoming Hill	Haverhill	$2.00	$3.00	$1.00
Attleboro	Providence/Stoughton	$4.00	$3.00	-$1.00
Providence	Providence/Stoughton	$8.55	$9.00	$0.45
Route 128	Providence/Stoughton	$5.00	$7.00	$2.00
South Attleboro	Providence/Stoughton	$4.00	$3.00	-$1.00
T. F. Green[b]	Providence/Stoughton	N/A	$6.75	N/A
Wickford Junction[b]	Providence/Stoughton	N/A	$4.00	N/A
Wonderland	Blue Line	$4.00	$5.00	$1.00
Wood Island	Blue Line	$3.00	$5.00	$2.00
Chestnut Hill	Green Line	$5.50	$6.00	$0.50
Eliot	Green Line	$5.50	$6.00	$0.50
Lechmere	Green Line	$5.50	$6.00	$0.50
Riverside	Green Line	$5.75	$6.00	$0.25
Waban	Green Line	$5.50	$6.00	$0.50
Green Street	Orange Line	$5.00	Permit-only	N/A
Malden	Orange Line	$5.50	$6.00	$0.50
Oak Grove	Orange Line	$5.50	$6.00	$0.50
Sullivan Square	Orange Line	$5.00	$4.00	-$1.00
Butler	Red Line	$0.00	$4.00	$4.00
Milton	Red Line	$5.00	$4.00	-$1.00
Quincy Center	Red Line	$7.00	Facility closed	N/A
Savin Hill	Red Line	$0.00	$5.00	$5.00
Watertown Yard	Bus	Not surveyed	$5.00	N/A
Quincy/Fore River	Ferry	$3.00	$4.00	$1.00
Hingham	Ferry	$3.00	$4.00	$1.00

a Additional free street parking may be available near the station.
b New station
N/A = not applicable

State Fiscal Year 2013 Changes in MBTA Boarding Fares

On July 1, 2012, the MBTA implemented changes in its service fare structure. These are shown in Appendix F. The notable fare changes are:

- Rapid transit fees increased from $1.70 to $2.00 per ride ($2.50 if paying by CharlieTicket or cash).
- The outer express buses that serve bus Route 354, which stops at the Montvale Avenue park-and-ride lot, in Woburn, increased from $4.00 to $5.00 per ride ($6.50 if paying by CharlieTicket or cash).
- Commuter rail monthly passes experienced increases of $11.00 to $64.00 per month, depending on the zone of travel. (Single rides increased by $.30 to $2.25, depending on the zone of travel.)
- Commuter ferry monthly passes increased from $198.00 to $262.00 per month. (Single rides experiences increases of $1.30 to $4.00 per trip, depending on the route).

MBTA Service Changes 2010-13

In the period between the 2009–10 and 2012–13 inventories, there were several MBTA service changes. Although many of those changes seem minor, they may have had significant impacts on the park-and-ride utilization at certain MBTA stations. For example, if a feeder bus service is reduced, more commuters may instead drive to MBTA stations, causing parking utilization to increase at those stations.

State Fiscal Year 2013 MBTA Service Changes[9]

In July 2012, the MBTA implemented significant service changes in an effort to balance its budget. The service changes that potentially affected the peak-period commute at the MBTA stations that were surveyed for the 2012–13 park-and-ride inventory are listed below:

- MBTA bus Routes 355 and 500 were eliminated.
- Bus Routes 52, 217, 351, 354, 439, 441, 442, 451, 455, and 555 all experienced schedule or route changes.

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[9] "MBTA Service Changes," http://www.mbta.com/uploadedfiles/Fares_and_Passes_v2/MBTA_Service%20and%20Fare%20Changes_v3.pdf (accessed March 3, 2014).

Other MBTA Service Changes, 2010–13[10]

In addition to the FFY 2012 MBTA service changes, there were other notable alterations to the MBTA system that may have had an impact on the park-and-ride utilization at stations. The changes are listed below.

- Additional AM and PM peak-period trips were added to bus Route 62 in September 2010, and all express trips along this bus route were replaced with local trips.
- T. F. Green Airport and Wickford Junction MBTA stations opened along the Providence/Stoughton Line in December 2010 and April 2012, respectively.
- Some trains began operating as three-car trains along the Green Line Riverside Branch during the AM and PM peak period in October 2010. Before the service change, one- and two-car trains operated along the Riverside Branch. The use of three-car trains was implemented on the Heath Street branch from Brigham Circle to Lechmere during the AM peak period in March 2011.
- A new station opened on the Fairmont Line, at Talbot Avenue, in November of 2012. New stations at Four Corners/Geneva Avenue and Newmarket opened in July of 2013. Six daily round-trips were added to the Fairmount Line in July 2013.
- The Commonwealth of Massachusetts announced the completion of the purchase of the trackage between Framingham and Worcester from CSX Railroad in October 2012.

The Economy

Beginning in December 2007, the United States economy underwent a severe recession; its effects were still being felt at the time of the 2012–2013 inventory. Even though the Boston region was not one of the hardest hit US regions, the impact of the recession was evident. An economic recession generally results in an increase in the unemployment rate. Therefore, fewer people commute to work, resulting in a drop in utilization of all transportation facilities. Many MBTA commuters work either in the central business district in Boston or at various commercial activity centers located throughout the Boston region. When these centers experience increases in unemployment, there is a decrease in daily commuting to those centers.

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[10] Jonathan Belcher, Central Transportation Planning Staff, “Changes to Transit Service in the MBTA District: 1964-2013,” http://www.transithistory.org/roster/MBTARouteHistory.pdf (accessed on March 3, 2014).

Since the 2009–10 parking inventory was completed, the economy has continued to improve, which led to more people commuting to work.[11], Commuting has increased since then, reflecting the economic turnaround.

Increased Popularity of Public Transportation

Over the last few years, public transportation has been increasing in popularity nationwide despite service cuts and fare increases. Some of the contributing factors are:

- The increases in the cost, and decreasing convenience, of commuting by automobile
- Technical improvements such as smartphones are improving the ease of use of public transportation.
- Demographic shifts, as the millennial generation often values the convenience of public transportation and technology over automobile ownership. Baby boomers who are approaching retirement are also embracing the convenience of public transportation.
- The improving economy is enabling more commuters to return to work, which results in an increase in the usage of all transportation modes.
- Population increases nationwide and in the Boston region mean that there are more commuters, who will need to use some mode or modes of the transportation system, including public transportation.
- Gasoline prices increased 44 percent between the 2009–10 and 2012–13 inventories.[12],[13] When gasoline prices increase, commuters tend to take public transportation to cut commuting costs. This can indirectly result in an increase in systemwide parking utilization.

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[11] US Bureau of Labor Statistics, “BLS Spotlight on Statistics – The Recession of 2007–2009,” February 1, 2012. Available online at http://www.bls.gov/spotlight/2012/recession/pdf/recession_bls_spotlight.pdf (accessed January 15, 2014).

[12] Consumer Reports, “Average gas prices--August 23, 2010,” available online at http://www.consumerreports.org/cro/news/2010/08/average-gas-prices-august-23-2010/index.htm (accessed January 15, 2014).

[13] Consumer Reports, “Average gas prices--September 17, 2012,” available online at http://www.consumerreports.org/cro/news/2012/09/average-gas-prices-september-17-2012/index.htm (accessed January 15, 2014).

Station Parking Lot Construction

Certain MBTA stations and nearby parking lots were under construction at the time of observation (see Appendix A for information about specific stations that were under construction at the time of the survey).

Several MBTA station platforms, elevators, ramps, and other access points were under construction at the time of observation. Construction at MBTA stations may prompt commuters to use other MBTA stations to complete their trip, which may have resulted in an increase in parking utilization at nearby stations. This is especially true if the construction temporarily causes a station to cease being ADA-accessible.

Construction in the parking lots near MBTA stations may temporarily reduce parking capacity, which can make it seem that parking utilization has increased. Another effect of parking lot construction is the resulting confusion of commuters about where parking is permitted and how much it costs.

Conversion of Public Parking to Permit Parking

The permitted usage of municipally and privately owned parking lots near some MBTA stations has changed since the 2009–10 inventory for various reasons. Public lots allow any commuter to park in the lot, as long as the parking fee is paid. Permit-only parking lots only allow commuters who have a parking pass from a municipality or other entity to park at the specified location. Green Street Station, located on the Orange Line, and Winchester Station, located on the Lowell Line, are now exclusively served by permit-only spaces. Permit parking is generally not included in the analysis performed for this memorandum, as the memorandum focuses on parking availability for the general public. However, the locations of permit-only and resident-only parking near MBTA stations are discussed in section 5.3.

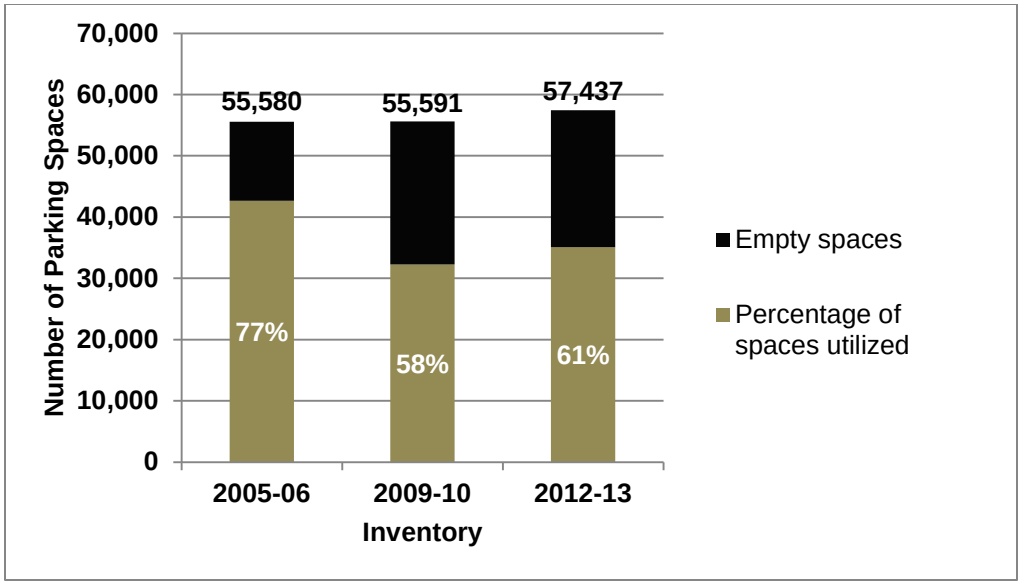
3 INVENTORY RESULTS: PARKING UTILIZATION

An analysis of the inventory results indicated a total net increase of about 1,846parking spaces in the MBTA park-and-ride system between the 2009-10 inventory and the 2012–13 inventory. On a typical weekday morning, 61 percent of all parking spaces for all modes in the MBTA system were utilized. As shown in Figure 1, there was a 3 percent increase in utilization from the 2009–10 survey to the 2012–13 survey, but a 16 percent decrease in the utilization rate from the 2005–06 inventory because there was a net increase in the number of parking spaces. Major changes that may have affected the utilization include the addition of the T. F. Green Airport and Wickford Junction MBTA stations, the removal of the Quincy Center Garage, the conversion of public parking spaces to permit-only spaces, and station construction. T. F.

Green Airport and Wickford Junction stations experience low utilization because they are relatively new.

The breakdown of parking utilization rates is 55 percent utilization for the commuter rail system, 74 percent utilization for the rapid transit system, 84 percent utilization for express bus, and 49 percent utilization for commuter ferry.[14] Figure 2 graphically shows the parking capacity and utilization for each individual station that was collected for the 2012–13 inventory. For a graphical comparison of the parking utilization difference between the 2009–10 and 2012–13 inventories by individual station, refer to Figure B-1, in Appendix B.

FIGURE 1
Utilization at Park-and-Ride Lots near MBTA Stations: 2005–06, 2009–10, and 2012–13 Inventories



[14] Some stations with parking serve both Commuter Rail and Rapid Transit. To avoid confusion, these stations are all categorized as rapid transit in this inventory

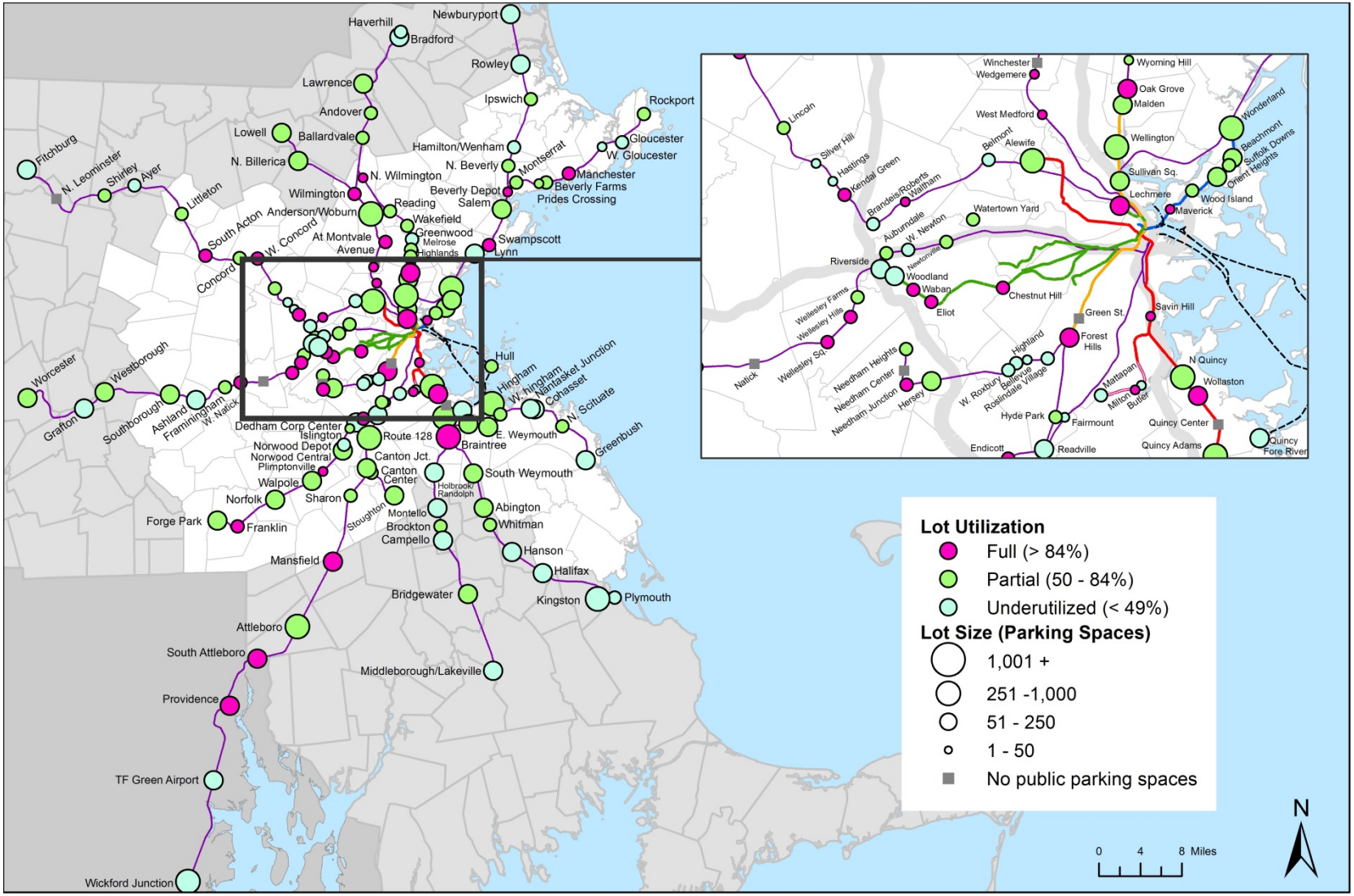


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FIGURE 2
Park-and-Ride Lot Capacity and Utilization, 2012-13 Inventory

Congestion Management Process

3.1 Commuter Rail

Table 3 shows the commuter rail park-and-ride utilization by line.

