



# Mass Ave Partial Construction Project



*Working Group Meeting #2  
June 22, 2023*

# Remote Participation Instructions

## Working Group Members

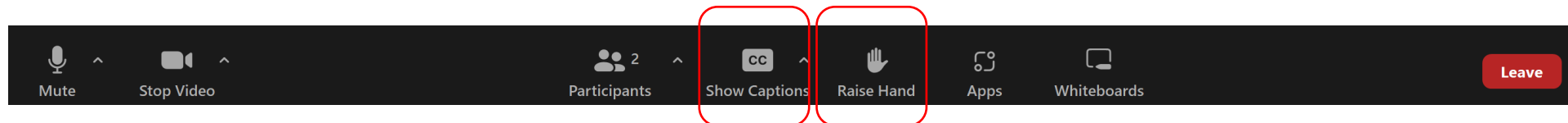
- Participants may speak and show webcam video
- Use "Raise Hand" button during discussion or press \*9 if you are joining by phone only
- Mute your microphone when others are speaking
- Screen-share will be turned off during discussion to allow for more of a virtual meeting room

## Members of the Public

- Attendees are muted and cannot show video
- Questions/comments permitted at each agenda item during the discussion. We will try to respond to clarifying questions before moving on to next agenda item.
- Verbal questions and comments will be heard after working group member discussion

You can enable live captions using the button pictured below.

**Technical Support:** [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov)





# Agenda

- General Updates
- Overview of Last Meeting
- Reporting back on Homework
  - Public Questions/Comments
- Approaching Corridor Design
- Working Group General Discussion
  - Public Questions/Comments
- Stakeholder Engagement Discussion
- Site Walk Discussion
- Public Comment
- Next Steps

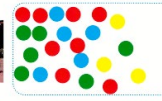


## Partial Build Opportunities\*

What would you like to see on Mass Ave?  
Place a sticker next to the opportunities that interest you.

### Separated Bike Lanes and Floating Parking

Separated bike lanes will be implemented as required by ordinance. In a partial build scenario, moving parking away from the curb can help create a buffer between cars and cyclists.



### Bus Stop Improvements

Bus stop improvements, such as installing transit shelters or seating.



### Crossing Islands

Enhanced crossing islands can provide more comfortable and accessible places of refuge for pedestrians crossing Mass Ave.



### Center Median Removal

Removing the center median in certain places can allow space to be reallocated to other uses.



### Upgrading Existing Utilities

Some utilities along Mass Ave may have to be addressed in a partial build scenario.



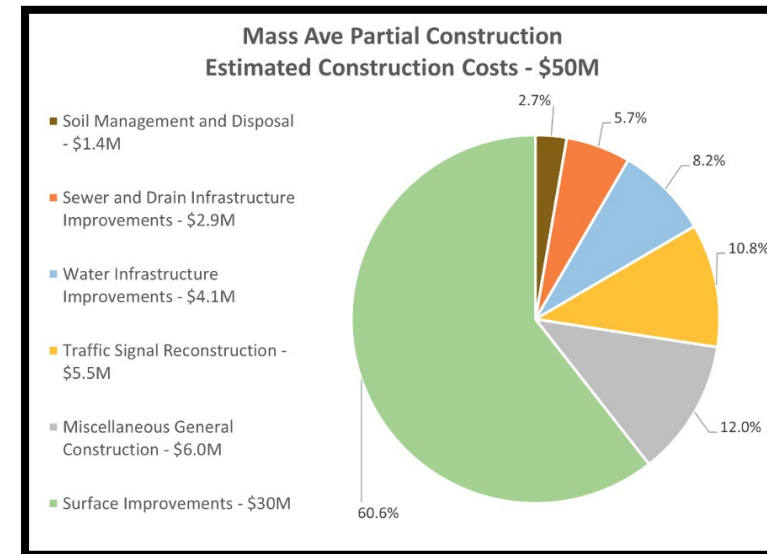
# General Updates



# Recent Project Updates

- The City created a [Summary of Costs](#) document showing what improvements have been budgeted for in the project.
  - Multimodal safety improvements
  - Breakdown of \$50 million cost
- The City updated the website to reflect recent project updates and scope modifications.

The screenshot shows the Cambridge Department of Public Works website. The header includes the logo 'THE WORKS' and navigation links for 'Services', 'I Want To', and 'Initiatives'. The breadcrumb trail reads 'Public Works > City Construction Projects > Mass Ave Partial Construction'. The main heading is 'Mass Ave Partial Construction'. The text describes the project's goals: implementing separated bike lanes, removing the median, improving pedestrian crossings, and maintaining 40% to 50% of curbside uses. A map on the right shows the project location on Mass Ave. A paragraph below the map states that the project includes two previously implemented quick-build separated bike lane projects and is the longest corridor project undertaken by the City.



# Recap from First Working Group Meeting



## Working Group Role

- Advise the city on key design issues, including separated bike lanes, crosswalks, curb access, parking/loading and bus priority needs
- Help communicate with the public about the process



## Project Background & Overview

- Previous guiding plans and policies include the Cycling Safety Ordinance and Cambridge Bicycle Plan
- Project purpose: improve safety and experience for people walking, biking, and taking the bus while maintaining curb access for businesses.
- Partial Construction Recommendation



## Basis for Design

- The project will add separated bike lanes, provide curb access where possible, and incorporate transit improvements
- The project will not make wholesale changes to basic corridor curb lines, make general streetscape and landscape improvements, or include complete subsurface reconstruction, replacement and upgrades



## Toolbox of Potential Design Options

- Including bike lane types, bus priority treatments, crosswalk enhancements, and parking and loading regulations



# Homework Report Back





# Homework Assignment

- ❑ Visit the corridor either in person or Google Streetview
- ❑ Share your thoughts at the next working group meeting

## **Tell us what you noticed!**

- Behavior of people using the corridor
- How you use the corridor
- Specific locations of interest to you
- How the road currently works
- Your design thoughts while viewing the corridor
- Other observations or thoughts

# Opportunity for Public Questions



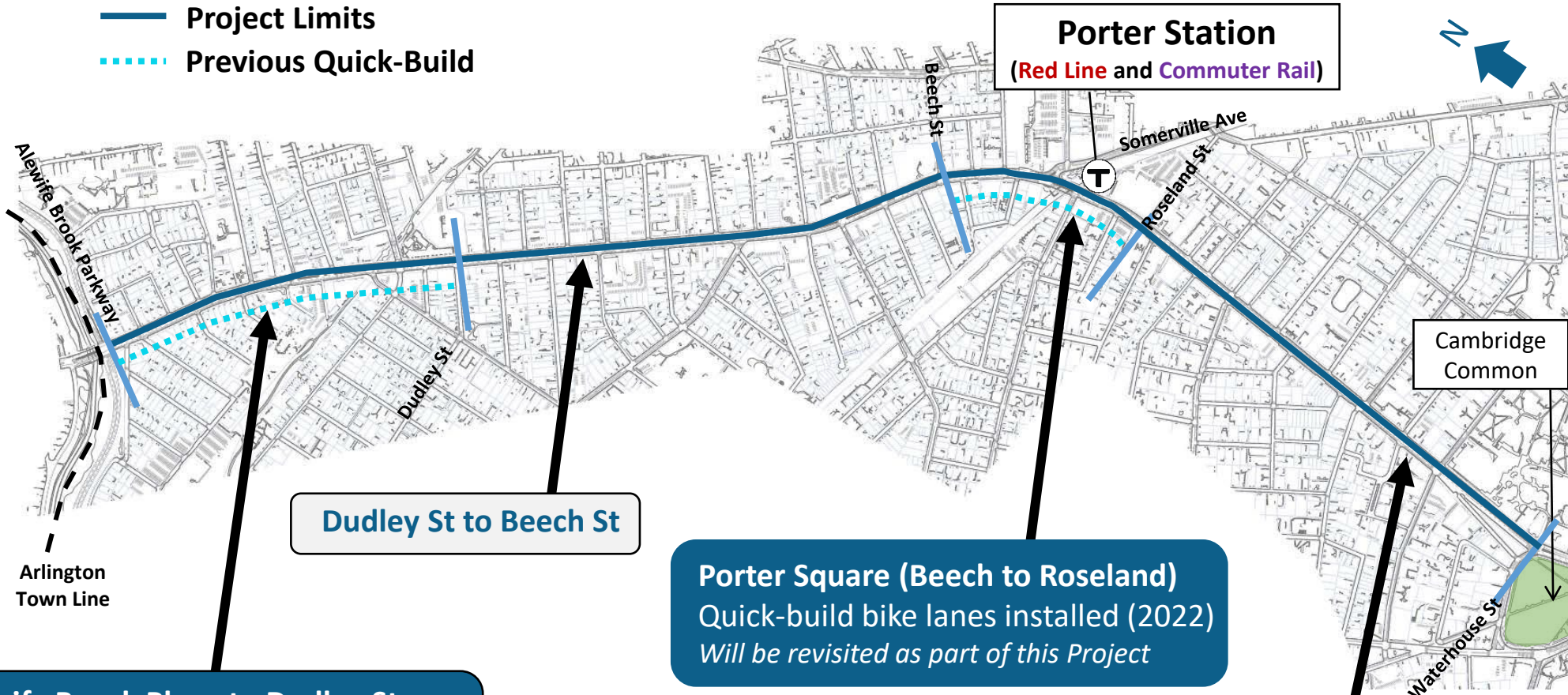
# Approaching Corridor Design



# Partial Construction Project Limits

Massachusetts Ave from Waterhouse Street to Alewife Brook Parkway

- Project Limits
- - - Previous Quick-Build



**Dudley St to Beech St**

**Porter Square (Beech to Roseland)**  
Quick-build bike lanes installed (2022)  
*Will be revisited as part of this Project*

