



# Massachusetts Avenue Bus Priority Pilot

Presentation to Arlington Select Board

September 12, 2018

# Presentation Overview

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- Project Schedule
- Introduction to Pilot
- Pilot Design



Massachusetts Bay  
Transportation Authority



**ITDP**  
Institute for Transportation  
& Development Policy



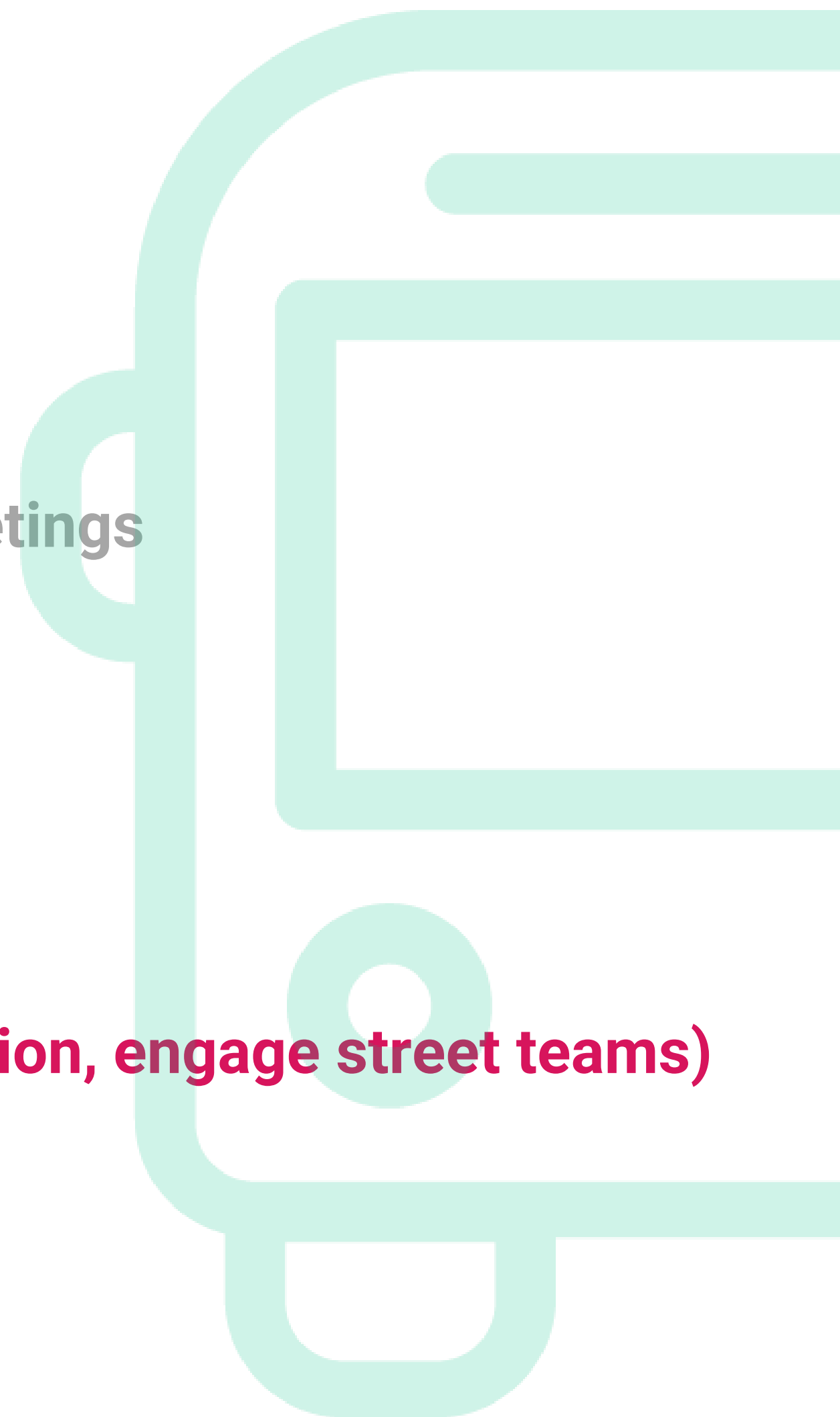
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# Project Schedule

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April-June:	Field Work and Data Collection, including stakeholder meetings
May 16:	BRT Educational Forum
June-August:	Corridor Scenario Development
August 15:	Alternatives Scenarios Forum
<b>August-October:</b>	<b>Stakeholder Meetings in East Arlington</b>
<b>August-September:</b>	<b>Implementation (final design and prepare for implementation, engage street teams)</b>
<b>October:</b>	<b>Bus Priority Pilot</b>
<b>November-December:</b>	<b>Pilot Evaluation</b>
<b>November 14:</b>	<b>Final Forum</b>



