South Massachusetts Avenue Corridor Safety Improvements

Public Meeting #1 | May 3, 2018
Agenda

Massachusetts Avenue - Sidney Street to Memorial Drive

- Welcome & Introductions
- Project Background
- Corridor Information
- Design Toolbox
- Next Steps
- Breakout Discussion: Corridor Review
Mass. Ave. Reconstruction
Completed in 2008

Before

After
**Municipal Policies**

**Vision Zero** calls for the elimination of fatalities and serious injuries resulting from traffic crashes, and emphasizes that they can, and should be prevented (2016).

**Complete Streets** are designed and operated to enable safe access for all users—regardless of age, ability, or mode of transportation (2016).

**Vehicle Trip Reduction Ordinance** established programs to encourage alternatives to single-occupancy vehicle travel (1992).

**Cambridge Growth Policy** emphasizes sustainable modes of transportation such as walking, biking and using transit and low-emission vehicles, which promote livability and help to improve air quality and reduce greenhouse gas emissions (1993/2007).
Guiding Plans
PROJECT BACKGROUND

From Plans to Actions
Flexible Implementation

Based on Policies and Plans and direction of City leadership:

• Evaluate and implement “quick build” solutions to enhance the comfort and promote sustainable transportation for people walking, biking, driving and using transit

  ✓ Designs that are flexible after implementation

  ✓ Modifications possible based on evaluation (including feedback)
CORRIDOR INFORMATION

Project Limits

Lafayette Square to the Charles River
from Sidney Street to Memorial Drive

Legend

- Project Limits
Existing Conditions

Lafayette Square to the Charles River from Sidney Street to Memorial Drive
Existing Conditions
Mass. Ave. Cross-Section (at Amherst Street)

- 88’ wide
- On-street bike lane
- On-street vehicle parking
- Mix of meters and other parking
- Bus stops
- Curb extensions at multiple locations
CORRIDOR INFORMATION

Existing Users

People Walking

Walking in this corridor:

- Boston/Cambridge connection
- Charles River to Central Square
- MIT intra-campus
- Local businesses
Users: Transit, Driving, Bicycling

Massachusetts Avenue (North of Amherst at MIT)

Weekday AM peak hour

Weekday PM peak hour

- People using bus
- People biking
- Number of motor vehicles
People have varying levels of tolerance for traffic stress created by volume, speed, proximity of adjacent traffic and on-street parking.

- An all-ages and ability network has BLC of 1 or 2
- Facilities with BLC 1 or 2 are generally safest
**Corridor Users**

**People Biking - Bicycle Level of Comfort Analysis**

<table>
<thead>
<tr>
<th>Bicycle Level of Comfort</th>
<th>Typical Criteria</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Protected/Separated or Shared with ADT &lt;2K or Shared with Speed &lt;30 mph</td>
<td>Pemberton Street, Community Path, Vassar Street</td>
</tr>
<tr>
<td>2</td>
<td>White/Halfwidth Bike Lane or Bike Lane w/o Parking adjacent or Shared with ADT 2-4K or Shared with Speed &lt;30 mph</td>
<td>Radcliffe Avenue, Broadway</td>
</tr>
<tr>
<td>3</td>
<td>Bike Lane adjacent to Parking or Shared with Speed 30 mph or Shared with ADT 4-6K or Narrow Operating Space</td>
<td>Magazine Street, Main Street</td>
</tr>
<tr>
<td>4</td>
<td>Shared with Speed 30+ mph or Shared with ADT 6-15K or High Volume Bus Route</td>
<td>Massachusetts Avenue, Broadway</td>
</tr>
<tr>
<td>5</td>
<td>Shared with Speed 35+ mph or Shared with ADT 15+K or No Parking and 2+ Travel Lanes per direction</td>
<td>Land Boulevard, O’Brien Highway / Route 28</td>
</tr>
</tbody>
</table>
Corridor Users: People Bicycling

Throughout the entire corridor length, users experience the second lowest level of comfort.
CORRIDOR INFORMATION

Corridor Safety History

Reported Crashes Requiring EMS Transport, 2015-2016

[Map showing crashes requiring EMS transport with a concentration in a specific area.]
Corridor Safety History

