

Proposed Overnight Service Pilot

Service Pilot Evaluation *Presented by MBTA*

Fiscal Management and Control Board
July 31, 2017

- Service Pilot **Proposal Evaluation**
 - Proposal for Early Morning
 - Proposal for NightBus
- **Performance Metrics** for Evaluation of Service Pilot(s)

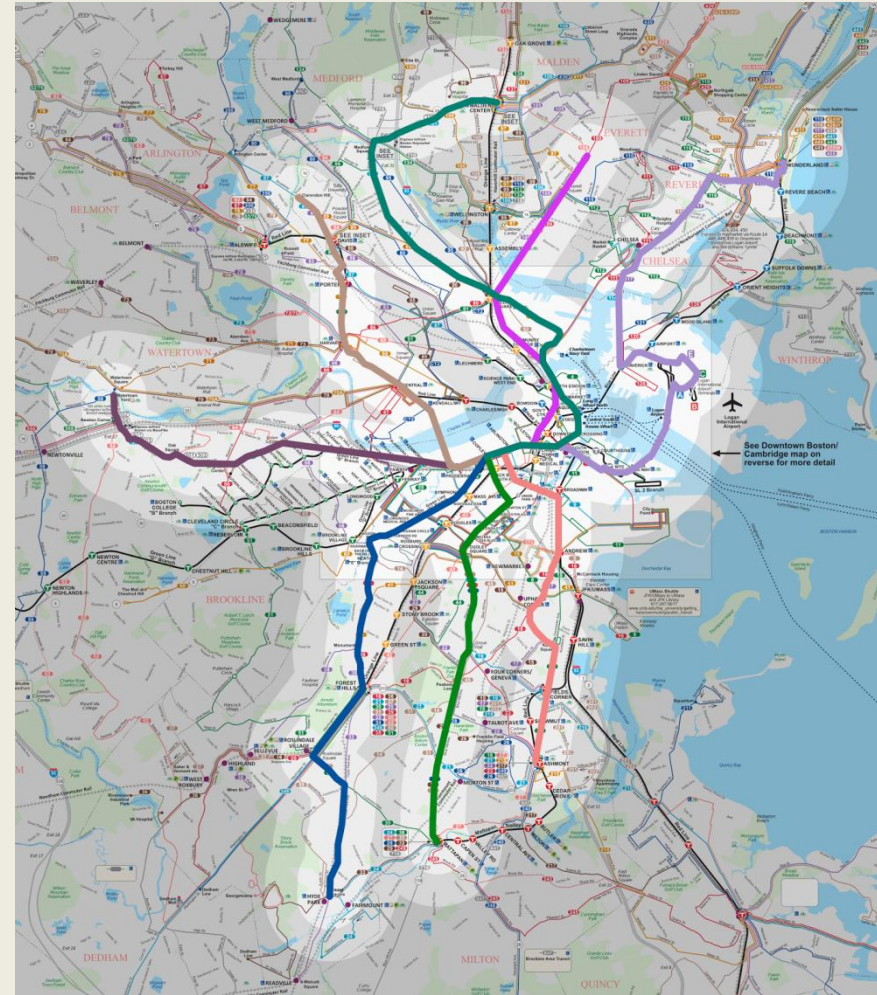
Proposed Overnight Service Pilot

Proposal Evaluation

Overview of Proposal

Early Morning and NightBus

- Original proposal was for overnight bus service 7 days a week
- MBTA staff working with the City sponsors and advocates collected and analyzed data on travel demand during the 1am to 5am time period
- We determined that the demand, and origin and destination patterns differed significantly throughout the 1-5am time period
- We agreed to split the proposal into two time periods:
 - Early morning from 4-5am, operated by the MBTA
 - NightBus from 1-4 am
 - **Nightbus Peak** with additional service between 1-3 am on high demand routes
 - **Nightbus Continuous** with a few routes operating from 1-4 am