# Introduction to **Pilot**



# Public Transit / Buses

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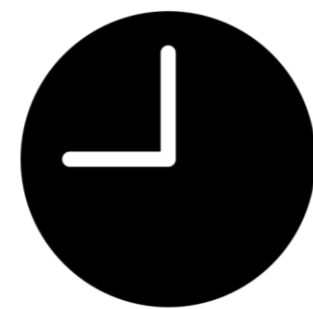
- The region is growing economically and regional traffic is increasing
- Public transit is the most efficient way to capture and serve that growth in a sustainable way, reduce congestion, relieve demand for parking
- A 30% increase in transit trips in the region is predicted by 2035
- **Bus service suffers from significant delay and reliability challenges**



# Time Travel Variance

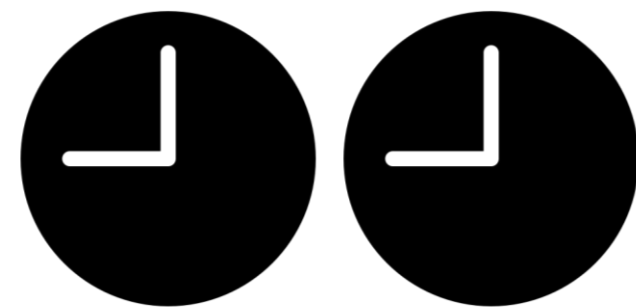
Inbound minutes between scheduled and actual departure times

50<sup>th</sup> Percentile



3-5 minutes  
behind schedule

90<sup>th</sup> Percentile



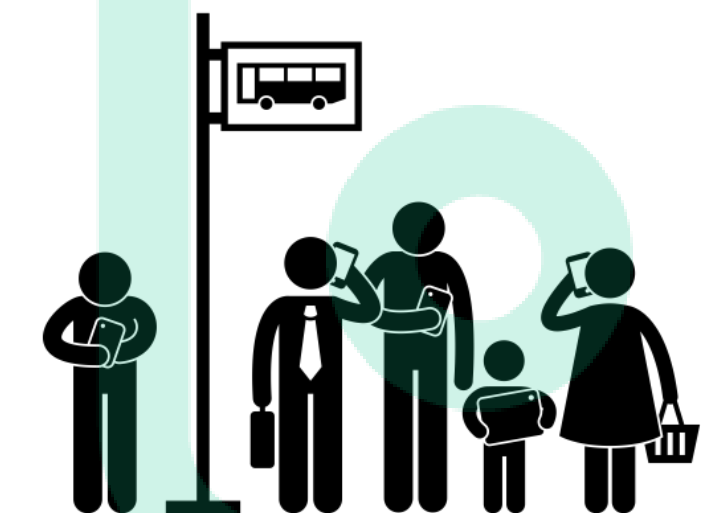
10-20 minutes  
behind schedule

## Causes

- Long Wait Times



- Overcrowding



- Bus Bunching



# Arlington Pilot Goals

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- 1. Improve Traffic Flow**
- 2. Reduce Travel Time**
- 3. Increase Reliability**



# What about people who don't take the bus?

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- Accommodating growth through public transit can help reduce congestion and create less demand for parking for those who still want/need to drive
- No significant impact expected for travel time by car
- Reduces conflicts with bike lane travel
- No significant impacts expected for access out of side streets
- Design considers parking demand along corridor