Reported Bicycle Crashes, 2015-2016
**Criteria:**
- Excess vehicle travel time compared to a minimum
- Passenger time (travel time x riders)
- Reliability (how much the travel time varies)
CORRIDOR INFORMATION

Transit Service

MBTA Bus Route 1: PM Peak

Method: Automatic Passenger Counter (APC) Data (MBTA)
**Corridor Users: People Driving**

**2016 Massachusetts Avenue/Main Street Traffic Volume Study**

**Weekday Motor Vehicle Volumes**

- Eastbound = 6,713 vehicles/day
- Westbound = 6,166 vehicles/day

Cambridge average vehicle occupancy = 1.1, therefore:

- Eastbound = 7,385 people/day
- Westbound = 6,783 people/day

Based on 2016 VHB study conducted on Massachusetts Avenue west of Sidney Street on a Tuesday and Wednesday in mid-May.

**DESIGN TOOLBOX**

**Project Goals**

- Address safety issues and reduce crashes - Vision Zero
- Reduce transit delays
- Enable/encourage people of all ages and abilities to choose sustainable transportation
Design Considerations

- Bicyclist safety & comfort
- Pedestrian safety & comfort
- MBTA Bus stops
- MBTA Bus reliability
- Tour Bus pick-up/drop-off
- Accessible parking
- Loading & deliveries
- Street maintenance
- On-street parking
Design Considerations

- Bicyclist safety and comfort
Design Considerations

- Pedestrian safety & comfort:
  Crosswalks and sidewalks
Design Considerations

- Bus stops
- Reliability: Queue jumps, signal priority
Design Considerations

- Private shuttles, tour bus & other pick-up and drop-off
- Food truck locations
Design Considerations

- Accessible parking
- Loading and deliveries
Design Considerations

- Street maintenance
Design Considerations

On-street parking
Potential Project Toolbox

✓ Signage
✓ Pavement Markings
✓ Flexible Delineator Posts
Potential Project Toolbox

- Turn Lanes
- Bus Queue Jump/Priority Lane
- Additional Crosswalks
- Signal Phasing and Timing
NEXT STEPS

Data Collection

- Motor Vehicle Parking Study
  - Inventory existing on-street parking
  - Inventory public streets only
  - Conduct occupancy study

- Bicycle & Pedestrian counts
- Bus travel time/delay analysis
- Conduct traffic counts at key intersections
NEXT STEPS

Data Collection

✓ Parking Inventory Study
**NEXT STEPS**

**Implementation Steps**

- **PLANNING**
  - Identify measures of effectiveness
  - Develop detailed plan
  - Community engagement
  - Develop mitigation measures

- **IMPLEMENTATION**
  - Procure materials
  - Issue regulations
  - Remove / reinstall pavement markings
  - Installation of new elements

- **OPERATION**
  - Street cleaning
  - Snow clearance
  - Enforcement
  - Communications strategy

- **EVALUATION**
  - After data collection and analysis
  - Community engagement
  - Decisions on next steps
Schedule

Bicycle, pedestrian, traffic counts
April

Public Meeting #1
May 3

Refine design
May - August

Public Meeting #2/Open House
June

Parking study
Week of April 30

Advisory Committee Meeting #1
April 11

Evaluation

Advisory Committee Meetings #2-3
May, June/July

Implementation
Late Summer 2018
Community Engagement

Feedback from Stakeholders and the Public

• Wikimap: visit project website
• 3 advisory group meetings
• 2 public workshops
• Additional community engagement
• Post-implementation feedback and evaluation

More Information and Contact

Project Website: http://www.cambridgema.gov/CDD/Projects/Transportation/southmassave

Contact: Bill Deignan, Community Development, wdeignan@cambridgema.gov
         Chris Balema, Kleinfelder Project Manager, Community.Cambridge@kleinfelder.com
Breakout Discussion

South Mass. Ave. Corridor

✓ What aspects of the existing south Mass. Ave. corridor do you like and/or want to see more of?
✓ What aspects of the south Mass. Ave. corridor do you dislike or want to see changed?
✓ What other considerations do you think need to be addressed by this project?