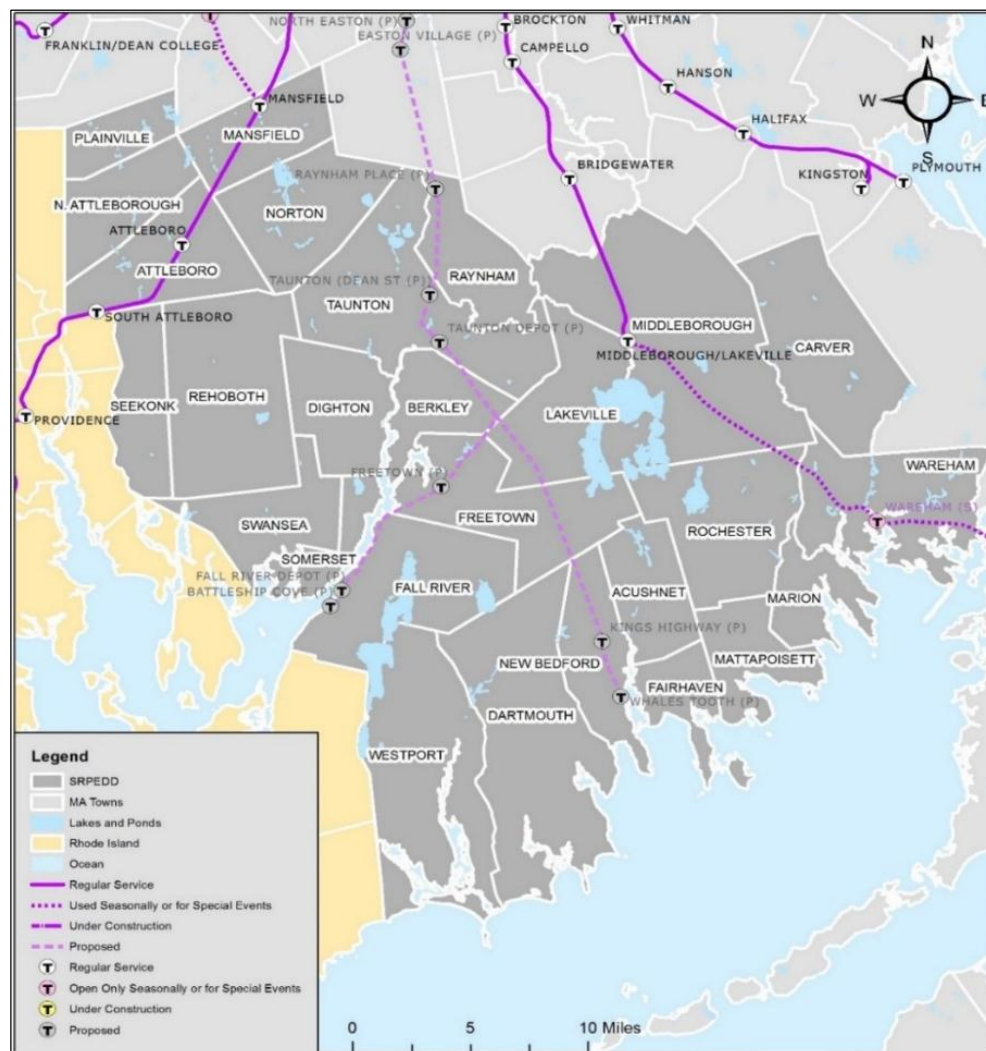


## Appendix H: Commuter Rail

### Introduction

The history of the United States could be told through the history of rail, at least until the mid-twentieth century when highways began supplanting railroads as the primary mode of transportation to move people and goods long distances. Railroads gave access to vast natural resources, affected the outcome of wars, and facilitated the westward migration of our nation's population. The development of railroads brought profound social, economic and political change to our country.

During the post-World War II boom many railroads were driven out of business due to competition from airlines and Interstate highways. The rise of the automobile led to the end of passenger train service on most railroads, but they continued to carry bulk freight such as coal, steel, and other commodities.



**Figure H-1: SRPEDD Commuter Rail**

As our national transportation policy and preferences began to favor the automobile over the railroad, rail traffic declined and was abandoned due to high maintenance costs compared with a low rate of return. Despite the decline in long distance rail traffic, local and regional rail use continued and since has experienced resurgence in investment in Southeastern Massachusetts during the past twenty years. Figure H-1 outlines the Commuter Rail system in southeastern Massachusetts.

Keolis Commuter Services began operating the MBTA Commuter Rail System on July 1, 2014 and has an 8-year contract with the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA) with the two options to renew for two years each.<sup>1</sup>

Keolis and the MBTA Commuter system are:

- 5<sup>th</sup> largest commuter rail operation in North America
- 14 lines covering 394 route miles, serving 137 stations
- 127,000 passengers each day
- 81 locomotives, 481 passenger cars
- 500 trips each weekday; 228 trips each weekend day
- 2,100 Keolis employees in Boston.

Keolis approached its contract with a commitment to enhancing safety, “thinking like a passenger,” increasing ridership through improved service and establishing a strong partnership with the MBTA.<sup>2</sup>

## **Existing Commuter Rail and Stations in the Region**

### **Providence/Stoughton Line**

The MBTA currently provides commuter rail service along two branches with stations in Southeastern Massachusetts. The first branch is the Providence/Stoughton Line which extends Commuter Rail service from Boston through Attleboro to Providence, Rhode Island. This branch line which is double tracked (two parallel tracks which permit simultaneous bi-directional travel) also supports limited freight operations by CSX, Amtrak Northeast Regional passenger train, and the Acela Express which provides high speed passenger service between Boston and Washington D.C. The Providence/Stoughton Line has three stations within the SMMPO region:

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<sup>1</sup> Keolis: MBTA Commuter Rail Operator

<sup>2</sup> Keolis: MBTA Commuter Rail Operator

Mansfield, Attleboro Center, and South Attleboro. Historically, this line has the highest ridership of any of the commuter rail lines operated out of Boston.

The Providence/Stoughton Line offers 20 daily trips, 9 Saturday trips, and 7 Sunday trips; the weekday span of service extends from 5:00 AM until 11:00 PM. The frequency of trips during the peak hours have added to steady growth in ridership.