# Pilot Design



# Arlington Bus Priority Pilot

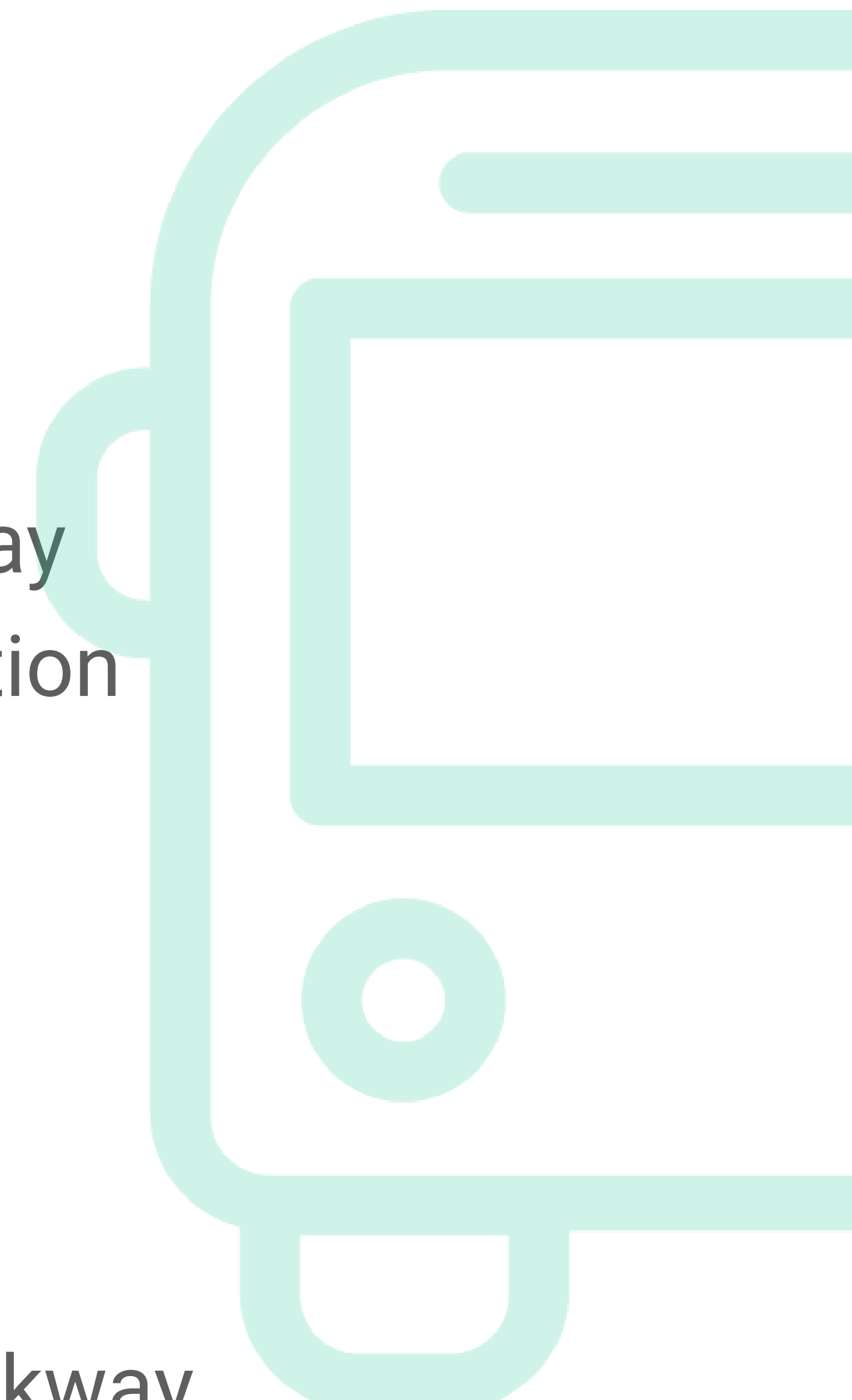
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## Pilot

- Mass Ave Eastbound - Lake Street to Alewife Brook Parkway
- Minimal construction; cones, signal changes, signs, education and enforcement
- October 2018 during morning commute eastbound