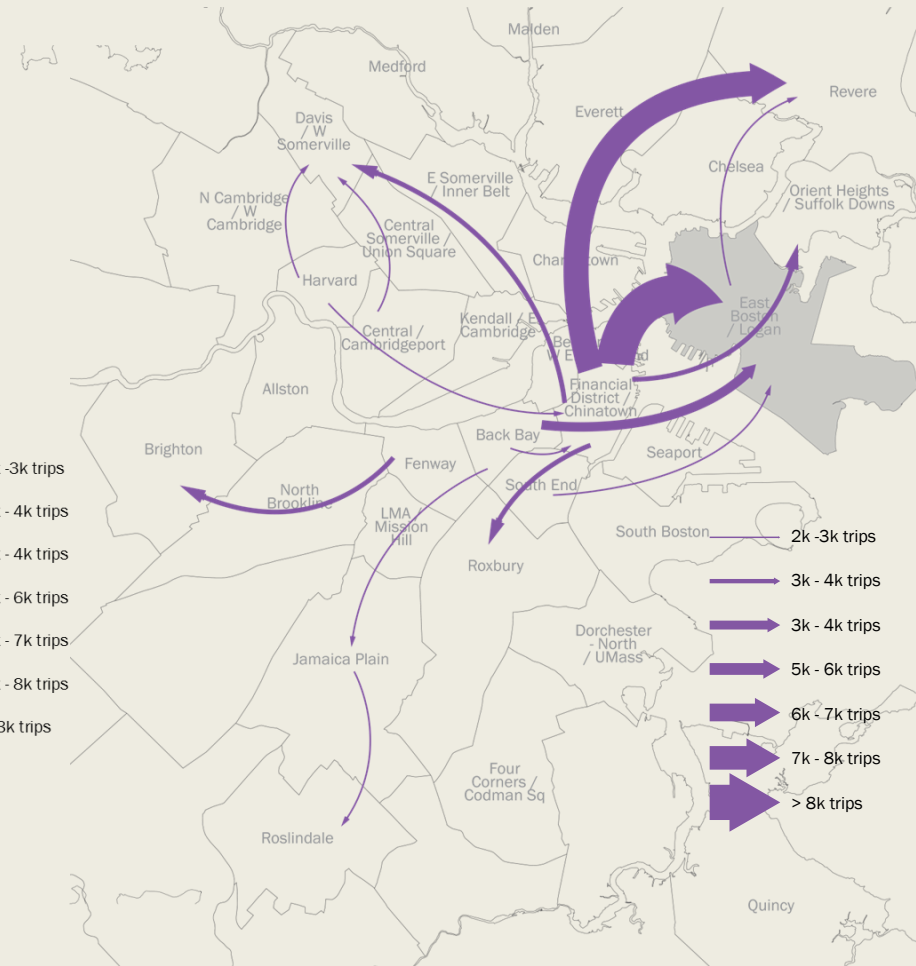
Original Transit Matters Proposal

Origin Destination Patterns

Early Morning

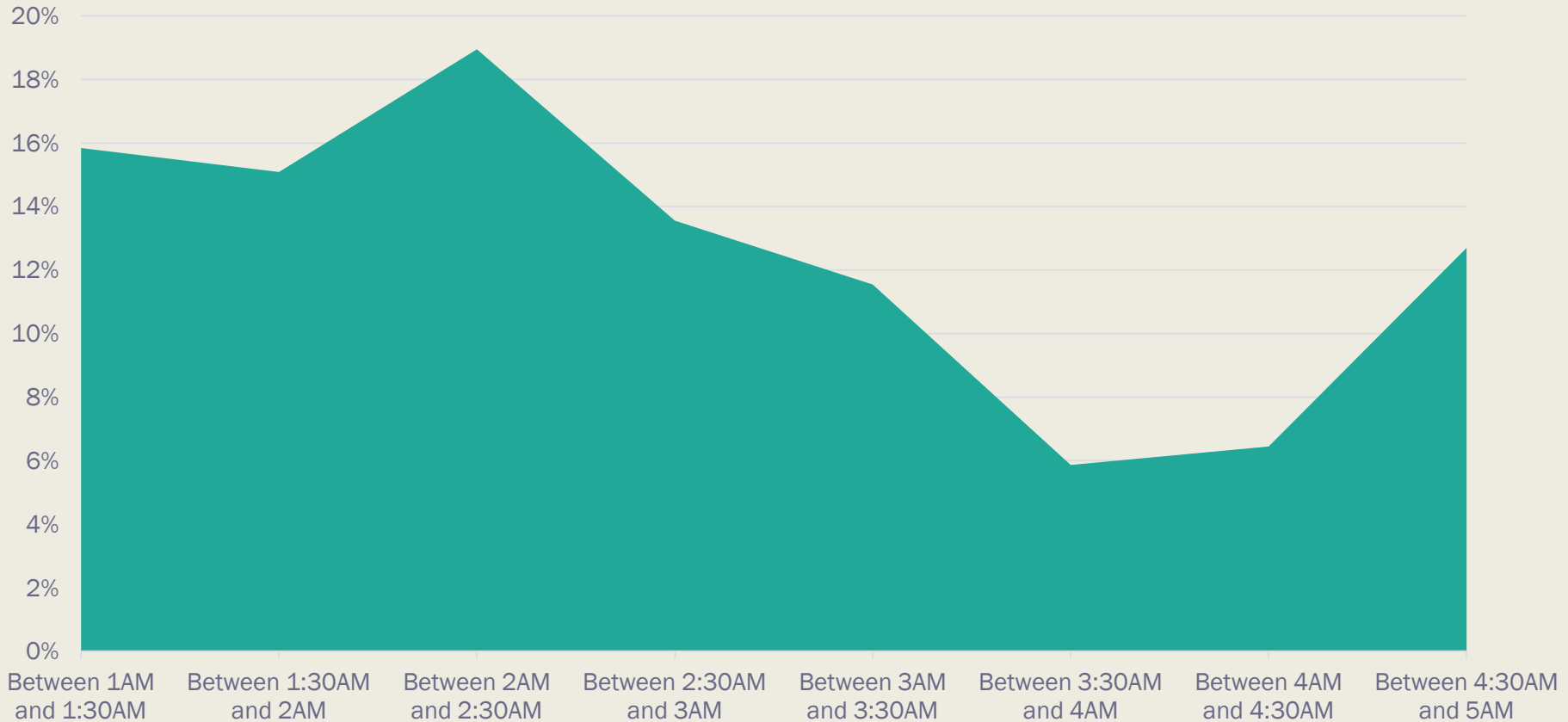


Late Night



Optimal Boarding Times

Different demand for boarding throughout the overnight period



This shape generated using both the likelihood of traveling, frequency of current overnight travel, and optimal boarding times.