### **Attleboro Center Station**

Improvements to the Attleboro Intermodal Center were completed in 2013 and included a new busway, improved access to transit parking and the redevelopment of abandoned properties surrounding the site. One hundred MBTA commuter parking spaces were constructed to replace those that were impacted by construction of the GATRA bus facility. The improvements to the station area enhance the customer's connection between rail and local GATRA bus service. Figure H-2 shows the Attleboro Center Station after the station improvements.



**Figure H-2: Attleboro Center Station**

The City of Attleboro, in partnership with the MBTA and GATRA, are considering additional improvements to the station area to promote transit oriented development (TOD). These would include development projects adjacent to the station along with construction of a multi-level parking garage. The plans are conceptual, however GATRA is pursuing a preliminary planning study to evaluate TOD potential. According to Mayor Paul Heroux, the Attleboro Redevelopment Authority is aiming to develop a seven-acre stretch of land on Riverfront Drive

across from Robbins Riverfront Park, and if that land is developed as expected, it will create a need for even more parking. The aim is to build apartments and businesses in what is the city's first transit-oriented zoning district, which was created to support mixed uses and attract residents who want to live near the commuter rail and bus station.<sup>3</sup>

### **South Attleboro Station**

The South Attleboro Station remains in need of Capital improvements to address accessibility issues to comply with ADA regulation, upgrade pedestrian access, and improve pavement conditions for the parking areas. The existing pedestrian crossing bridge remains in need of structural repairs and a once planned stair replacement project has been abandoned. The only cross track access is via the pedestrian bridge. These improvement needs were identified in both the 2012 & 2016 Regional Transportation Plan. Due to budgetary constraints, a majority of these improvements were included in the list of deferred projects in the FFY13-FFY17 MBTA Capital Investment Program. The MBTA has estimated these improvements at \$1 million. Figure H-3 shows a view of the South Attleboro Station.



**Figure H-3: South Attleboro Station Parking Lot**

### **Mansfield Station**

The MBTA began upgrades to the Mansfield Station in 2015 to address accessibility issues and bring the station in to compliance with the American with Disabilities Act. Improvements

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<sup>3</sup> The Sun Chronicle: Mayor, Developer Discussing New Parking Garage for Downtown Attleboro

include canopied ramps, stairs, new mini-high platforms, new guardrails, lighting upgrades, and textured platforms. Improvements to the parking lots include new pavement and relocation of the pay boxes to be closer to the platforms.

In 2014, the town of Mansfield completed the *Access & Improvement Evaluation for the Mansfield Commuter Rail Parking Lot*. The study evaluated station access and made several recommendations to improve traffic flow and reduce traffic congestion in the area surrounding the station. The recommendations include improving access via a northern roadway connection via North Main Street and King Street, improving pedestrian and bicycle access, and promoting transit oriented development in the areas closest to the station.

The Mansfield Station is served by two separate transit routes: the GATRA Route 140 which begins at Wheaton College and ends at the station, and the GATRA Mansfield T Connector which operates as a subscription service providing transportation between Mansfield residents' homes and the MBTA station.

### **Middleborough/Lakeville Line**

The second branch of Commuter Rail service in the SMMPO region is the Middleborough/Lakeville Line which connects Boston to the towns of Middleborough and Lakeville directly and Wareham via a GATRA commuter shuttle. The station is located in Lakeville near the junction of I-495 and Route-105 at the Lakeville/Middleborough town line. The Middleborough/Lakeville Line opened in the fall of 1997.

The Middleborough/Lakeville Line is part of the MBTA Old Colony Branch and is a single track with passing sidings which also support CSX freight trains for the entire southeastern portion of the state. The route comes off the "Shore Line" in downtown Attleboro and head east through Taunton into the Middleborough yard. The Middleborough yard serves as the main freight yard for all of Southeastern Massachusetts. Freight service radiates north to Braintree and Quincy, east to the Plymouth area, southwest to Fall River and New Bedford and Southeast from Wareham to Cape Cod. Freight service to Fall River, New Bedford, and Cape Cod is now operated by Mass Coastal through a lease with the State of Massachusetts.

Because rail lines south and east of Attleboro are single tracked, freight operations place capacity and timing limitations on passenger operations. The single track section on the Old Colony line between Braintree and South Boston also creates a limitation for additional passenger service in the future. The reserve capacity of the entire Old Colony line (Greenbush, Plymouth, and Lakeville) would be used by any proposed extension of Commuter Rail south from Lakeville/Middleborough station to Wareham and Cape Cod. Any extension of Middleborough service would require one additional train set and additional coaches on



existing trains. This additional train set was always included in the design of the system as it currently exists.

### **Middleborough/Lakeville Station**

When this station opened in 1997, there was a need to increase the parking supply from 400 spaces to 864 spaces. A decline in ridership after the completion of the Central Artery Project in Boston reduced the demand, and capacity was reduced to its current day capacity of 769 spaces. After an increase in parking rates, the number of drop-offs (known as “kiss-and-ride”), bicycles, and pedestrian use increased.

