

# Cambridge Street Bicycle Safety Demonstration Project



Community Presentation | April 25, 2017

# Agenda

Cambridge Street

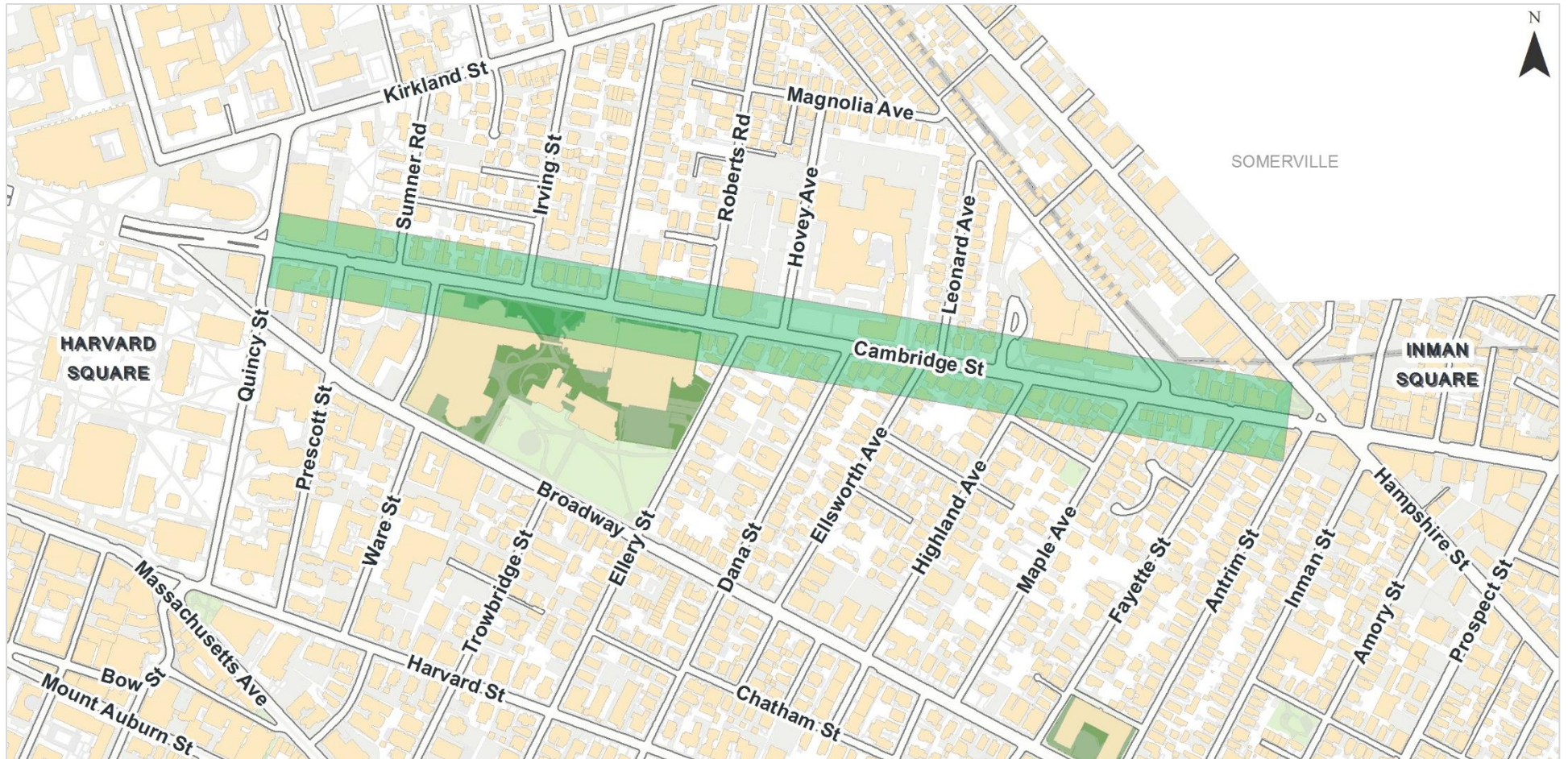
- Project Background
- Project Information
- Design Overview
- Next Steps





# Project Limits

## Harvard Square to Inman Square *from Quincy Street to Antrim Street*



# Municipal Policies

## Vision Zero, Complete Streets, & Safe Routes to School



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

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

**Safe Routes to School** aims to increase the number of students who get to and from school safely by walking or biking.



**BICYCLE CRASH ANALYSIS**

BICYCLE CRASHES PER MILLION BICYCLE MILES TRAVELED (BMT)  
AND PREVALENT CRASH TYPES BY CORRIDOR 2004-2012

Crashes per Million BMT  
62  
5

Prevalent Crash Types  
left hook  
angle  
rear end

Note: Crash rates are only calculated for those roads which have sufficient bicycle count and crash data available to make a statistically significant estimate.

The map displays various corridors with their respective crash rates and prevalent crash types. Corridors include Concord Turnpike, Alewife Creek Rd, Davis St, Somerville Ave, Fresh Pond, Belmont Ave, Watertown Ave, Boston Ave, Central Ave, Kendall Ave, and others. Crash rates range from 5 to 62 per million BMT. Prevalent crash types shown are left hook, angle, and rear end.

# Separated Bicycle Facilities

## Examples



Vancouver, Canada



Mass. Ave., Boston, MA



# Separated Bicycle Facilities

## Mass Ave Protected Bike Lane Demonstration

*December 2016*

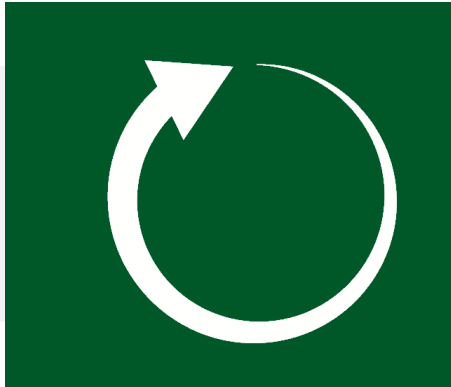


*Northbound from Sidney Street to  
Douglass Street (shown: Lafayette Square)*



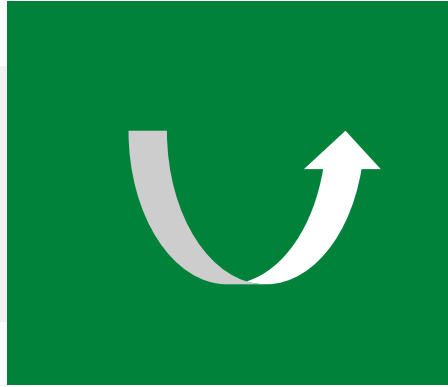
*Northbound (east/odd side of the street)  
from Waterhouse Street to Everett Street*