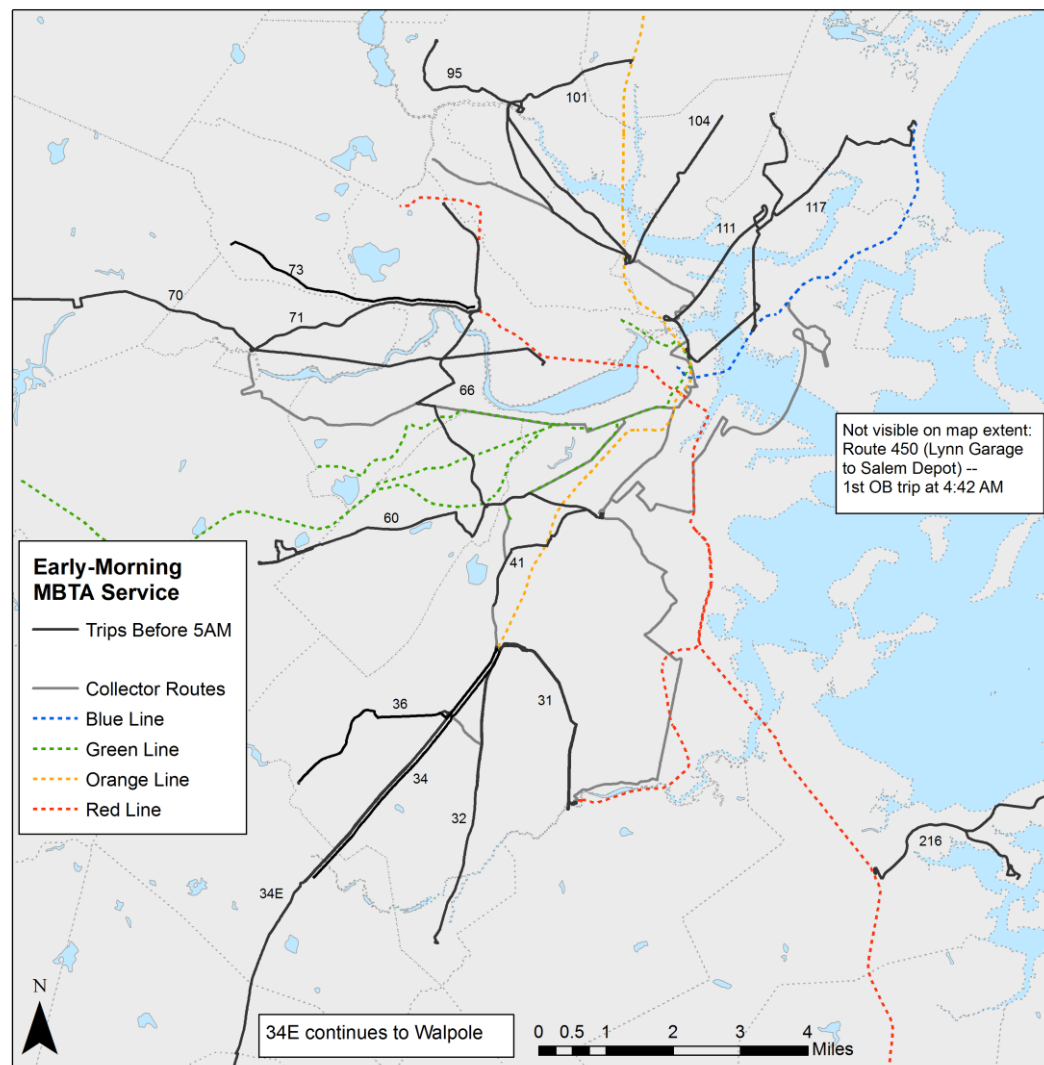
Early Morning Network

Summary

- The MBTA has early morning bus service between 4-5 am¹
- The existing service is not planned or marketed as a network
- There is crowding on first trips of the day in the 4-5 am hour and in the 5-6 am hour.
- This proposal is to create a Early Morning network that would serve existing demand and serve additional riders
- The Early Morning service would be marketed as its own network

¹ Most routes go only outbound for their first trip before 5. A few “collector” routes start between 3- 4 am.