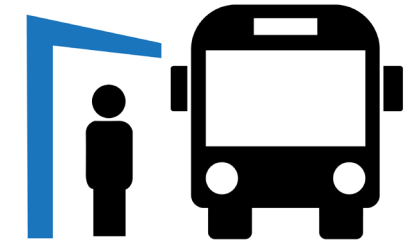
**Alewife Brook Pkwy to Dudley St**  
Quick-build bike lanes installed (2021)  
*Will be revisited as part of this Project*

**Roseland St to Waterhouse St**



# Project goals\* to guide design choices

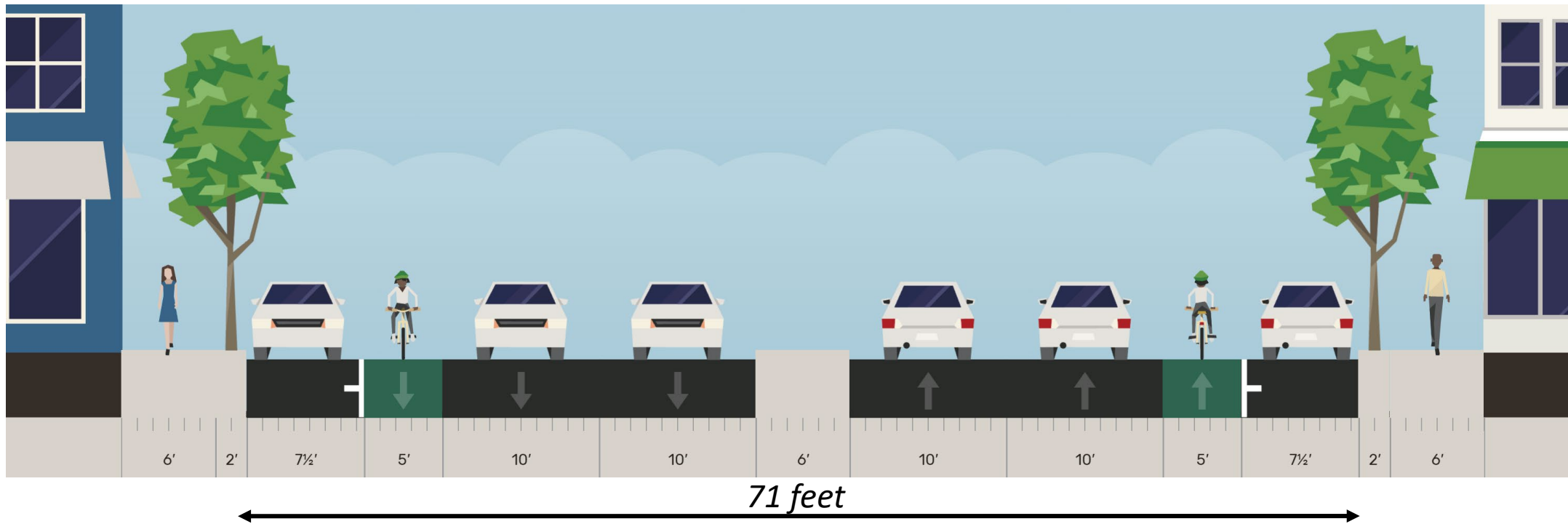
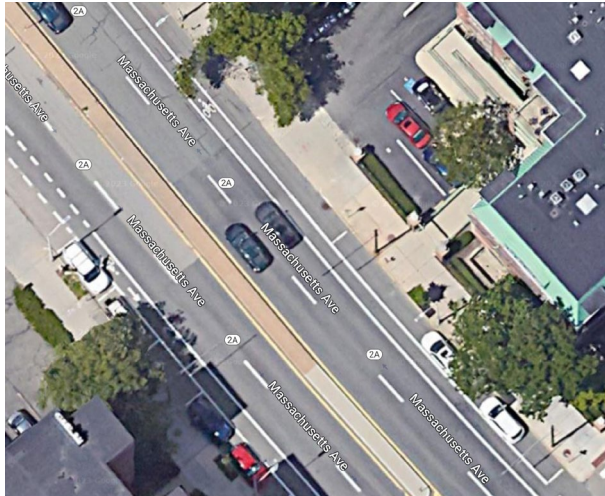
- Improve **safety** for people **biking** in the project area
- Improve **safety** for people **walking** in the project area
- Evaluate crosswalk locations to identify **additional crossing** locations
- Improve **experience for transit riders** with priority treatments at bus stops
- Improve travel times and **reliability of MBTA** buses
- Maintain loading and short-term parking access to **support local businesses**
- Implement changes in line with the **Cambridge Bicycle Plan and Vision Zero Action Plan**
- Meet the requirements of the **Cambridge Cycling Safety Ordinance**, which includes the requirement to add separated bike lanes



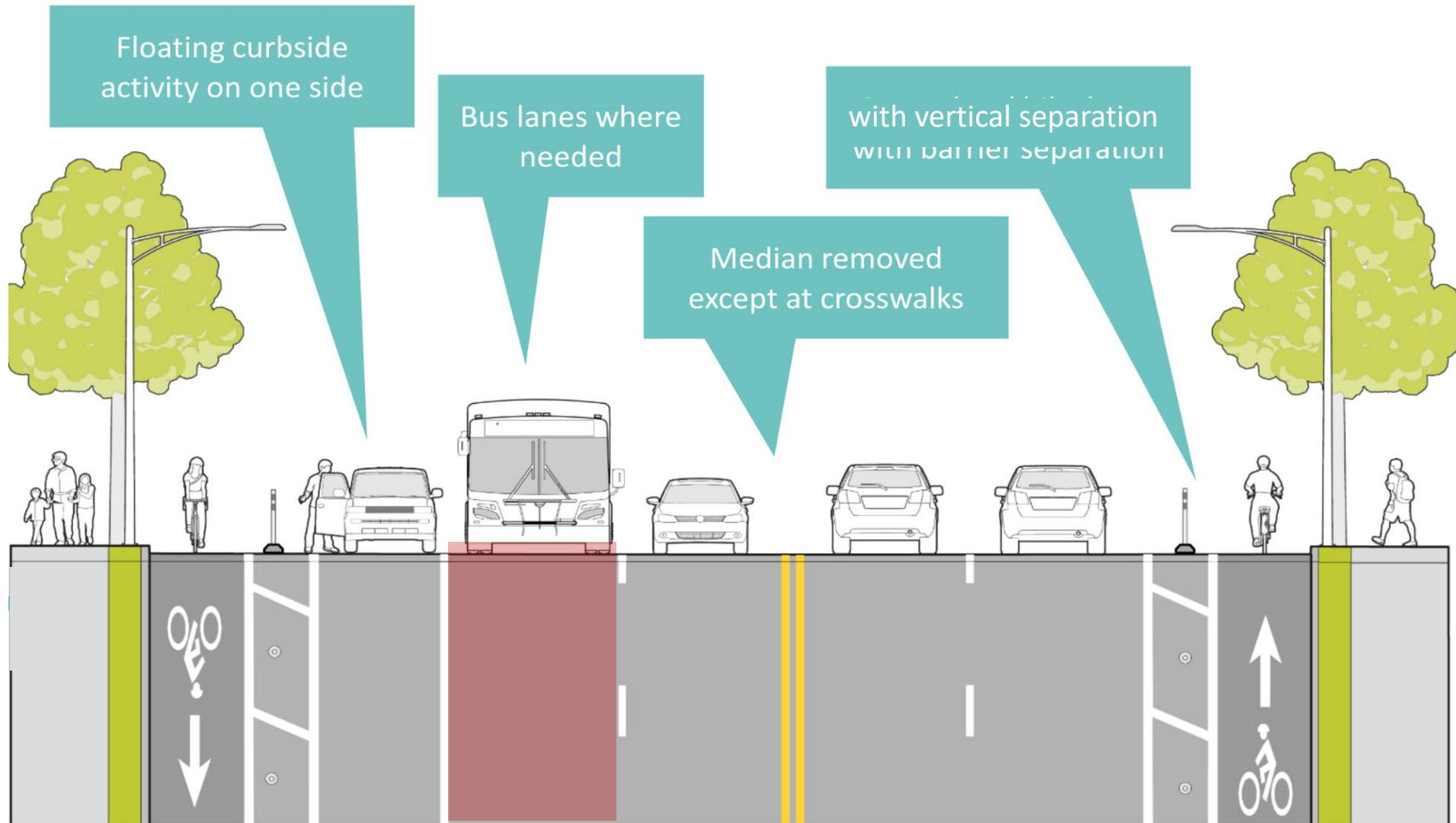
\* developed through public and stakeholder input, previous Citywide visioning, and roadway observations