# Implementation Steps



## PLANNING

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



## IMPLEMENTATION

- Procure materials
- Issue regulations
- Remove / reinstall pavement markings
- Install delineators



## OPERATION

- Street cleaning
- Snow clearance
- Enforcement
- Communications strategy

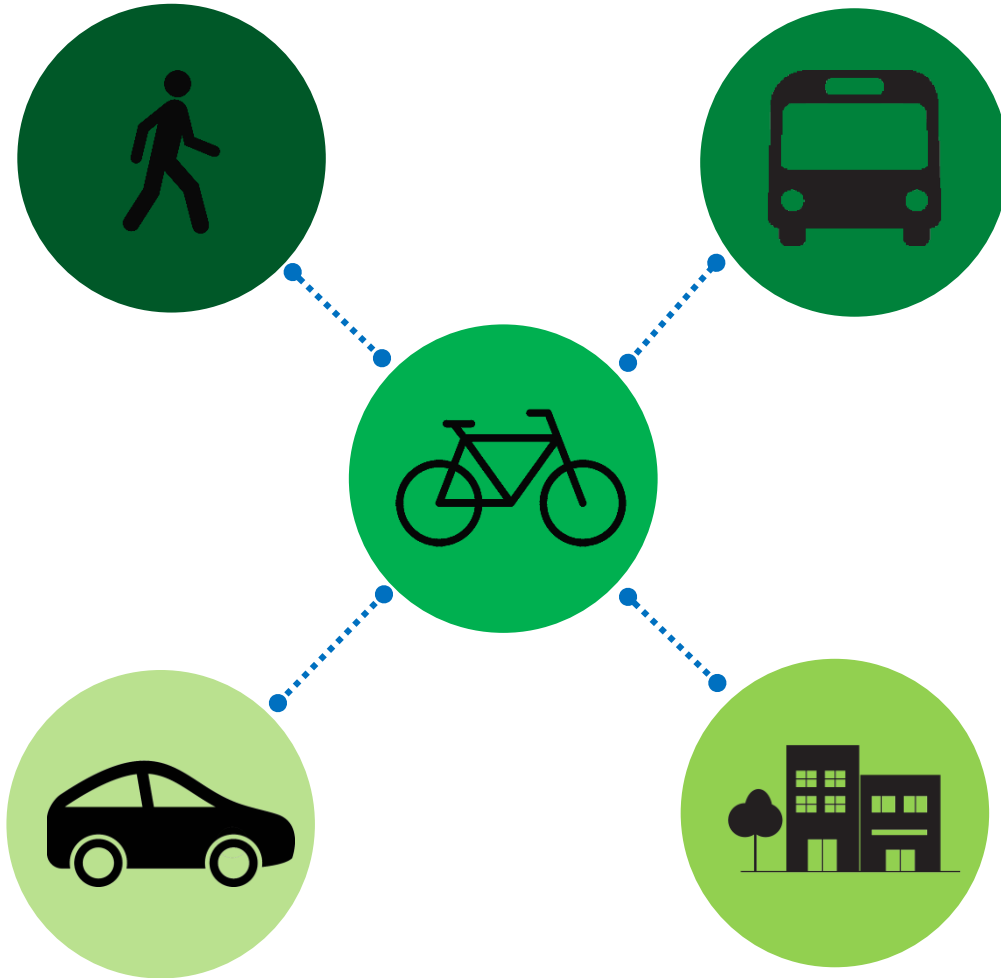


## EVALUATION

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



# Design Considerations



- ✓ Cyclist safety & comfort
- ✓ Crosswalks/curb extensions
- ✓ Bus stops
- ✓ School pick-up/drop-off
- ✓ Accessible parking
- ✓ Loading & deliveries
- ✓ Street maintenance
- ✓ On-street parking

