
Southeastern Regional Transit Authority

# Microtransit Implementation Plan

July 2023

NELSON NYGAARD

GETTING ON BOARD

SRTA

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# 1 INTRODUCTION

## Creating vital, robust connections with the new South Coast Rail project is a critical need for the Southeastern Regional Transit Authority (SRTA).

With South Coast Rail due to open within the next year, SRTA must adapt their system to ensure that a robust transit connection exists between SRTA and commuter rail service. This connection will ensure that residents of the Fall River and New Bedford areas have broader access to the region without needing to rely on a car. While this new connection is important, it cannot come at the expense of current SRTA service.

To make the connection for transit riders to the new South Coast Rail (SCR) stations, SRTA is considering microtransit as a solution. Microtransit is on-demand, shared ride, public transportation service that operates within a defined area or zone. Microtransit software allows users (riders) to request a ride, track vehicle movements in real time, and pay fares. Riders can request trips through smartphone apps, computer or via a call center. Transportation providers use microtransit software to efficiently dispatch vehicles "on demand."

Microtransit is an emerging mode within the transit industry that has been growing in popularity over the past decade and offers several unique features in comparison to fixed-route bus service. Microtransit is adept a first/last mile connections where a deviation from fixed-route bus service may not make sense due to scheduling issues, geographic challenges, or barriers in the network. Microtransit also can be very convenient for passengers, picking them up at their home and taking them directly to their destination. However, while microtransit is a relatively nimble service, it does not have the capacity to move large volumes of passengers as fixed-route service.

In certain markets and under certain conditions, microtransit's dynamic dispatching capabilities are an alternative to traditional reservation-based demand response and potentially fixed-route service. The operating model allows agencies to tailor service to demand and offer riders a flexible service that is often easier to use. The need to call the day (or days) before travel is reduced or eliminated. As public transportation technology continues to improve, microtransit can be integrated with other services, including fixed-route, complementary paratransit (ADA), and services provided by taxis and by transportation network companies (TNCs) such as Lyft and Uber

Because of microtransit's advantages, SRTA is proposing to implement a microtransit pilot service to connect residents of Fall River and New Bedford with the new SCR rail stations. While this service is not designed to move large numbers of people, this pilot will allow SRTA

and interested stakeholders to better understand travel patterns of riders and underlying demand for connections to the new rail stations. If successful, this pilot will lay the groundwork for either greater investment in more robust microtransit connections or a significant investment in fixed route service to include the rail stations within the service area.

This document will outline key features of the proposed microtransit pilot, including pilot goals and key performance indicators, service design, zone descriptions, resource requirements, and implementation schedule.

# 2 GOALS AND KEY PERFORMANCE INDICATORS

Agencies considering microtransit service are typically looking to achieve certain goals aimed at providing and/or improving current public transportation options while ensuring these options are both equitable and sustainable. The following goals and related key performance indicators will guide the development and performance evaluation of SRTA's microtransit pilot project.

| Goal 1 | SRTA will offer high-quality, equitable connections to South Coast Rail stations. |
|---|---|
| High-quality, equitable connections will create a service passengers use out of desire, not out of lack of options. These connections to the commuter rail stations will reinforce SRTA's goal to move people out of single-occupancy vehicles and will reduce traffic congestion around the stations. In addition, on-demand transit will also ensure that passengers of all backgrounds have equal access to commuter rail. | |
| **Proposed key performance indicator (KPI): Passenger wait time for a trip will not exceed 15 minutes.** | |
| **Proposed KPI: SRTA will deny no trips based on availability.** | |

| Goal 2 | On-demand transit will reduce parking demand at South Coast Rail stations. |
|---|---|
| By providing on-demand transit, SRTA will reduce the demand for on-site parking at each station. This will contribute to more efficient land use opportunities and will move commuters away from single-occupancy vehicle trips. | |
| **Proposed KPI: Each zone will provide 1 passenger trips per scheduled train.** | |

| Goal 3 | On-demand transit will complement fixed route service, not detract from it. |
|---|---|

While robust access to commuter rail stations is important, providing on-demand transit service that competes directly with fixed route service wastes resources and dilutes the effectiveness of both services.

**Proposed KPI: Ridership on bus stops in close proximity to commuter rail stations will not decrease at a rate greater than overall system ridership**

| Goal 4 | On-demand transit will create new riders on fixed route service. |
|---|---|

On-demand transit presents the opportunity to attract new riders to SRTA's network, and potentially convert a portion of other trips to fixed route service.