TABLE 3
Commuter Rail Parking Inventory and Percent of Parking Utilization at Park-and-Ride Lots near MBTA Stations, 2012–13

Commuter Rail Line	Number of Parking Spaces	Percent Utilization
Fitchburg/South Action Line[a]	1,365	60%
Haverhill Line	2,061	57%
Lowell Line[a]	2,924	66%
Newburyport/Rockport Line[a]	3,539	46%
North Side total	*9,889*	*56%*
Fairmount Line	387	35%
Framingham/Worcester Line	3,558	63%
Franklin Line	3,663	56%
Greenbush Line	2,931	44%
Kingston/Plymouth Line	3,120	44%
Middleborough/Lakeville Line	2,833	44%
Needham Line[a]	959	65%
Providence/Stoughton Line[a]	8,366	61%
South Side total	*25,817*	*54%*
Grand total	**35,706**	**55%**

a The parking lots near the North Leominster, Littleton, Wedgemere, Beverly Depot, Needham Center, Needham Heights, Attleboro, and South Attleboro stations were under construction at the time of the survey 2012–13. The parking utilization and capacity may have been temporarily affected as a result.

Fitchburg/South Acton Line[15]

On the Fitchburg/South Acton Line, 61 percent of all parking spaces were utilized during the AM peak period. At the 15 stations on this line that routinely provide parking, Kendall Green and South Acton filled during the AM peak period. Waltham Station had a 98 percent parking utilization rate during the AM peak period. In addition to the parking spaces that do not require a permit, there are 452 parking spaces that are resident-only or permit-only; 80 percent of those parking spaces were in use. There are 44 accessible spaces available along the line, 14 percent of which were utilized.

[15] North Leominster and Littleton stations were under construction at the time of the survey. North Leominster had an inventory of 0 parking spaces and Littleton had an inventory of 52 parking spaces at the time of observation.

Haverhill Line

During the AM peak period, 57 percent of the 2,061 parking spaces available for public use were filled. At the 12 stations on the Haverhill Line that have parking lots, only North Wilmington Station filled to capacity during the AM peak period. There are additional 60 additional parking spaces, at Reading Station, but they are restricted to residents of Reading. Of those parking spaces, 88 percent were in use by the end of the morning peak period. There are also 13 permit-only spaces at Bradford Station, 9 of which were occupied. There are also 49 accessible parking spaces near stations along the Haverhill Line. Four percent of those spaces were utilized.

Lowell Line[16],[17]

The parking utilization rate decreased by 17 percent on the Lowell Line between the 2009–10 inventory and the 2012–13 inventory. Of the seven stations on the Lowell Line that have parking, both the Wedgemere and West Medford lots filled up during the AM peak period. The Winchester town lot that is located west of the station also filled up during the morning peak period. The Wilmington Station lot had 184 spaces in use out of the 191 spaces available. The Lowell Line had 59 accessible parking spaces near its stations and 24 percent were utilized.

Newburyport/Rockport Line

There are 3,539 parking spaces available for public use on the Newburyport/Rockport Line; 46 percent of those parking spaces were in use during the AM peak period. Of the 16 stations on the line that have parking lots, Beverly Depot was the only station that filled to capacity during the AM peak period.[18] There are 18 parking spaces at Swampscott Station. There are 125 public parking spaces and 18 resident-only spaces. All of the resident-only parking spaces were utilized during the AM peak period. The Newburyport/Rockport Line has 106 accessible parking spaces. Of these accessible spaces, 10 percent were utilized.

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[16] There are an additional 857 overnight parking spaces at the Anderson/Woburn MBTA station. These parking spaces are owned by Massport and are provided for users of the Logan Express shuttle bus. That parking lot is not included in the analysis performed for this memorandum.

[17] The 17 percent decrease in the parking utilization rate on the Lowell Line is partly due to the fact that the non-overnight lot at Anderson/Woburn Station, which has 1,297 parking spaces, experienced a 34 percent decrease in parking utilization.

[18] Beverly Depot was under construction at the time of the 2012–13 survey, and several nearby lots were blocked off. As a result, there were 40 spaces available at this station at the time of observation.

Fairmount Line

Readville and Fairmount are the only two stations on the Fairmount Line that have public parking.[19] Of the 387 public parking spaces, 35 percent were filled during the AM peak period. There are no permit-only parking spaces on this line. The Fairmont Line has 21 accessible parking spaces, 19 percent of which were utilized.

Framingham/Worcester Line

Of the 14 stations on the Framingham/Worcester Line that have parking, only the Wellesley Hills lot filled entirely during the AM peak period. The West Natick parking lot was observed to be 99 percent utilized during the AM peak period. Of the 3,558 parking spaces on this line, 63 percent filled during the AM peak period. There are permit-only lots at Framingham and Natick stations that have 119 and 139 spaces, respectively. The Framingham lot had 57 percent utilization and the Natick lot had 80 percent utilization. There are 89 accessible parking spaces along the Framingham/Worcester Line, 11 percent of which were utilized.

Franklin Line

There are a total of 3,663 parking spaces available along the Franklin Line, 56 percent of which were filled. There are two new parking lots along the line. One new parking lot was added as part of the Liberty Lane development project near Norfolk Station; it provides 258 spaces. A private lot that provides 25 spaces was constructed near Norwood Central Station. Of the 11 stations on the Franklin Line, Plimptonville was the only station whose parking lot filled completely during the AM peak period.[20] In addition to the public spaces, there are 60 permit-only spaces at Franklin Station, 59 of which were filled during the AM peak period. The Franklin Line has 66 accessible spaces, with a utilization rate of 9 percent.

Greenbush Line

At the seven stations on the Greenbush Line that have parking, no lots filled during the AM peak period. There are 2,931 parking spaces available for public use, 44 percent of which filled during the AM peak period. The parking lots along the Greenbush Line provide 76 accessible parking spaces. The utilization rate for the accessible spaces along the line is 1 percent.

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[19] Readville Station is served by both the Fairmount Line and the Franklin Line. To avoid confusion, Readville data were counted as Fairmount Line data for all of the quantitative analyses for this memorandum.

[20] These totals exclude Readville Station (see the previous footnote).

Kingston/Plymouth Line

At the seven stations on the Kingston/Plymouth Line that have parking, no lot filled during the AM peak period. There are 3,120 parking spaces available for public use on this line, 44 percent of which were filled during the AM peak period. There are an additional 175 permit-parking spaces available at Kingston Station, and an additional 208 permit-parking spaces at Abington Station, which were at 85 percent and 45 percent utilization, respectively. There is no AM-peak-period train service at Plymouth, and 8 of the 92 available spaces at that station were utilized. There are 72 accessible parking spaces along the Kingston/Plymouth Line, of which 17 percent were utilized.

Middleborough/Lakeville Line

At the six stations on the Middleborough/Lakeville Line that have parking, no lot filled during the AM peak period. There are 2,833 parking spaces available for public use, and 44 percent filled during the AM peak period. There are no permit-only or resident-only parking spaces on the Middleborough/Lakeville Line. The parking lots along the Middleborough/Lakeville Line provide 65 accessible parking spaces. The utilization for the accessible parking spaces was 12 percent.

Needham Line[21]

There are 959 parking spaces available for public use, 65 percent of which filled during the AM peak period. Of the 8 stations on the Needham Line, Needham Junction Station was the closest to being full during the AM peak period, at 99 percent utilization. There are 34 accessible parking spaces along the Needham Line, 12 percent of which were utilized.

Providence/Stoughton Line[22]

There are a total of 8,366 parking spaces available for public use on the Providence/Stoughton Line, 61 percent of which filled during the AM peak period. An additional 1,192 parking spaces on the line are designated for resident-only parking; 81 percent of those were in use during the AM peak period.

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[21] Both Needham Center and Needham Heights stations were under construction at the time of observation. Neither station provided public parking at that time.

[22] There are an additional 533 overnight parking spaces provided at the Route 128 MBTA station. These spaces are provided to serve Amtrak riders. The utilization rate of these spaces was 97 percent. These spaces are not included in the analysis for this memorandum.

Since the last inventory, two stations were added to the Providence/Stoughton Line: T. F. Green Airport and Wickford Junction, in Rhode Island. These two stations have public garages that have 591 spaces and 1,077 spaces, respectively. T. F. Green Airport was 12 percent utilized and Wickford Junction was 6 percent utilized during the AM peak period. Of the 12 stations on the Providence/Stoughton Line that have parking, no lot filled completely during the AM peak period. However, the Mansfield, South Attleboro, and Providence stations were 99 percent, 90 percent, and 86 percent utilized during the AM peak period, respectively. There are 151 accessible parking spaces along the line, 30 percent of which were utilized.

3.2 Rapid Transit

Table 4 shows the percent of parking utilization by rapid transit line.

Blue Line

The Blue Line has six stations that provide parking. No lots filled during the AM peak period; only 65 percent of the 3,395 public parking spaces were in use by the end of the peak period. There is no permit-only parking on this line.

Green Line

The Green Line has 2,043 parking spaces, 56 percent of which were in use during the AM peak period. Six Green Line stations have parking, but only Eliot was observed to be filled during the AM peak period. There are 45 accessible parking spaces near Green Line stations; the utilization rate for those spaces was 11 percent.

Orange Line

Five stations on the Orange Line have public parking lots, none of which was filled to capacity during the AM peak period. However, public parking at Forest Hills and Oak Grove stations was 99 percent filled. Oak Grove also has 107 permit-only parking spaces, of which 70 spaces were in use. There are 81 permit-only spaces near Green Street Station, of which 48 spaces were in use. There are 85 accessible parking spaces along the Orange Line; 35 percent of those spaces were utilized.

Red Line and Mattapan High-Speed Line

The Red Line and Mattapan High-Speed Line together have nine stations with parking lots. Of the 8,397 parking spaces available for public use, 83 percent were filled during the AM peak period. Savin Hill Station was the only station on the Red Line that filled to capacity during the AM peak period. The parking lots

near the Red Line and Mattapan High-Speed Line provide 130 accessible parking spaces. The utilization of these spaces was 52 percent.

TABLE 4
Rapid Transit Parking Inventory and Percent Utilization at Park-and-Ride Lots near MBTA Stations, 2012–13

Rapid Transit Line	Number of Parking Spaces	Percent Utilization
Blue Line[a]	3,395	65%
Green Line	2,043	56%
Orange Line	5,052	73%
Red Line and Mattapan High-Speed Line	8,397	83%
Total	**18,887**	**74%**

[a] The parking lots near Wonderland Station were under construction at the time of the survey. Parking utilization and capacity may have been temporarily changed as a result.

3.3 Commuter Ferry

Quincy/Fore River, Hingham, and Hull are the three commuter ferry terminals with parking lots. Quincy/Fore River has 370 parking spaces, 21 percent of which were in use during the AM peak period. This parking lot is also available for overnight parking for Logan International Airport and Harbor Island users, and there are different parking rates for day and overnight users. Of the 1,979 parking spaces at the Hingham ferry terminal, 52 percent were in use during the morning peak period. There are 236 parking spaces at the Hull ferry terminal, 69 percent of which were in use during the peak period. The three commuter ferry terminals provide 49 accessible parking spaces, 20 percent were utilized during the AM peak period.

3.4 Express Bus

The express bus parking lots in Woburn, at Montvale Avenue, and at Watertown Yard were surveyed. The Montvale Avenue lot has 65 spaces, 100 percent of which filled during the AM peak period. The Watertown Yard parking lot has 194 spaces, 78 percent of which were utilized by the end of the AM peak period. There are a total of 9 accessible spaces at the Woburn and Watertown park-and-ride lots, 11 percent of which were utilized by the end of the AM peak period.

4 MAJOR REGIONAL PARK-AND-RIDE LOTS AND PARK-AND-RIDE LOTS AT TERMINAL STATIONS

4.1 Major Regional Park-and-Ride Lots

There are several parking garages and lots serving the MBTA system that are located strategically throughout the MBTA service area in order to attract a large number of users from many origin communities. For the purposes of this analysis, all major regional park-and-ride lots each contain at least 500 parking spaces. These facilities are typically located at the end of a commuter rail or transit line or near state or interstate highways or at major roadway interchanges, and generally have greater capacity than most other stations. Some examples are the facilities at Alewife and Quincy Adams stations, which have ramps from Route 2 and Route 3, respectively. Other stations with such facilities are Riverside and Route 128 stations, which are located directly off of Route 128/Interstate 95, and the Anderson Regional Transportation Center (RTC), which is located directly off of I-93.

These parking facilities are significant because, due to their convenient location and size, they serve many users, and they supply more than 65 percent of all of the parking spaces available at MBTA transportation facilities, including express bus lots and commuter ferry terminals. Table 5 lists the regional park-and-ride lots serving the MBTA system. Of these lots, the Forge Park and Anderson RTC lots experienced the biggest declines in utilization between the 2009–10 and 2012–13 inventories. South Attleboro, Canton Junction, Wollaston, and North Quincy stations all experienced parking lot utilization increases of more than 20 percent.

Table 5 does not include accessible parking. The totals also omit 282 permit-only parking spaces: 107 at Oak Grove and 175 at Kingston. Overall, 78 percent of these permit-only spaces were used during the morning peak period.

4.2 Park-and-Ride Lots at Terminal Stations

There are several terminal stations located throughout the MBTA system. For the purpose of this memorandum, the definition of a terminal station is an MBTA station, ferry terminal, or bus stop that has nearby public or private parking for MBTA commuters and is located on a transit line that terminates on-site. Terminal stations are often the locations where commuters switch their mode of travel from use of an automobile to public transportation; therefore, these stations offer vast amounts of parking. The commuter rail terminal stations are typically located in suburban locations or in medium-sized cities. Rapid transit terminal stations are all located in Boston, Cambridge, or inner-ring suburbs. The three ferry terminals are all located along the South Shore of Massachusetts. The bus terminal station is located in Watertown, which is just

west of Boston. Table 6 displays the size and utilization of the terminal station parking lots.

The utilization rate of terminal stations tends to vary by transit mode. Commuter rail terminal stations have a 41 percent overall utilization; however, the utilization is typically higher at terminal stations that are located in larger municipalities than at those in suburban areas. This may be due to the fact that the terminal stations that are located in larger municipalities usually have smaller parking lots.