# Design Considerations

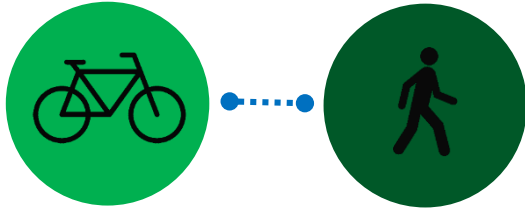


✓ Cyclist safety & comfort





# Design Considerations

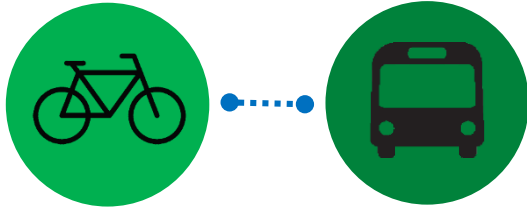


✓ Crosswalks/curb extensions





# Design Considerations

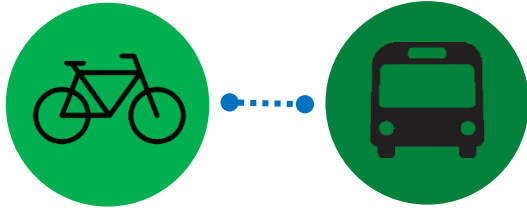


✓ Bus stops





# Design Considerations

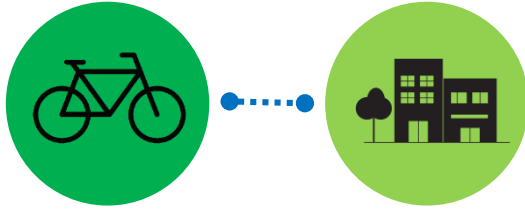


✓ School pick-up and drop-off





# Design Considerations

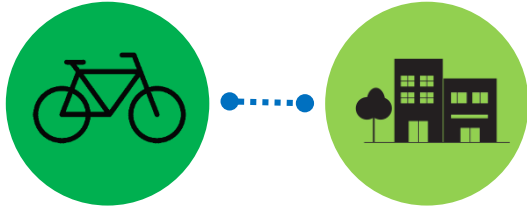


- ✓ Accessible parking
- ✓ Loading & deliveries





# Design Considerations

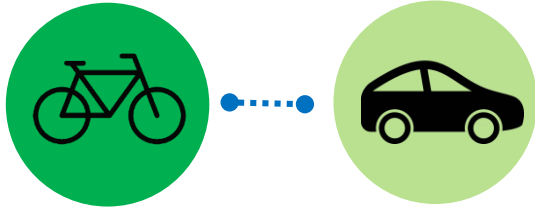


✓ Street maintenance

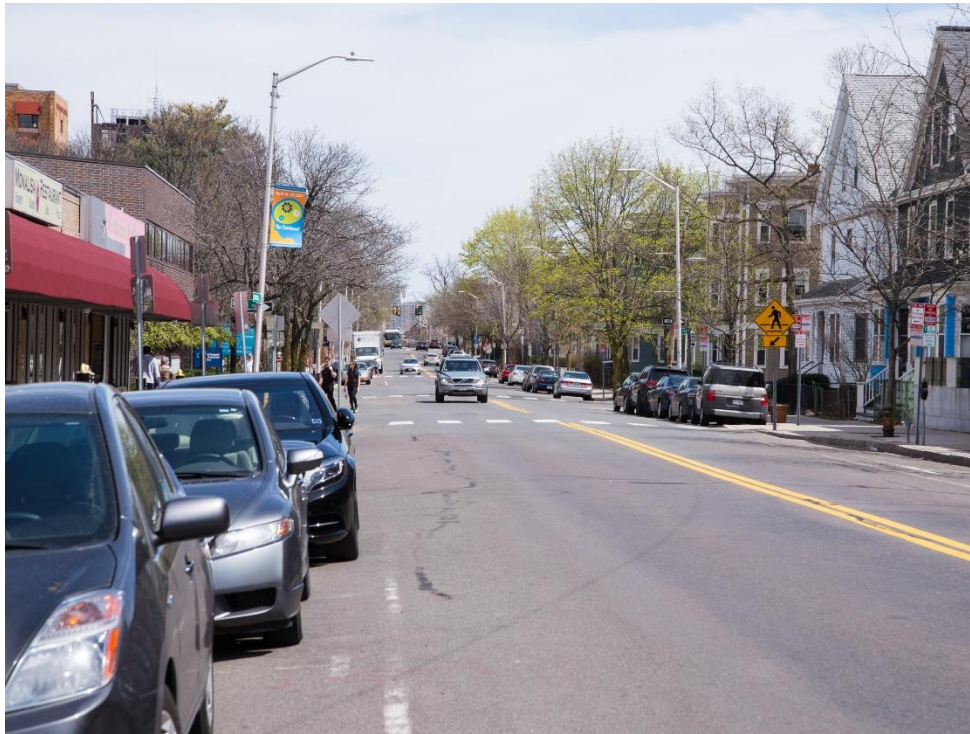




# Design Considerations

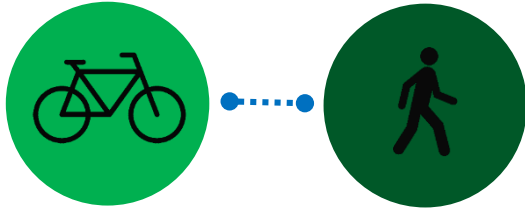


✓ On-street Parking





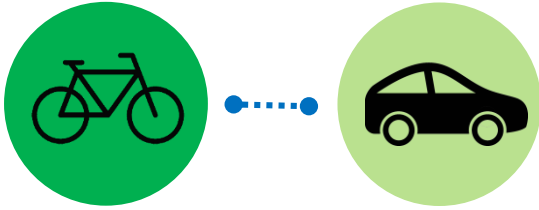
# Bicycle and Pedestrian Counts



- ✓ Conduct bicycle and pedestrian counts



# Motor Vehicle Parking Study



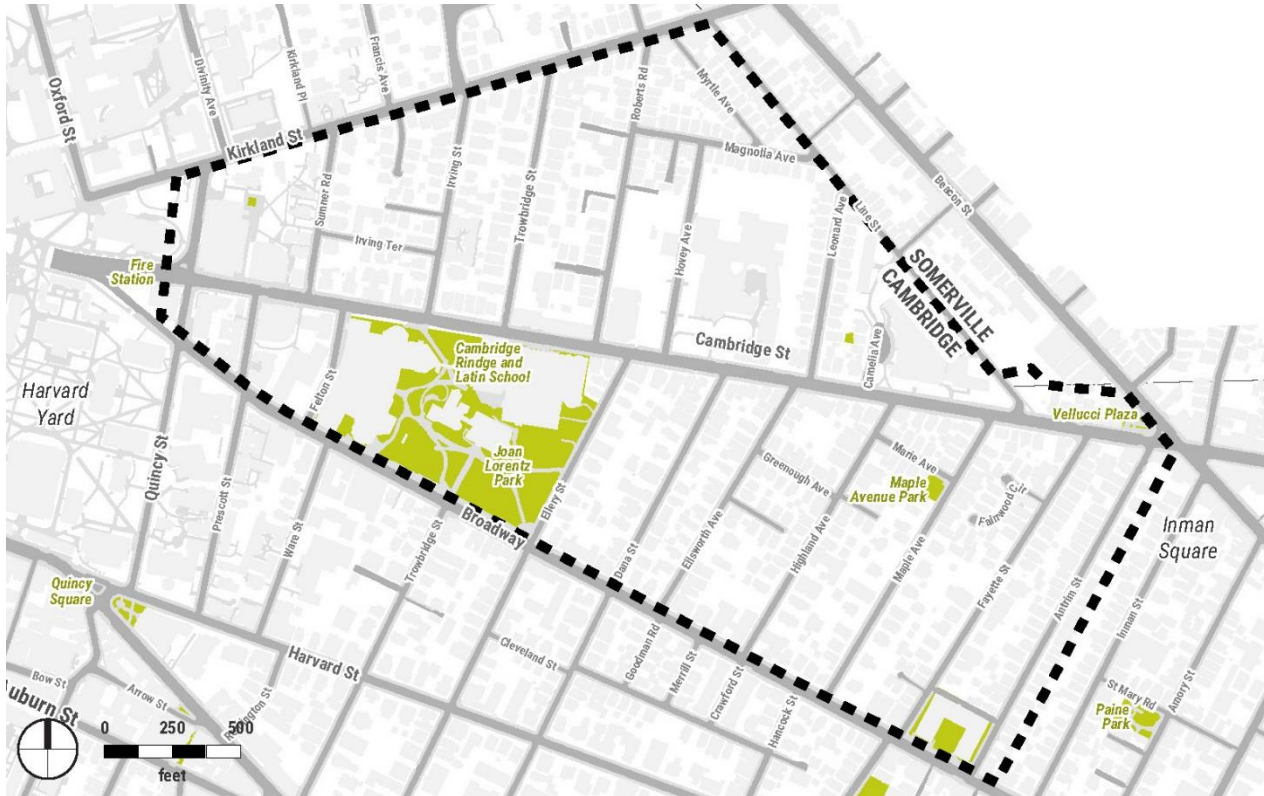
- **Goals**
- **Methodology**
- **Inventory**
- **Preliminary Results**
- **Additional analysis ongoing**