## Proposed Features

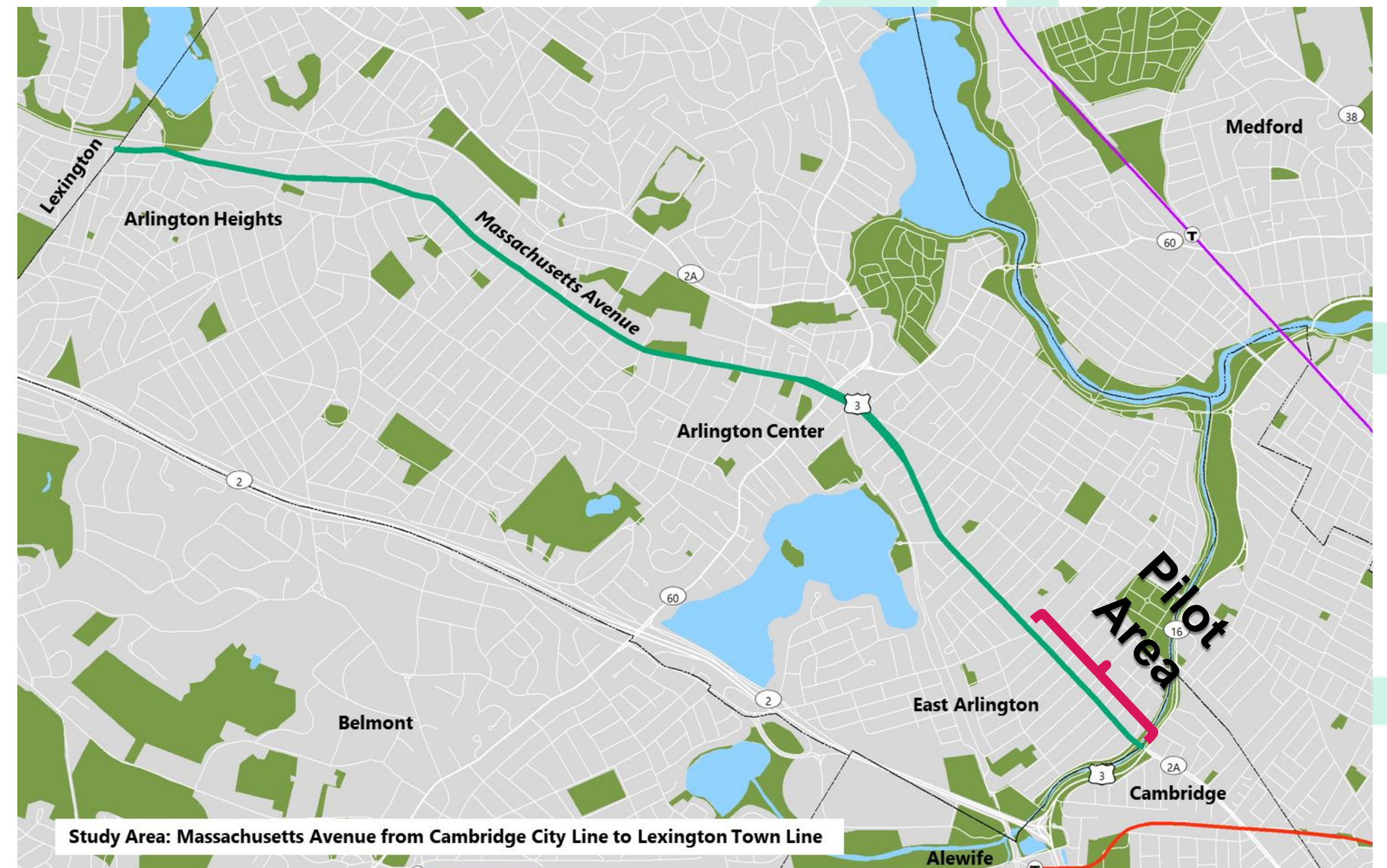
- Bus queue jump at Lake Street and Alewife Brook Parkway
- Bus stop relocation at Lake Street
- Dedicated lane between Lake Street and Alewife Brook Parkway





# Process and Methodology

- ✓ Review of entire Mass Ave corridor
  - Data Collection
  - Observations
  - Field Assessment
- ✓ Conceptual Design
  - Different Potential Alternatives
  - Range of opportunities
- ✓ Public Review and Input Throughout Process
  - One-Month Pilot Program
  - Post-Pilot Assessment



# Evaluation of Concepts

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Bus Travel Time  
Bus Reliability  
Vehicular Traffic  
Intersection Queues  
Pedestrian Accommodation  
Bicycle Accommodation  
On-Street Parking Displacement  
Feasibility