**Potential KPI: At least 10% of riders of on-demand transit will utilize fixed route transit for a portion of trips.**

| Goal 5 | On-demand transit will improve riders' satisfaction with SRTA overall. |
|---|---|

On-demand transit presents an opportunity for SRTA to expand their footprint within their service area and to provide more robust connections within their communities, both for existing riders and new riders. Potentially, this service can improve the satisfaction of riders with SRTA overall.

**Potential KPI: Complaints about on-demand transit will be a lower rate than complaints about fixed route service.**

**Potential KPI: Satisfaction ratings will improve over the previous rating, based on survey questions.**

**Potential KPI: In-app ratings will increase over time.**

| Goal 6 | On-demand transit will be financially sustainable. |
|---|---|

While on-demand transit does fill a niche for areas where fixed route service is not feasible, on-demand transit is limited in the number of passenger trips it can provide at a time. To ensure the service is operating efficiently, comparing costs between fixed route and on-demand services is critical to gauging the success of the on-demand service over time. Understanding how costs differ between services will help determine if the service model needs to be adjusted in the future.

**Potential KPI: Cost per passenger will trend flat or downward over time.**

**Potential KPI: Cost per service hour for on-demand transit will not exceed cost per service hour for fixed route service.**

**Potential KPI: Passengers per trip will trend upward over time.**

# 3 ZONE DESCRIPTIONS

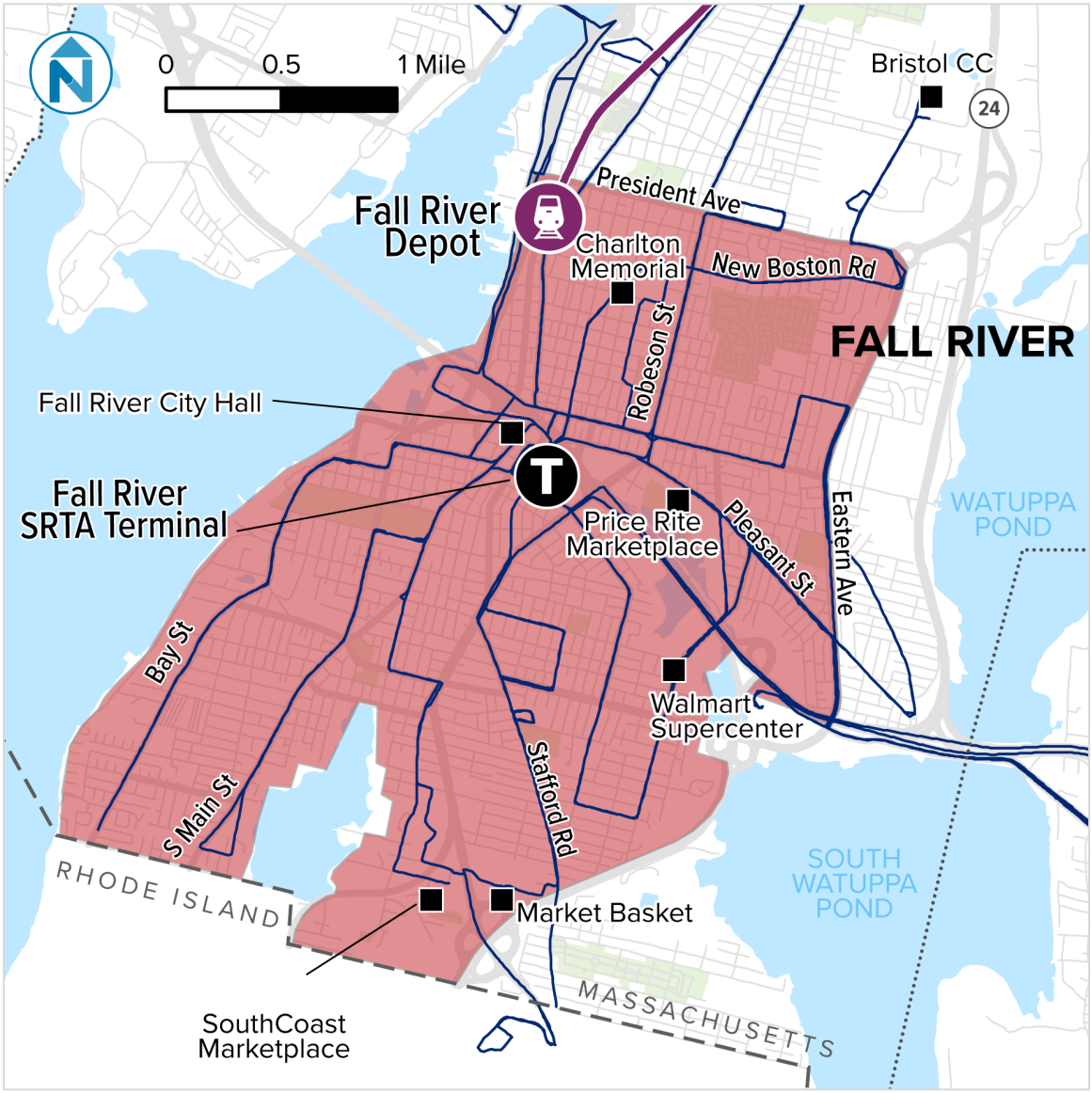
SRTA's pilot will be comprised of three separate microtransit "zones." A zone is the geographic area where an individual microtransit service operates. Zones will often be comprised of both residential and commercial areas. Oftentimes, a zone will overlap with the fixed route network to allow for transfers between services. Smaller zones tend to require fewer operational resources and also tend to have better on-time performance.