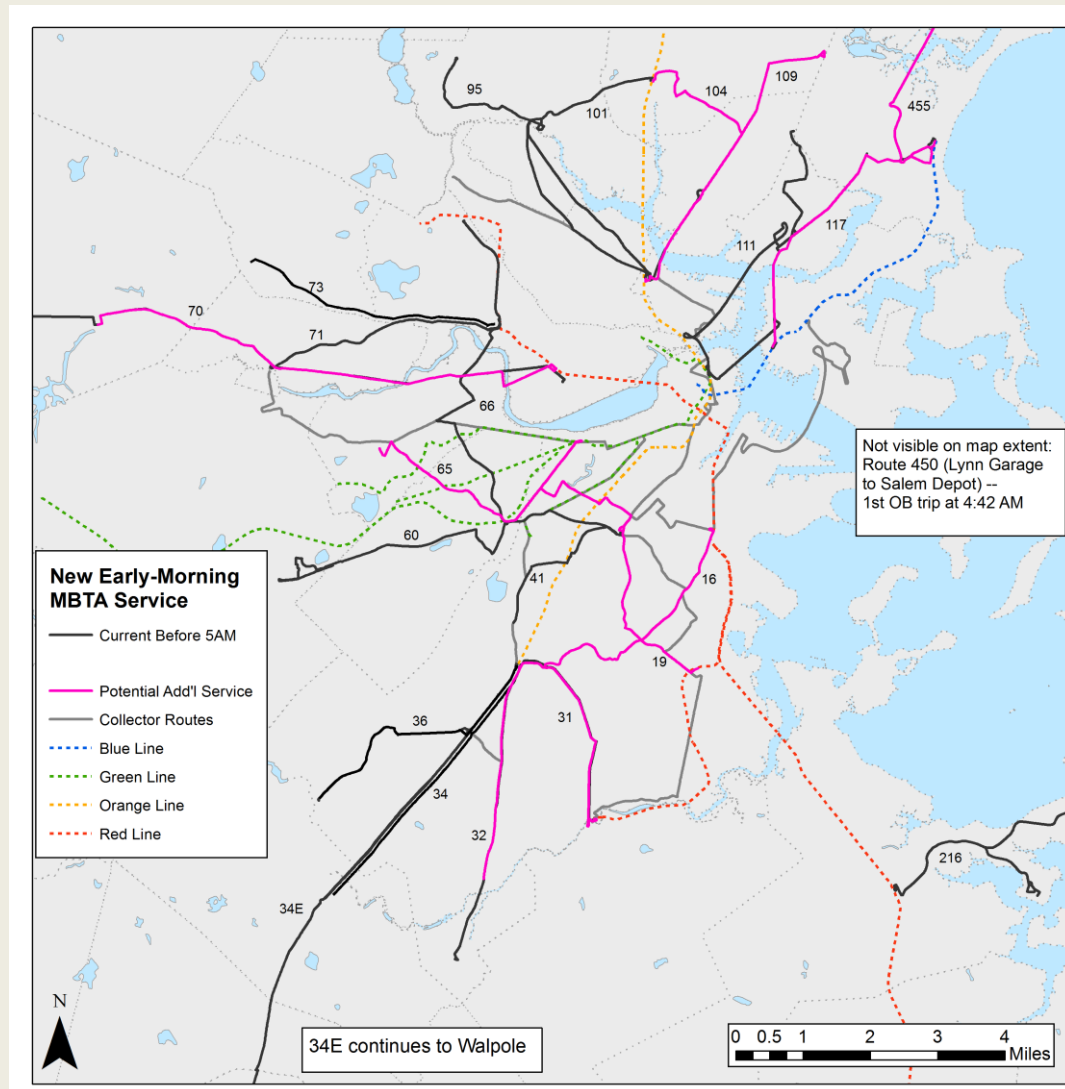
Existing MBTA Early Morning Service



Early Morning Network Proposal

- The proposal would add additional early morning trips
- Routes with the most severe AM crowding levels to get supplemental service: 16, 19, 31, 32, 65, 70, 104, 109, 117, 455
- Early trips are scheduled to meet the first trains of the day or operate on variants that provide service into job centers
- Market entire network, including Massport and other providers

Proposed Early Morning Network

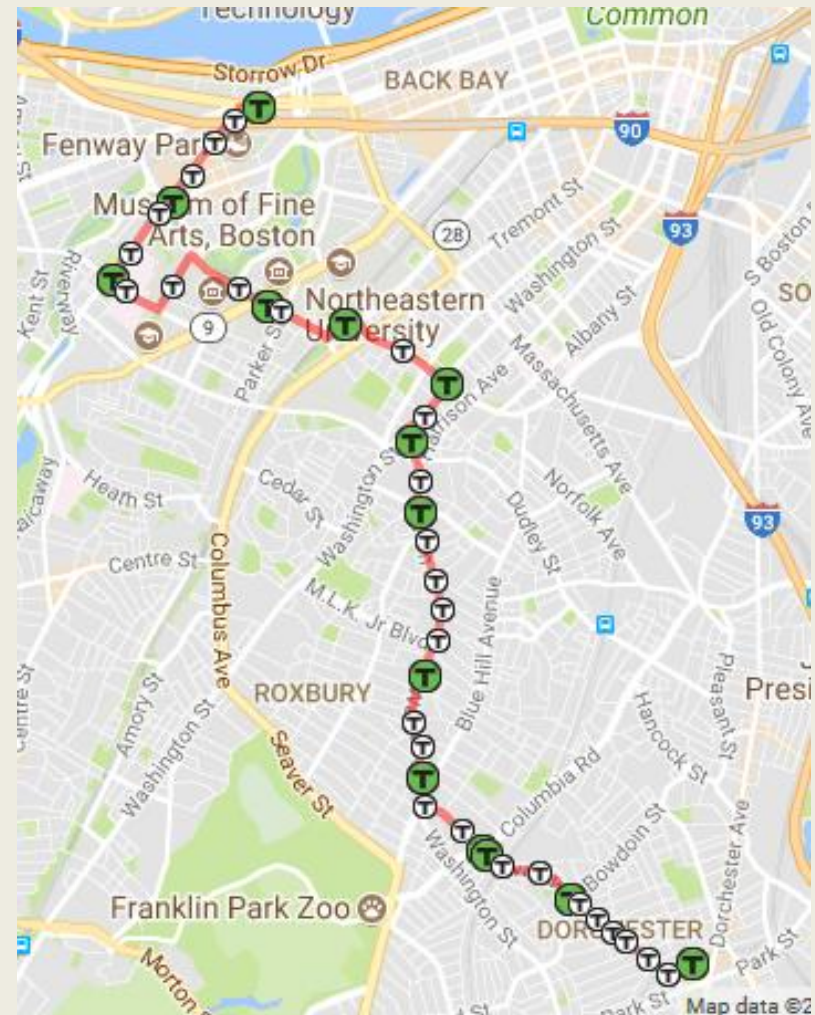


Example of Early Morning Route

Route 19

- Weekday first trip inbound is at 6:08am
- Route connects Dorchester and Roxbury to Northeastern, Longwood, and Kenmore
- Connects to Red, Fairmount, Silver, Orange, all Green branches
- Currently the first inbound trip has an average of 71 boardings, average max load of 47, and max observed load of 68.
- On an average day people are standing
- On above average days the crowding standard is violated