The total utilization rate for terminal stations along rapid transit lines is 77 percent. However, the terminal stations along light rail lines (Mattapan Station and Riverside Station) have a significantly lower utilization rate than terminal stations along heavy rail lines, probably due to the lower ridership on light rail lines.

The total utilization rate for the ferry terminal stations is 49 percent. The ferry terminal stations consist of one location that has a large park-and-ride lot and two stations that have medium-sized park-and-ride lots. The Watertown yard bus terminal has a 78 percent utilization rate.

Some stations are designated as both a terminal station and a major regional park-and-ride lots, depending on the location along the transit line and the number of parking spaces located near the station.

TABLE 5
Major Regional Parking Garages and Lots near MBTA Stations:
2012–13 Capacity and Utilization

Station Name	Transit Line	Number of Parking Spaces	Percent Utilization
Worcester	Framingham/Worcester	500	62%
Ashland	Framingham/Worcester	652	37%
Forge Park	Franklin	703	53%
Norfolk	Franklin	520	63%
Walpole	Franklin	677	64%
Norwood Central	Franklin	792	56%
Greenbush	Greenbush	978	25%
Lawrence	Haverhill	815	70%
Kingston	Kingston/Plymouth	1,083	30%
South Weymouth	Kingston/Plymouth	531	56%
Lowell	Lowell	866	70%
North Billerica	Lowell	519	81%
Anderson/Woburn	Lowell	1,297	51%
Middleborough/Lakeville	Middleborough/Lakeville	761	45%
Campello	Middleborough/Lakeville	545	21%
Lynn	Newburyport/Rockport	940	21%
Wickford Junction	Providence/Stoughton	1,077	6%
T. F. Green	Providence/Stoughton	591	12%
Providence	Providence/Stoughton	695	86%
South Attleboro[a]	Providence/Stoughton	715	91%
Attleboro[a]	Providence/Stoughton	1,068	68%
Canton Junction	Providence/Stoughton	887	80%
Route 128	Providence/Stoughton	2,008	58%
Commuter rail total		*19,220*	*51%*
Wonderland[a]	Blue Line	2,326	66%
Woodland	Green Line	533	43%
Riverside	Green Line	948	42%
Oak Grove	Orange Line	760	99%
Malden	Orange Line	829	84%
Wellington	Orange Line	2,409	59%
Sullivan Square	Orange Line	570	57%
Alewife	Red Line	2,456	83%
North Quincy	Red Line	1,512	81%
Wollaston	Red Line	529	100%
Quincy Adams	Red Line	2,352	81%
Braintree	Red Line	1,244	95%
Rapid transit total		*16,468*	*74%*
Hingham	Ferry	1,979	52%
Ferry total		*1,979*	*52%*
All regional stations	**Grand total**	**37,667**	**61%**

[a] The station was under construction at the time of the survey.

TABLE 6
Terminal Station Garage and Parking Lots: 2012–13 Capacity and Utilization

Station Name	Transit Line	Number of Parking Spaces	Percent Utilization
Newburyport	Newburyport/Rockport	775	42%
Rockport	Newburyport/Rockport	140	66%
Haverhill	Haverhill	153	28%
Lowell	Lowell	866	70%
Fitchburg/South Acton	Fitchburg/South Acton	281	23%
Worcester	Framingham/Worcester	500	62%
Needham Heights[a]	Needham	80	60%
Forge Park	Franklin	703	53%
Readville	Fairmount	339	37%
Wickford Junction	Providence/Stoughton	1,077	6%
Stoughton	Providence/Stoughton	463	70%
Middleborough/Lakeville	Middleborough/Lakeville	761	45%
Kingston	Kingston/Plymouth	1,258	38%
Plymouth	Kingston/Plymouth	92	9%
Greenbush	Greenbush	978	25%
Commuter rail total		*8,466*	*41%*
Alewife	Red Line	2,456	83%
Braintree	Red Line	1,244	95%
Mattapan	Mattapan High-Speed Line	210	9%
Wonderland[a]	Blue Line	2,326	66%
Forest Hills	Orange Line	484	99%
Oak Grove	Orange Line	867	95%
Lechmere	Green Line	369	95%
Riverside	Green Line	948	42%
Rapid transit total		*8,904*	*77%*
Hingham	F1	1979	52%
Hull	F2H	236	69%
Quincy/Fore River	F2	370	21%
Ferry total		*2,585*	*49%*
Watertown Yard	52, 57, 59, 502, 504 Bus	194	78%
MBTA Bus total		*194*	*78%*
All terminal stations	**Grand total**	**20,149**	**58%**

[a] The station was under construction at the time of the survey.

5 INVENTORY RESULTS: AMENITIES

The tables in Appendix D summarize the amenities at MBTA stations that have parking lots. Information pertaining to accessible platforms and ramps, along with the absence or presence of benches, bicycle racks, and shelters, was collected as part of this inventory.

5.1 Accessible Platforms

Of the 116 commuter rail stations inventoried, 87 have fully raised or “mini-high,” accessible platforms. All of the stations included in this inventory on the Middleborough/Lakeville, Plymouth/Kingston, Fairmount, Greenbush, and Needham lines now have accessible platforms.

Of the 28 rapid transit stations inventoried, 25 have accessible platforms, including all of the stations on the Red, Orange, and Blue lines. Three of the inventoried Green Line stations still lack accessible platforms. All three ferry terminals have accessible platforms. All of the express bus lots have accessible sidewalk ramps, and all of the buses are low-level, kneeling buses. Table 7 lists the stations that lack accessible platforms.

TABLE 7
Stations without Accessible Platforms:
2012–13 Inventory

Station Name	Transit Line	Transit Mode
Ayer	Fitchburg/South Acton Line	Commuter Rail
Belmont	Fitchburg/South Acton Line	Commuter Rail
Concord	Fitchburg/South Acton Line	Commuter Rail
Hastings	Fitchburg/South Acton Line	Commuter Rail
Kendal Green	Fitchburg/South Acton Line	Commuter Rail
Lincoln	Fitchburg/South Acton Line	Commuter Rail
Shirley	Fitchburg/South Acton Line	Commuter Rail
Silver Hill	Fitchburg/South Acton Line	Commuter Rail
Auburndale	Framingham/Worcester Line	Commuter Rail
Natick	Framingham/Worcester Line	Commuter Rail
Newtonville	Framingham/Worcester Line	Commuter Rail
Wellesley Farms	Framingham/Worcester Line	Commuter Rail
Wellesley Hills	Framingham/Worcester Line	Commuter Rail
Wellesley Square	Framingham/Worcester Line	Commuter Rail
West Newton	Framingham/Worcester Line	Commuter Rail
Endicott	Franklin Line	Commuter Rail
Franklin	Franklin Line	Commuter Rail
Islington	Franklin Line	Commuter Rail
Plimptonville	Franklin Line	Commuter Rail
Walpole	Franklin Line	Commuter Rail
Greenwood	Haverhill Line	Commuter Rail
Melrose Cedar Park	Haverhill Line	Commuter Rail
Wakefield	Haverhill Line	Commuter Rail
Wyoming Hill	Haverhill Line	Commuter Rail
West Medford	Lowell Line	Commuter Rail
Winchester	Lowell Line	Commuter Rail
Prides Crossing	Newburyport/Rockport Line	Commuter Rail
Sharon	Providence/Stoughton Line	Commuter Rail
Chestnut Hill	Green Line	Rapid Transit
Eliot	Green Line	Rapid Transit
Waban	Green Line	Rapid Transit

5.2 Accessible Parking

Accessible parking spaces are defined in this memorandum as parking spaces that are specifically designated to provide persons with disabilities better access to MBTA facilities by automobile. These parking spaces can be

identified by surveyors from signs, which include the international symbol of accessibility. A special permit needs to be obtained before a commuter can park in an accessible parking space. Of the MBTA stations that were surveyed for the 2012–13 inventory, 88 percent provided at least one public accessible parking space. At the time of the 2012–13 survey, 1,214 accessible parking spaces were located near MBTA stations, with 21 percent of those spaces utilized. The utilization rate for accessible parking spaces has increased 1 percent since the 2009–10 inventory, despite a 6 percent increase in accessible parking capacity. Rapid transit has nearly double the utilization rate of all other modes, at 39 percent in the 2012–13 inventory. Table 8 shows the utilization rates of accessible parking spaces, by transit line.

TABLE 8
Accessible Parking near MBTA Stations by Transit Line: 2012–13 Capacity and Utilization

Transit Line	Accessible Parking Spaces	Accessible Parking Space Utilization
Fairmount	21	19%
Fitchburg/South Acton [a]	44	14%
Framingham/Worcester	89	11%
Franklin	66	9%
Greenbush	76	1%
Haverhill	49	4%
Kingston/Plymouth	72	17%
Lowell[a]	59	24%
Middleborough/Lakeville	65	12%
Needham[a]	34	12%
Newburyport/Rockport[a]	106	10%
Providence/Stoughton[a]	151	30%
Commuter rail total	*832*	*15%*
Blue Line[a]	64	39%
Green Line	45	11%
Orange Line	85	35%
Red Line	130	52%
Rapid transit total	*324*	*39%*
Commuter Ferry total	*49*	*20%*
Bus total	*9*	*11%*
Total accessible spaces	**1,214**	**21%**

[a] Parking lots near the North Leominster, Littleton, Wedgemere, Beverly Depot, Needham Center, Needham Heights, Attleboro, South Attleboro and Wonderland stations were under construction at the time of the survey. The parking utilization and parking capacity may have been temporarily affected as a result.

5.3 Permit-Only and Resident-Only Parking

Some commuter rail and rapid transit stations have permit-only or resident-only parking located nearby. Permit-only and resident-only parking are generally restricted to commuters who either purchase a permit for a certain period of time (for example, yearly or monthly) or commuters who are a residents of the local municipality in which the MBTA station is located. Since the purpose of this memorandum is to show the parking utilization rates for the general public, permit-only and resident-only parking are not included in the analysis, with the exception of this section.

Table 9 displays the locations of the permit-only and resident-only parking lots near MBTA stations. In the 2012–13 inventory, there were 3,121 permitted or resident-only parking spaces near MBTA stations; 2,933 parking spaces near commuter rail stations, and 188 parking spaces near rapid transit stations. Permit parking along the Franklin, Haverhill, Lowell, and Newburyport/Rockport commuter rail lines has the highest rates of permit-parking utilization.

TABLE 9
Permit-Only and Resident-Only Parking Spaces near MBTA Stations: 2012–13 Capacity and Utilization

Station Name	Transit Line	Permit-Only, Resident-Only Parking Spaces	Permit-Only, Resident-Only Parking Space Utilization
Lincoln	Fitchburg/South Acton	46	63%
South Acton	Fitchburg/South Acton	320	78%
Waltham	Fitchburg/South Acton	45	93%
West Concord	Fitchburg/South Acton	41	100%
Framingham	Framingham/Worcester	119	57%
Natick	Framingham/Worcester	139	80%
Franklin	Franklin	60	98%
Bradford	Haverhill	13	69%
Reading	Haverhill	260	88%
Abington	Kingston/Plymouth	208	45%
Kingston	Kingston/Plymouth	175	86%
Wedgemere[a]	Lowell	91	100%
West Medford	Lowell	47	100%
Winchester	Lowell	159	80%
Swampscott	Newburyport/Rockport	18	100%
Mansfield	Providence/Stoughton	620	90%
Sharon	Providence/Stoughton	503	78%
Stoughton	Providence/Stoughton	69	36%
Commuter rail total		*2,933*	*80%*
Green Street	Orange Line	81	59%
Oak Grove	Orange Line	107	65%
Rapid transit total		*188*	*63%*
Total permit parking spaces		**3,121**	**79%**

[a] Parking lots near the Wedgemere station were under construction at the time of the survey. The parking utilization and parking capacity may have been temporarily affected as a result.

5.4 Bicycle Racks and Cages

This discussion of bicycle parking is based on the data collected on the bicycle parking facilities' capacity and utilization that were recorded for all MBTA stations in the period July through October 2012, and an earlier inventory, which was conducted in 2009–11.[23] The inventory included 134 rapid transit stations, 122 commuter rail stations, six commuter ferry terminals, and three major bus stops. Of the 265 stations included in the bicycle survey inventory, 86 percent have bicycle racks. This includes 105 of the 134 commuter rail stations, 117 of the 122 rapid transit stations, four of the six ferry terminals, and two of the three major bus stops. Using federal stimulus funds, the MBTA installed 50 bicycle ports near MBTA stations, and by the end of 2014, the MBTA is expected to have installed 15 bicycle cages near MBTA stations. The MBTA stations that either currently have, or will have, bike ports or bicycle cages are listed in Appendix D.

The station with the highest bike parking capacity is Alewife, with 387 spaces. Between the previous bicycle parking inventory, which was conducted in 2009–11, and the 2012 bicycle parking inventory, there was a 48 percent increase in the number of parked bicycles and a 30 percent increase in the number of bicycle parking spaces. Table 10 shows the percentages of bicycle rack utilization by mode and line throughout the system. Figures B-3 and B-4, in Appendix B, are maps of the bicycle parking capacity and utilization by station.

[23] Boston Region Metropolitan Planning Organization, memorandum titled ”2012 Inventory of Bicycle Parking Spaces and Number of Parked Bicycles at MBTA Stations,” April 3, 2014.

Table 10
Bicycle Parking Capacity and Utilization at Park-and-Ride Stations near MBTA Stations, 2012

Transit Line	Bicycle Parking Spaces	Percent Utilization
Fairmount	84	1%
Fitchburg/South Acton	260	35%
Framingham/Worcester	272	27%
Franklin	162	15%
Greenbush	109	23%
Haverhill Line	244	15%
Kingston/Plymouth	84	23%
Lowell	137	45%
Middleborough/Lakeville	81	15%
Needham	104	15%
Newburyport/Rockport	272	33%
Providence/Stoughton	309	26%
Commuter rail total	*2,076*	*25%*
Blue Line	409	22%
Green Line	870	43%
Orange Line	941	40%
Red Line	1,553	65%
Mattapan High-Speed Line	90	6%
Silver Line - Washington Street	125	30%
Silver Line - Waterfront	230	33%
Rapid transit total	*3,929*	*47%*
Ferry total	*70*	*14%*
Bus total	*16*	*75%*
Grand total	**6,091**	**39%**

Note: Bicycles and racks are counted more than once at stations that serve more than one transit line. In those cases, each bicycle and each rack is counted once for each line. However, in each of the totals for that station, these spaces are counted only once.

5.5 Shelters

Most of the stations with park-and-ride lots have shelters. In this inventory, a shelter is defined as any structure that provides some protection from the weather. The structure could be just a roof over the platform, a completely enclosed station, or a stand-alone structure with a roof and walls. Lincoln, Hastings, and Plimptonville are the stations on commuter rail lines that do not have a shelter. All rapid transit stations, parking lots for MBTA bus service, and ferry terminals that were surveyed have shelters on the inbound side, and some of them have shelters on the outbound side.