# Motor Vehicle Parking Study

## Goals



Determine existing curbside uses by type and number

Determine existing on-street parking demands on various days and at various times

Determine methods to address Cambridge Street's curbside activity needs

# Motor Vehicle Parking Study

## Methodology

Inventoried existing on-street parking spaces

Inventoried public streets only

Determined occupancy on:

- Tuesday, April 4<sup>th</sup>
- Thursday, April 6<sup>th</sup>
- Saturday, April 8<sup>th</sup>

Times observed each day:

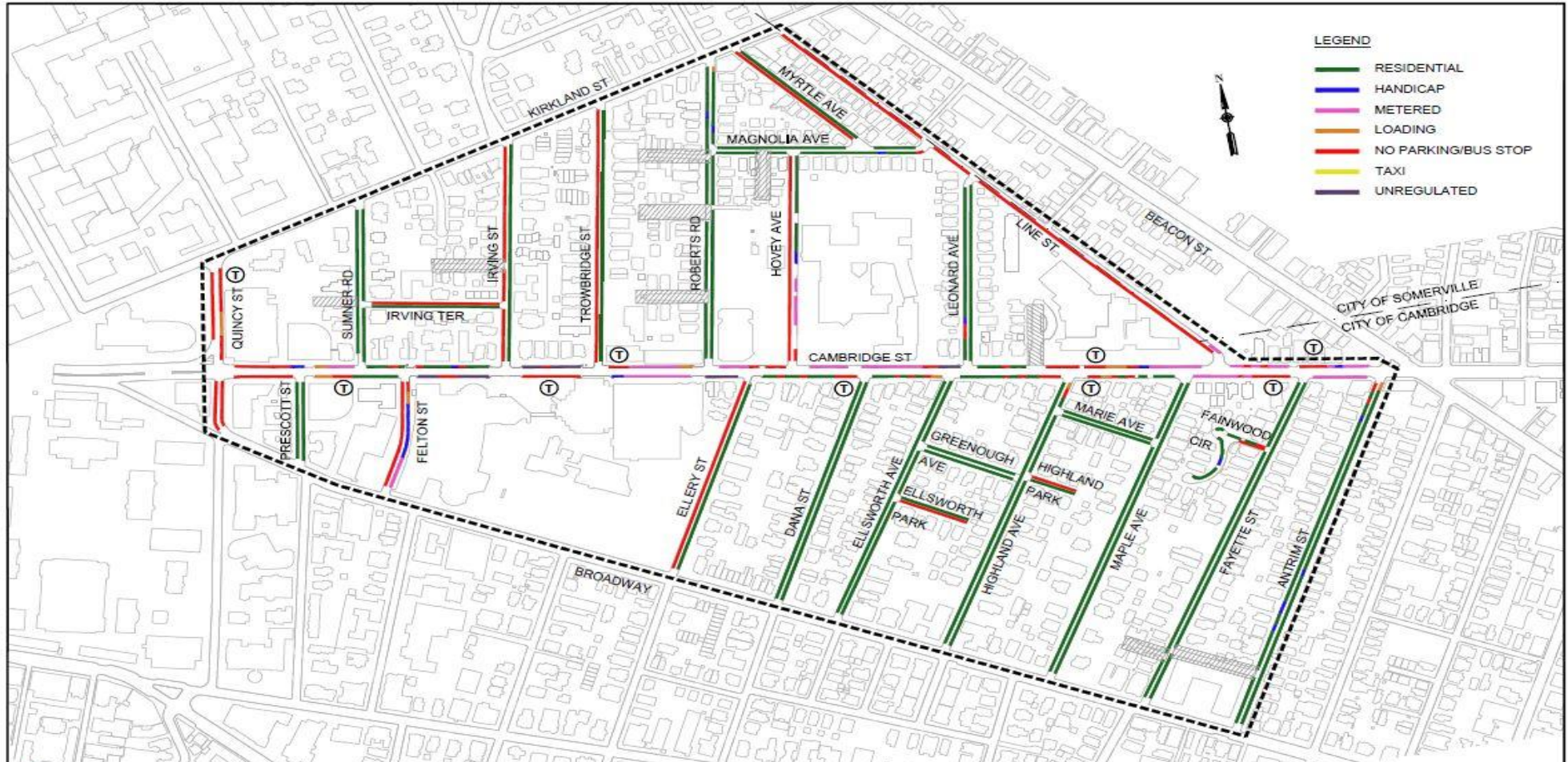
- 10AM
- 3PM
- Midnight





# Motor Vehicle Parking Study

## Inventory of Parking Regulations



# Motor Vehicle Parking Study

## Preliminary Results – Occupancy Rates

Street/Area	Time of Day	Weekday	Weekend
Cambridge Street	AM	82%	68%
	PM	75%	68%
	Midnight	42%	53%
North Neighborhood Streets	AM	76%	74%
	PM	72%	64%
	Midnight	76%	67%
South Neighborhood Streets	AM	77%	68%
	PM	70%	71%
	Midnight	83%	75%