The SRTA pilot zones include one in Fall River and two in New Bedford. Each will operate independently of each other, and each zone will require its own operational resources. These zones will also be evaluated and monitored individually.

# Fall River

Fall River is served by one microtransit zone. This zone encompasses much of the core of Fall River. It is bounded by Route 6 in the north, Eastern Avenue and Route 24 in the east, the state line in the south and Taunton River in the west.

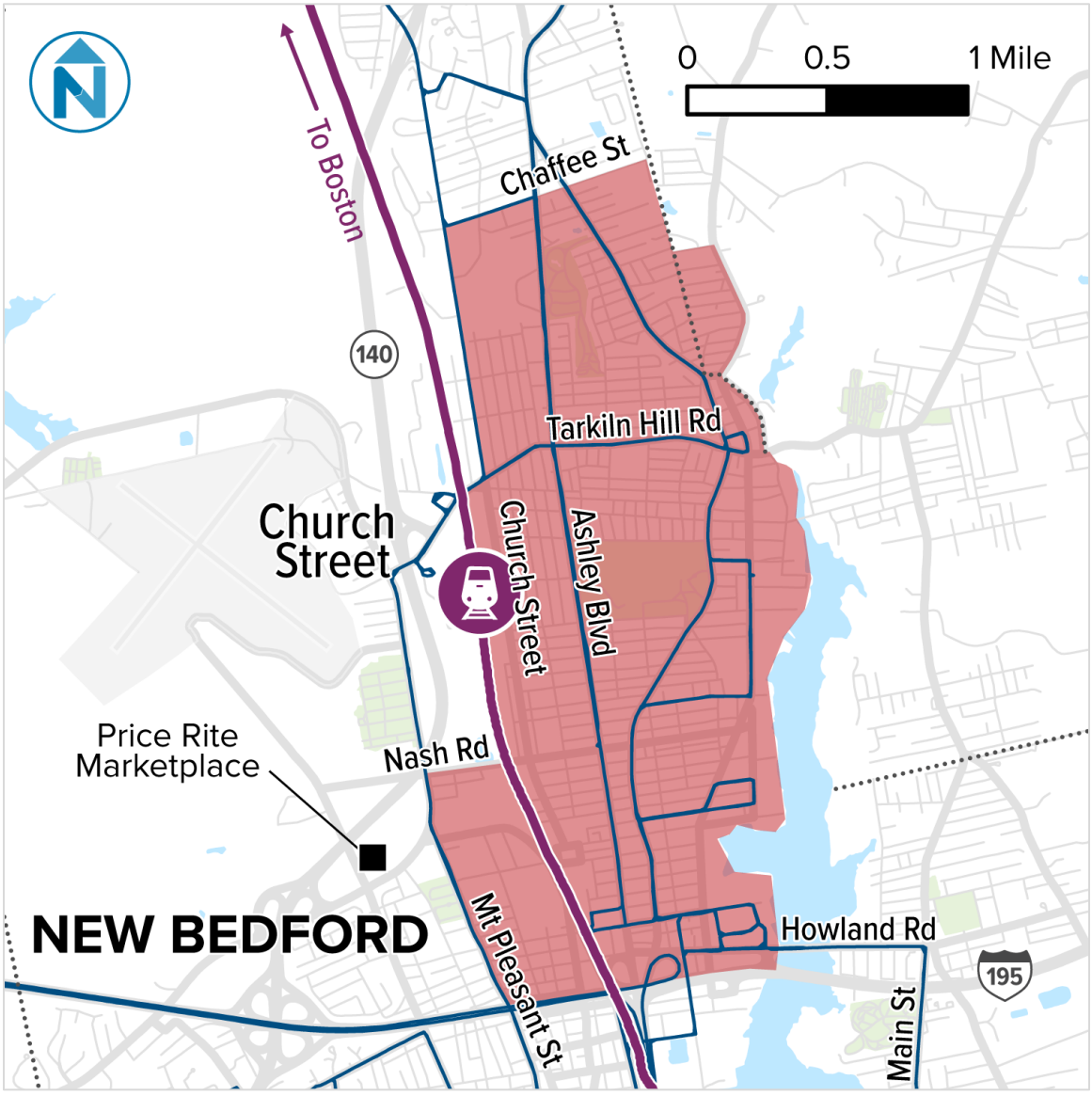
**Figure 3-1 Fall River Microtransit Zone**