6 CONCLUSION

In summary, the analysis of the park-and-ride inventory suggests the following conclusions.

6.1 General Conclusions

Overall, the park-and-ride system capacity has increased by 1,846 spaces since the previous inventory. The breakdown by transit mode is: commuter rail park-and-ride lots increased by 1,860 spaces, rapid transit park-and-ride lots decreased by 207 spaces, and commuter ferry park-and-ride lots increased by 9 spaces.

Although more spaces were added since the 2009–10 inventory, more park-and-ride lots at MBTA stations were filled in the 2012–13 inventory than in the 2009–10 inventory. This is consistent with a nationwide trend of more commuters traveling by public transportation.

In the 2012–13 inventory, 22 percent of the stations surveyed had parking lots that filled to 85 percent or more of their capacity. Park-and-ride lots at 30 percent of the stations surveyed were less than half utilized at the end of the AM peak period. Of the 33 lots that filled to 85 percent or more of their capacity, 25 were smaller lots (with 250 spaces or fewer); by contrast, larger lots (with 1,000 spaces or more) were 61 percent utilized, on average.

6.2 Commuter Rail

Overall, commuter rail utilization remained essentially stable despite the construction of spaces at two new stations. However, the data also showed that utilization declined at certain stations, notably Anderson/Woburn and Forge Park/495.

Generally, commuter rail parking utilization was the greatest at MBTA stations inside of I-95/Route 128 and along major expressway corridors.

There is at least one station on every MBTA commuter rail line where 45 percent or more of the parking is available on a typical weekday morning.

Major commuter garages and facilities, which are located near major highways, provide more than 65 percent of the MBTA system’s parking capacity. There are several major regional park-and-ride lots at commuter rail stations that experienced significant increases or decreases in parking utilization between the two most recent inventories.

6.3 Rapid Transit

Rapid transit park-and-ride utilization has increased significantly since the 2009–10 inventory, largely due to the removal of parking spaces since then.

The Red Line currently has the highest parking utilization rate of all of the rapid transit lines, at 83 percent, which is an increase of 19 percent since the 2009–10 inventory. The high utilization of park-and-ride lots along the southern portion of the Red Line was due in part, to the closing of the Quincy Center parking garage.

6.4 Commuter Ferry

Commuter ferry park-and-ride utilization decreased significantly between the 2009–10 inventory and the 2012–13 inventory. This decrease was likely caused by a number of factors, including the 2012 fare increase and the fact that the Greenbush Line, which was implemented in 2007, is a viable alternative for commuting to downtown Boston; it continues to attract riders from the South Shore region.

6.5 Express Bus

The park-and-ride lot at Montvale Avenue, in Woburn, was found to have 100 percent utilization in the 2012–13 inventory. This is an increase from the 93 percent utilization rate that was recorded in the 2009–10 inventory.

6.6 Major Regional Park-and-Ride Lots

The Forge Park and Anderson/Woburn parking lots experienced the biggest declines in utilization from the 2009–10 inventory to the 2012–13 inventory, with decreases of 32 percent and 33 percent, respectively.

The South Attleboro and Canton Junction commuter rail stations experienced parking lot utilization increases of more than 20 percent. South Attleboro experienced a large increase in the number of parked vehicles despite a temporary reduction in parking spaces due to construction.

The Wollaston and North Quincy rapid transit stations experienced parking lot utilization increases of more than 20 percent. The increase in utilization at these stations may have been caused by the closing of the parking garage at Quincy Center Station.

6.7 Terminal Stations

The total utilization rate for the commuter rail terminal stations that are located in municipalities that have a population of more than 40,000 people is 52 percent. The total utilization rate for the commuter rail terminal stations that are located in municipalities that have a population of less than 40,000 people is 37 percent. One of the causes of the differences in utilization rates is that the terminal stations in larger municipalities typically have fewer parking spaces.

The total utilization rate for terminal stations located along heavy rail lines is 82 percent. The total utilization rate for terminal stations located along light rail lines is 50 percent, even though those terminal stations generally have smaller parking lots than heavy rail lines. They probably have lower utilization rates because they have a significantly lower number of daily boardings than do the heavy rail terminal stations.

6.8 Amenities Conclusions

The overall utilization of accessible parking spaces has increased since the 2009–10 inventory. The Red Line has the highest utilization rate for accessible parking spaces, at 52 percent.

Permit-only and resident-only parking that is located along the Franklin, Haverhill, Lowell, and Newburyport/Rockport lines have the highest parking utilization. All four of these lines have a permit-only and resident-only parking utilization of 85 percent or higher.

The number of bicycles parked, parking capacity, and utilization rates at MBTA stations increased between the 2009–11 bicycle parking inventory and the 2012 bicycle parking inventory. Since the 2005–06 inventory, 62 MBTA stations that previously did not provide bicycle parking had bicycle racks installed.

RH/rh

APPENDIX SECTIONS

Appendix Section	Section Name
Appendix A:	Parking Utilization: Comprehensive Results of Inventory
Appendix B:	Park-and Ride and Bicycle Parking Maps
Appendix C:	Park-and-Ride Lot Survey Form: Fall 2012/Winter 2013
Appendix D:	Amenities: Comprehensive Results of Inventory
Appendix E:	Comparison of 2012–13 Inventory Results with 2005–06 and 2009–10 Inventory Results, by Mode
Appendix F:	MBTA Fare Increase –State Fiscal Year 2013

APPENDIX A

PARKING UTILIZATION: COMPREHENSIVE RESULTS OF 2012–13 INVENTORY

TABLE A.1
North Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Ayer	Fitchburg/South Acton	Town	52	18	35%	9/27/2012	$0.00
Belmont	Fitchburg/South Acton	Town	151	63	42%	11/30/2012	$3.00
Brandeis/Roberts	Fitchburg/South Acton	MBTA	65	13	20%	11/27/2012	$4.00
Concord	Fitchburg/South Acton	Private	56	48	86%	4/9/2013	$0.00
Concord	Fitchburg/South Acton	Town	62	60	97%	4/9/2013	$0.00
Fitchburg	Fitchburg/South Acton	MART	281	65	23%	11/7/2012	$3.00
Hastings	Fitchburg/South Acton	Town	8	3	38%	2/26/2013	$0.00
Kendal Green	Fitchburg/South Acton	Town	52	52	100%	2/26/2013	$0.00
Lincoln	Fitchburg/South Acton	Private	15	9	60%	3/1/2013	$0.00
Lincoln	Fitchburg/South Acton	Town	146	95	65%	3/1/2013	$3.00
Littleton[a]	Fitchburg/South Acton	MBTA	52	41	79%	11/8/2012	$4.00
North Leominster[b]	Fitchburg/South Acton	MART	0	0	0%	11/7/2012	$3.00
Shirley	Fitchburg/South Acton	Town	164	118	72%	9/27/2012	$0.00
Silver Hill	Fitchburg/South Acton	Town	6	2	33%	2/26/2013	$0.00
South Acton	Fitchburg/South Acton	Town	428	357	83%	4/10/2013	$2.50
Waltham	Fitchburg/South Acton	Town	93	89	96%	11/27/2012	$2.00
West Concord	Fitchburg/South Acton	Town	186	151	81%	4/9/2013	$4.00
Andover	Haverhill	MBTA	146	87	60%	4/3/2013	$4.00
Ballardvale	Haverhill	MBTA	112	80	71%	3/5/2013	$4.00

(Cont.)

[a] Littleton was under construction at the time of the survey. This parking lot is estimated to have 200 spaces upon completion

[b] North Leominster was under construction at the time of survey. Upon completion, this station will have a 350 space parking facility nearby.

MART = Montachusett Regional Transit Authority

MVRTA = Merrimack Valley Regional Transit Authority

LRTA = Lowell Regional Transit Authority

TABLE A.1 (CONT.)
North-Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Bradford	Haverhill	MBTA	295	48	16%	4/2/2013	$4.00
Bradford	Haverhill	Private	13	9	69%	4/2/2013	$0.00
Greenwood	Haverhill	Private	6	6	100%	3/6/2013	$0.00
Greenwood	Haverhill	Town	76	33	43%	3/6/2013	$2.00
Haverhill	Haverhill	MBTA	153	43	28%	4/2/2013	$4.00
Lawrence	Haverhill	MVRTA	815	570	70%	4/3/2013	$3.50
Melrose Cedar Park	Haverhill	Town	56	33	59%	3/12/2013	$3.00
Melrose Highlands	Haverhill	On-street	23	6	26%	3/12/2013	$3.00
Melrose Highlands	Haverhill	Town	65	48	74%	3/12/2013	$3.00
North Wilmington	Haverhill	Town	50	50	100%	2/28/2013	$0.00
Reading	Haverhill	MBTA	112	76	68%	3/5/2013	$4.00
Reading	Haverhill	Town	260	230	88%	3/6/2013	$0.00
Wakefield	Haverhill	MBTA	125	85	68%	3/6/2013	$4.00
Wyoming Hill	Haverhill	Town	27	19	70%	3/12/2013	$3.00
Anderson/Woburn	Lowell	MBTA	1,297	664	51%	4/2/2013	$4.00
Lowell	Lowell	LRTA	866	604	70%	5/22/2013	$5.00
North Billerica	Lowell	LRTA	519	420	81%	12/11/2012	$4.00
Wedgemere[c]	Lowell	Town	91	91	100%	4/5/2013	$0.00
Wedgemere	Lowell	On-street	31	31	100%	4/5/2013	$0.00

[c] Parking Lot near Wedgemere was under construction at the time of survey. The lot has since fully reopened.

(Cont.)

TABLE A.1 (CONT.)
North Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
West Medford	Lowell	MBTA	20	20	100%	5/9/2013	$0.00
West Medford	Lowell	Town	47	47	100%	5/9/2013	$0.00
Wilmington	Lowell	MBTA	191	184	96%	12/11/2012	$4.00
Winchester	Lowell	Town	159	127	80%	3/15/2013	$0.00
Beverly Depot[d]	Newburyport/Rockport	MBTA	40	40	100%	11/15/2012	$0.00
Beverly Farms	Newburyport/Rockport	Town	56	42	75%	3/26/2013	$0.00
Gloucester	Newburyport/Rockport	MBTA	96	25	26%	3/28/2013	$4.00
Hamilton/Wenham	Newburyport/Rockport	MBTA	188	77	41%	11/15/2012	$4.00
Ipswich	Newburyport/Rockport	On-street	22	22	100%	11/13/2012	$0.00
Ipswich	Newburyport/Rockport	Town	128	102	80%	11/13/2012	$0.00
Lynn	Newburyport/Rockport	MBTA	940	199	21%	4/2/2013	$4.00
Manchester	Newburyport/Rockport	Town	65	64	98%	3/27/2013	$0.00
Montserrat	Newburyport/Rockport	MBTA	110	78	71%	3/26/2013	$4.00
Newburyport	Newburyport/Rockport	MBTA	775	325	42%	11/13/2012	$4.00
North Beverly	Newburyport/Rockport	MBTA	82	57	70%	11/9/2012	$4.00
Prides Crossing	Newburyport/Rockport	Town	7	4	57%	3/27/2013	$0.00
Rockport	Newburyport/Rockport	Town	140	92	66%	11/16/2013	$0.00
Rowley	Newburyport/Rockport	MBTA	274	52	19%	11/13/2012	$4.00
Salem	Newburyport/Rockport	MBTA	329	221	67%	4/3/2013	$4.00

[d] It is estimated that approximately 500 parking spaces will be located near Beverly Depot when construction is complete.

(Cont.)

TABLE A.1 (CONT.)
North Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Salem	Newburyport/Rockport	Town	120	106	88%	4/3/2013	$4.00
Swampscott	Newburyport/Rockport	MBTA	125	112	90%	4/3/2013	$4.00
Swampscott	Newburyport/Rockport	Town	18	18	100%	4/3/2013	$0.00
West Gloucester	Newburyport/Rockport	MBTA	42	9	21%	3/28/2013	$4.00

TABLE A.2
South Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Fairmount	Fairmount	MBTA	48	8	17%	5/22/2013	$4.00
Morton Street	Fairmount	MBTA	0	0	0%	9/20/2012	$0.00
Readville	Fairmount	MBTA	339	127	37%	11/27/2012	$4.00
Ashland	Framingham/Worcester	MBTA	652	241	37%	5/9/2013	$4.00
Auburndale	Framingham/Worcester	MBTA	33	30	91%	12/5/2012	$4.00
Auburndale	Framingham/Worcester	On-street	35	21	60%	12/5/2012	$0.00
Framingham	Framingham/Worcester	MBTA	155	152	98%	5/2/2013	$4.00
Framingham	Framingham/Worcester	Private	130	78	60%	5/2/2013	$4.00
Framingham	Framingham/Worcester	Town	67	34	51%	5/2/2013	$0.00
Grafton	Framingham/Worcester	MBTA	366	158	43%	6/21/2013	$4.00
Natick	Framingham/Worcester	Town	139	111	80%	2/28/2013	$0.00
Newtonville	Framingham/Worcester	On-street	34	20	59%	12/6/2012	$7.50
Newtonville	Framingham/Worcester	Town	53	43	81%	12/6/2012	$7.50
Southborough	Framingham/Worcester	MBTA	362	293	81%	3/26/2013	$4.00
Wellesley Farms	Framingham/Worcester	Town	188	148	79%	12/4/2012	$4.50
Wellesley Hills	Framingham/Worcester	Town	71	71	100%	12/4/2012	$4.50
Wellesley Square	Framingham/Worcester	Town	218	193	89%	12/4/2012	$4.50
West Natick	Framingham/Worcester	MBTA	170	169	99%	2/28/2013	$4.00
West Newton	Framingham/Worcester	MBTA	200	51	26%	12/5/2012	$4.00

BAT = Brockton Area Transit Authority

GATRA = Greater Attleboro Taunton Regional Transit Authority

(Cont.)

TABLE A.2 (CONT.)
South Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Westborough	Framingham/Worcester	MBTA	443	305	69%	5/2/2013	$4.00
Worcester	Framingham/Worcester	MBTA	115	100	87%	4/2/2013	$3.00
Worcester	Framingham/Worcester	Town	385	208	54%	4/2/2013	$8.25
Dedham Corp Center	Franklin	MBTA	486	141	29%	11/27/2012	$4.00
Endicott	Franklin	Town	51	48	94%	3/15/2013	$0.00
Forge Park	Franklin	MBTA	703	376	53%	4/5/2013	$4.00
Franklin	Franklin	MBTA	180	180	100%	9/20/2012	$4.00
Franklin	Franklin	Town	60	59	98%	9/20/2012	$0.00
Islington	Franklin	MBTA	35	20	57%	3/26/2013	$4.00
Norfolk	Franklin	MBTA	520	326	63%	11/27/2012	$4.00
Norwood Central	Franklin	MBTA	68	67	99%	11/15/2012	$4.00
Norwood Central	Franklin	Private	724	377	52%	11/15/2012	$4.00
Norwood Depot	Franklin	MBTA	214	82	38%	6/21/2013	$4.00
Plimptonville	Franklin	MBTA	5	5	100%	2/26/2013	$0.00
Walpole	Franklin	MBTA	343	136	40%	11/15/2012	$4.00
Walpole	Franklin	Private	334	295	88%	11/15/2012	$4.00
Cohasset	Greenbush	MBTA	394	191	48%	4/9/2013	$4.00
East Weymouth	Greenbush	MBTA	324	259	80%	3/27/2013	$4.00

(Cont.)