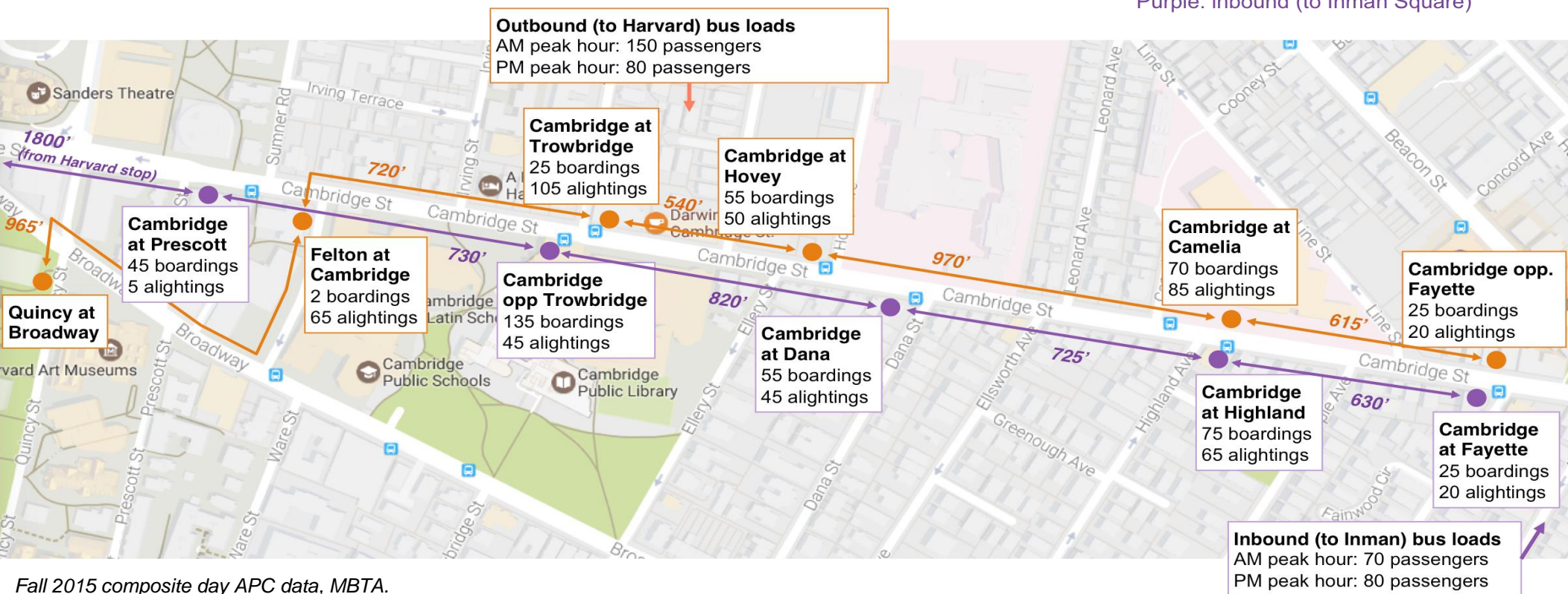
(Total of **1 180 on-street parking spaces** within study area)



# Bus Boarding and Alighting

## Cambridge St Bus Data (Inman Sq to Quincy St)

Orange: outbound (to Harvard)  
Purple: inbound (to Inman Square)



Fall 2015 composite day APC data, MBTA.  
Measurements from Google Maps

# Project Elements

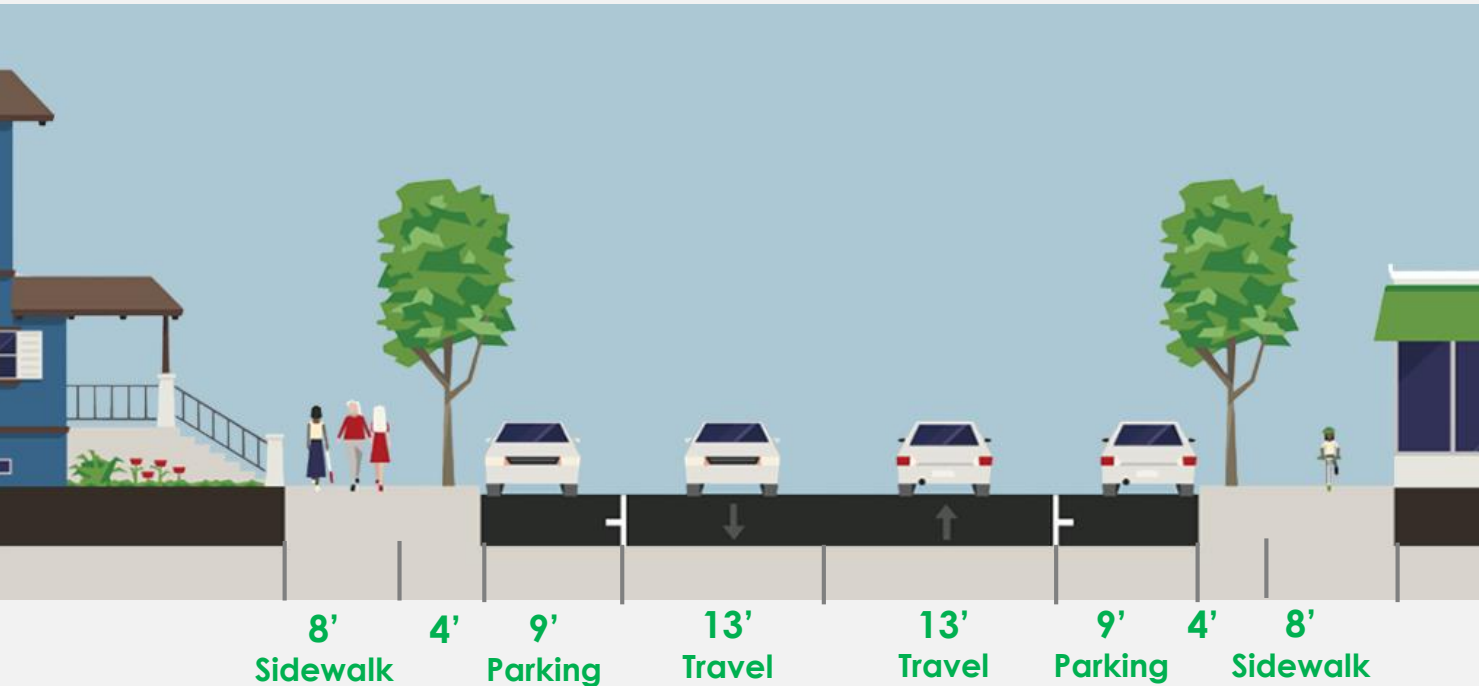
1. Create one-way separated bike lane on each side of the roadway using existing pavement and curb-to-curb width
2. Narrow travel and parking lanes, and remove some parking
3. Delineate lane with pavement markings, signs, and flexible delineator posts