# Existing typical cross section

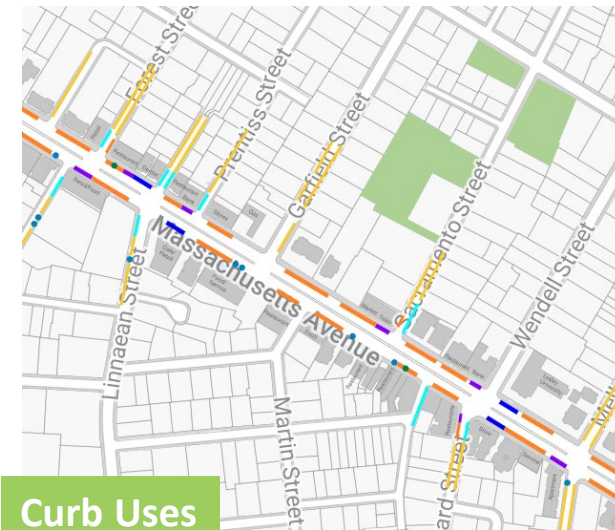
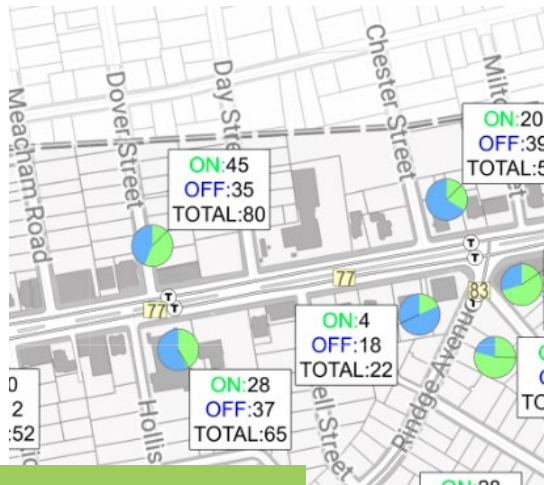
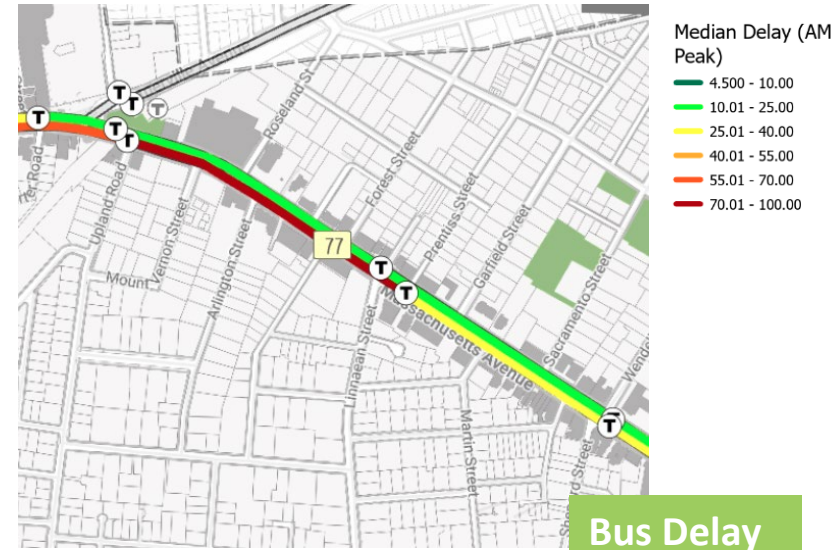
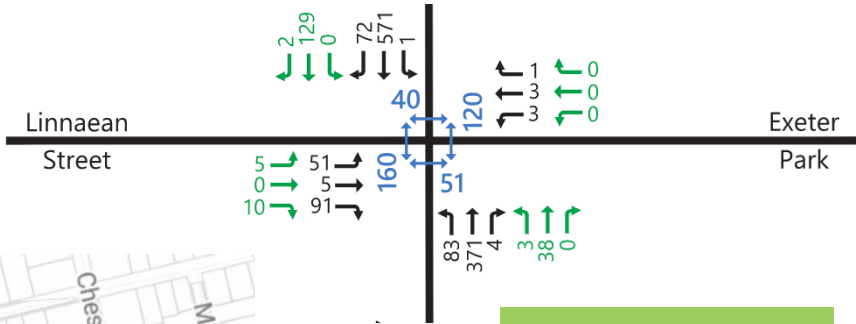


# Cross Section Elements for Partial Construction





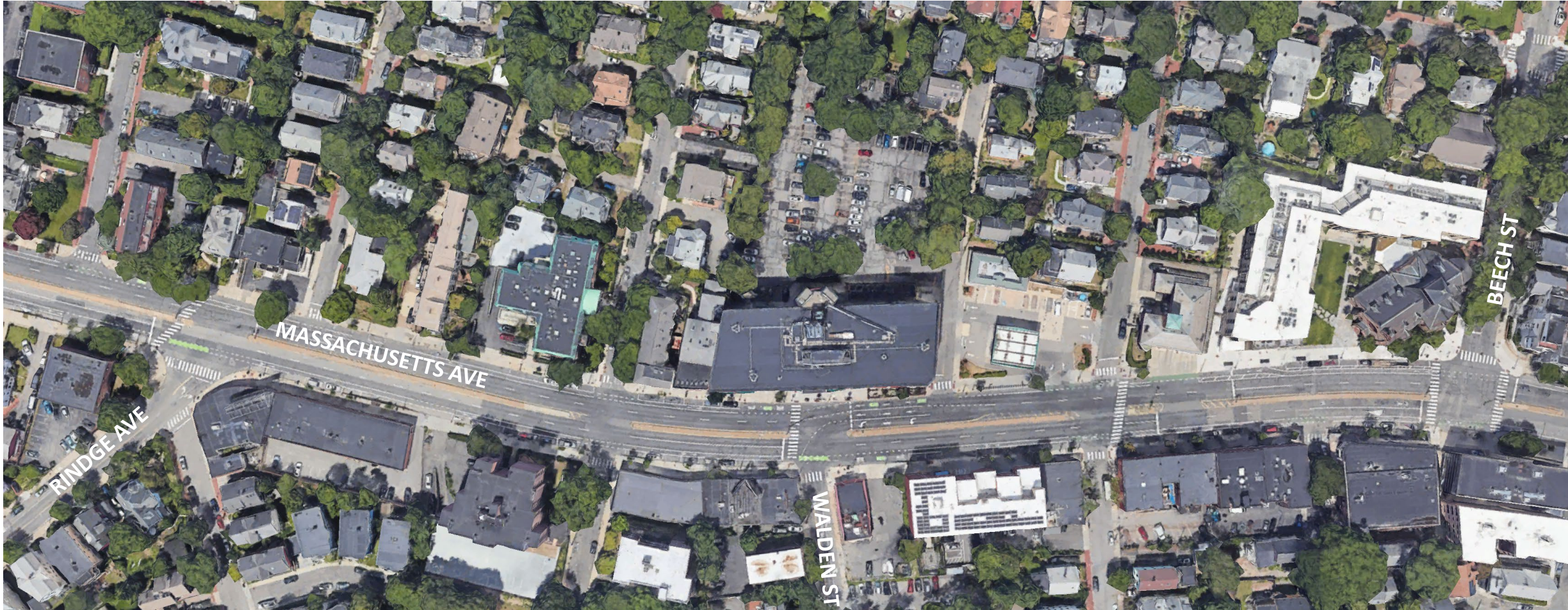
# Using data to inform the design





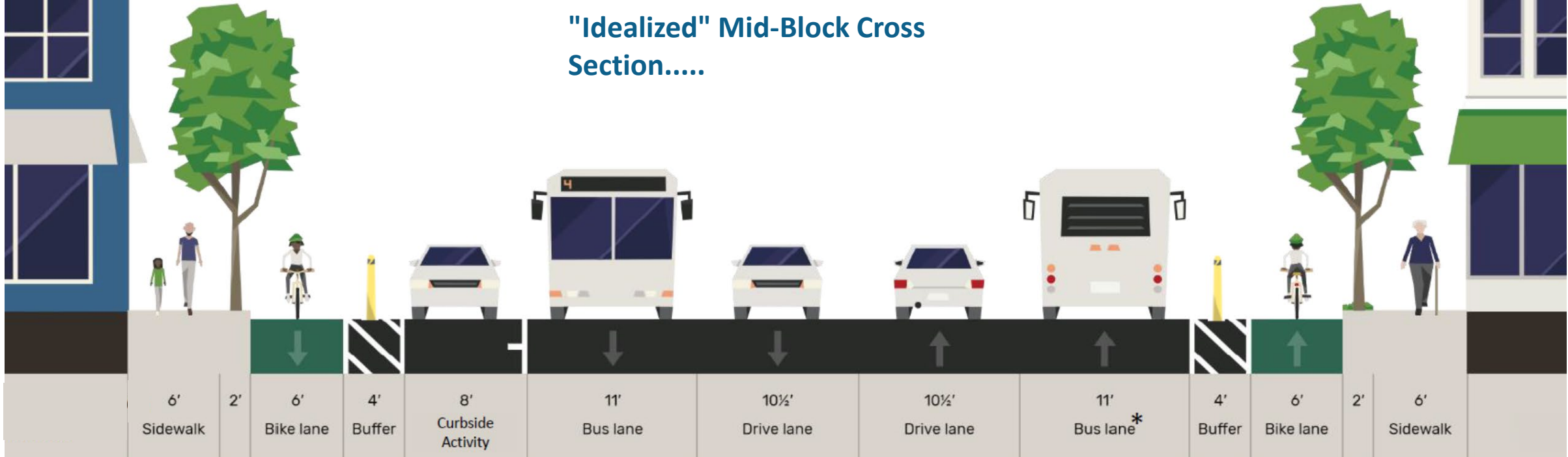
# Focus Area

*Rindge Ave to Beech St demonstrates design choices which need to be made to meet project goals*