TABLE A.2 (CONT.)
South Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Greenbush	Greenbush	MBTA	978	247	25%	4/9/2013	$4.00
Nantasket Junction	Greenbush	MBTA	492	102	21%	3/27/2013	$4.00
North Scituate	Greenbush	MBTA	242	160	66%	4/9/2013	$4.00
West Hingham	Greenbush	MBTA	224	175	78%	3/27/2013	$4.00
Weymouth Landing	Greenbush	MBTA	277	164	59%	3/27/2013	$4.00
Abington	Kingston/Plymouth	MBTA	396	219	55%	5/7/2013	$4.00
Abington	Kingston/Plymouth	Private	208	94	45%	5/7/2013	$0.00
Halifax	Kingston/Plymouth	MBTA	398	188	47%	5/9/2013	$4.00
Hanson	Kingston/Plymouth	MBTA	428	211	49%	5/9/2013	$4.00
Kingston	Kingston/Plymouth	MBTA	1,083	328	30%	5/10/2013	$4.00
Kingston	Kingston/Plymouth	Private	175	150	86%	5/10/2013	$50.00
Plymouth	Kingston/Plymouth	MBTA	92	8	9%	5/10/2013	$4.00
South Weymouth	Kingston/Plymouth	MBTA	531	296	56%	5/7/2013	$4.00
Whitman	Kingston/Plymouth	MBTA	192	132	69%	5/9/2013	$4.00
Bridgewater	Middleborough/Lakeville	MBTA	492	370	75%	9/20/2012	$4.00
Brockton	Middleborough/Lakeville	BAT	227	127	56%	3/28/2013	$3.00
Campello	Middleborough/Lakeville	MBTA	545	117	21%	4/3/2013	$4.00
Holbrook/Randolph	Middleborough/Lakeville	MBTA	396	179	45%	3/22/2013	$4.00

(Cont.)

TABLE A.2 (CONT.)
South Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Middleborough/Lakeville	Middleborough/Lakeville	MBTA	761	339	45%	11/9/2012	$4.00
Montello	Middleborough/Lakeville	MBTA	412	122	30%	4/3/2013	$4.00
Bellevue	Needham	MBTA	35	16	46%	9/26/2012	$4.00
Hersey	Needham	MBTA	309	243	79%	3/14/2013	$4.00
Highland	Needham	MBTA	169	59	35%	9/26/2012	$4.00
Needham Center[a]	Needham	Town	0	0	0%	4/30/2014	$4.00
Needham Heights[b]	Needham	MBTA	80	48	60%	4/30/2013	$4.00
Needham Junction	Needham	MBTA	171	170	99%	3/13/2013	$4.00
Roslindale Village	Needham	MBTA	135	66	49%	9/26/2012	$4.00
West Roxbury	Needham	MBTA	60	20	33%	9/26/2012	$4.00
Attleboro[c]	Providence/Stoughton	GATRA	781	511	65%	5/16/2013	$4.00
Attleboro	Providence/Stoughton	Private	287	212	74%	5/16/2013	$3.00
Canton Center	Providence/Stoughton	MBTA	211	153	73%	11/7/2012	$4.00
Canton Junction	Providence/Stoughton	MBTA	734	566	77%	11/7/2012	$4.00
Canton Junction	Providence/Stoughton	Private	153	143	93%	11/7/2012	$4.00
Hyde Park	Providence/Stoughton	MBTA	117	78	67%	3/26/2013	$4.00
Mansfield	Providence/Stoughton	MBTA	365	362	99%	2/26/2013	$4.00
Mansfield	Providence/Stoughton	Private	396	350	88%	2/26/2013	$0.00

(Cont.)

[a] The parking lots near Needham Center were under construction at the time of survey.

[b] The parking lots near Needham Heights were under construction at the time of survey

[c] The MBTA parking lot near Attleboro Station was under construction at the time of survey. The MBTA lot on South Main Street will be restriped in the near future.

TABLE A.2 (CONT.)
South Side Commuter Rail: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Commuter Rail Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Mansfield	Providence/Stoughton	Town	224	205	92%	2/26/2013	$0.00
Providence	Providence/Stoughton	Private	695	600	86%	3/28/2013	$16.00
Route 128	Providence/Stoughton	MBTA	2,008	1,163	58%	6/20/2013	$7.00
Sharon	Providence/Stoughton	Town	741	591	80%	3/22/2013	$4.00
South Attleboro[d]	Providence/Stoughton	MBTA	554	554	100%	4/4/2013	$4.00
South Attleboro[d]	Providence/Stoughton	Private	161	95	59%	4/4/2013	$3.00
Stoughton	Providence/Stoughton	MBTA	463	325	70%	11/7/2012	$4.00
T. F. Green	Providence/Stoughton	Private	591	70	12%	4/3/2013	$6.75
Wickford Junction	Providence/Stoughton	Private	1,077	61	6%	4/4/2013	$4.00

[d] The private parking lot near South Attleboro Station was under construction and was completely closed at the time of the survey.

(Cont.)

TABLE A.3
Rapid Transit: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Rapid Transit Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Beachmont	Blue Line	MBTA	425	243	57%	10/5/2012	$5.00
Maverick	Blue Line	Private	21	18	86%	10/5/2012	$7.00
Orient Heights	Blue Line	MBTA	396	252	64%	10/5/2012	$5.00
Suffolk Downs	Blue Line	MBTA	106	69	65%	10/5/2012	$5.00
Wonderland[a]	Blue Line	Private	2,326	1,541	66%	10/1/2012	$5.00
Wood Island	Blue Line	Private	121	90	74%	3/14/2013	$5.00
Chestnut Hill	Green Line	MBTA	69	65	94%	3/13/2013	$6.00
Eliot	Green Line	MBTA	53	53	100%	3/13/2013	$6.00
Lechmere	Green Line	MBTA	369	349	95%	3/12/2013	$6.00
Riverside	Green Line	MBTA	948	395	42%	3/6/2013	$6.00
Waban	Green Line	MBTA	71	62	87%	3/6/2013	$6.00
Woodland	Green Line	MBTA	533	227	43%	2/13/2013	$6.00
Forest Hills	Orange Line	MBTA	203	200	99%	1/30/2013	$6.00
Forest Hills	Orange Line	Private	281	278	99%	1/30/2013	$6.00
Green Street	Orange Line	Private	45	23	51%	3/5/2013	$70.00
Green Street	Orange Line	Town	36	25	69%	3/5/2013	$0.00
Malden	Orange Line	MBTA	188	182	97%	2/14/2013	$6.00
Malden	Orange Line	Private	641	515	80%	2/14/2013	$6.00
Oak Grove	Orange Line	MBTA	795	773	97%	3/12/2013	$6.00
Oak Grove	Orange Line	Private	72	47	65%	3/12/2013	$0.00

[a] The parking lots near Wonderland Station were under construction at the time of the survey.

(Cont.)

TABLE A.3 (CONT.)
Rapid Transit: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Rapid Transit Line	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Sullivan Square	Orange Line	MBTA	228	206	90%	2/14/2013	$6.00
Sullivan Square	Orange Line	Private	342	117	34%	2/14/2013	$5.00
Wellington	Orange Line	MBTA	1,295	1,010	78%	6/12/2013	$6.00
Wellington	Orange Line	Private	1,114	411	37%	6/12/2013	$5.00
Alewife	Red Line	MBTA	2,456	2,037	83%	5/7/2013	$7.00
Braintree	Red Line	MBTA	1,244	1,185	95%	11/2/2012	$7.00
Butler	Red Line	MBTA	45	5	11%	9/21/2012	$4.00
Mattapan	Red Line	MBTA	210	19	9%	9/21/2012	$4.00
Milton	Red Line	MBTA	31	30	97%	9/21/2012	$4.00
North Quincy	Red Line	MBTA	1,512	1,224	81%	11/01/2012	$5.00
Quincy Adams	Red Line	MBTA	2,352	1,911	81%	5/1/2013	$7.00
Quincy Center[b]	Red Line	MBTA	0	0	0%	11/1/2012	$0.00
Savin Hill	Red Line	MBTA	18	18	100%	9/25/2012	$5.00
Wollaston	Red Line	MBTA	529	528	100%	11/2/2012	$5.00

[b] The parking garage near Quincy Center Station was closed at the time of the survey.

TABLE A.4
Commuter Ferry and Express Bus: Inventory of MBTA Park-and-Ride Lots, Nonaccessible Spaces, 2012–13

Station	Transit Mode	Lot Ownership	Parking Spaces	Occupied Parking Spaces at Time of Last AM-Peak-Period Inbound Train	Percent Parking Space Utilization	Date of Observation	Parking Fee
Watertown Yard	Bus	MBTA	194	152	78%	5/1/2013	$5.00
At Montvale Avenue	Bus	Town	65	65	100%	5/1/2013	$0.00
Hingham	Ferry	MBTA	1,692	771	46%	6/20/2013	$4.00
Hingham	Ferry	Private	287	255	89%	6/20/2013	$4.00
Hull	Ferry	On-street	26	23	88%	9/18/2012	$0.00
Hull	Ferry	Private	75	4	5%	9/18/2012	$0.00
Hull	Ferry	Town	135	135	100%	9/18/2012	$0.00
Quincy/Fore River	Ferry	MBTA	370	76	21%	6/21/2013	$4.00

APPENDIX B

MAPS OF PARK-AND-RIDE LOTS AND BICYCLE PARKING

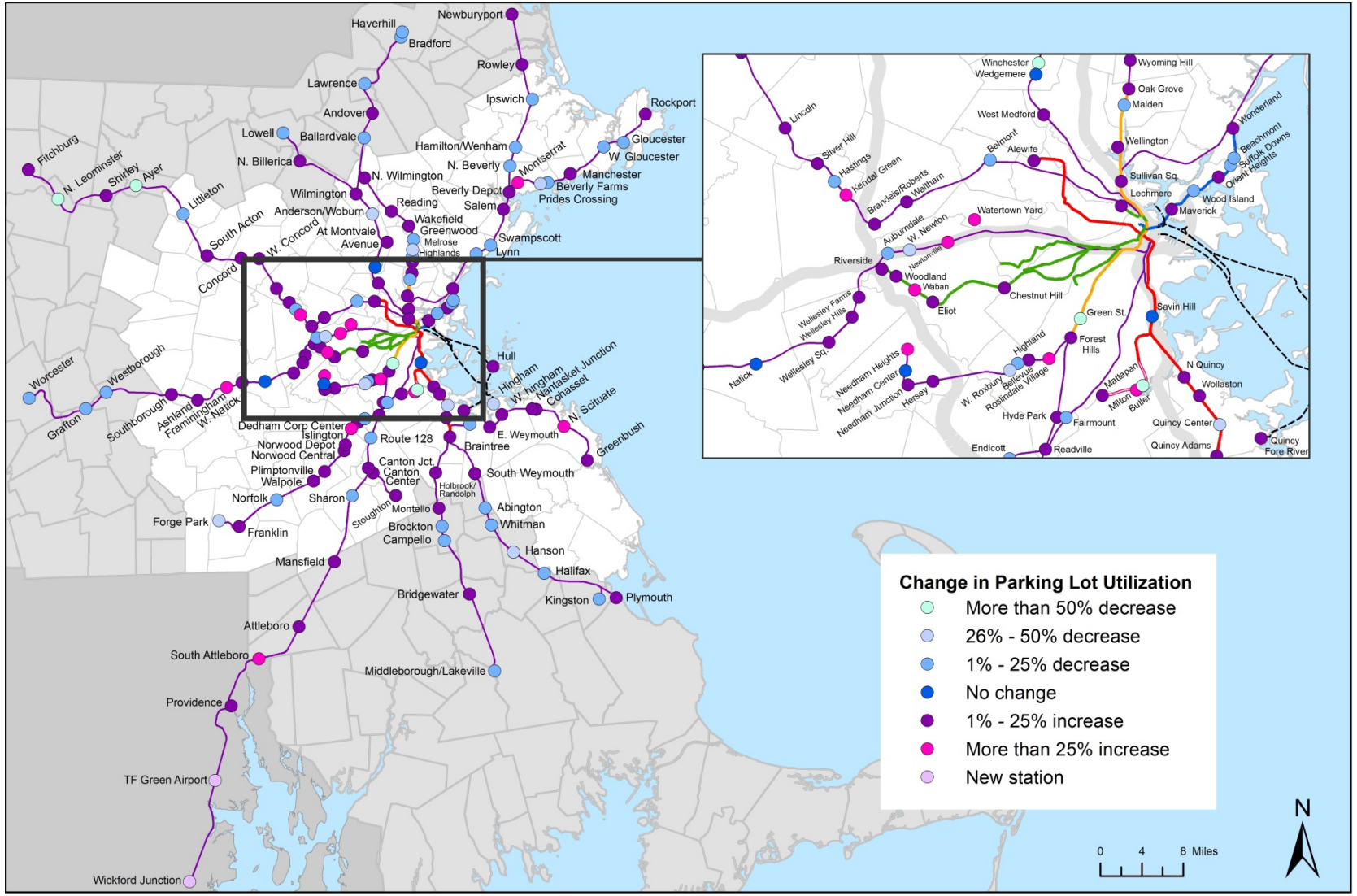

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FIGURE B-1
Change in Park-and-Ride Utilization Rates, 2009-10 Inventory and 2012-13 Inventory