# Existing Conditions

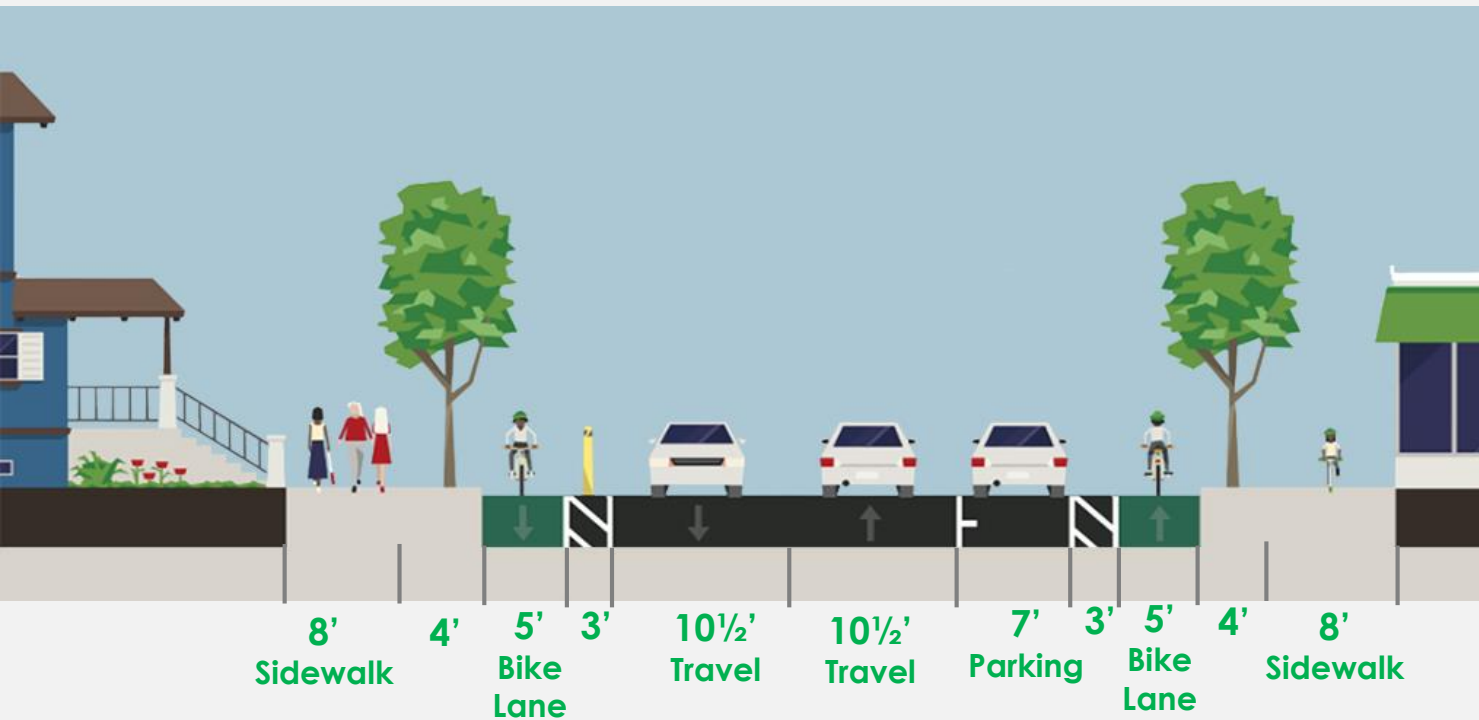
## Cambridge Street Cross-Section (Quincy St to Inman Sq)



- ✓ 44' wide
- ✓ No existing bike facility
- ✓ Parking on both sides
- ✓ Mix of meters and resident parking
- ✓ Bus stops and bus pullouts
- ✓ Curb extensions at multiple locations

# Possible Outcomes

## Cambridge Street Cross-Section (Quincy St to Inman Sq)



- ✓ 44' wide
- ✓ Separated bike lanes on both sides
- ✓ Parking on one side (could alternate)
- ✓ Bus stops remain
- ✓ Curb extensions remain