Route 19 to Kenmore



Early Morning Anticipated Ridership

Service Planning Projections

- Proposed changes projected to add **1900 passenger-trips per week**, 1200 new riders and 700 diverted from later trips
- Adds 67 additional bus-trips per week
- Equivalent to **98,000 passenger-trips per year**
- Mix of **weekday/ Saturday/ Sunday** ridership

- Additional passenger-trips are generated through a mix of **new riders** and **alleviating crowding** on the ten routes with the most severe AM crowding levels.

Revenues and Operating Costs

Estimates for Duration of Service Pilot

- **Operating Revenues¹:**
 - the average bus rider fare is \$1.01
 - 1200 trips will generate roughly \$1200 in additional revenue per week, and \$62,000 per year.
- **Operating Costs¹:** estimated at \$500,000 annual cost
- **Subsidy/New Trip:** approximately \$7.
- **Marketing Campaign** for the Early Morning Service: \$80,000
- Additional service on **The RIDE**: \$500,000²
- **Total cost** to implement: \$1,080,000

1 Cost and revenue estimates are annual, pilot proposed to last 9 months before evaluation, and if the pilot is discontinued the service would end after completing a full year at the end of a rating.

2 TheRIDE cost is an estimate and would require negotiations with our vendors

Capital Costs and Impact on Assets

Early Morning

- Early Morning is not projected to require any capital investments
- Service would be provided with existing MBTA buses, no additional buses required
- There will be minimal cost and impact on bus maintenance due to the 67 additional bus trips per week
- It should have no impacts on other MBTA services, outside the expansion of The Ride service

- In February, the FMCB provided feedback on Overnight Service setting the following requirements
 - Safe and reliable, providing real-time information
 - Ease of use, including at least some fixed route service
 - Accessible to all passengers, including those without smartphones
 - Affordable by accepting MBTA fare products, including passes
- The MBTA released an RFI listing those requirements and received no responses that fulfilled them all
 - Submissions from Uber and Lyft were unable to meet the affordability, accessibility, and some of the fixed route requirements
 - Traditional bus operators didn't submit expressing concerns about staffing a shift from 1-4 am

NightBus

Three Options

- MBTA staff see three possible options for this proposal
 - Relax some of the constraints and release a RFP
 - Operate with MBTA buses and operators
 - Take no action

- If the decision is to release a RFP, how should we consider?
 - Fixed route service
 - Ability to use MBTA fare products
 - How to make the service ADA accessible