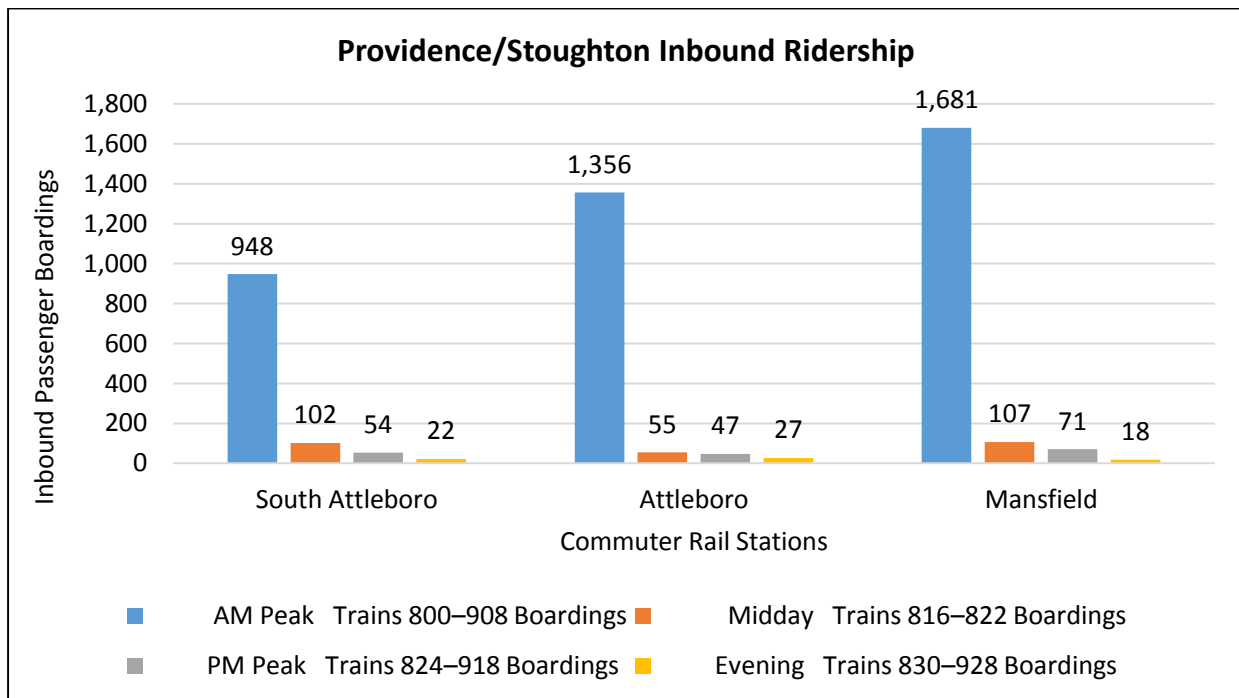
Recently completed highway improvements in the area of the station, including the relocation of Route-79 and signalization of the I-495 Northbound and Southbound ramps at South Main Street (Route 105), have reduced traffic congestion.

### **Cape Flyer Service**

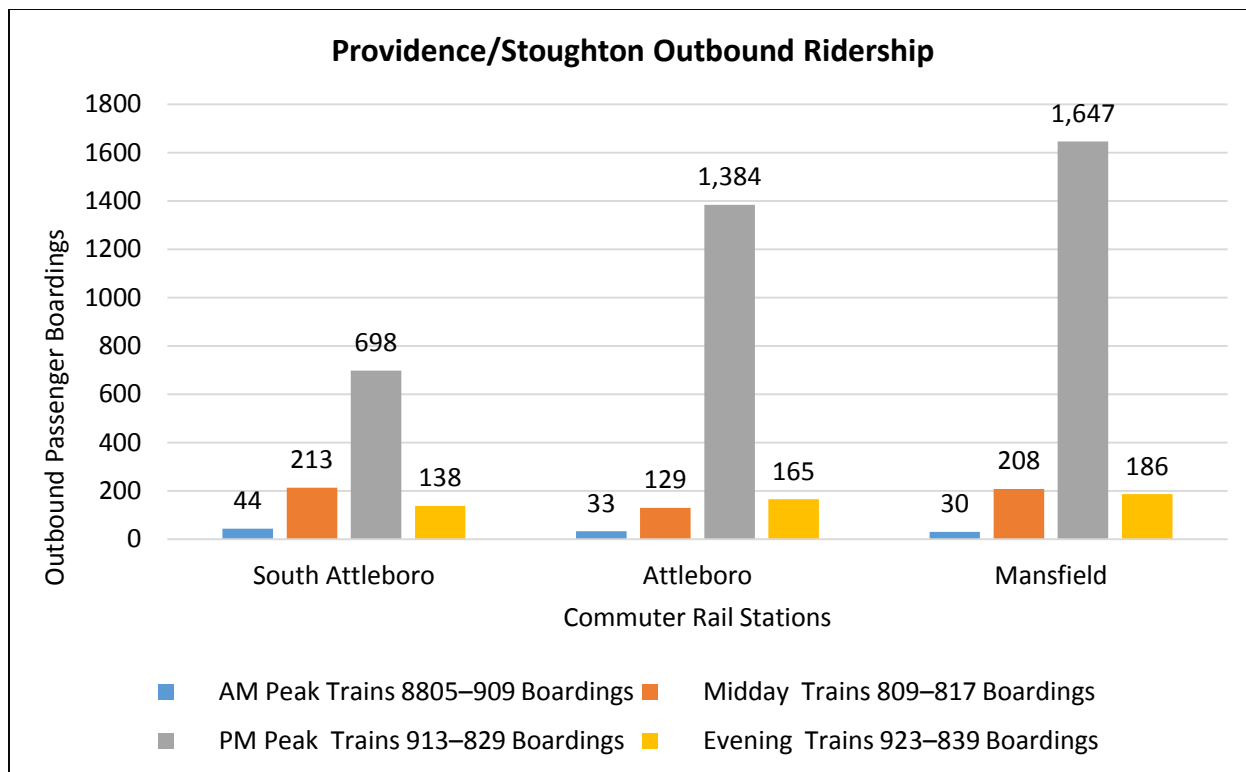
In 2013, the MBTA announced a partnership with the Cape Cod Regional Transit Authority (CCRTA) to provide weekend train service between Boston and Hyannis via the Middleborough/Lakeville Line. The service, known as the “Cape Flyer” operates on Friday, Saturday, and Sunday beginning Memorial Day weekend and ending Labor Day weekend. The train originates at Boston South Station, making stops in Braintree, Brockton, Middleborough/Lakeville, Wareham Village, Buzzard’s Bay, Bourne and Hyannis. As of the 2019 season, the cost of a round trip fare from Boston to Hyannis is \$40 and \$8 from Middleborough/Lakeville to Hyannis.

