Agenda

Massachusetts Avenue – Sidney Street to Memorial Drive

• Welcome
• Project Background and Process
• Analysis and Conceptual Design
• Discussion/Plan Review Break-Out Session
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).
PROJECT BACKGROUND

From Plans to Actions
CORRIDOR INFORMATION

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
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 Safety History

Reported Crashes Requiring EMS Transport, 2015-2016

Crashes Requiring EMS Transports 2015-2016

[Map showing hotspots of crashes requiring EMS transport]
CORRIDOR INFORMATION

Safety History

Reported Bicycle Crashes, 2015-2016

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

People Walking

Walking in this corridor:

✓ Local and regional destinations and connections

✓ Evaluating ease and comfort of crossing at and between intersections
Transit Service

MBTA Bus Route 1: PM Peak

Composite Grade

- Excellent (A)
- Good (B)
- Satisfactory (C)
- Unsatisfactory (D)
- Poor (E)
- Failing (F)
- N/A

Failing Areas:

Method: Automatic Passenger Counter (APC) Data (MBTA)
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
Public Process

- Appointed Advisory Committee
  - Met three times
- Wikimap online
- Survey online and feedback at public meetings
- Outreach to Businesses
  - Direct meetings with local businesses
  - Coordination with CSBA
- Individual Stakeholder meetings
- Transit/Ped/Bike Committees
- Communitywide Meetings
- Posted and electronic announcements
Public Feedback

✓ Need for **safer conditions for bicyclists**
  ✓ Motorists and delivery vehicles block bike lanes
  ✓ Desire for greater separation from moving vehicles

✓ Need for **additional crosswalks** traversing Mass Ave

✓ Desire to **improve transit operations**

✓ Concerns about **unpredictable ridesharing, tour bus, food truck, commercial loading & pick-up/drop-off activity**

✓ **Relocate MIT-related tour buses** loading/unloading

✓ Concerns about **long vehicle queues, traffic at Vassar Street**

✓ **Minimize conflicts**
  ✓ Bus/bike conflicts
  ✓ Bike/ped conflicts esp. at 77 Mass Ave.
Corridor-wide transportation analysis to determine where:

- **Bus lanes** can be added
- **Vehicle lanes** can be repurposed
- **Signal operations** can be modified
- **Bicycle lanes** can be separated
- **Bicycle buffers** can be added
- **Parking** can be re-located for better operations
Draft Design – Before and After
South Mass. Ave. Corridor

Before

After
Corridor has been divided into 3 sections for clarity:

Section 1: Sidney St to Albany St
Section 2: Albany St to Vassar St
Section 3: MIT
The three general cross sections (intersections vary)

Section 1: Sidney St to Albany St

Section 2: Albany St to Vassar St

Section 3: MIT

Most Complicated
Bus lanes proposed for two sections, to address the key areas of delay.
Transportation/Traffic Analysis

Bus Facility Details - Before

Image of a street scene with buses and cars.
Transportation/Traffic Analysis

Bus Facility Details - After
Bus Facility Details

Bus lanes at intersections:
Right turning motorists may use bus lane

National Precedent

Design Sample
CORRIDOR INFORMATION

Transportation/Traffic Analysis

Bus Facility Details

Bus Lanes with Parking (example)
Bicycle Facilities

For most of the corridor, separated bike lanes can be created using on-street parking and flex posts.
Design Overview

Bicycle Facilities

Separated Bike Lane – Parking Protected

Parking Protected Bicycle Lanes (examples)
DESIGN OVERVIEW

Bicycle Facilities

Bike Lane with Curbside Parking

Curbside Parking / Accessible Parking (examples)
DESIGN OVERVIEW

Parking Facilities

Floating Accessible Parking

Design follows federal and state standards
DESIGN OVERVIEW

Bus Stop Options

Bus stop at curb

Floating bus stop (possible future consideration)
Bus Stop Options

Modular floating bus stop under evaluation
(possible future consideration)
**Vehicle Parking Analysis**

**Parking Modifications**

- Two new loading zones
- Re-arranged loading zones
- Seven fewer metered spaces out of 51 metered spaces (due to added crosswalk, loading zones and sight lines)
- Sufficient parking availability on side streets

**Section 1:** Sidney St to Albany St
- No Change

**Section 2:** Albany St to Vassar St
- No parking eastbound (six fewer)
- New pick-up/drop-off spaces westbound
- Change metered parking westbound (12) to loading, pickup-dropoff, added space for bus stop
- Maintain food truck location
- Clearer MBTA boarding/alighting areas

**Section 3:** MIT
Proposed Design

Three Main Sections

Section 1: Sidney St to Albany St
Proposed Design

Section 1: Sidney St to Albany St (A)
Proposed Design

Section 1: Sidney St to Albany St (B)

New Crosswalk & RRFB (rectangular rapid flash beacon)
Proposed Design

Section 1: Sidney St to Albany St (C)

New Crosswalk & Rectangular Rapid Flash Beacon
Proposed Design

Section 2: Albany St & Vassar St

Bike signal & Right-turn lane
Proposed Design

Potential future opportunity to increase space for bicyclists by modifying curb extensions

Bike signal & right-turn lane separate movements

Mass. Ave

Vassar St

DRAFT
Proposed Design

Vehicle Movement

Bike signal & right-turn lane separate movements
Proposed Design

Mass. Ave

Bike signal & right-turn lane
separate movements

Bicycle Movement
Pedestrian Movement
Proposed Design

Three Main Sections

Section 3: MIT
Proposed Design

Section 3: MIT (A)

Bike signal at 77 Mass Ave to ensure unconflicted crossing for people walking.
Proposed Design

Section 3: MIT (B)

Remove MBTA Bus Stop, consistent with MBTA Service Plan
Possible Future Additions

To Be Evaluated

- Additional crosswalk/RRFB in Section 1
- Move bus stops to the far side of intersections (for better operations)
- Construct modular (or permanent) floating bus stops
- Remove/modify curb extensions to allow better bicyclist protection
- Work with state DCR and MassDOT on changes at Memorial Dr. and bridge
NEXT STEPS

**Schedule**

- **Bicycle, pedestrian, traffic counts**
  - April

- **Public Meeting #1**
  - May 3

- **Refine design**
  - May - August

- **Public Meeting #2/Open House**
  - June 19

- **Parking study**
  - Week of April 30

- **Advisory Committee Meeting #1**
  - April 11

- **Advisory Committee Meetings #2-3**
  - May, June

- **Evaluation**

- **Implementation**
  - Late Summer 2018
South Mass. Ave. Corridor Safety Improvements

More Information and Contact

Project Website: [http://www.cambridgema.gov/CDD/Projects/Transportation/southmassave](http://www.cambridgema.gov/CDD/Projects/Transportation/southmassave)

Contact: Bill Deignan, Community Development, [wdeignan@cambridgema.gov](mailto:wdeignan@cambridgema.gov)

Chris Balema, Kleinfelder Project Manager, [Community.Cambridge@kleinfelder.com](mailto:Community.Cambridge@kleinfelder.com)

Section 1: Sidney St to Albany St

Section 2: Albany St to Vassar St

Section 3: MIT

NEXT STEPS

Breakout Discussion