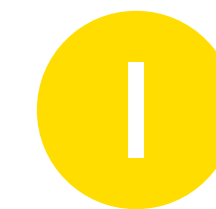
## *Impact Designation*



**Positive**



**Slightly Positive**



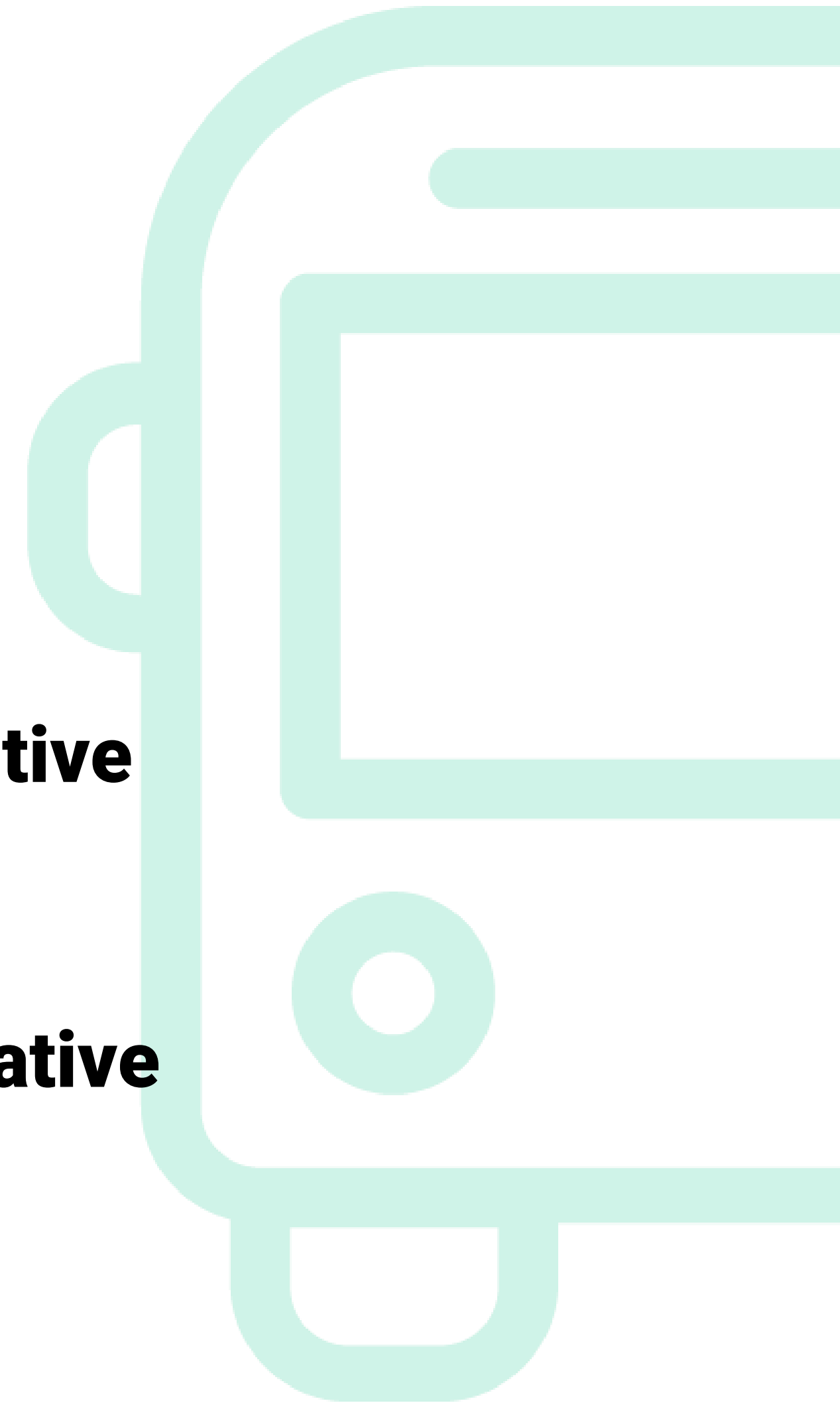
**Neutral**



**Slightly Negative**



**Negative**





# Mass Ave at Lake Street

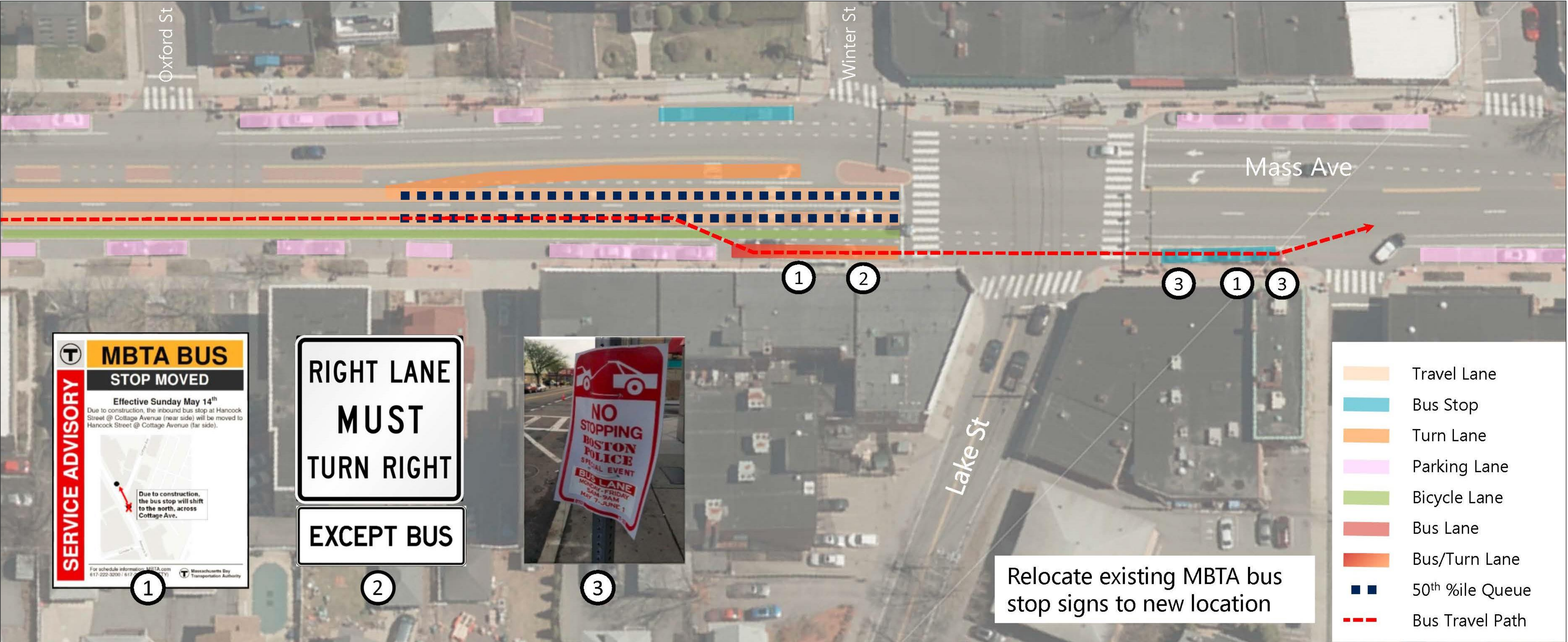
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- **Relocate bus stop to “far-side”**
  - Permanent condition during pilot month
  - Requires repurposing 3 parking spaces
- **Bus uses right turn lane as a queue jump**