### **Ridership Trends**

Ridership on the MBTA commuter rail in Southeastern Massachusetts has fluctuated between 2003 and 2013; the peak occurred in 2008 with 9,651 boardings, the low occurred in 2007 with 5,787 boardings. In 2018, the Providence/Stoughton Line saw daily ridership for inbound trains at 4,651 and outbound trains at 5,053. The Middleboro/Lakeville Line saw daily ridership at 867 for inbound trains and 899 for outbound trains. Figures H-4 and H-5 illustrate the ridership trends for Inbound and Outbound trips on the Providence/Stoughton Line. Figures H-6 and H-7 illustrate the ridership trends for Inbound and Outbound trips on the Middleborough/Lakeville Line.

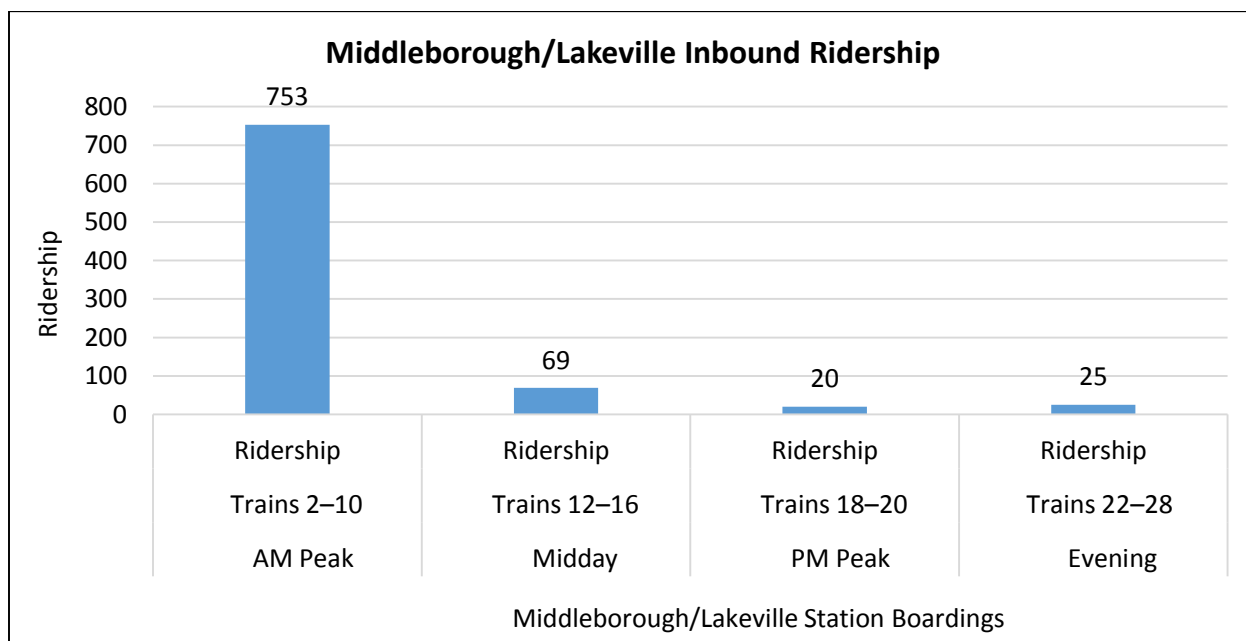


**Figure H-4: Providence/Stoughton Inbound Ridership**



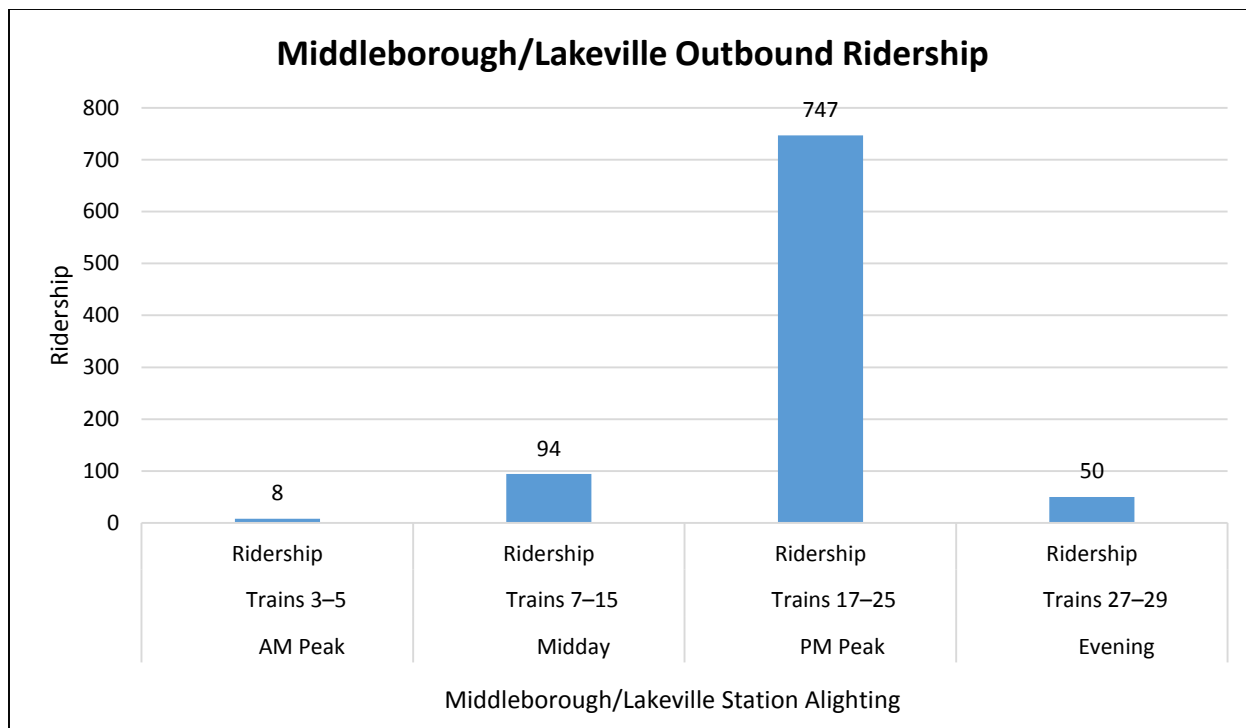
**Figure H-5: Providence/Stoughton Outbound Ridership**