# New Bedford – North

New Bedford is split into two zones. The first zone, located in the north, is bounded by Chaffee Avenue for the northern boundary, Middle Road/Mill Road/Acushnet River on the east, I-195 in the south, and Church Street/Mount Pleasant Street in the west.

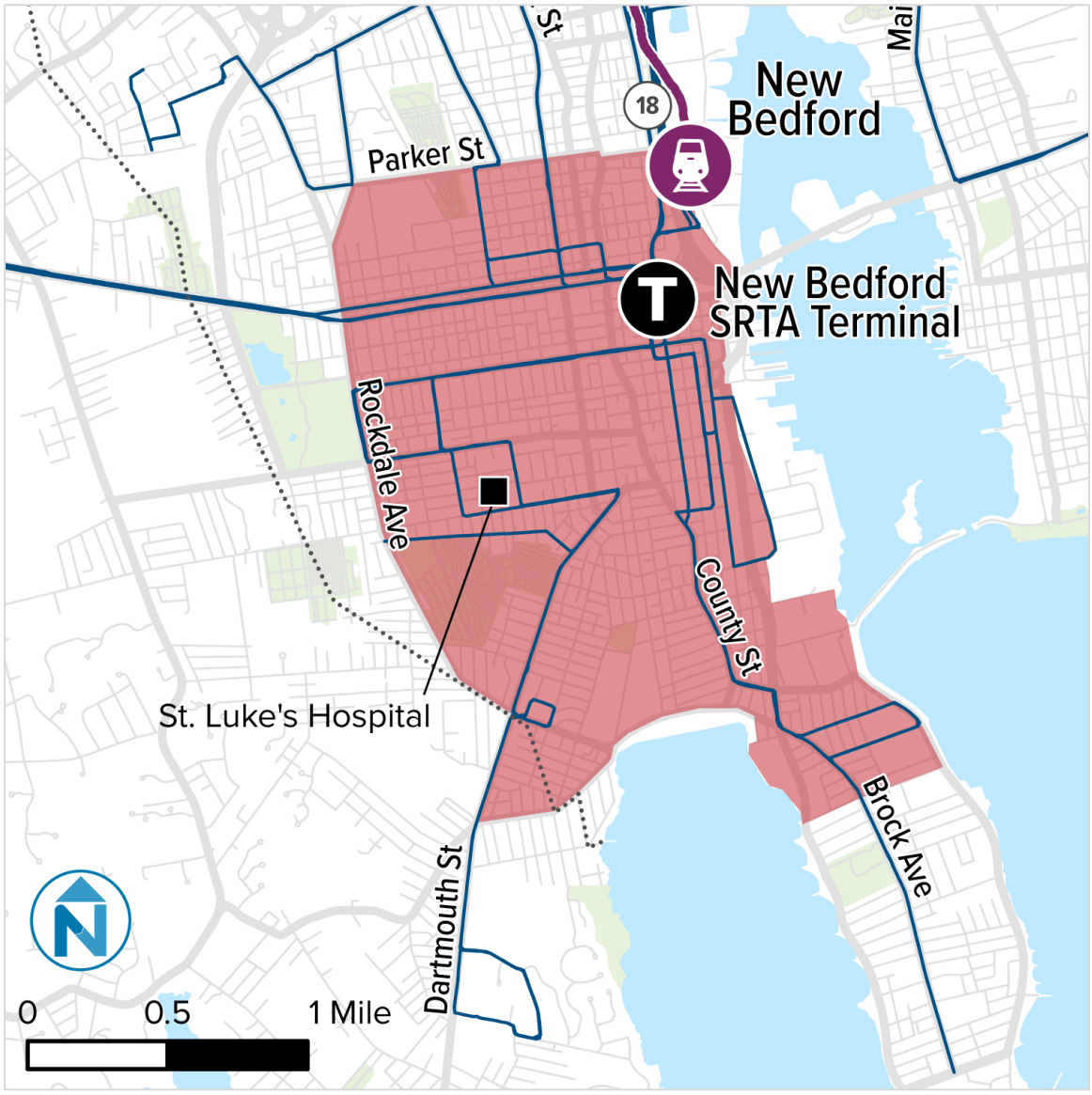
**Figure 3-2 New Bedford - North Microtransit Zone**