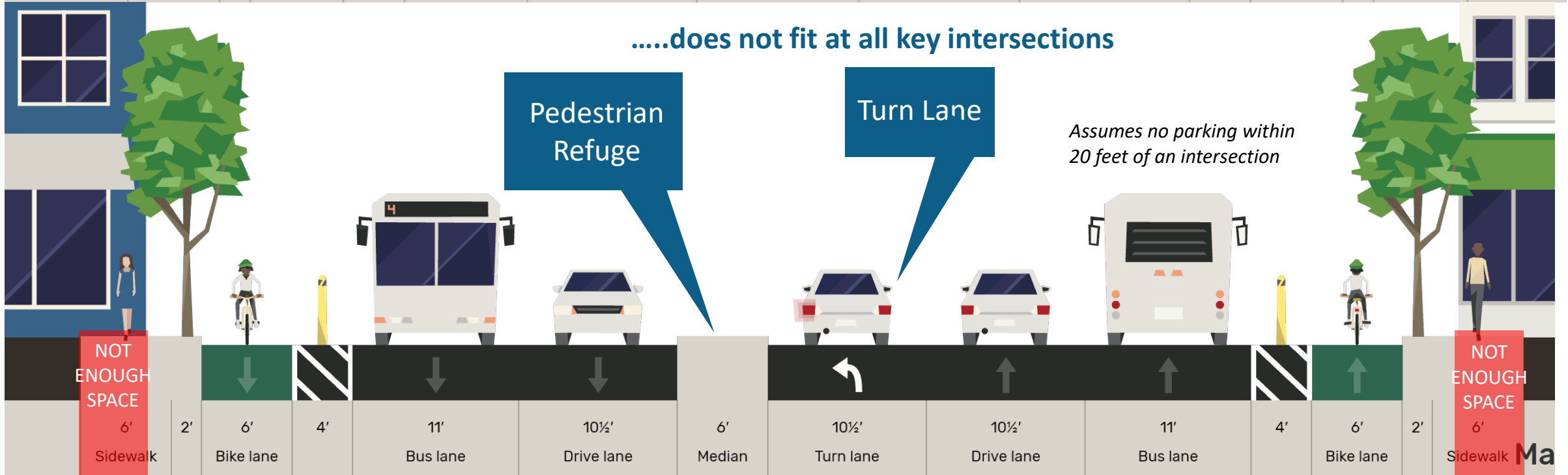




# "Idealized" Mid-Block Cross Section.....



## .....does not fit at all key intersections



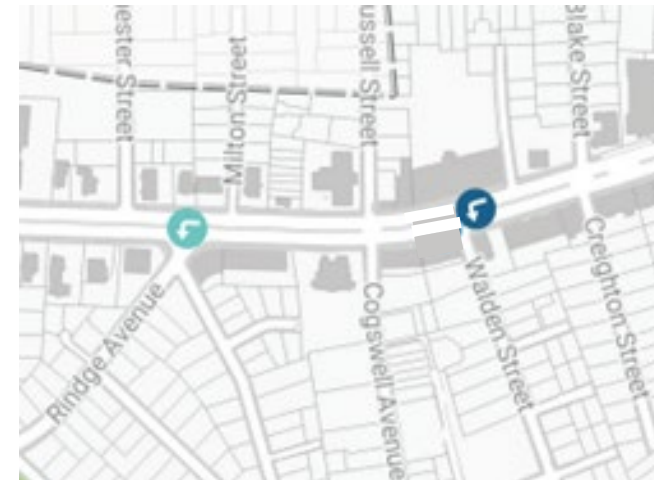
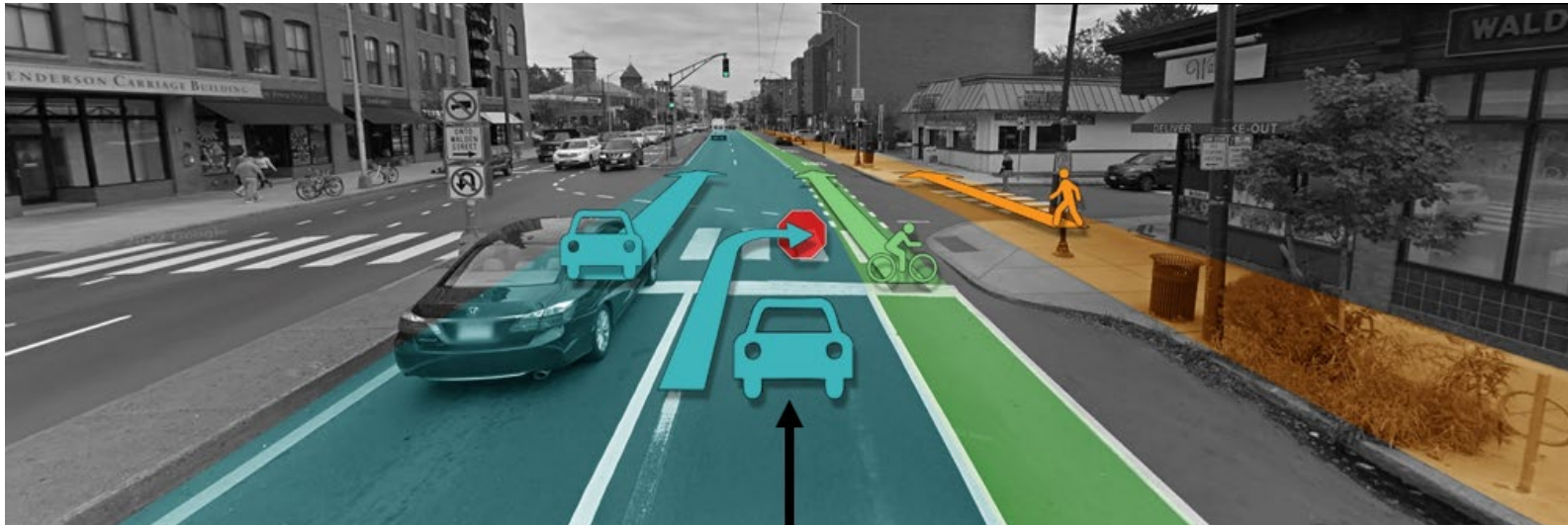


Let's talk about the interaction of turn lanes, bus lanes, curbside access, and pedestrian crossings.....



# Turn Lanes

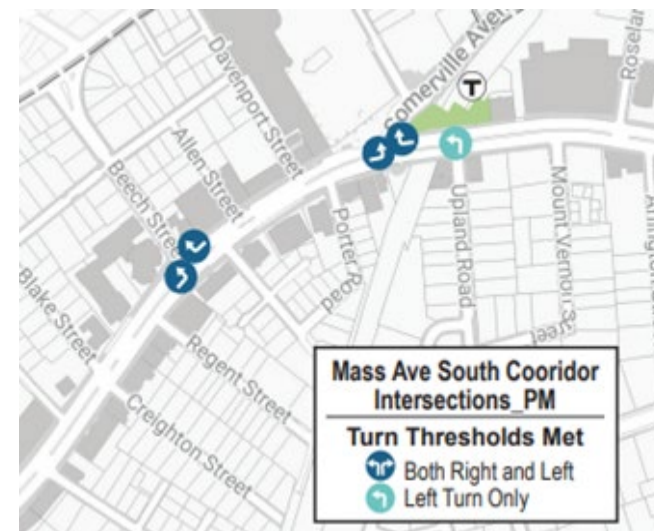
*Reduce conflict between people walking, driving and biking*



Cambridge City Council votes to ban turns on red - Boston News, Weather, Sports | WHDH 7News

CAMBRIDGE, MASS. (WHDH) - After a city council vote Monday night, Cambridge joins a handful of cities in America where turning on red is illegal. The excerpt-read-more

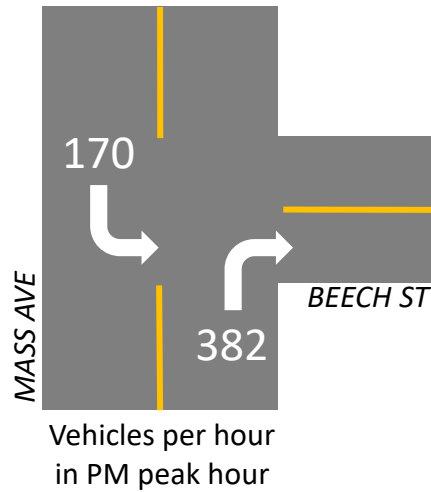
 Boston News, Weather, Sports | WHDH 7News