#### Middleboro/Lakeville Ridership



**Figure H-6: Middleborough/Lakeville Inbound Ridership**

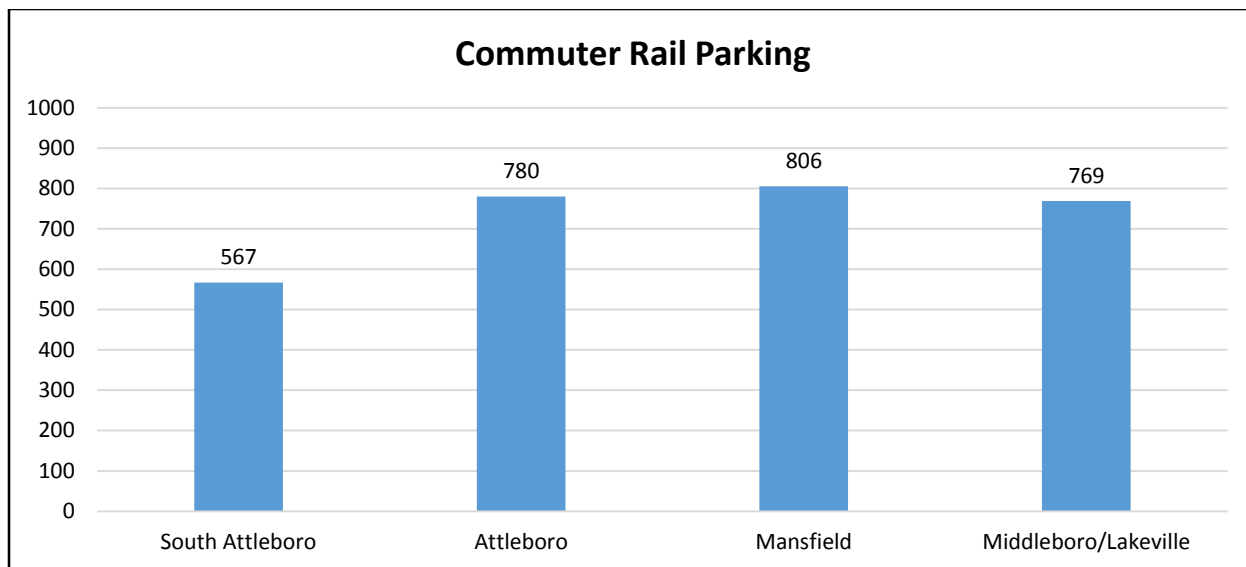




**Figure H-7: Middleborough/Lakeville Outbound Ridership**

## Parking Trends

The 2017 SRPEDD survey of the Middleboro/Lakeville station passengers revealed that 79% of respondents drove alone to the station. This figure demonstrates the nature of commuter rail ridership and implies that for it to grow, so too must the parking capacity. The combined parking capacity at the four stations is 2,922. South Attleboro has the least capacity with 567 spaces, followed by Middleboro/Lakeville with 769 spaces, Attleboro provides 780 spaces and Mansfield has the most spaces with 806 available. The parking rate for all the lots are \$4.00, with the exception of Mansfield residents with a sticker at \$3 and at Attleboro which is \$5.00. Figure H-8 illustrates the Commuter Rail Parking in the SRPEDD region.



**Figure H-8: Commuter Rail Parking**

Average daily parking utilization rates are published on the MBTA website and are available for South Attleboro (95%) and Middleboro/Lakeville (46%). The parking is managed by LAZ Parking, a national parking management company. Through their website and the mobile app, station users can check parking availability and pay for parking. GATRA manages the parking at the Attleboro station and the Town of Mansfield manages parking at the Mansfield station.

## Multi-modal Connections

According to the Commission on the Future of Transportation in the Commonwealth, while there will likely be new technologies to provide mobility in the future, many of them will have wheels or tires and travel on corridors that already exist today. These corridors, or “rights of way,” will increasingly need to serve as shared assets for personal vehicles, transit, freight, TNCs, active transportation modes such as walking and biking, and micro-mobility devices such as scooters. Given that today’s roadways and travel corridors are difficult to expand with right-of-way constraints, it is vital that they be re-purposed to support a truly multi-modal transportation future.<sup>4</sup>

The Greater Attleboro Taunton Regional Transit Authority (GATRA) provides fixed route bus transit service to three of the four stations (the South Attleboro station is not served by a fixed route bus.) The Middleboro-Wareham Link provides service designed to meet the MBTA

<sup>4</sup> Massachusetts Future of Transportation Plan

Commuter Rail AM inbound trains and the PM outbound trains at the Middleboro/Lakeville station.