# New Bedford – South

The southern New Bedford zone is bounded by Parker Street in the north, JFK Memorial Highway and Rodney French Boulevard in the east, Rodney Street and Cove Road in the south, and Dartmouth Street and Rockdale Avenue in the west.

**Figure 3-3 New Bedford - South Microtransit Zone**



# 4 SERVICE DESIGN

The service design of SRTA's three microtransit zones sets the rules and parameters by which the service will operate. The service design will work towards reinforcing the pilot goals. Key aspects of microtransit service design includes fare, hours of operations, days of operation, response time, and reservation/cancellation policies. Figure 4-1 outlines the operational parameters and proposed policies for SRTA's pilot microtransit program.

**Figure 4-1 Service Design**

| Operational Parameter | SRTA Policy |
|---|---|
| Fare | $5.00 per boarding, no pre-paid fare products accepted |
| Transfer | None |
| Days of Operation | Weekdays only, no holidays |
| Hours of Operations | Fall River – 4am-8:30pm<br>New Bedford North – 4am-9pm<br>New Bedford South – 4am-9pm |
| Response Time | Within 15 minutes of scheduled pickup time |
| Reservations | Accepted up to 1 week prior |
| Cancellation | No-shows lose privileges to make reservations |
| Operating rules | Passengers may only book trips for any destination within the zone, except for 30 minutes before northbound trains and 30 minutes after southbound trains. Passengers may only book trips to the train stations 30 minutes before a northbound departure and from the train station 30 minutes after a southbound arrival. |

Due to the unique size of the individual zones, the train schedules, and the desired response time, each zone will require different levels of resources to be adequately served. Figure 4-2 shows the number of vehicles and operators required to provide this microtransit service, not including any spare vehicles or spare board operators.

**Figure 4-2 Vehicle and Operator Requirements**

| Zone | Vehicles Required | Operators Required[1] |
|---|---|---|
| Fall River | 3 | 6 |
| New Bedford – North | 1 | 2 |

[1] Assumes 8.5 hour shifts from operators. If shift times are limited to 8 hours, operators required will increase by one for each zone (three total)

| | | |
|---|---|---|
| New Bedford – South | 2 | 4 |

# 5 OPERATIONS

SRTA will operate the microtransit pilot utilizing SRTA-owned vehicles and operated by operators supplied by South Coast Transit Management (SCTM), which is the current contractor providing operations for SRTA. The software that powers SRTA's microtransit program will be provided by a third party.

In selecting a microtransit software platform provider, SRTA has a range of options to consider. Some of the factors SRTA will need to consider include the procurement timeline, cost, billing model, and ease of expansion/contraction of the service. On the passenger side, SRTA should select a vendor that provides passenger tools that are easy to understand, adaptable to SRTA's needs, and accessible to a board variety of passengers.

Currently, SRTA contracts with Trapeze corporation's paratransit platform TripSpark to provide paratransit scheduling and dispatch. This software can be expanded to include microtransit scheduling and dispatch as well. Advantages for considering TripSpark include a potentially shortened procurement window/process, continuity of software platforms within SRTA, and the potential to utilize some of the real-time dispatching features of microtransit within paratransit operations. Also, because of Trapeze's focus within the transit industry, their platforms are designed to communicate seamlessly with each other, which could improve integration. TripSpark also utilizes a pricing model that seems to differ from most other microtransit providers; billings are determined by the maximum number of trips booked in a week, whereas most other microtransit providers bill based upon the number of vehicles in service.