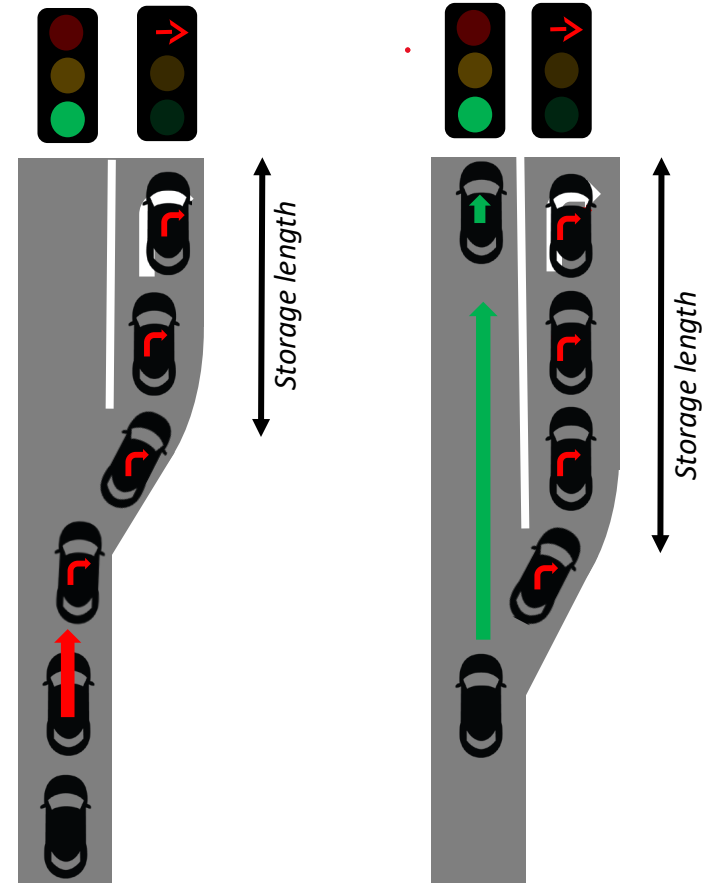
# Turn Lanes

*What are the key vehicle operational considerations?*

At locations with high turning volumes...

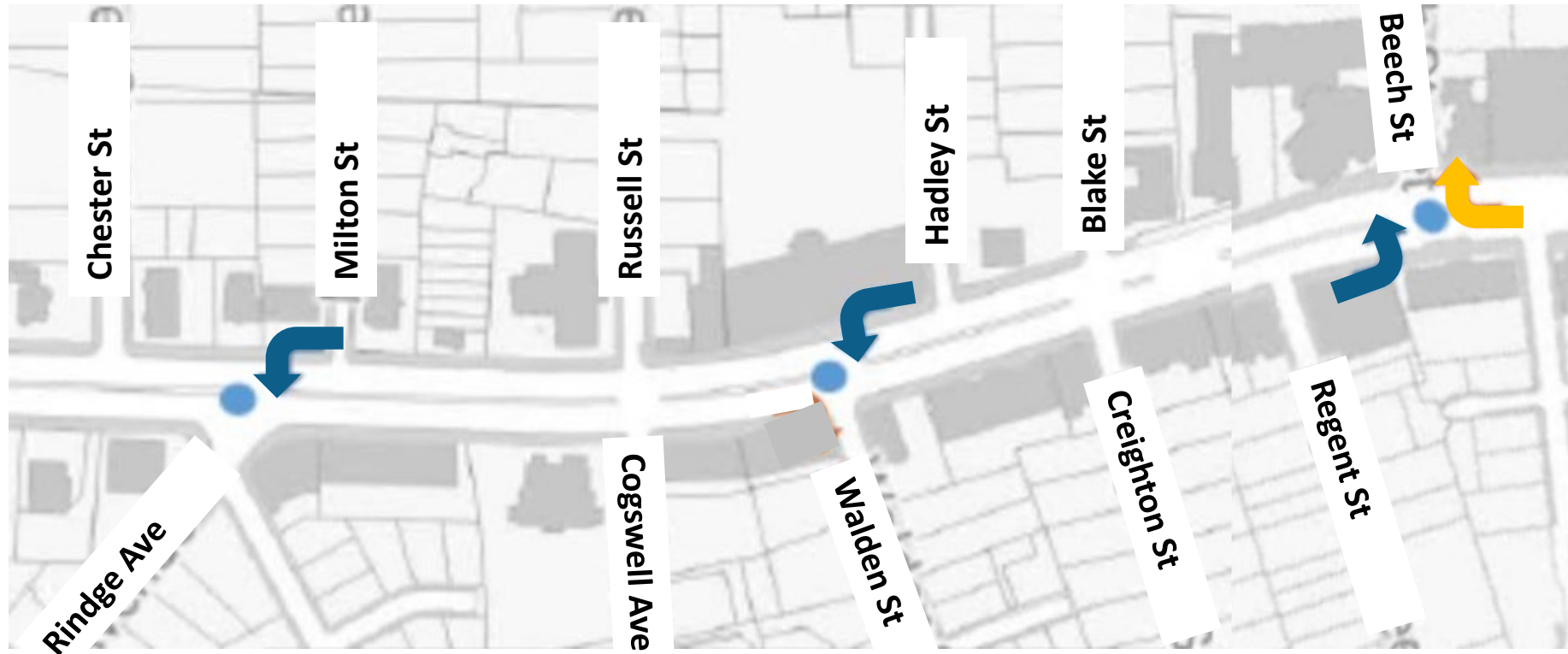
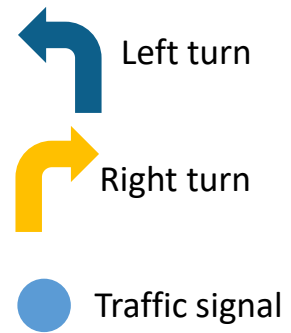