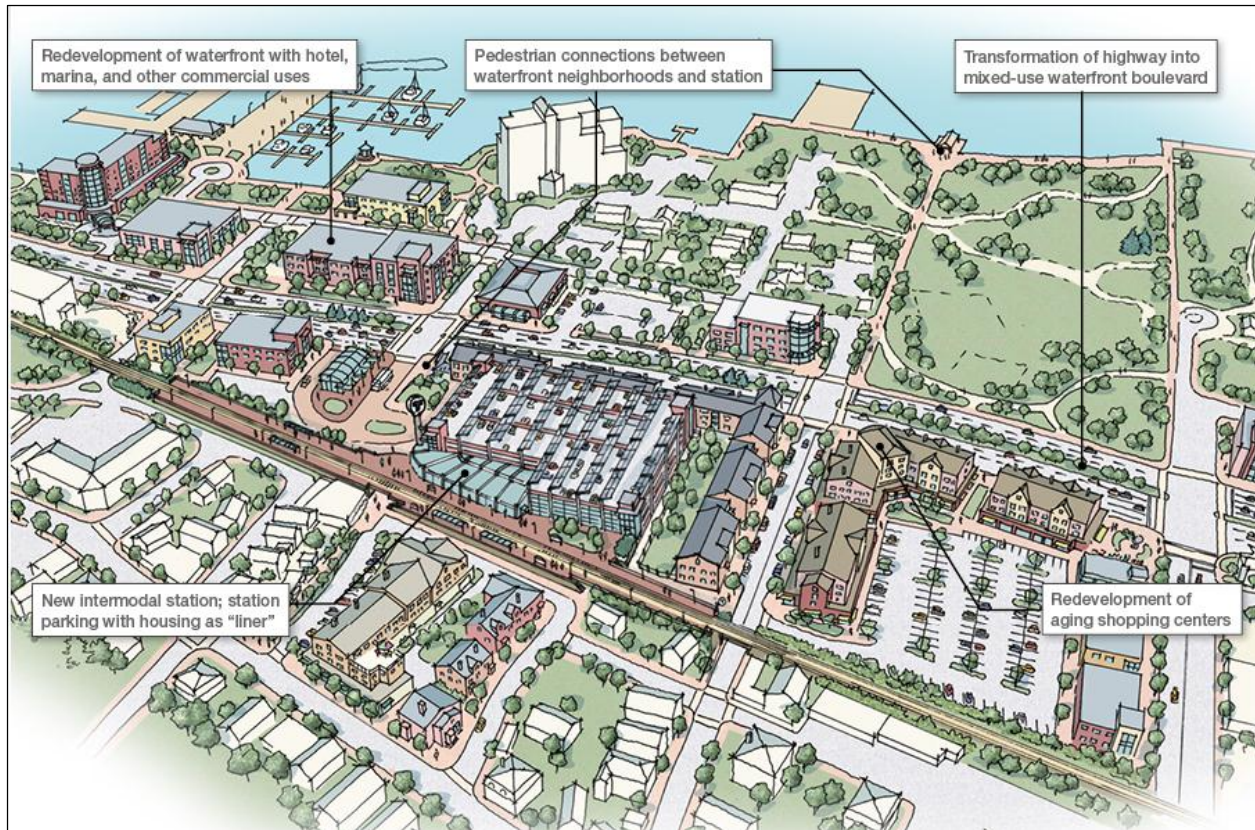
Aligning service at the Attleboro and Mansfield stations is a challenge for GATRA; bus service operates on a clock-face schedule, whereas the MBTA train schedules do not. Clock-face scheduling is a practice in which departure times are scheduled to occur at even intervals and typically align with a specific time during the hour (i.e. a departure at 8:15 AM, 9:15 AM, 10:15 AM, etc.) Because the MBTA trains do not follow a consistent time interval between arriving trains, aligning the GATRA schedule with the MBTA schedule is a challenging task. In addition to the irregular intervals of the MBTA train arrivals, the MBTA and GATRA modify timetables independent of each other, further complicating the task of aligning the timetables.

The Attleboro station offers the most connections to GATRA service with four possible connections. The Mansfield station is served by a single fixed route bus, and the Middleboro/Lakeville station is served by two routes; the South Attleboro station is not served by GATRA.

### **Future Commuter Rail in the Region - The South Coast Rail Project**

The restoration of commuter rail to the south coast has been proposed and extensively studied for over twenty years. The SMMPO has continuously supported the extension of commuter rail to Southeastern Massachusetts during that time.

In June 2009, MassDOT published the South Coast Rail Economic Development and Land Use Corridor Plan. The report discussed the restoration of passenger rail transportation to connect Boston to the greater Taunton, Fall River, and New Bedford areas. According to the report, New Bedford and Fall River are the 6<sup>th</sup> and 10<sup>th</sup> largest cities in Massachusetts respectively, and along with Taunton, are the only cities within 50 miles of Boston that are not served by Commuter Rail. South Coast Rail would provide a new, convenient travel option that will be safer and more reliable than driving on congested roads. It will provide a needed connection between the cities of Taunton, Fall River, and New Bedford, and it will connect these three cities with Boston. In addition, it will address transportation inequalities by extending MBTA service to urban areas with large Environmental Justice populations (minority, low-income, and Limited English Proficiency [LEP]) that suffer the burden of the lack of this public service. Figure H-9 is a conceptual design included in South Coast Rail Economic Development and Land Use Corridor Plan.



**Figure H-9: South Coast Rail Economic Development Land Use and Corridor Plan**

The Corridor Plan identifies Priority Development Areas (PDA) and Priority Protection Areas (PPA). The concept behind the PDA is to encourage development in areas with the greatest capacity or potential to accommodate new development by leveraging existing assets and infrastructure. PDAs include downtowns, major jobs centers, and future South Coast Rail station areas. PPAs were identified to preserve environmentally sensitive areas that are not permanently protected, but are worthy of increased protection through conservation minded land-use planning. Both areas were developed through an extensive public input process involving local, regional, and state review.

On June 15, 2018, the Secretary of the Executive Office of Energy and Environmental Affairs (EOEEA) issued a Certificate stating that MassDOT's latest environmental document adequately and properly complies with MEPA. The Certificate outlines MassDOT's ongoing permitting and construction oversight responsibilities.

### **Phase 1 of the South Coast Rail Program**

On April 22, 2019, MassDOT and the MBTA announced that the South Coast Rail Program has reached two critical Phase 1 milestones: a finance plan has been completed and will be fully funded in the Commonwealth's Capital Investment Plan and the U.S. Army Corps of Engineers

(USACE) has approved the final federal permit required for the program to advance. Meanwhile, early action steps are underway including infrastructure work and the acquisition of land for stations.

According to Stephanie Pollack, Transportation Secretary and MassDOT CEO “Phase 1 of South Coast Rail will be funded one hundred percent by the Commonwealth and the MBTA will not be required to provide any capital funding or issue any revenue bonds that might otherwise impact the MBTA’s future operating budget. We are now well on our way to offering passenger rail service to the South Coast in a few short years with the financing secure, major permits in hand and infrastructure being built.”<sup>5</sup>

The South Coast Rail Program will be built in phases. Phase 1 will deliver service to the South Coast late in 2023, years before service is possible under the Full Build Stoughton Electric Service Project. Phase 1 will provide a one-seat ride from Taunton, Fall River and New Bedford to Boston by extending the existing Middleborough/Lakeville Commuter Rail Line using diesel-powered trains to New Bedford and Fall River.

At the same time, MassDOT will proceed with designing, permitting and funding of the Full Build project. This route will travel from Boston's South Station to Stoughton using a portion of the Northeast Corridor. The route continues south along a combination of inactive right-of-way and freight railroad before splitting south of Taunton for terminus stations in Fall River and New Bedford.