# Sample Block – Line St to Highland Ave

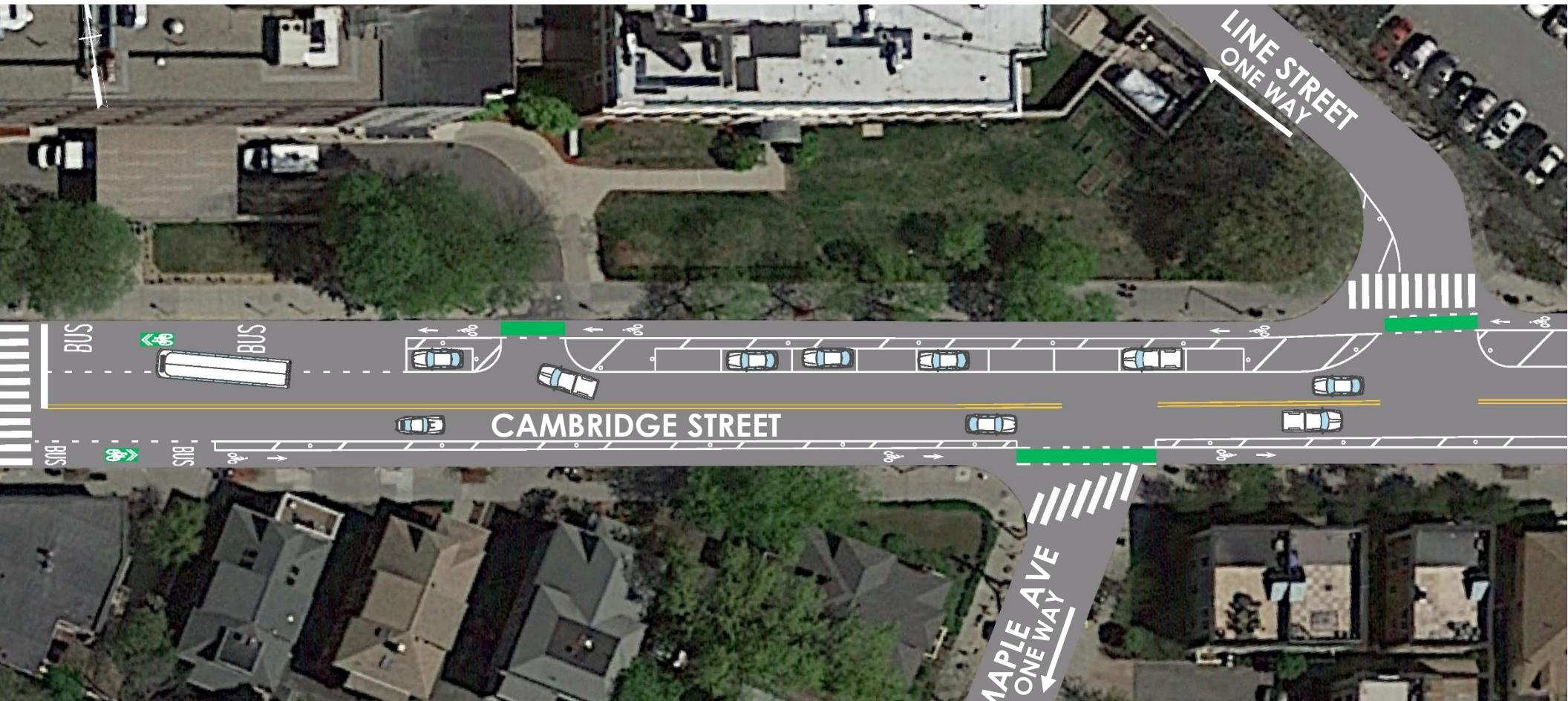
## Existing Condition





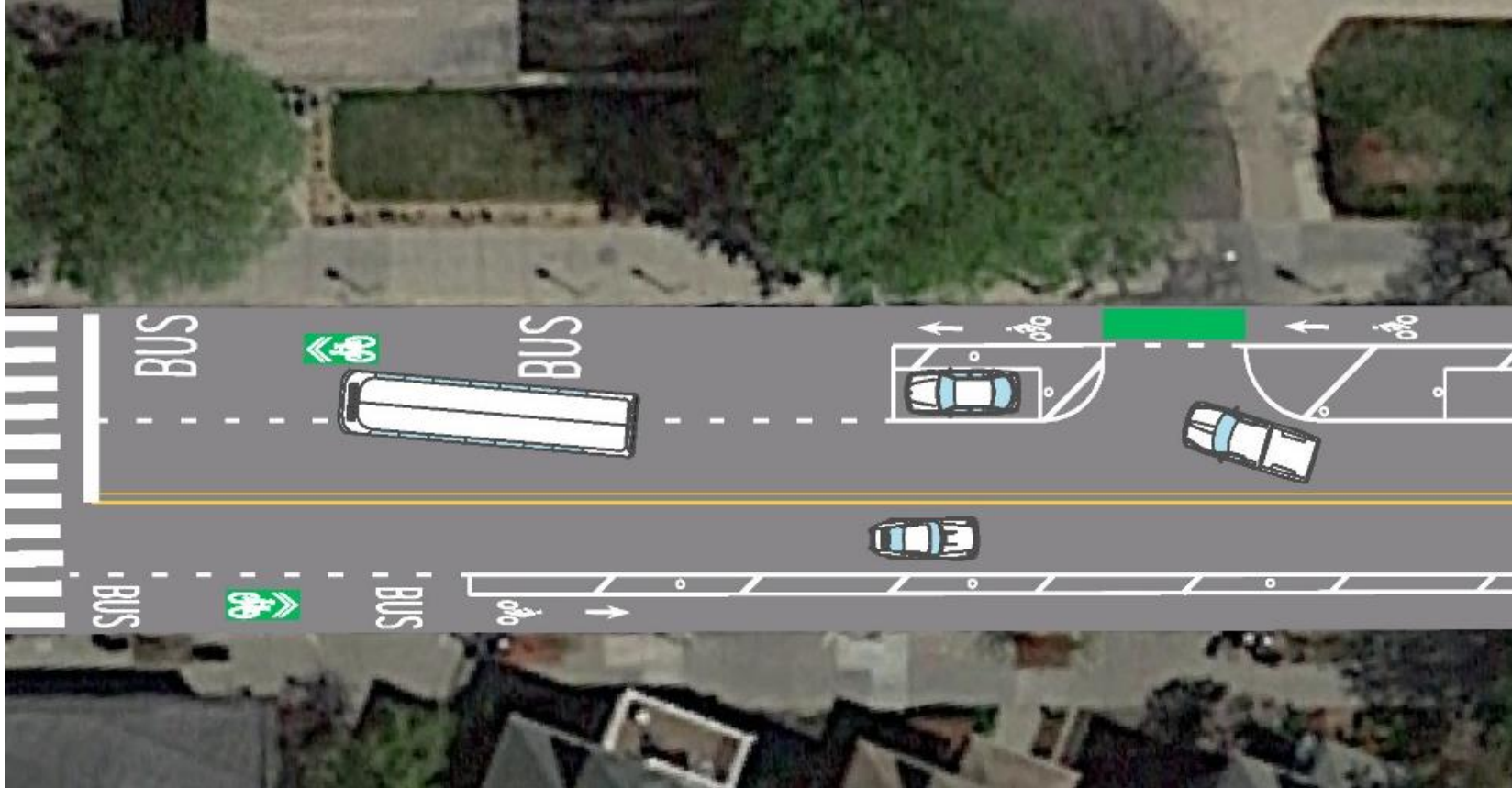
# Sample Block – Line St to Highland Ave