  - No parking spaces repurposed
- **Transit Signal Priority (TSP) will be installed at signal**
  - Permanent condition during pilot month





# Mass Ave at Lake Street





# Mass Ave between Lake Street and Alewife Brook Parkway

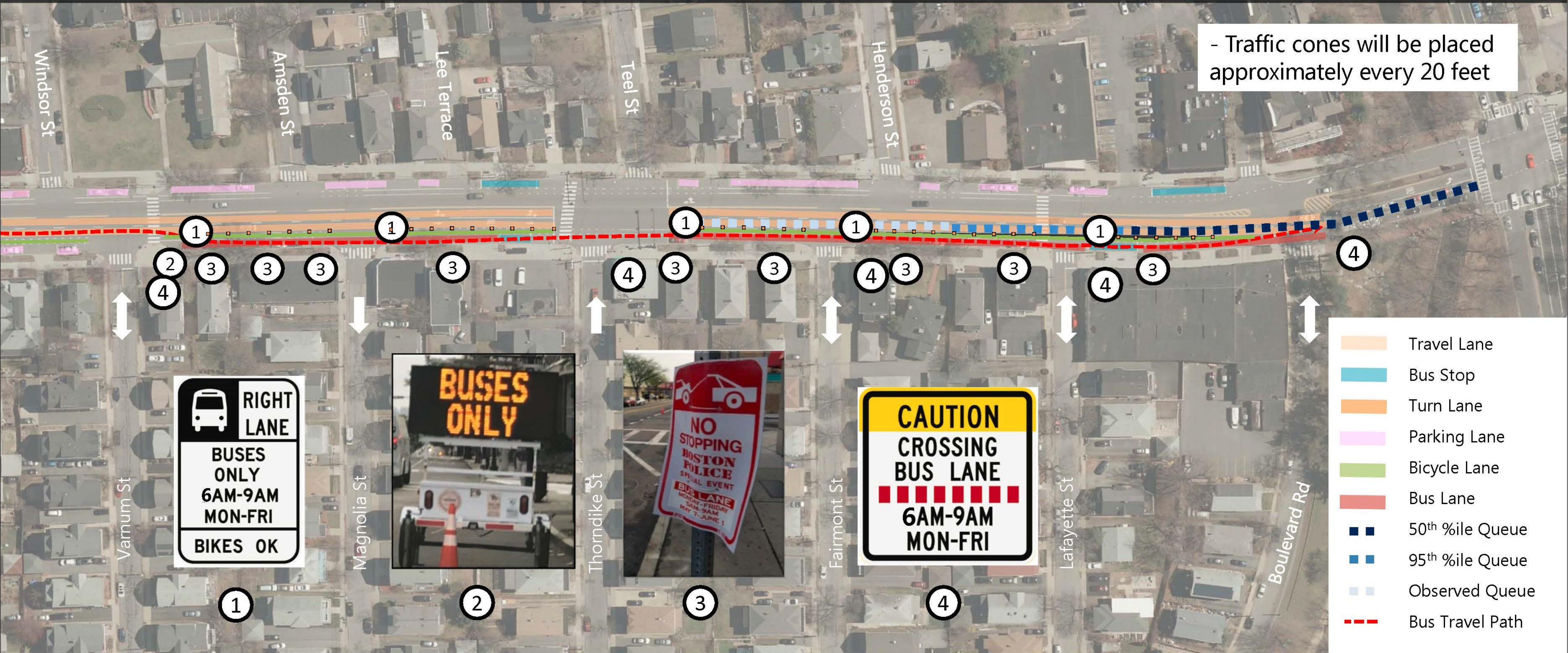
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- **Bus uses parking lane between Varnum Street and Alewife Brook Parkway**
  - Requires temporary repurposing 19 parking spaces
  - Removal of bump out at Lafayette Street