...we need to consider appropriate storage lengths



# Recommended Turn Lanes

*Rindge to Beech*

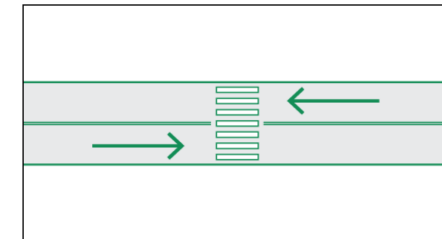




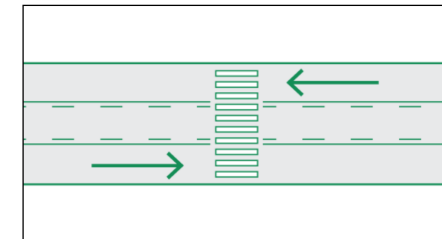
# Pedestrian Crossing Considerations



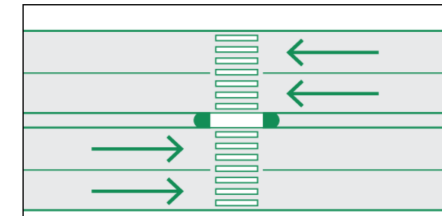
## Multiple Lane Crossings



3 lanes



4 lanes

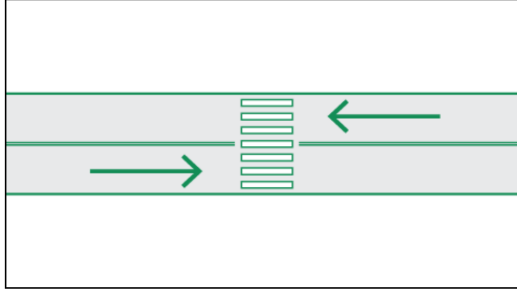


## Pedestrian Refuge suggested for 4 lanes

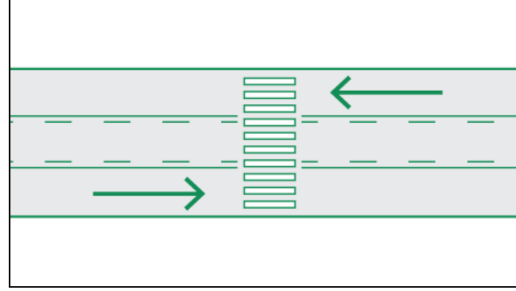




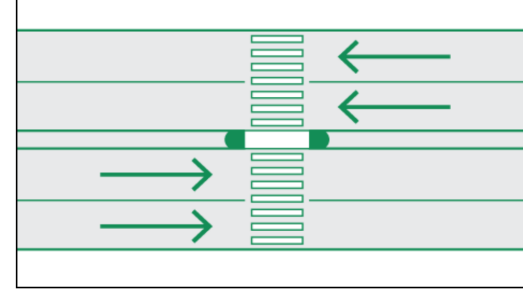
2 lanes



3 lanes



4 lanes

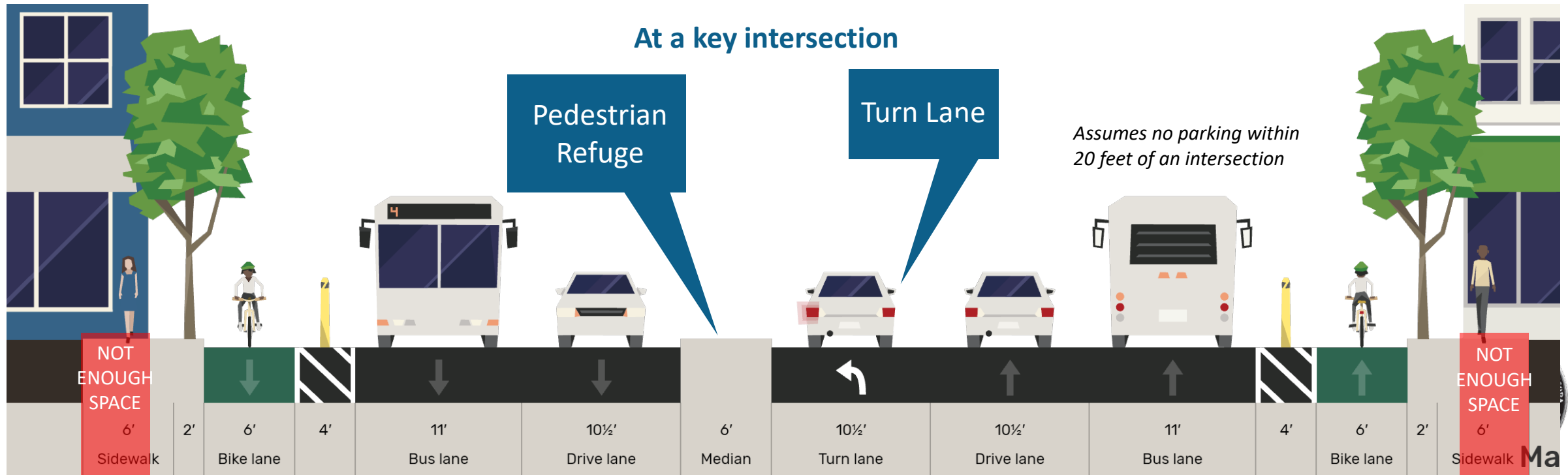


### At a key intersection

Pedestrian Refuge

Turn Lane

*Assumes no parking within 20 feet of an intersection*



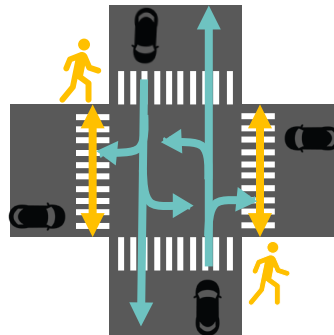
# Pedestrian Signal Phasing

## Exclusive Phasing



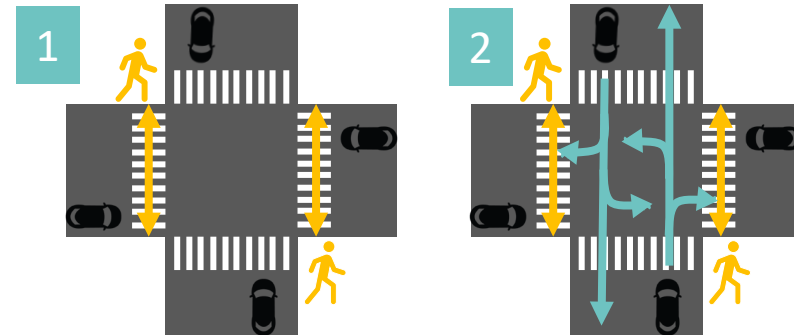
*Includes phase where only pedestrians move*

## Concurrent Phasing



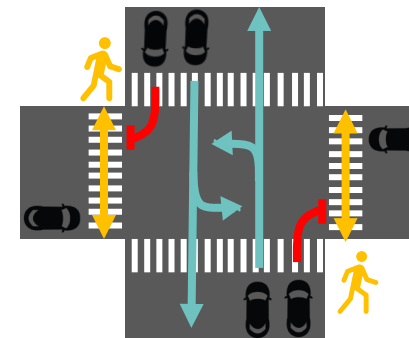
*Includes phase where vehicles and pedestrians move together*

## Concurrent with Leading Pedestrian Interval



*Concurrent phase where pedestrians get a head start*

## Protected Concurrent Phasing



*Concurrent phase where turning movements are controlled*

### Considerations

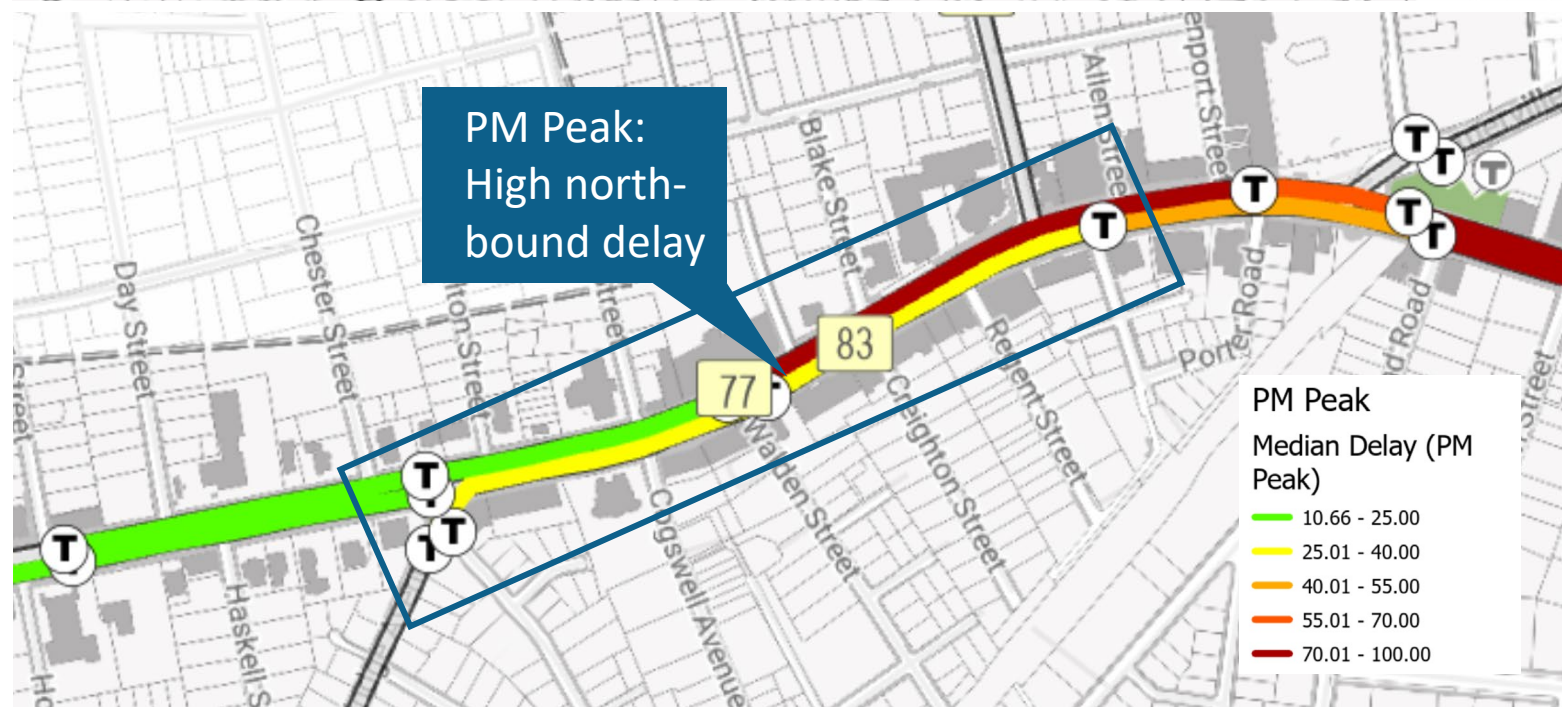
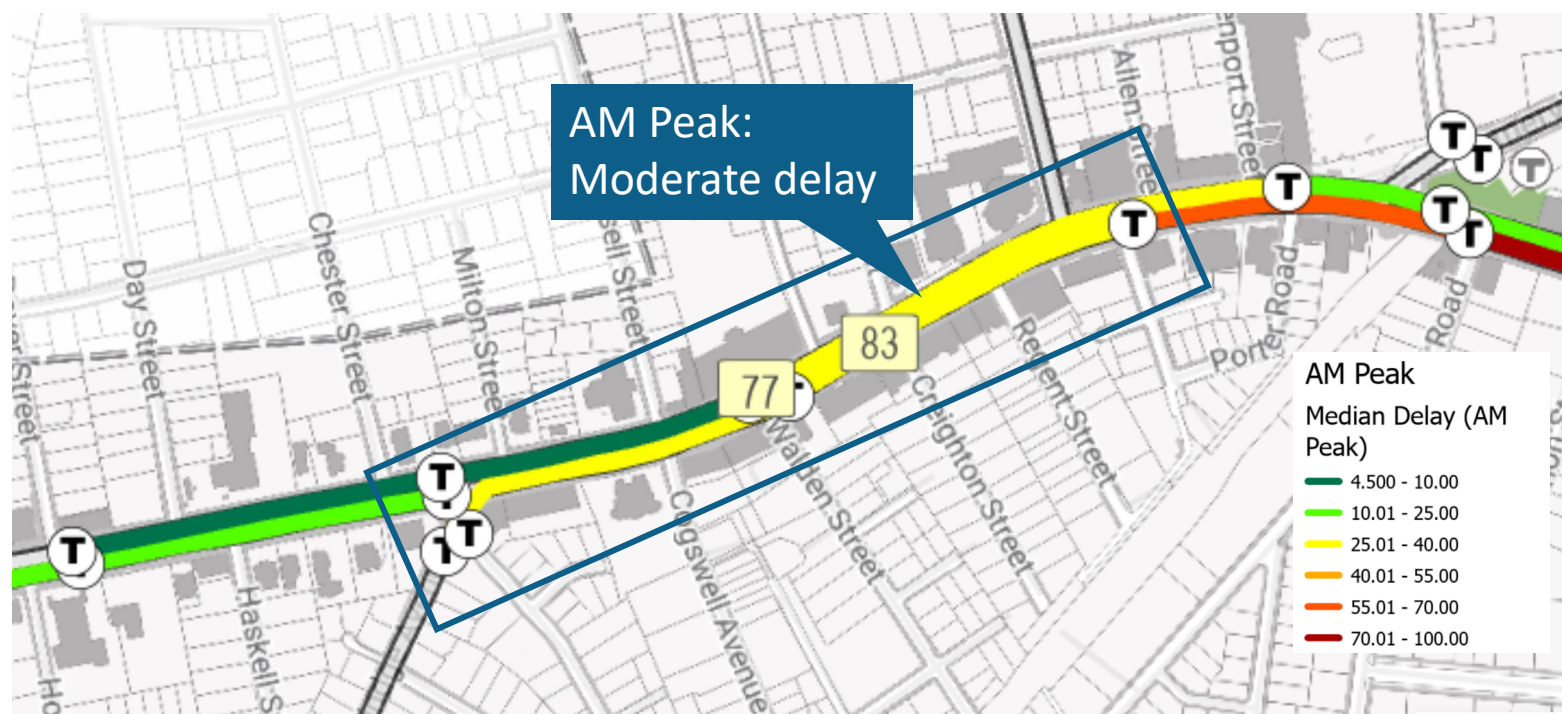
- Volume of turning conflicts
- Geometry of intersection