NightBus

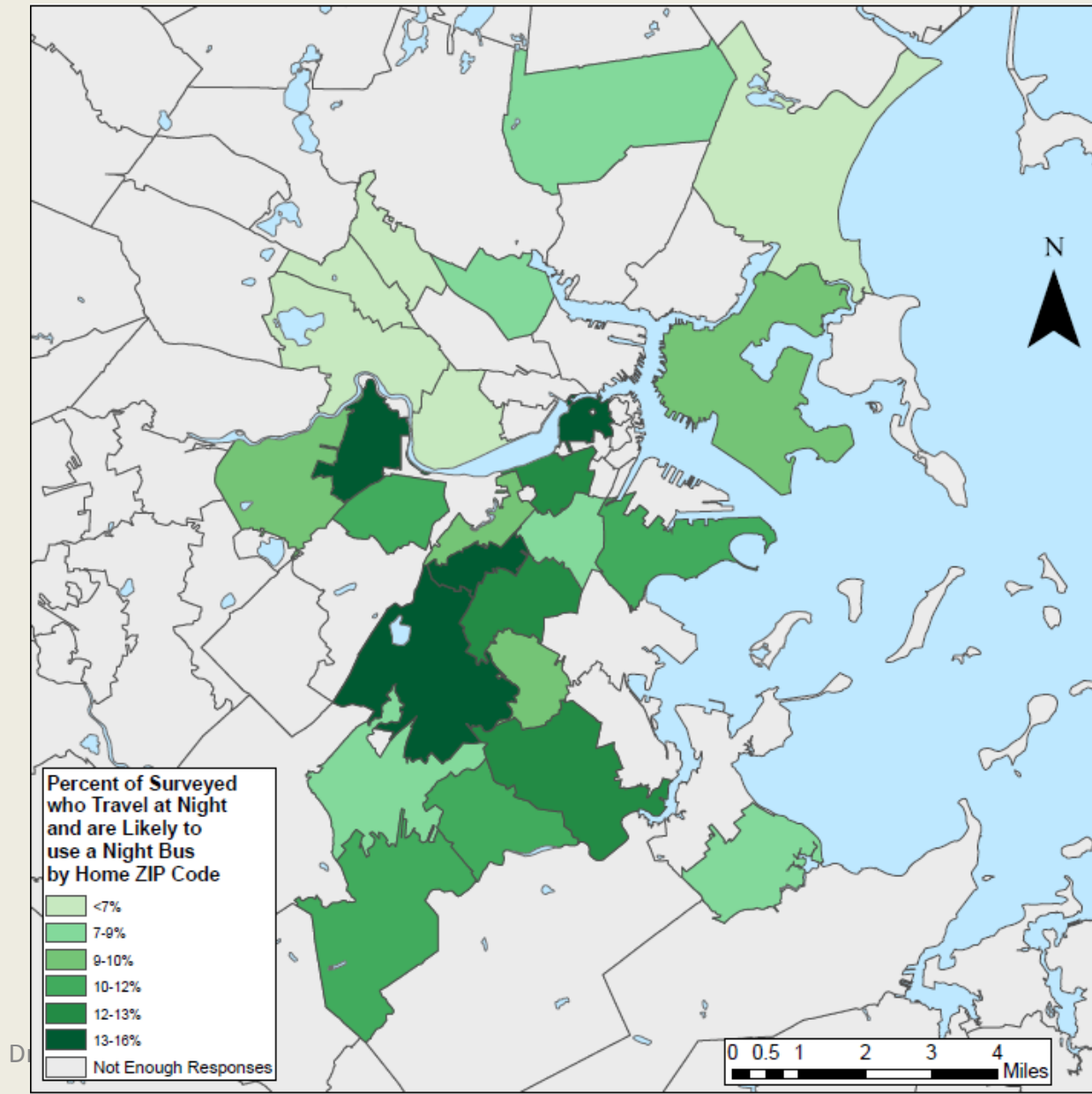
Demand for Overnight service

An intercept survey conducted by the MBTA, provide evidence of some demand for overnight service.