Phase I includes the reconstruction of approximately 37 miles of active Right of Way (ROW) from the Town of Middleborough southwest to New Bedford and Fall River, as well as 28 at-grade crossings (22 fully reconstructed; 6 with equipment upgrades), 14 bridges, work at 63 culverts, 6 new commuter rail stations (new Middleborough Station at Pilgrim Junction, East Taunton, Freetown, Fall River Depot, King's Highway, and Whale's Tooth) and 2 new overnight layover facilities. The stations will comply with the Americans with Disability Act (ADA) Standards, including 800-foot high-level platforms for "all doors" boarding.

The layover facilities, Fall River (Weaver’s Cove) and New Bedford (Wamsutta), are sites for storing the trains at night when they are not in use, near each terminus station. The train sets start and end each service day from these facilities. Each will include six storage tracks, crew quarters, a maintenance shed and parking facilities. For Phase 1 service, South Coast Rail will also use the existing Middleborough Layover facility.

Phase 1 service will include a total of 26 trains (each-way) for weekday service. The MBTA will operate three morning peak trains and three evening peak trains to both New Bedford and Fall

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<sup>5</sup> MassDOT: South Coast Rail Project

River. Taunton and Middleborough will see up to six morning and six evening peak trains because all of the service will pass through those communities. During off-peak periods, the trains will operate on a less frequent service. Operations details will be confirmed as design advances.

The South Coast Rail project team has been working closely with municipalities and will continue to coordinate with them. The SMMPO has continuously supported the extension of commuter rail to Southeastern Massachusetts for over 20 years. The SRPEDD staff continues this support in a number of efforts, including continuing technical assistance to municipalities. Figure H:10 illustrates the phasing plan of the South Coast Rail project.



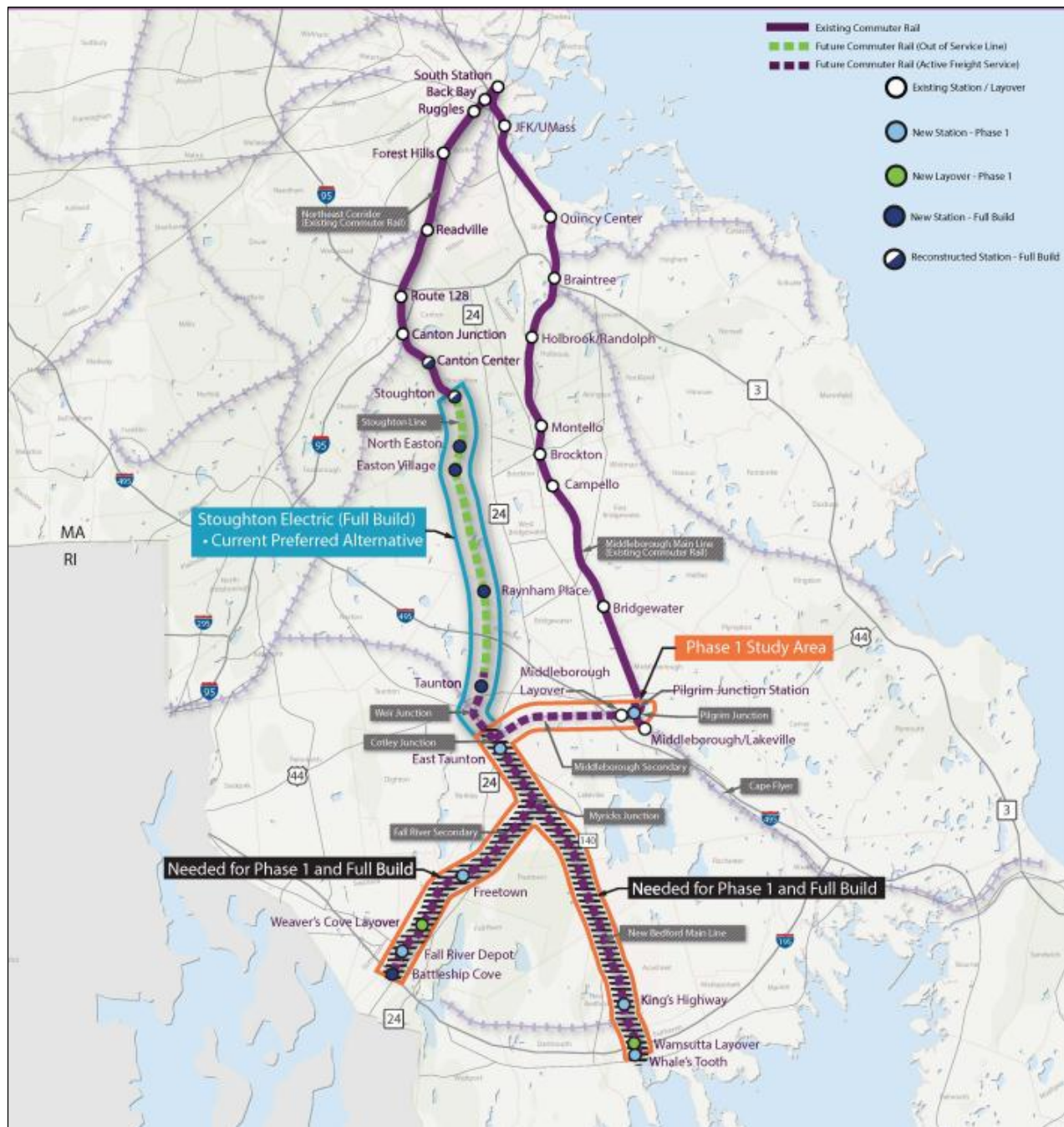


Figure H-10: South Coast Rail Phasing Plan



## **Extension of Commuter Rail to Wareham**

Efforts to extend commuter rail service from Middleborough/Lakeville over the existing rail line to Wareham and possibly Cape Cod have been proposed for several years. This particular rail line is presently being used by freight trains. The On-Cape segment between Hyannis to the Sagamore Bridge is used by excursion trains during summer months. Thru service from Boston to Cape Cod last operated in 1959. In 2013, the MBTA began operating the Cape Flyer between Memorial Day weekend and Labor Day weekend. The train originates at Boston South Station, making stops in Braintree, Middleborough/Lakeville, Wareham Village, Buzzard's Bay, and Hyannis with trips on Friday, Saturday, and Sunday. To accommodate this service, upgrades to the track and signal systems were installed.