# Mass Ave between Lake Street and Alewife Brook Parkway





# Mass Ave at Alewife Brook Parkway

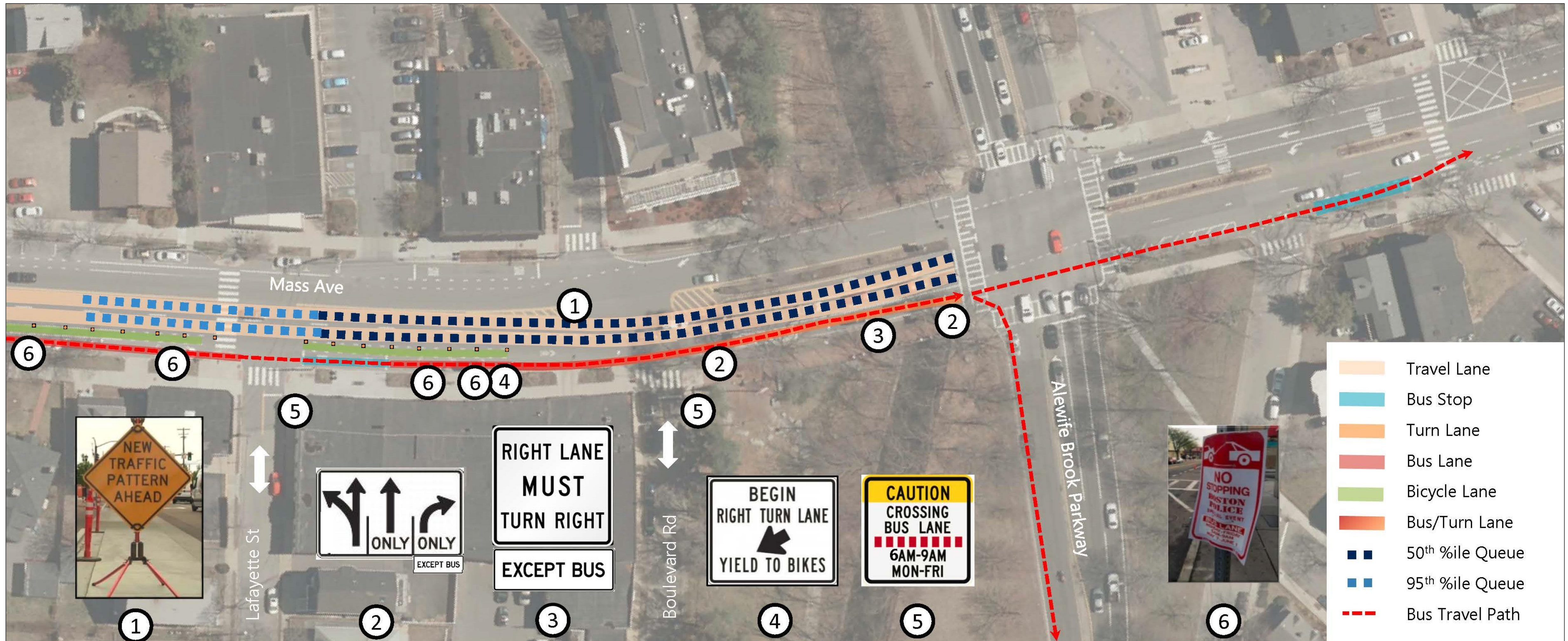
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- **Coordination with Cambridge and MA Department of Conservation and Recreation (DCR)**
  - Cambridge owns signal; DCR owns parkway
- **Signal will become a split phase – eastbound & westbound traffic move separately**
  - Permanent condition during pilot month
- **Bus uses right turn lane to cross intersection**