The map indicates demand by home zip code of respondents who:

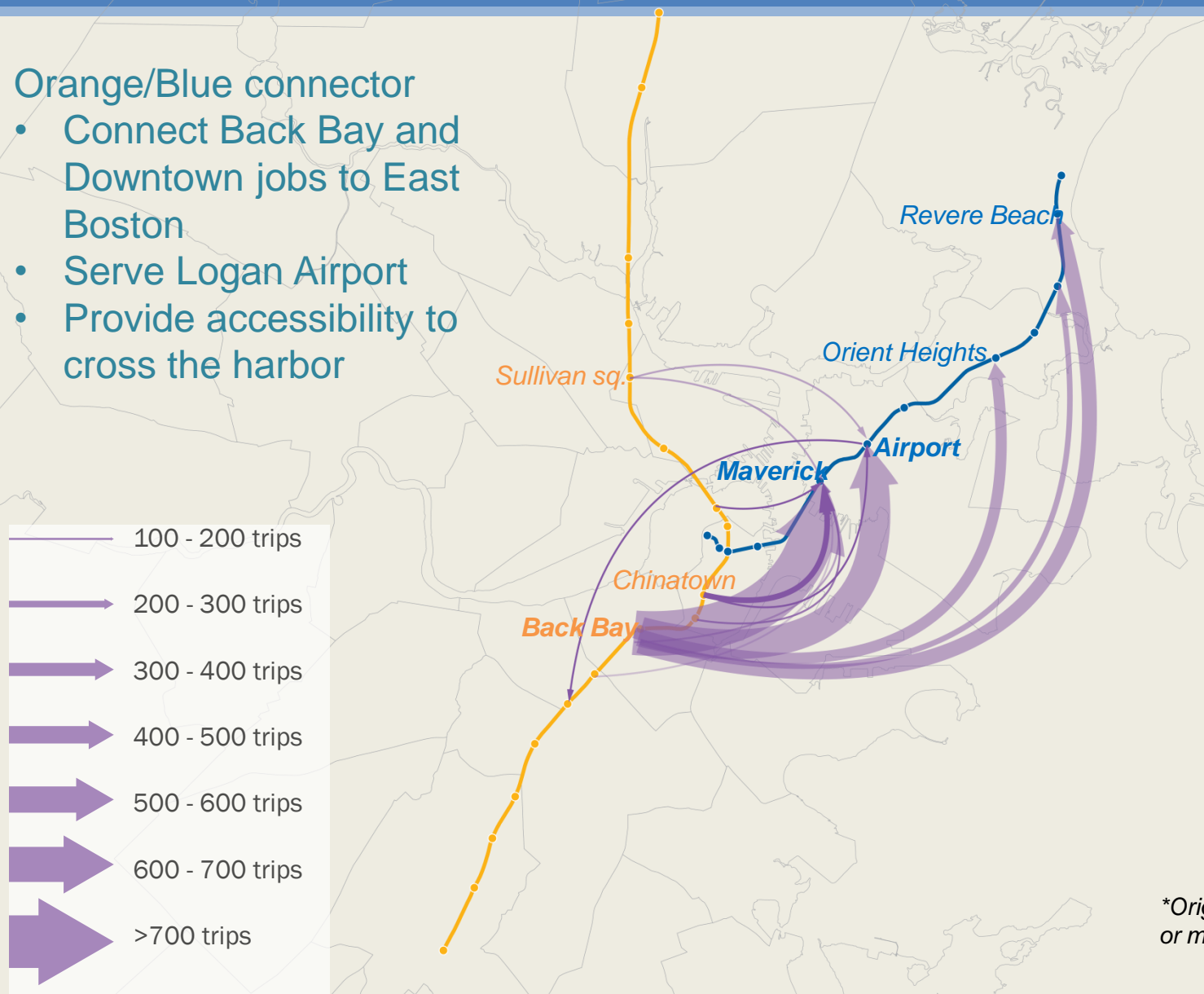
- already ride the MBTA,
- already travel overnight,
- indicate they are likely to use an overnight T service