	Waiting time	Conflicts
Concurrent	↓	↑
Exclusive	↑	↓

Any clarifying questions on turn lanes and pedestrian crossings?



# Existing Bus Delay

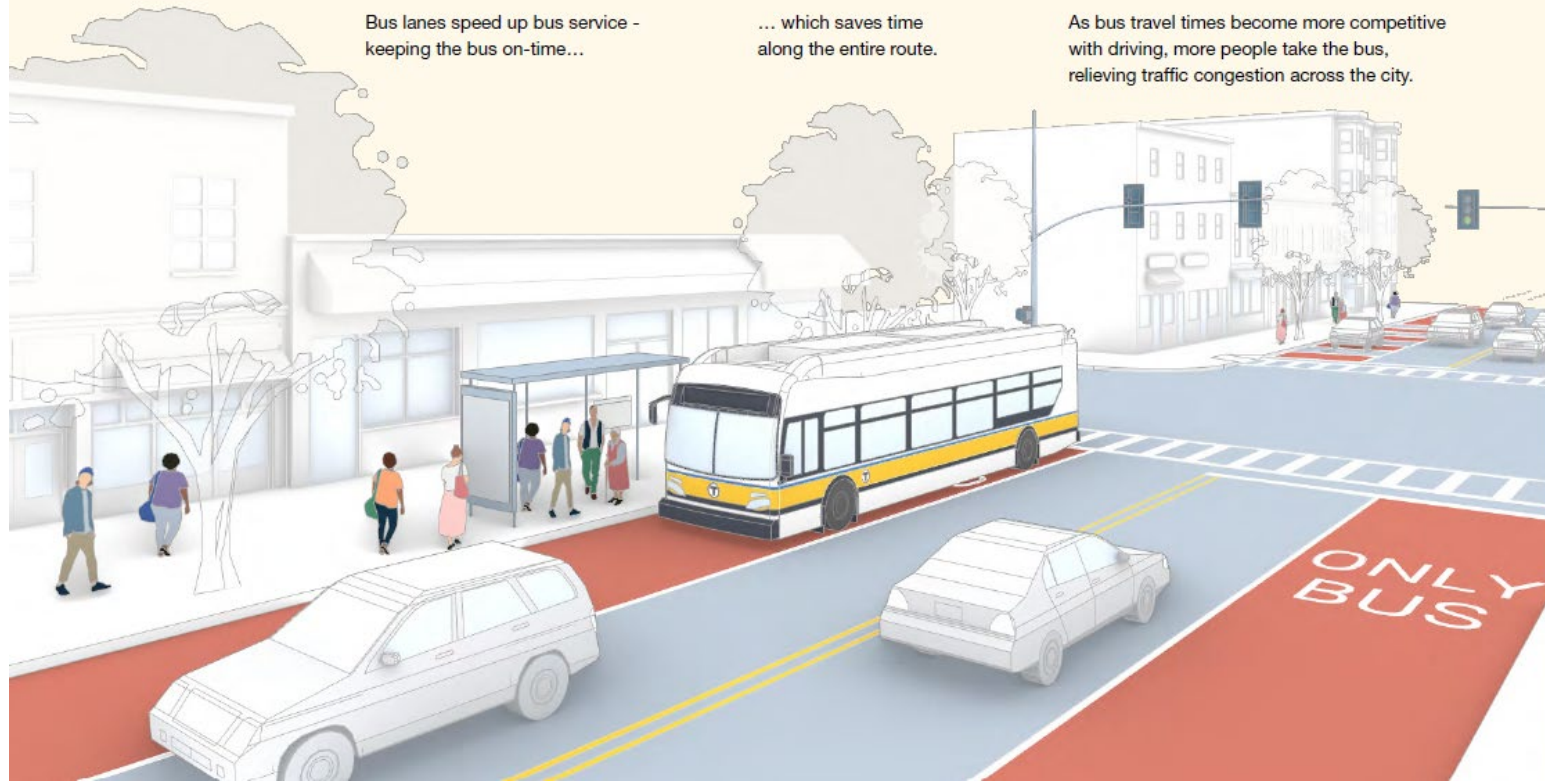




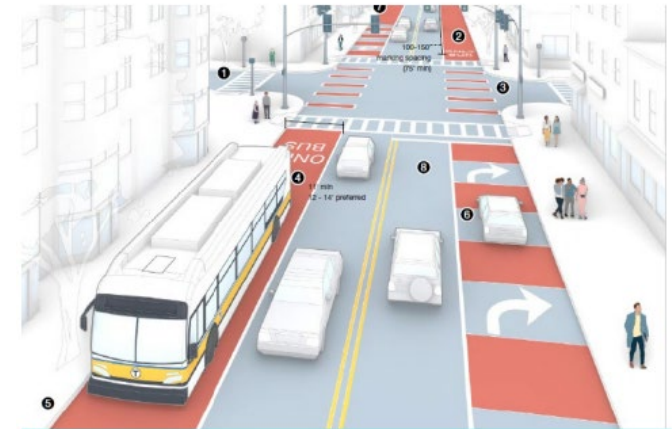
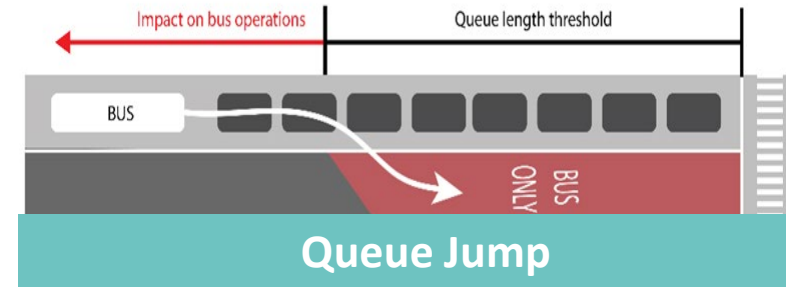
# Transit Priority Tools

## Everyone benefits from bus priority improvements.

Bus priority projects benefit the entire transportation system and everyone who travels through it.