In preparation for SRTA's potential procurement of a software provider for microtransit services, three microtransit providers were reviewed to determine potential paths for SRTA. The project team reached out to the following three vendors for additional product review: TripSpark, VIA, and Transloc.

**Figure 5-1 Potential Microtransit Software Providers**

| Provider | Pricing | Major Differentiator |
|---|---|---|
| TripSpark | Set up fee + maximum number of trips per week charge | Integrated into the Trapeze platform |
| VIA | Set up fee + per vehicle hour charge | |
| Transloc | Set up fee + per vehicle charge | |

Prior to launching microtransit service, SRTA will be required to select a vendor that will provide the platform by which the service is operated. A platform will include the ability to schedule and dispatch trips, manage customer accounts, have a passenger facing app that will allow passengers to book trips, and process payments. A hallmark of microtransit service is the ability for scheduling and dispatch to be dynamic. This will allow trips to be adjusted in real time to both create additional vehicle capacity and to make service as efficiently scheduled as possible.

# 6 COST & RESOURCES

Costs for this pilot project fall into two categories: capital and operating. Capital costs include one-time costs that will help deliver the service, and operating costs are recurring costs.

## Capital Costs

**Figure 6-1 Capital Costs**

| Item | Cost |
|---|---|
| Cutaway Vehicles (6 total)[2] | $300,000-450,000 |
| Software Implementation Cost | $10,000-20,000 |
| Marketing Campaign | $25,000-$40,000 |

## Operational Costs

**Figure 6-2 Annual Operational Costs**

| Item | Annual Cost |
|---|---|
| Annual Operational Cost[3] | $1,770,000 |
| Software Licensing | $100,000-$120,000 |

[2] Not inclusive of spare vehicles, assumes operator shift changes occur on-street

[3] Calculated by $70.67 (demand response hourly cost) X 251 days of service

# 7 PHASING

As an initial launch of this service, SRTA will operate a reduced pilot to account for operator availability. Phase one will focus on beginning service in all three zones, but will have reduced operations. This phasing strategy will not meet anticipated demand, but it will provide an opportunity to begin testing the service with resources that are currently available. This phasing strategy, as shown in Figure 7-1, will require eight full-time operators and four vehicles to operate.

**Figure 7-1 Phase One Microtransit Schedule**

| Zone | Vehicles in Service | Operators Required | Weekday Shift Time |
|---|---|---|---|
| Fall River | 2 | 2 | 4:15 a.m. – 12:15 p.m. |
| | | 2 | 12:15 p.m. – 8:30 p.m. |
| New Bedford – North | 1 | 1 | 4:00 a.m. – 12:30 p.m. |
| | | 1 | 12:30 p.m. – 9 p.m. |
| New Bedford – South | 1 | 1 | 4:00 a.m. – 12:30 p.m. |
| | | 1 | 12:30 p.m. – 9 p.m. |

Phase two (Figure 7-2) will build upon phase one by adding in additional operators and vehicles to accommodate the anticipated ridership demands and to help attain the anticipated response time threshold identified as a project goal.

**Figure 7-2 Phase Two Additional Resources Required**

| Zone | Additional Vehicles in Service | Additional Operators Required | Weekday Shift Time |
|---|---|---|---|
| Fall River | 1 | 1 | 4:15 a.m. – 12:15 p.m. |
| | | 1 | 12:15 p.m. – 8:30 p.m. |
| New Bedford – North | 0 | 0 | n/a |
| | | 0 | n/a |
| New Bedford – South | 1 | 1 | 4:00 a.m. – 12:30 p.m. |
| | | 1 | 12:30 p.m. – 9 p.m. |

# 8 IMPLEMENTATION SCHEDULE/CHECKLIST

## July 2023

- ❑ Develop/finalize SOW for software contractor
- ❑ Issue RFP for software contract (if not issuing extension to TripSpark)
- ❑ Coordinate operator requirements with SCTM (to begin hiring)

## August 2023

- ❑ Develop branding for service
- ❑ Begin procurement for marketing and public information

## Fall 2023

- ❑ Public meetings to gather passenger feedback
- ❑ Develop outreach campaign
- ❑ Update website to include microtransit information
- ❑ Operator training
- ❑ Finalize billing procedures
- ❑ Call center training

## Winter 2023/2024

- ❑ Beta test new app with select riders
- ❑ Potential promotional period begins
- ❑ Train service begins; microtransit service begins