In the highest zip code 16% of respondents fit this criteria; however, we don't know if they all want to travel to similar locations.



Orange/Blue connector

- Connect Back Bay and Downtown jobs to East Boston
- Serve Logan Airport
- Provide accessibility to cross the harbor



**Origin-destinations of 100 trips or more are portrayed here*

- **Example of MBTA operated Orange/Blue connector**
 - Service running **Back Bay to Wonderland** would take approximately 100 minutes round-trip
 - With 3 buses, could provide a 35-minute headway
 - At seven days per week, would cost approximately **\$800,000 per year** for the MBTA to operate in house, includes additional bus machinist and two fuelers
 - **Total operating costs** for the service depending on how many routes and operating model
 - **MBTA costs** regardless of operating model
 - TheRIDE operating 24 hours a day: estimated at \$700,000 a year if limited to routes in the core
 - Additional MBTA police if routes limited in the core: \$180,000
 - Bus operations oversight: \$280,000
 - Marketing campaign: \$80,000
- Total annual operating cost** for example MBTA operated route: \$2,040,000

Capital Costs and Impact on Assets

NightBus

- A limited overnight service operated by the MBTA would not require additional buses, but could have an impact on bus maintenance
- 24 hour operations for The RIDE poses concerns for scheduling software runs, call center staffing, and driver availability
- If operated by the MBTA, we would have to hire additional employees

Proposed Overnight Service Pilot

Performance Metrics for Evaluation of Service Pilot

Performance Metrics

To be evaluated during Service Pilot

- **Data will be collected and evaluated throughout the Service Pilot, with regular reporting to FMCB on compliance with performance metrics:**
 - Ridership
 - Cost-Efficiency of the service using a modified version of the cost-efficiency tool in the Service Delivery Policy
 - Reductions in existing crowding on early morning trips
- Pilot sponsors will work with the MBTA to conduct a survey during the pilot to determine:
 - Ridership demographics
 - Trip purpose
 - How people were making the trip previously

Decisions for Early Morning Service Pilot

- Does the FMCB support **Early Morning** service with an annual budget of \$1.08 million, including additions to TheRIDE service:
 - As a pilot which would be reviewed after 9 months and if discontinued service would end after a year?
 - As a permanent service addition?
- If a decision is made today, the earliest an Early Morning service can start is on 12/31/2017

- How would the FMCB like staff to proceed on a **NightBus pilot?**
 - Investigate potential high demand routes between 1-3 am to operate with MBTA buses and operators?
 - Put out an RFP with relaxed constraints for either the 1-3 am or 1-4 am time period?
 - Take no further action