## Proposed Design



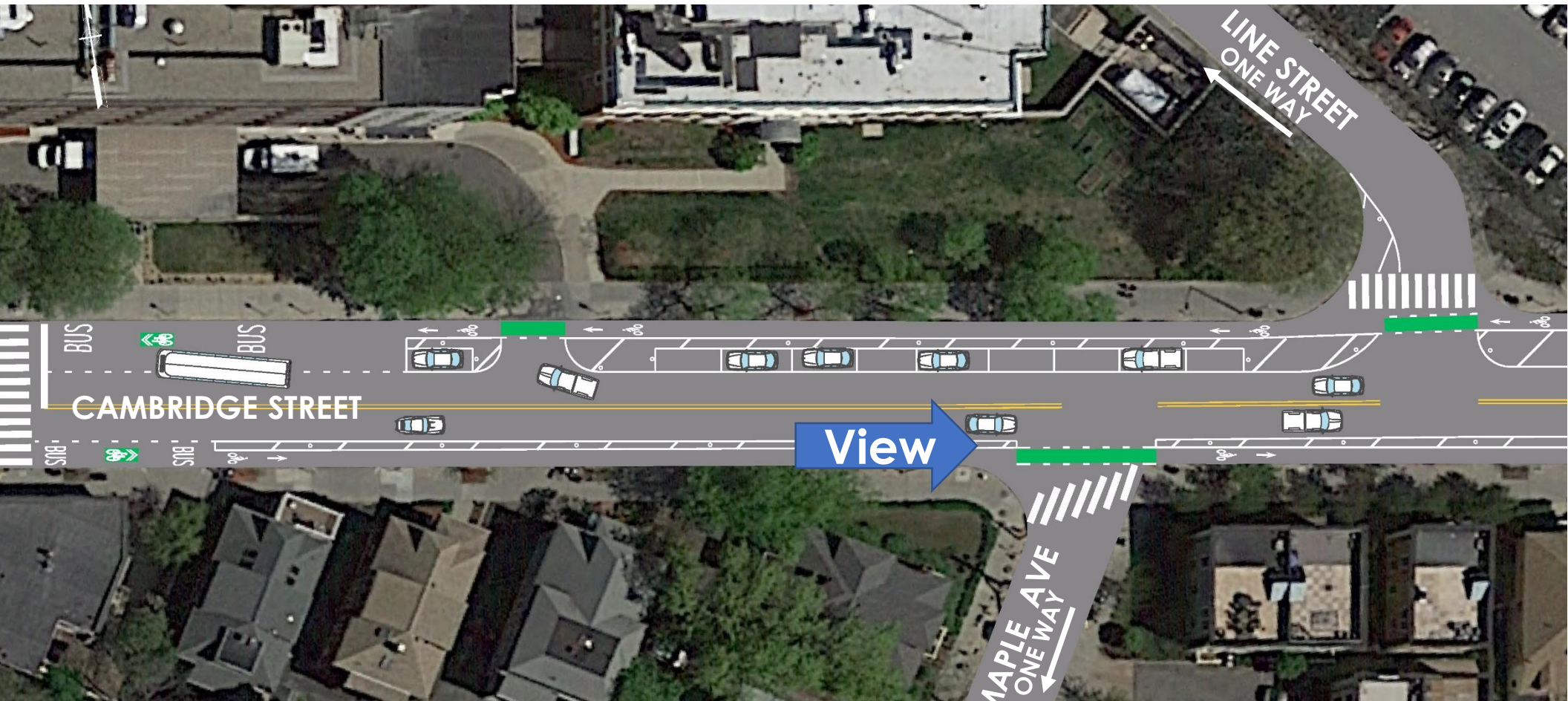


# Bus Stops



# Sample Block – Line St to Highland Ave

## Proposed Design





# Sample Block – Line St to Highland Ave

## Existing Condition





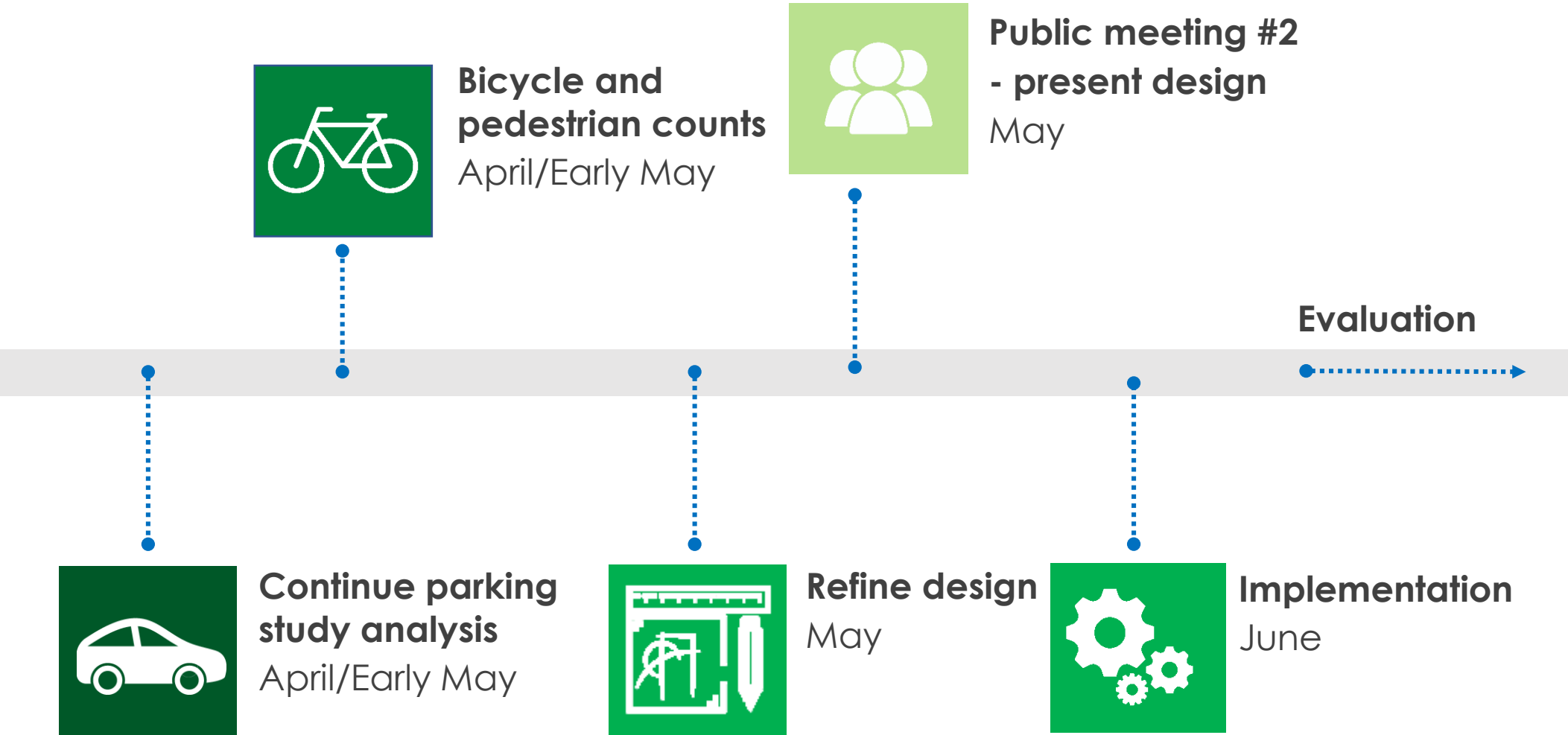
# Sample Block – Line St to Highland Ave

## Proposed Design





# Schedule



# COMMENTS & QUESTIONS?