Congestion Management Process

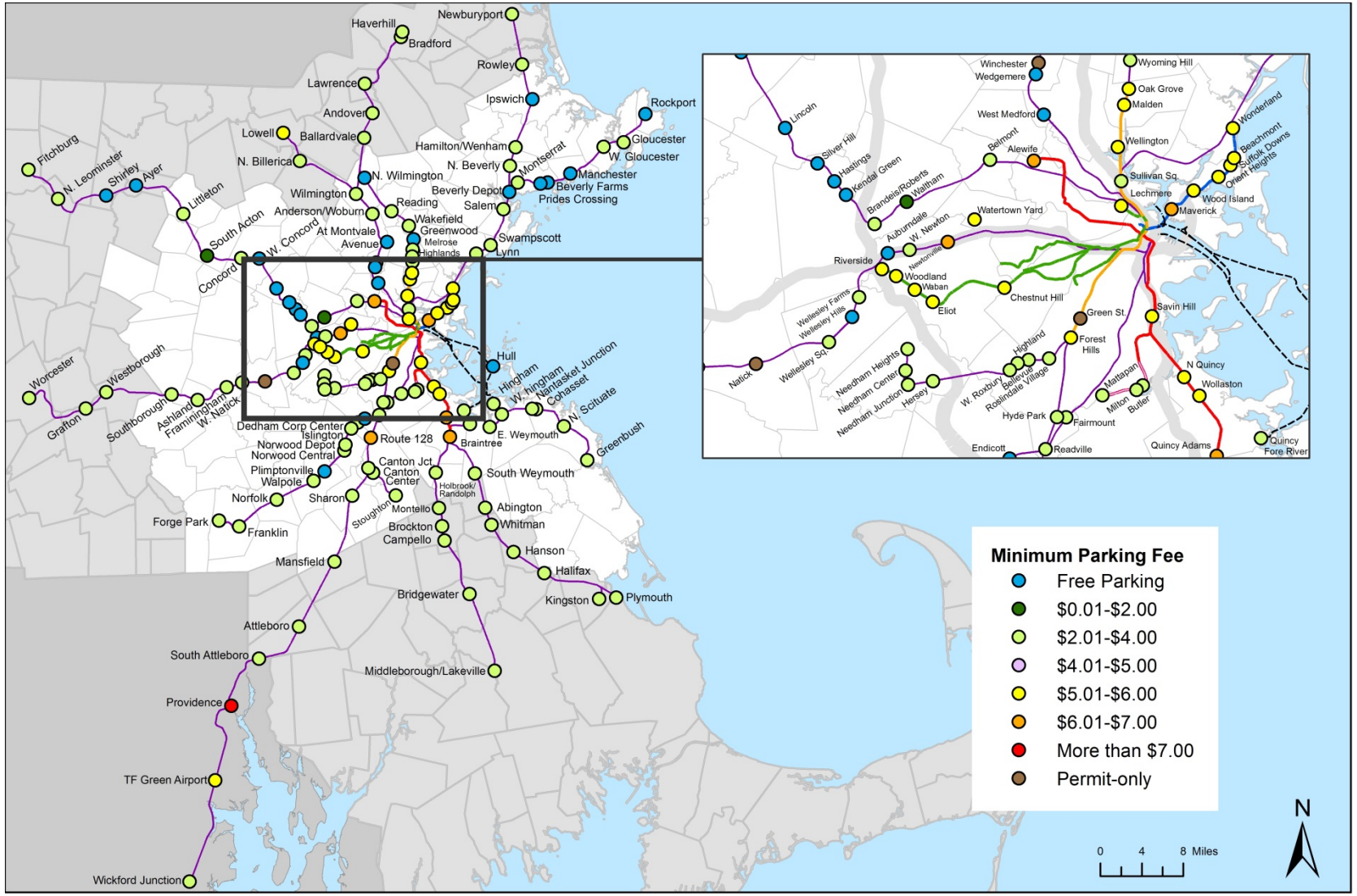

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FIGURE B-2
Minimum Parking Fees for MBTA Stations, 2012-13 Inventory

Congestion Management Process

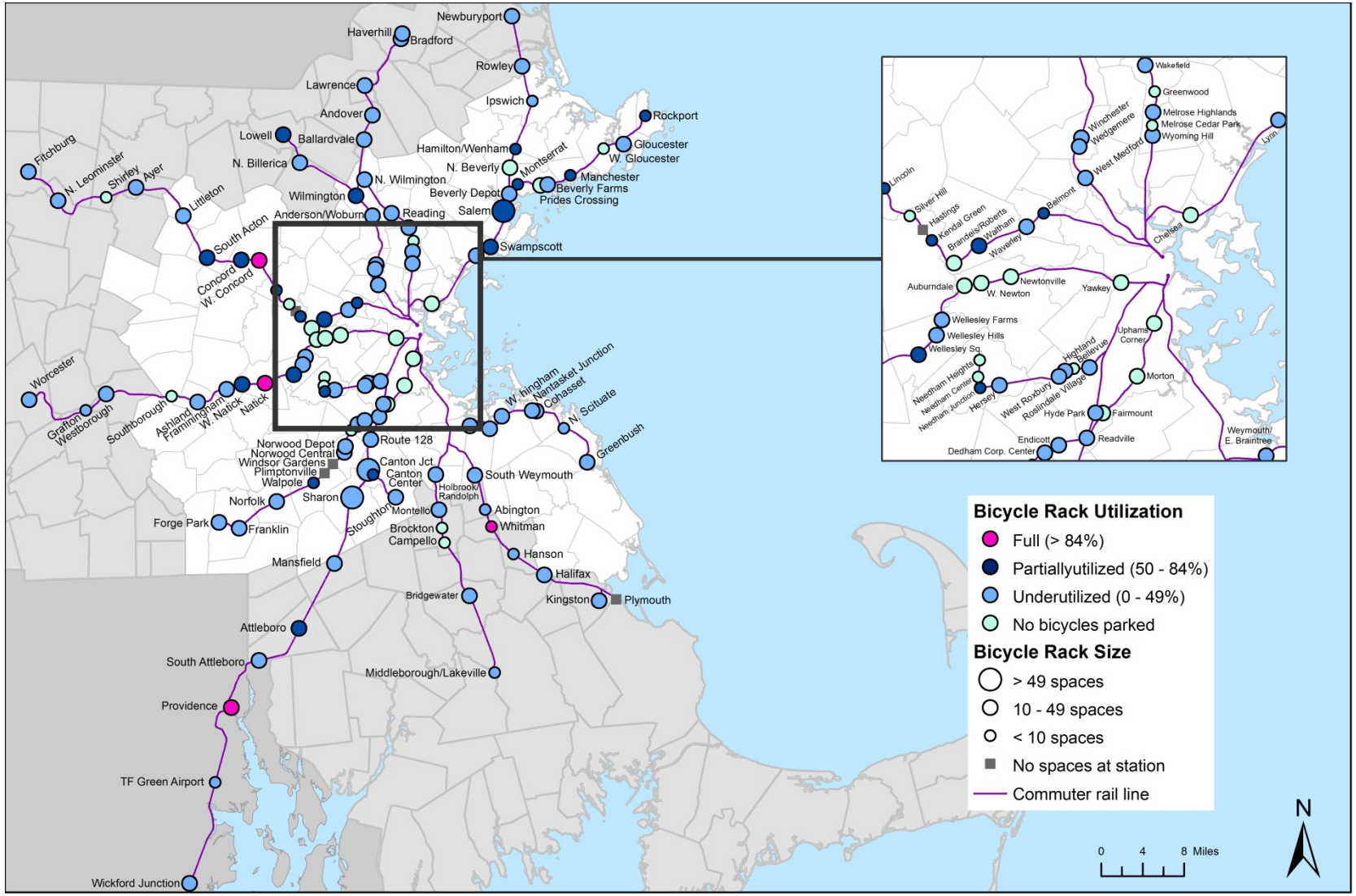

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FIGURE B-3
Bicycle Parking Capacity and Utilization for Commuter Rail Stations, 2012 Inventory

Congestion Management Process

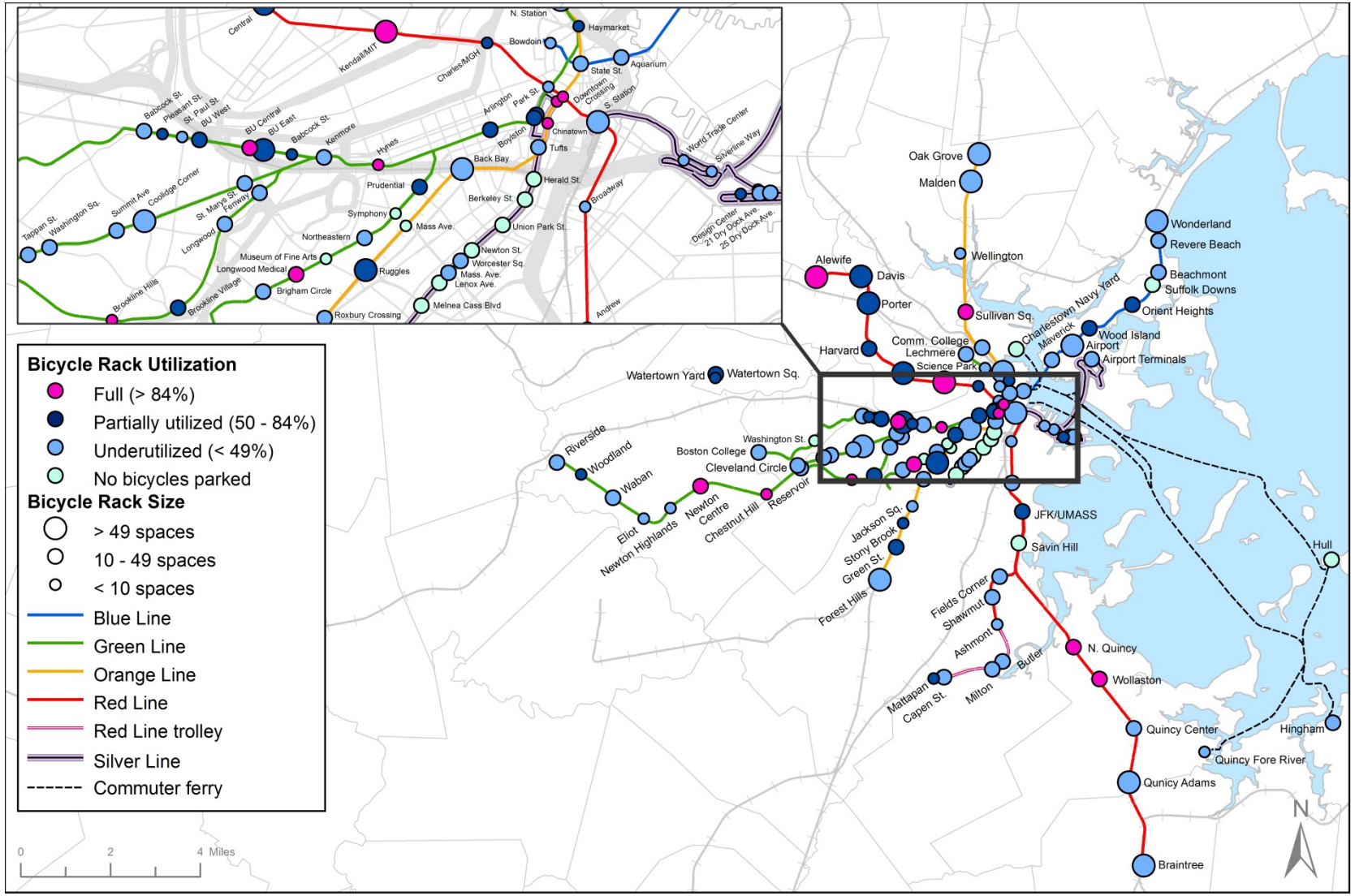

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FIGURE B-4
Bicycle Parking Capacity and Utilization for Rapid Transit Stations, Express Bus Stops, and Ferry Terminals, 2012 Inventory

Congestion Management Process

APPENDIX C

PARK-AND-RIDE LOT SURVEY FORM: FALL 2012/WINTER 2013

Park and Ride Lot Survey: Fall 2012/Winter 2013

Station Name: _____ Rail Line: _____

Data Collector's Name: _____ Date: _____ Day of the Week: _____

Address/Directions to Station Parking Lot: _____

Weather: _____ Time Data Collection Started: _____

Information to Collect:

# of Parking Spaces (non-HP): _____ # of Used/ Occupied Parking Spaces (non-HP): _____

# of HP Parking Spaces: _____ # of Used/ Occupied HP Parking Spaces: _____

Time Lot Fills Up (non-HP): _____ *A.M.* # of Parked Cars Not in Marked Spaces: _____

Time of Last A.M. Peak Period Train: _____ *A.M.* Lot ownership type? *MBTA* *On-Street* *Private* *Town*

Parking Fee ($): _____ Method of Parking Fee Collection: *Meter* *Attendent* *Money Box* *Permit* *Other:* _____

Is there a bike rack? *Yes* *No* What condition is the bike rack in? *Good* *Fair* *Poor*

What type of bike rack is it? *Inverted U* *Ribbon* *Single Bike Post* *Dish Rack* Other: _____

How many bicycle parking spaces are there? _____ How many bicycles are parked there? _____

Are there bikes parked at locations other than the bike rack? Where? _____

Are there any bike trails/paths leading to the station? Name of path? _____

What condition is the bike trail in? *Good* *Fair* *Poor*

Are there sidewalks leading to the station? *Yes* *No* Are there crosswalks leading to the station? *Yes* *No*

What condition are the sidewalks in? *Good* *Fair* *Poor* What condition are the crosswalks in? *Good* *Fair* *Poor*

At what locations are sidewalks missing? _____

At what locations are crosswalks missing? _____

If there is a signalized intersection that pedestrians use to access the station, does it have a working pedestrian indication? *Yes* *No*

Which number bus routes, if any, connect to this station? _____

What kind of platform is at the station? *Raised fully accessible* *Mini-high platform* Other: _____

Are there accessible ramps and/or elevators at the station? *Yes* *No*

Describe possible accessibility concerns (i.e. missing ramps, etc.) _____

Are there benches at the station platform? *Yes* *No*

If 'yes', what side of the platform? *Inbound* *Outbound* *Both*

Are there shelters at this station platform? *Yes* *No*

If 'yes', what side of the platform? *Inbound* *Outbound* *Both*

If 'yes', what kind of shelters are they? *Fully Enclosed* *Roof & Walls* *Roof Only* *Other*

Additional Comments: _____

Use other side of form for additional comments:

APPENDIX D

AMENITIES: COMPREHENSIVE RESULTS OF 2012-13 INVENTORY

TABLE D.1
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Rail Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible Ramps and/or Elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Ayer	Fitchburg/ South Acton	Inverted-U; Dish rack	Not accessible	No	Inbound	Inbound	Roof and walls	N/A
Belmont	Fitchburg/ South Acton	Ribbon	Not accessible	No	None	Inbound	Roof only	N/A
Brandeis/ Roberts	Fitchburg/ South Acton	Dish rack; Inverted-U	Mini-high	Yes	Both	Inbound	Fully enclosed	N/A
Concord	Fitchburg/ South Acton	Inverted-U	Not accessible	No	Inbound	Inbound	Roof and walls	N/A
Fitchburg	Fitchburg/ South Acton	Dish rack	Mini-high	Yes	Both	Both	Roof and walls	N/A
Hastings	Fitchburg/ South Acton	None	Not accessible	No	None	None	N/A	N/A
Kendal Green	Fitchburg/ South Acton	Hanger	Not accessible	No	Outbound	Outbound	Roof only	N/A
Lincoln	Fitchburg/ South Acton	Ribbon	Not accessible	No	Outbound	None	N/A	N/A
Littleton	Fitchburg/ South Acton	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A

N/A = not applicable

(Cont.)

TABLE D.1 (CONT.)
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
North Leominster	Fitchburg/ South Acton	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Shirley	Fitchburg/ South Acton	Dish rack	Not accessible	No	Both	None	N/A	N/A
Silver Hill	Fitchburg/ South Acton	Hanger	Not accessible	No	Both	Both	Roof and walls	N/A
South Acton	Fitchburg/ South Acton	Inverted-U; lockers	Other	Yes	Both	Both	Roof and walls	N/A
Waltham	Fitchburg/ South Acton	Dish rack; Inverted-U	Mini-high	Yes	Outbound	Outbound	Fully enclosed	BP
West Concord	Fitchburg/ South Acton	Inverted-U	Mini-high	Yes	Both	Both	Roof only	N/A
Andover	Haverhill	Dish rack; ribbon; inverted-U	Raised, fully accessible	Yes	Both	Both	Roof and walls	BP
Ballardvale	Haverhill	Dish rack	Mini-high	Yes	Both	Both	Roof and walls	N/A
Bradford	Haverhill	Ribbon; hanger	Mini-high	Yes	Both	Both	Roof only	N/A

(Cont.)