The Central Transportation Planning Staff (CTPS) completed the Buzzard's Bay Commuter Rail Extension Feasibility Study in January 2007 in response to a request from the Massachusetts Executive Office of Transportation (MassDOT) to examine the feasibility of re-establishing commuter rail service to Buzzard's Bay. Ridership estimates based on year 2000 US Census journey-to-work were calculated at 2,045 inbound boarding per day in year 2006 and 2,750 by year 2020. The study suggested that improvements to restore passenger service with competitive travel times require the replacement of worn-out cross-ties, installation of at least one new passing track, upgrading of an existing side track near Buzzard's Bay, rebuilding of grade-crossings, and installation of signals. Installation of new full-length high-level platforms would be required at each station. Parking facilities would need to be provided at each station, with adequate capacity for the number of riders projected. Based on the 2007 CTPS study, capital costs for a Buzzards Bay extension would range from about \$81.8 million to \$103.5 million. Annual operating costs were estimated at \$1.9 million for minimum weekday service to \$5.7 million for maximum weekday service.

This project would require one, or possibly two, station locations in Wareham. In a draft November 2005 Site Analysis for a Wareham Intermodal Transportation Center to accommodate local GATRA bus service, intercity service, and passenger rail service, SRPEDD recommended a village station be built in the downtown area. The site analysis also recommended a regional station in West Wareham at Tobey Road, which has good access to the highway for regional users and the potential for Transit Oriented Development (TOD), provided that Wareham adopts appropriate zoning. With or without the connection to Cape Cod, stations in Wareham would need adequate parking in terms of quantity and location to the station to be effective.

If the commuter rail proposal is not feasible, consideration to enhanced transit service of commuter bus should be viewed as another option. These services would provide a less expensive alternative to train operation through the use of buses on the existing road network.

Currently, Peter Pan Bus Lines – Providence Division operates daily service from Wareham to Logan Airport, see Appendix I (Intercity & Commuter Bus) for more information.

## **Feeder Bus & Intermodal Connections**

Commuter rail works best when it connects with a well-designed feeder bus system. The feeder bus system will provide enhanced transit service at the commuter rail stations, and make it possible to travel to, from, and throughout the south coast with limited need of a private automobile.

A feeder bus service is designed to pick up passengers in a certain locality and take them to a transfer point where they make an onward journey on another service. This service can be another bus, or a rail-based service such as a tram, rapid transit or train. Feeder buses may act as part of a wider network. In accordance with the Massachusetts Commission on the Future of Transportation a successful Feeder bus system will aid in reducing Greenhouse Gas Emissions, while also helping accelerate Massachusetts' commitment to make transportation infrastructure resilient to a changing climate.

Two transit authorities currently provide fixed route bus transit service, Greater Attleboro Taunton Regional Transit Authority (GATRA) and the Southeastern Regional Transit Authority (SRTA). Both transit authorities should explore offering expanded service to accommodate the South Coast Rail Project. By expanding service to accommodate South Coast Rail it will make the region more multimodal. It will enhance the regions goals to decrease air quality emissions as well as promoting a sustainable form of public transportation.

The following guidelines are recommended for the feeder bus system:

- Provide direct connections to nearby origins and destinations including downtowns, universities, government centers, hospitals, and higher density residential developments;
- Reflect and incorporate future South Coast Rail Service. This includes the use of private shuttles. Where a new private shuttle service could prove beneficial, the feeder bus plan would identify and characterize the opportunity;
- Avoid duplications of service, minimize the need to transfer, and minimize the total travel times for patrons;
- Give preference to rerouting existing services over providing new services where and whenever possible. When rerouting significantly inconveniences existing riders, alternatives to reduce or eliminate these inconveniences should be considered;
- Provide safe and convenient pedestrian connections to nearby bus stops;
- Be coordinated with South Coast Rail timetables to minimize transfer and wait times.

## Conclusions and Recommendations

Commuter rail is an integral part of the southeastern Massachusetts transportation network and this will only increase with Phase 1 of the South Coast Rail Project underway. The existing service is well used with station boarding among the highest in the entire MBTA Commuter Rail system. Continued growth will require continued investment to maintain the stations and track currently in use today and to expand the system throughout the southeast.

For existing stations and service, several recommendations are necessary to maintain and improve the stations. The following recommendations apply to the four current stations within the SMMPO region: Mansfield, Attleboro Center South Attleboro, and Middleborough/Lakeville:

- Continued maintenance of train stations by repaving parking lots, improving sidewalk connections, improve pedestrian access and ensure ADA compliance, as well as improve lighting and security systems at the stations and parking lots.
- Improve connections and frequency between GATRA fixed route transit bus service and the MBTA commuter rail service.
- Expand Transit Oriented Development in the areas around the stations
- Coordinate with SRTA and GATRA to develop an intermodal system that is safe, reliant, environmentally conscientious and is resilient to the effects of climate change.
- Continue to provide and support a commuter rail network that is well maintained, reliable, efficient, and safe for all workers and users.
- Expand SRTA fixed route service to coordinate connections with future South Coast rail service.
- Expand hours of operation with GATRA and SRTA to coordinate with existing and future MBTA service.

As for new commuter rail service, the expansion of service to Fall River and New Bedford will improve the multi-modal travel options for residents and visitors of the SMMPO region. On April 22, 2019, MassDOT and the MBTA announced that the South Coast Rail Program has reached two critical Phase 1 milestones: a finance plan has been completed and will be fully funded in the Commonwealth's Capital Investment Plan and the U.S. Army Corps of Engineers (USACE) has approved the final federal permit required for the program to advance.

Meanwhile, early action steps are underway including infrastructure work and the acquisition of land for stations with the estimated date for start of service projected to be in late 2023.

SRPEDD will continue to support the South Coast Rail Plan and will continue its work in making it a reality.