# Mass Ave at Alewife Brook Parkway

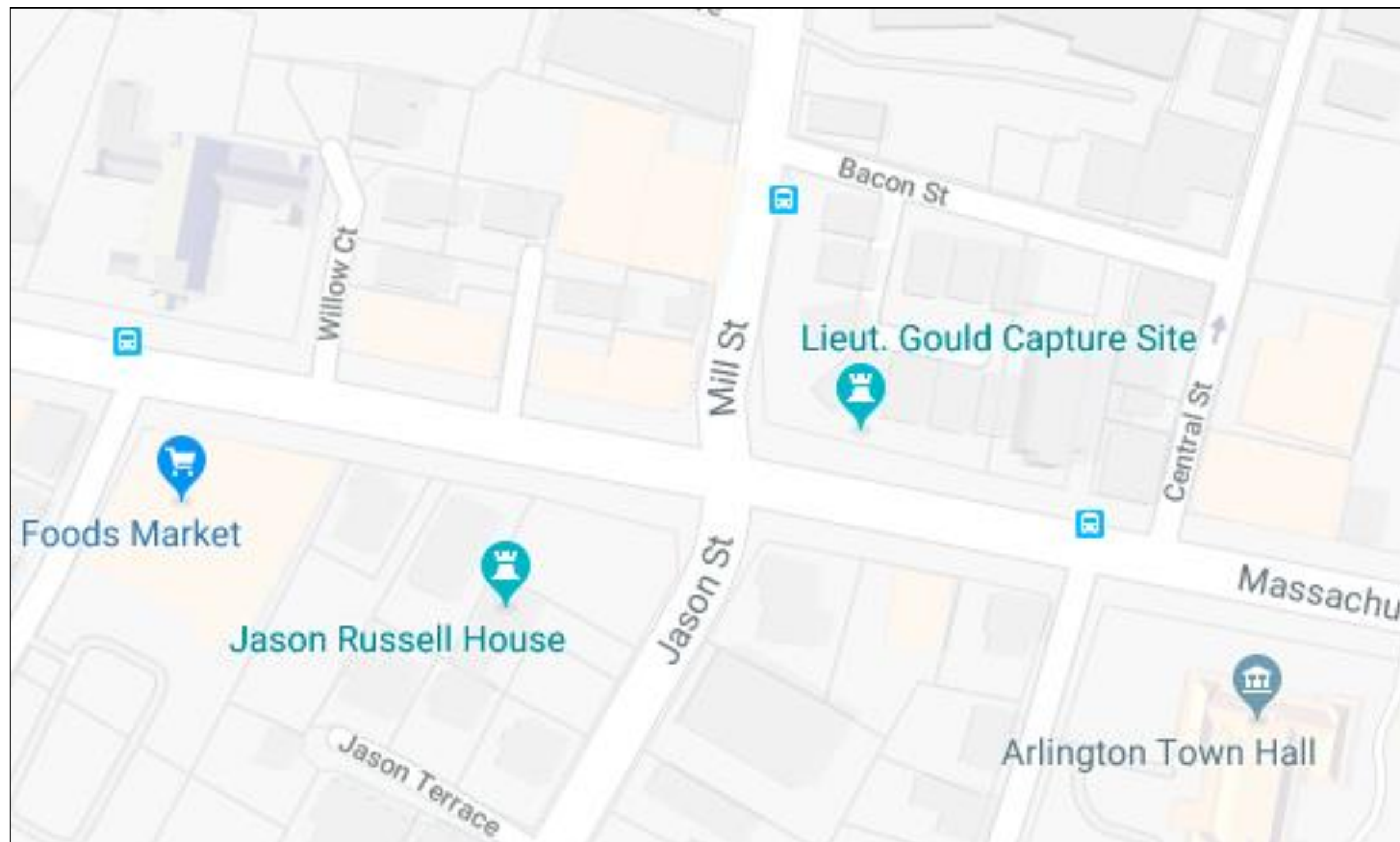




# Other Transit Signal Priority (TSP) Elements

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- TSP installed at Jason Street and Mill Street intersection



# Future BRT Opportunities

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- Continue work at Alewife Brook Parkway intersection and signal modifications
- Explore BRT elements on Broadway
- Consider broader application of BRT elements along other sections of Mass Ave corridor
- Add TSP to Mass Ave signals
- Consider level platform boarding
- Work with MBTA and Cubic to implement off-board fare collection system





ARLINGTON  
BRT

# Thank You