TABLE D.1 (CONT.)
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Greenwood	Haverhill	Ribbon	Not accessible	No	Inbound	Inbound	Roof and walls	N/A
Haverhill	Haverhill	Ribbon; inverted-U	Mini-high	Yes	Both	Both	Roof only	BP
Lawrence	Haverhill	Spiral	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A
Melrose Cedar Park	Haverhill	Dish rack	Not accessible	No	Both	Both	Roof only	N/A
Melrose Highlands	Haverhill	Hanger	Mini-high	Yes	Both	Both	Roof only	N/A
North Wilmington	Haverhill	Dish rack	Mini-high	Yes	None	None	N/A	N/A
Reading	Haverhill	Dish rack	Mini-high	Yes	Inbound	Inbound	Roof only	N/A
Wakefield	Haverhill	Dish rack; ribbon	Not accessible	No	Inbound	Inbound	Roof only	N/A
Wyoming Hill	Haverhill	Inverted-U; hanger	Not accessible	No	Both	Both	Roof and walls	BP

(Cont.)

TABLE D.1 (CONT.)
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Anderson/ Woburn	Lowell	Inverted-U	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A
Lowell	Lowell	Ribbon; inverted-U	Mini-high	Yes	Both	Both	Fully enclosed	N/A
North Billerica	Lowell	Ribbon; inverted-U	Mini-high	Yes	Both	Inbound	Fully enclosed	BP
Wedgemere	Lowell	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
West Medford	Lowell	Hanger	Not accessible	No	Inbound	None	N/A	N/A
Wilmington	Lowell	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Winchester	Lowell	Dish rack; inverted-U	Not accessible	Yes	Both	Both	Roof only	N/A
Beverly Depot	Newburyport/ Rockport	Dish rack	Mini-high	Yes	Both	Both	Roof only	P&P
Beverly Farms	Newburyport/ Rockport	Dish rack	Mini-high	Yes	Inbound	Inbound	Roof only	N/A

(Cont.)

TABLE D.1 (CONT.)
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Gloucester	Newburyport/ Rockport	Inverted-U	Mini-high	Yes	Both	Both	Roof and walls	N/A
Hamilton/ Wenham	Newburyport/ Rockport	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Ipswich	Newburyport/ Rockport	Ribbon	Mini-high	Yes	Both	Both	Roof and walls	N/A
Lynn	Newburyport/ Rockport	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
Manchester	Newburyport/ Rockport	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Montserrat	Newburyport/ Rockport	Ribbon	Mini-high	Yes	Inbound	Inbound	Roof and walls	N/A
Newburyport	Newburyport/ Rockport	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
North Beverly	Newburyport/ Rockport	Dish rack	Mini-high	Yes	Inbound	Inbound	Roof and walls	N/A
Prides Crossing	Newburyport/ Rockport	Dish rack	Not accessible	No	None	Inbound	Roof only	N/A

(Cont.)

TABLE D.1 (CONT.)
North Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Prides Crossing	Newburyport/ Rockport	Dish rack	Not accessible	No	None	Inbound	Roof only	N/A
Rockport	Newburyport/ Rockport	Ribbon	Mini-high	No	None	Both	Roof only	N/A
Rowley	Newburyport/ Rockport	Ribbon	Raised, fully accessible	No	Both	Both	Roof only	N/A
Salem	Newburyport/ Rockport	Ribbon; inverted-U; hanger	Mini-high	Yes	Both	Both	Roof only	BP
Swampscott	Newburyport/ Rockport	Hanger	Mini-high	Yes	Both	Both	Roof only	N/A
West Gloucester	Newburyport/ Rockport	Ribbon	Mini-high	Yes	Inbound	Inbound	Roof only	N/A

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Fairmount	Fairmount	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Morton Street	Fairmount	Inverted-U	Raised, fully accessible	No	Inbound	None	N/A	BP
Readville	Fairmount	Inverted-U	Mini-high	No	Both	Both	Roof only	N/A
Ashland	Framingham/ Worcester	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Auburndale	Framingham/ Worcester	Dish rack	Not accessible	No	Both	Both	Roof only	N/A
Framingham	Framingham/ Worcester	Ribbon; dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Grafton	Framingham/ Worcester	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Natick	Framingham/ Worcester	Single bike post; Inverted-U	Not accessible	No	Both	Inbound	Roof only	N/A
Newtonville	Framingham/ Worcester	Dish rack	Not accessible	No	Both	Both	Roof and walls	N/A

N/A = not applicable

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Southborough	Framingham/ Worcester	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Wellesley Farms	Framingham/ Worcester	Dish rack	Not accessible	No	Both	Both	Roof and walls	N/A
Wellesley Hills	Framingham/ Worcester	Inverted-U	Not accessible	No	Inbound	Inbound	Roof only	BP
Wellesley Square	Framingham/ Worcester	Inverted-U	Not accessible	No	Both	Both	Roof and walls	BP
West Natick	Framingham/ Worcester	Dish rack; ribbon	Mini-high platform	Yes	Both	Inbound	Roof only	N/A
West Newton	Framingham/ Worcester	Dish rack	Not accessible	No	Both	Both	Roof only	N/A
Westborough	Framingham/ Worcester	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Worcester	Framingham/ Worcester	Ribbon; inverted-U	Raised, fully accessible	Yes	Inbound	Both	Fully enclosed	BP

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Dedham Corp Center	Franklin	Dish rack	Mini-high	Yes	Both	Inbound	Roof only	N/A
Endicott	Franklin	Hanger	Not accessible	Yes	Inbound	Inbound	Roof only	N/A
Forge Park	Franklin	Inverted-U	Raised, fully accessible	Yes	Inbound	Inbound	Fully enclosed	N/A
Franklin	Franklin	Dish rack; Inverted-U	Not accessible	No	Both	Both	Fully enclosed	N/A
Islington	Franklin	Inverted-U	Not accessible	No	Inbound	Inbound	Roof only	N/A
Norfolk	Franklin	Ribbon; inverted-U	Mini-high	Yes	Both	Both	Roof only	N/A
Norwood Central	Franklin	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Norwood Depot	Franklin	Hanger	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Plimptonville	Franklin	None	Not accessible	No	None	None	N/A	N/A
Walpole	Franklin	Ribbon	Not accessible	No	Both	None	N/A	N/A

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Cohasset	Greenbush	Ribbon; hanger	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
East Weymouth	Greenbush	Ribbon; hanger	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Greenbush	Greenbush	Ribbon; hanger	Raised, fully accessible	No	Both	Both	Roof only	N/A
Nantasket Junction	Greenbush	Ribbon; hanger	Raised, fully accessible	No	Both	Both	Roof only	N/A
North Scituate	Greenbush	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
West Hingham	Greenbush	Dish rack; hanger	Raised, fully accessible	No	Both	Both	Roof only	N/A
Weymouth Landing	Greenbush	Ribbon; hanger	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Abington	Kingston/ Plymouth	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Halifax	Kingston/ Plymouth	Inverted-U; hanger	Raised, fully accessible	Yes	Both	Both	Roof only	N/A

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Hanson	Greenbush	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Kingston	Greenbush	Dish rack	Raised, fully accessible	No	Both	Both	Roof and walls	N/A
Plymouth	Greenbush	None	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
South Weymouth	Greenbush	Inverted-U	Raised, fully accessible	No	Both	Both	Roof only	BP
Whitman	Greenbush	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
Bridgewater	Middleborough/ Lakeville	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
Brockton	Middleborough/ Lakeville	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Campello	Middleborough/ Lakeville	Ribbon	Mini-high	No	Both	Both	Roof only	N/A
Holbrook/ Randolph	Middleborough/ Lakeville	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof and walls	BP

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Middleborough/ Lakeville	Middleborough/ Lakeville	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Montello	Middleborough/ Lakeville	Inverted-U; ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Bellevue	Needham	Ribbon	Mini-high	No	Both	Both	Roof only	N/A
Hersey	Needham	Dish rack	Mini-high	Yes	Both	Both	Roof only	BP
Highland	Needham	Dish rack; Inverted-U	Mini-high	Yes	Both	Both	Roof only	BP
Needham Center	Needham	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Needham Heights	Needham	Ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Needham Junction	Needham	Ribbon	Mini-high	Yes	Both	Both	Fully enclosed	N/A

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Roslindale Village	Needham	Dish rack	Mini-high	Yes	Both	Both	Roof only	N/A
West Roxbury	Needham	Inverted-U	Mini-high	No	Both	Both	Roof only	BP
Attleboro	Providence/ Stoughton	Ribbon; dish rack	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A
Canton Center	Providence/ Stoughton	Dish rack	Mini-high	Yes	Both	Both	Roof only	N/A
Canton Junction	Providence/ Stoughton	Dish rack; ribbon	Mini-high	Yes	Both	Both	Roof only	N/A
Hyde Park	Providence/ Stoughton	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Mansfield	Providence/ Stoughton	Ribbon; hanger	Mini-high	Yes	Inbound	Inbound	Fully enclosed	N/A
Providence	Providence/ Stoughton	Other; loop	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A
Route 128	Providence/ Stoughton	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A

(Cont.)

TABLE D.2
South Side Commuter Rail:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Commuter Rail Line	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Sharon	Providence/ Stoughton	Inverted-U; hanger	Not accessible	Yes	Both	Both	Roof and walls	N/A
South Attleboro	Providence/ Stoughton	Dish rack	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Stoughton	Providence/ Stoughton	Dish rack; Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
T. F. Green	Providence/ Stoughton	Dish rack	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A
Wickford Junction	Providence/ Stoughton	Inverted-U	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A

TABLE D.3
Rapid Transit:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Rapid Transit Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Beachmont	Blue Line	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
Maverick	Blue Line	Inverted-U; ribbon	Raised, fully accessible	Yes	Both	Both	Fully enclosed	BP
Orient Heights	Blue Line	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Suffolk Downs	Blue Line	Ribbon; inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Wonderland	Blue Line	Pedal & Park; ribbon	Raised, fully accessible	Yes	Inbound	Both	Roof and walls	P&P
Wood Island	Blue Line	Hanger	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Chestnut Hill	Green Line	Ribbon	Not accessible	No	Inbound	Inbound	Fully enclosed	BP
Eliot	Green Line	Ribbon	Not accessible	No	Both	Inbound	Fully enclosed	BP
Lechmere	Green Line	Single bike post	Other	Yes	None	Both	Roof and walls	N/A

N/A = not applicable

(Cont.)

TABLE D.3 (CONT.)
Rapid Transit:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots, 2012–13

Station	Rapid Transit Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Riverside	Green Line	Ribbon; inverted-U	Other	Yes	Both	Both	Roof only	BP
Waban	Green Line	Ribbon	Not accessible	No	Both	Inbound	Fully enclosed	BP
Woodland	Green Line	Ribbon	Other	Yes	Both	Inbound	Fully enclosed	N/A
Forest Hills	Orange Line	Pedal & Park; ribbon; hanger	Raised, fully accessible	Yes	Both	Both	Fully enclosed	P&P, BP
Green Street	Orange Line	Hanger	Raised, fully accessible	Yes	Both	Both	Fully enclosed	BP
Malden	Orange Line	Inverted-U; ribbon	Raised, fully accessible	Yes	Both	Both	Roof and walls	P&P
Oak Grove	Orange Line	Pedal & Park; inverted-U; ribbon	Raised, fully accessible	Yes	Both	Both	Roof and walls	P&P
Sullivan Square	Orange Line	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof only	BP
Wellington	Orange Line	Ribbon	Raised, fully accessible	Yes	Both	Both	Roof and walls	BP

(Cont.)

TABLE D.3 (CONT.)
Rapid Transit:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots, 2012–13

Station	Rapid Transit Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Alewife	Red Line	Pedal & Park; ribbon; inverted-U	Raised, fully accessible	Yes	Both	Both	Fully enclosed	P&P
Braintree	Red Line	Pedal & Park; bike post; inverted-U	Raised, fully accessible	Yes	Both	Both	Roof only	P&P
Butler	Red Line	Hanger	Other	Yes	Both	Both	Roof only	N/A
Mattapan	Red Line	Inverted-U	Other	Yes	Both	Both	Fully enclosed	N/A
Milton	Red Line	Ribbon; hanger	Other	Yes	Both	Inbound	Roof only	N/A
North Quincy	Red Line	Ribbon; hanger	Raised, fully accessible	Yes	Both	Both	Roof and walls	BP
Quincy Adams	Red Line	Inverted-U	Raised, fully accessible	Yes	Both	Both	Roof and walls	N/A
Quincy Center	Red Line	Inverted-U; hanger	Raised, fully accessible	Yes	Both	Both	Fully enclosed	N/A

(Cont.)

TABLE D.3 (CONT.)
Rapid Transit:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots, 2012–13

Station	Rapid Transit Line	Bike Rack at Station (Type)	Station Platform Type	Accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Savin Hill	Red Line	Hanger	Raised, fully accessible	Yes	Both	Both	Roof only	N/A
Wollaston	Red Line	Dish rack; hanger	Raised, fully accessible	Yes	Both	Both	Roof and walls	P&P

TABLE D.4
Commuter Ferry and Express Bus:
Amenity Inventory of MBTA Commuter Park-and-Ride Lots,
2012–13

Station	Transit Mode	Bike Rack at Station (Type)	Station Platform Type	HP accessible ramps and/or elevators	Benches at Station (side[s] of platform)	Shelters at Station (side[s] of platform)	Shelter Type(s)	Bicycle Cage (P&P) or Port (BP) Proposed or Installed
Watertown Yard	Bus	Pedal & Park; ribbon	Other	No	None	Both	Roof and walls	N/A
at Montvale Avenue	Bus	None	Other	No	Both	Both	Roof and walls	N/A
Hingham	Ferry	Inverted-U	Raised, fully accessible	No	Both	None	N/A	N/A
Hull	Ferry	Inverted-U	Other	No	Both	Both	Roof only	N/A
Quincy/Fore River	Ferry	Inverted-U	Other	Yes	None	Both	Fully enclosed	N/A

N/A = not applicable

APPENDIX E

COMPARISON OF 2012-13 INVENTORY RESULTS WITH 2005-06 AND 2009-10 INVENTORY RESULTS, BY MODE

E COMPARISON OF 2012-13 INVENTORY RESULTS WITH 2005-06 AND 2009-10 INVENTORY RESULTS

This section compares the 2012–13 inventory with the 2009–10 and 2005–06 inventories by mode. Figure B-1, in Appendix B, graphically displays the difference in utilization for each station from the 2009–10 and 2012–13 inventories. Commuter rail, rapid transit, and commuter Ferry and commuter bus modes are analyzed in each subsection of this appendix.

E.1 Commuter Rail

During the 2012–13 inventory, more park-and-ride lots at commuter rail stations were filled during the AM peak period than were filled during the 2009–10 inventory. However, the number of filled park-and-ride lots in the 2012–13 inventory was significantly less than in the 2005–06 inventory. This is mainly because of a net increase in parking capacity because of the addition of new stations with parking. The total parking capacity increased from 32,975 to 33,840, to 35,706over the three survey inventories. As a result, the overall percentage of parking utilization decreased, from 73 percent in 2005–06 and 56 percent in 2009–10 to 55 percent in 2012–13, as shown in Figure E-1.

Of the 12 commuter rail lines surveyed in the 2012–13 inventory, 6 lines had experienced an increase in utilization and 5 lines had experienced a decrease in utilization since 2009–10. Of the lines that experienced significant increases in utilization, the Newburyport/Rockport and Needham lines had construction at several stations that may have skewed their utilization rates. The Greenbush Line utilization increase is due to former commuter ferry riders transitioning into regular riders of the relatively new commuter rail line.

E.2 Rapid Transit

All four rapid transit lines experienced an increase in park-and-ride utilization between the 2009–10 and 2012–13 inventories. The total parking utilization for the rapid transit lines increased to 74 percent, from 61 percent in 2009–10, while the parking utilization rate was 85 percent in 2005–06. In the 2012–13 inventory, the Eliot, Savin Hill, and Wollaston rapid transit stations completely filled during the AM peak period, while in 2009–10, no rapid transit station filled during the AM peak period. Figure E-2 shows the utilization of the rapid transit system for the past three inventories.

E.3 Commuter Ferry and Express Bus

As shown in Figure E-3, parking utilization increased at commuter ferry terminals from 62 percent in 2005–06 to 69 percent in 2009–10, and decreased from 69 percent in 2009–10 to 49 percent in 2012–13.The reason for the

decrease in utilization at the commuter ferry lots is the drop in commuter ferry ridership by 27 percent since the MBTA increased fares in July 2012. Another possible cause of the decrease in the park-and-ride utilization at commuter ferry terminals is that many former commuter ferry riders are now using the Greenbush Line, which opened in 2007.

The express bus lots were 84 percent filled in the 2012–13 inventory. This was a decrease from the 93 percent utilization that was observed during the 2009–10 inventory. The Woburn bus lot at Montvale Avenue completely filled during the AM peak period in the 2012–13 inventory.

FIGURE E.1
MBTA Commuter Rail Park-and-Ride Utilization:
2005–06, 2009–10, and 2012–13 Inventories

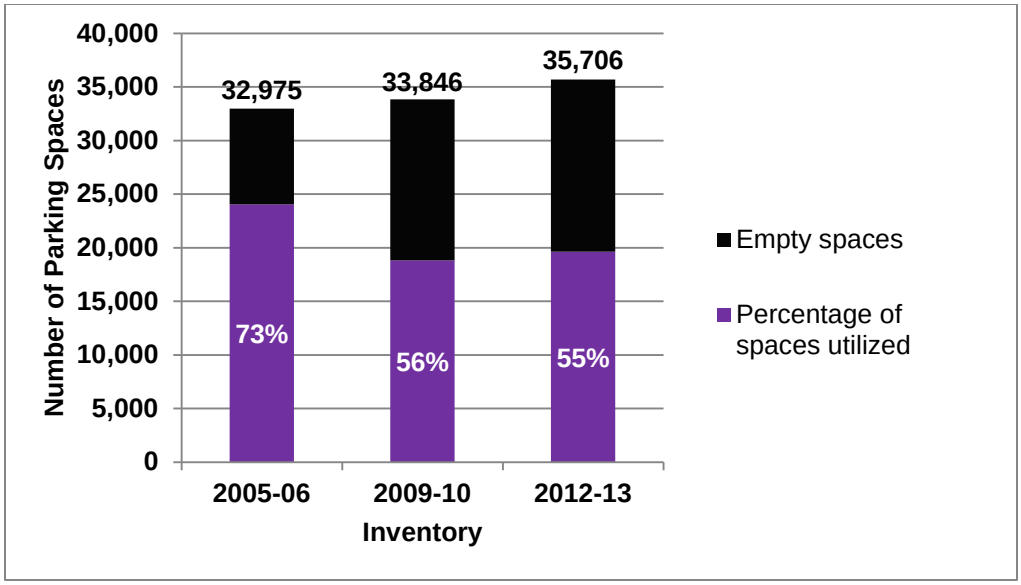


FIGURE E.2
MBTA Rapid Transit Park-and Ride Utilization:
2005–06, 2009–10, and 2012–13 Inventories

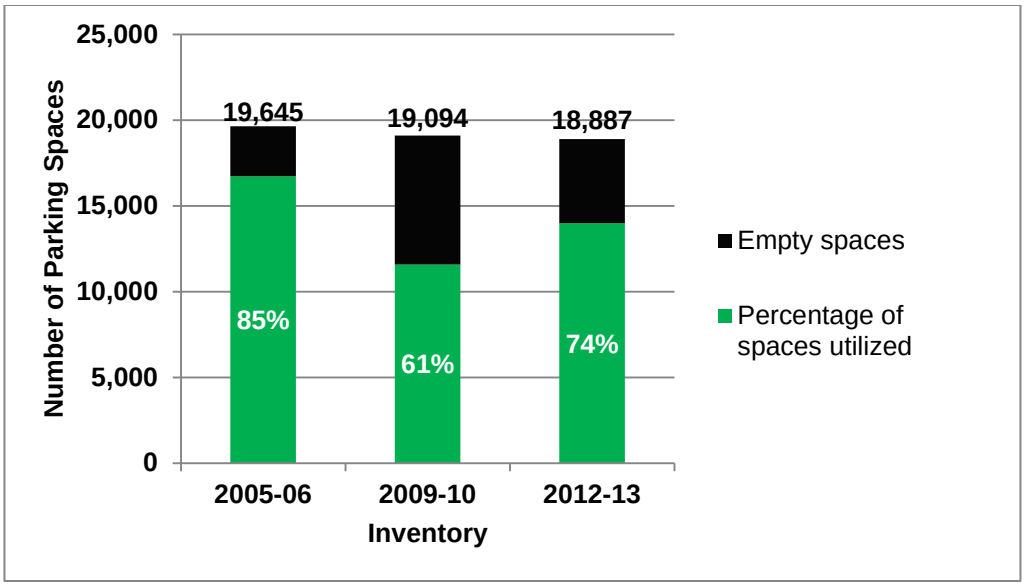
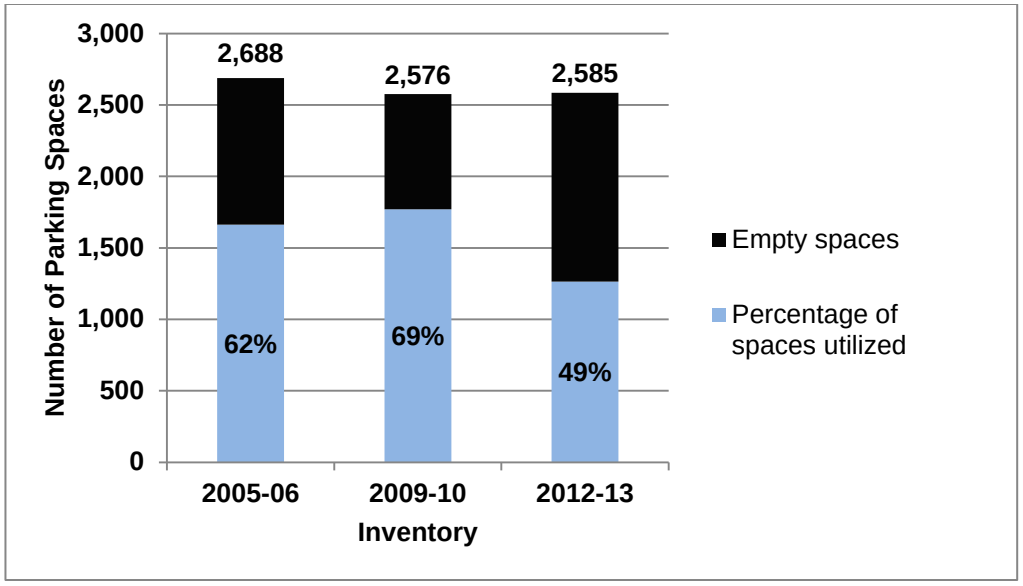


FIGURE E.3
MBTA Commuter Ferry Park-and Ride Utilization:
2005–06, 2009–10, and 2012–13 Inventories



APPENDIX F

MBTA FARE INCREASE: STATE FISCAL YEAR 2013

TABLE F.1
MBTA Fare Increase – Single Rides, State Fiscal Year 2013

Fare Category	Rate	FFY 2012 Price	FFY 2013 Price	Fare Increase	Percent Increase
Local Bus	Adult	$1.25	$1.50	$0.25	20%
Rapid Transit	Adult	$1.70	$2.00	$0.30	18%
Bus + RT*	Adult	$1.70	$2.00	$0.30	18%
Inner Express	Adult	$2.80	$3.50	$0.70	25%
Outer Express	Adult	$4.00	$5.00	$1.00	25%
Local Bus	Senior	$0.40	$0.75	$0.35	88%
Rapid Transit	Senior	$0.60	$1.00	$0.40	67%
Bus + RT*	Senior	$0.60	$1.00	$0.40	67%
Local Bus	Student	$0.60	$0.75	$0.15	25%
Rapid Transit	Student	$0.85	$1.00	$0.15	18%
Bus + RT*	Student	$0.85	$1.00	$0.15	18%
Local Bus	CharlieTicket - Adult	$1.50	$2.00	$0.50	33%
Rapid Transit	CharlieTicket - Adult	$2.00	$2.50	$0.50	25%
Bus + RT	CharlieTicket - Adult	$3.50	$4.50	$1.00	29%
Inner Express	CharlieTicket - Adult	$3.50	$4.50	$1.00	29%
Outer Express	CharlieTicket - Adult	$5.00	$6.50	$1.50	30%
Zone 1A	Commuter Rail	$1.70	$2.00	$0.30	18%
Zone 1	Commuter Rail	$4.25	$5.50	$1.25	29%
Zone 2	Commuter Rail	$4.75	$6.00	$1.25	26%
Zone 3	Commuter Rail	$5.25	$6.75	$1.50	29%
Zone 4	Commuter Rail	$5.75	$7.25	$1.50	26%
Zone 5	Commuter Rail	$6.25	$8.00	$1.75	28%
Zone 6	Commuter Rail	$6.75	$8.75	$2.00	30%
Zone 7	Commuter Rail	$7.25	$9.25	$2.00	28%
Zone 8	Commuter Rail	$7.75	$10.00	$2.25	29%
Zone 9	Commuter Rail	$8.25	$10.50	$2.25	27%
Zone 10	Commuter Rail	N/A	$11.00	N/A	N/A
Interzone 1	Commuter Rail	$2.00	$2.50	$0.50	25%
Interzone 2	Commuter Rail	$2.25	$3.00	$0.75	33%
Interzone 3	Commuter Rail	$2.50	$3.25	$0.75	30%
Interzone 4	Commuter Rail	$2.75	$3.50	$0.75	27%
Interzone 5	Commuter Rail	$3.00	$4.00	$1.00	33%
Interzone 6	Commuter Rail	$3.50	$4.50	$1.00	29%
Interzone 7	Commuter Rail	$4.00	$5.00	$1.00	25%
Interzone 8	Commuter Rail	$4.50	$5.50	$1.00	22%
Interzone 9	Commuter Rail	N/A	$6.00	N/A	N/A
Interzone 10	Commuter rail	N/A	N/A	N/A	N/A
F1	Ferry	$6.00	$8.00	$2.00	33%
F2: Boston	Ferry	$6.00	$8.00	$2.00	33%
F2: X-Harbor	Ferry	$10.00	$13.00	$3.00	30%
F2: Logan	Ferry	$12.00	$16.00	$4.00	33%
Inner Harbor	Ferry	$1.70	$3.00	$1.30	77%
ADA Territory	THE RIDE	$2.00	$4.00	$2.00	100%
Premium Territory	THE RIDE	N/A	$5.00	N/A	N/A

N/A = not applicable.

TABLE F.2
MBTA Fare Increase – Passes, State Fiscal Year 2013

Transit Mode	MBTA Pass	FFY 2012 Price	FFY 2013 Price	Fare Increase	Percent Increase
Bus/Rapid Transit	Local Bus	$40.00	$48.00	$8.00	20%
Bus/Rapid Transit	LinkPass	$59.00	$70.00	$11.00	19%
Bus/Rapid Transit	Senior/TAP	$20.00	$28.00	$8.00	40%
Bus/Rapid Transit	Student 5-Day	$20.00	$25.00	$5.00	25%
Bus/Rapid Transit	Student 7-Day	N/A	$28.00	N/A	N/A
Bus/Rapid Transit	1-Day	$9.00	$11.00	$2.00	22%
Bus/Rapid Transit	7-Day	$15.00	$18.00	$3.00	20%
Bus/Rapid Transit	Inner Express	$89.00	$110.00	$21.00	24%
Bus/Rapid Transit	Outer Express	$129.00	$160.00	$31.00	24%
Commuter Rail	Zone 1A	$59.00	$70.00	$11.00	19%
Commuter Rail	Zone 1	$135.00	$173.00	$38.00	28%
Commuter Rail	Zone 2	$151.00	$189.00	$38.00	25%
Commuter Rail	Zone 3	$163.00	$212.00	$49.00	30%
Commuter Rail	Zone 4	$186.00	$228.00	$42.00	23%
Commuter Rail	Zone 5	$210.00	$252.00	$42.00	20%
Commuter Rail	Zone 6	$223.00	$275.00	$52.00	23%
Commuter Rail	Zone 7	$235.00	$291.00	$56.00	24%
Commuter Rail	Zone 8	$250.00	$314.00	$64.00	26%
Commuter Rail	Zone 9	$265.00	$329.00	$64.00	24%
Commuter Rail	Zone 10	N/A	$345.00	N/A	N/A
Commuter Rail	Interzone 1	$65.00	$82.00	$17.00	26%
Commuter Rail	Interzone 2	$77.00	$100.00	$23.00	30%
Commuter Rail	Interzone 3	$89.00	$109.00	$20.00	23%
Commuter Rail	Interzone 4	$101.00	$118.00	$17.00	17%
Commuter Rail	Interzone 5	$113.00	$134.00	$21.00	19%
Commuter Rail	Interzone 6	$125.00	$151.00	$26.00	21%
Commuter Rail	Interzone 7	$137.00	$167.00	$30.00	22%
Commuter Rail	Interzone 8	$149.00	$184.00	$35.00	24%
Commuter Rail	Interzone 9	N/A	$201.00	N/A	N/A
Commuter Rail	Interzone 10	N/A	N/A	N/A	N/A
Ferry	Commuter Ferry	$198.00	$262.00	$64.00	32%

N/A = not applicable