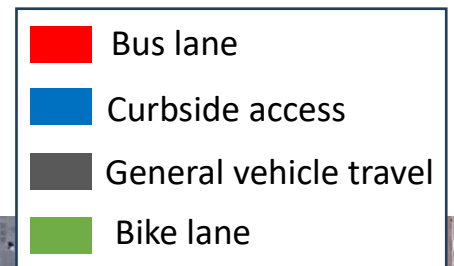
**Bus Priority**  
(MBTA Bus Priority Toolkit)



**Shared Bus / Right Turns**  
(MBTA Bus Priority Toolkit)

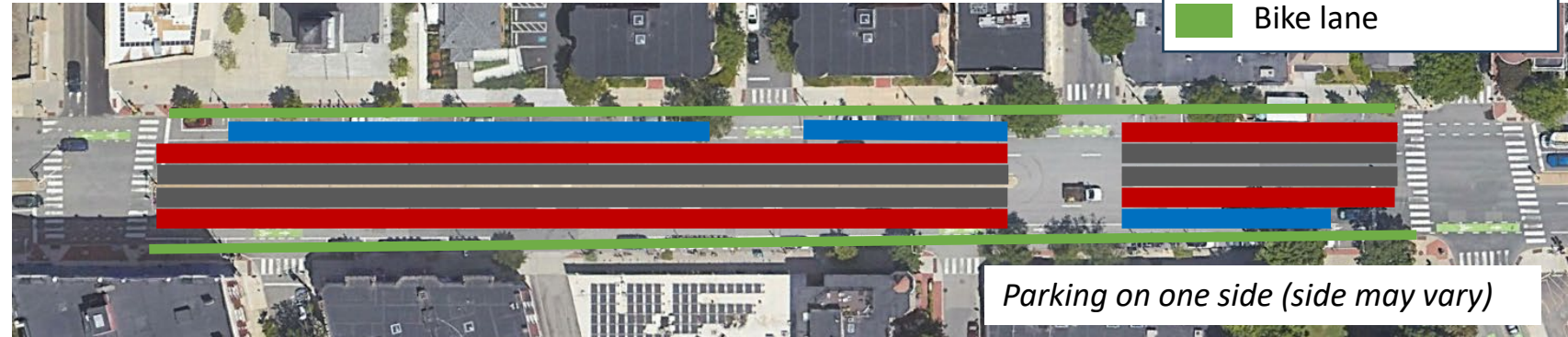


# Potential Options to Balance Curbside Uses and Bus Operations



## Full time bus lanes

- Curbside access on one side at a time
- Benefits to bus operations



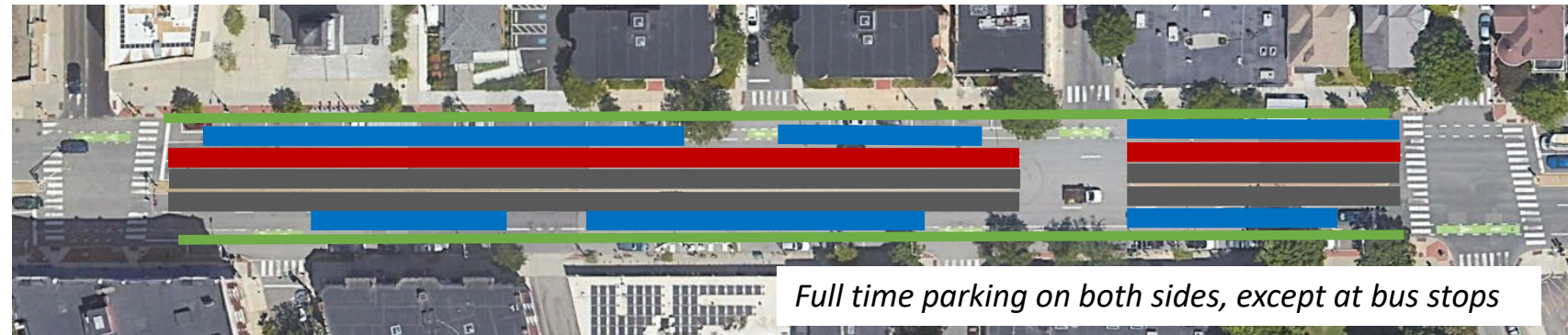
## Part time bus lane on one side

- Continuous curbside access on one side, off-peak access on other
- Benefits to buses during peak periods

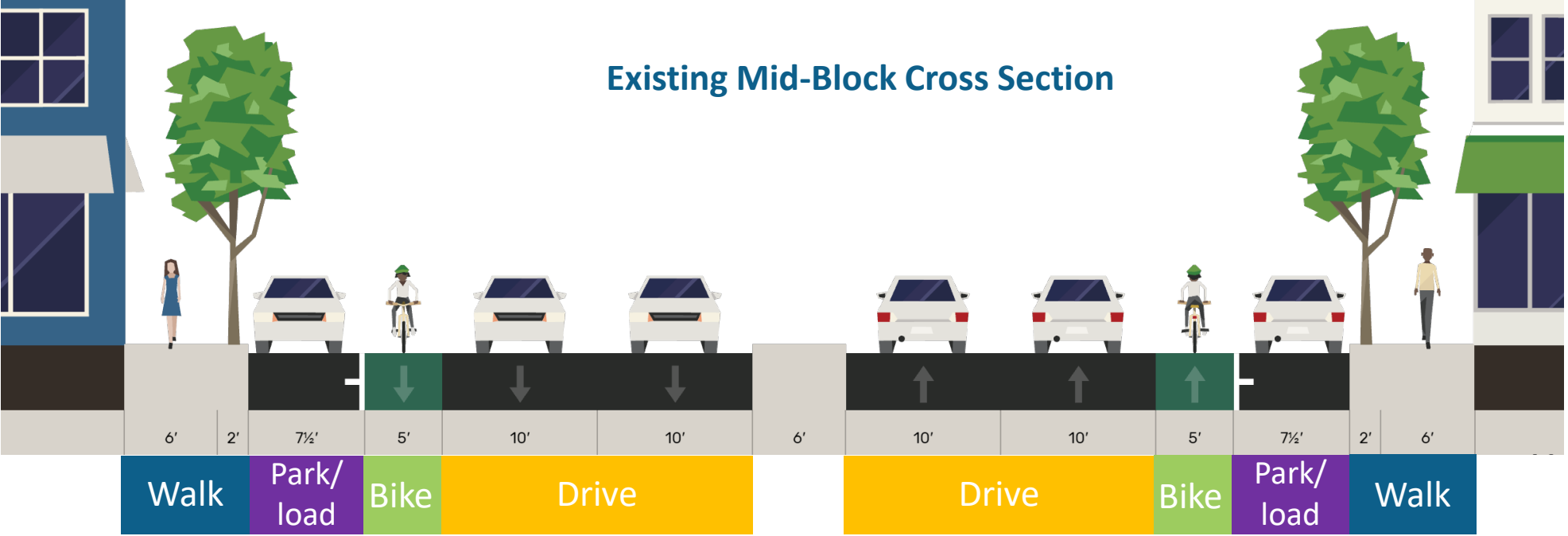


## Bus lane on one side only

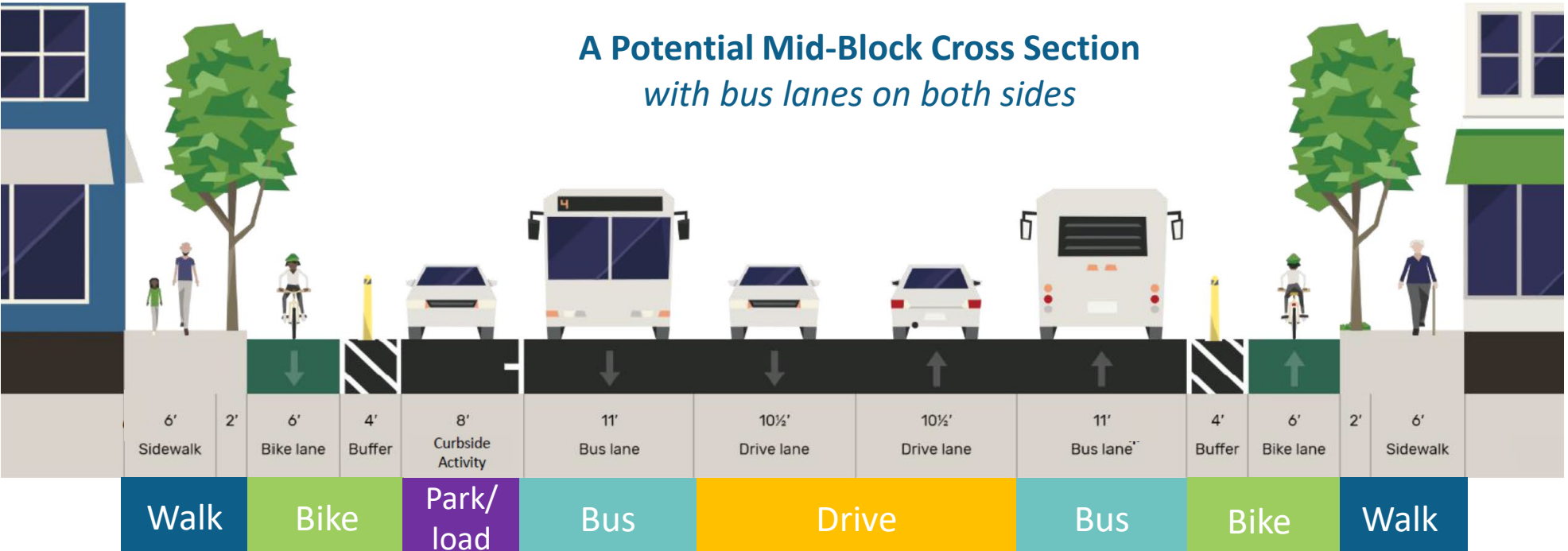
- Continuous curbside access on both sides
- Southbound bus in mixed traffic



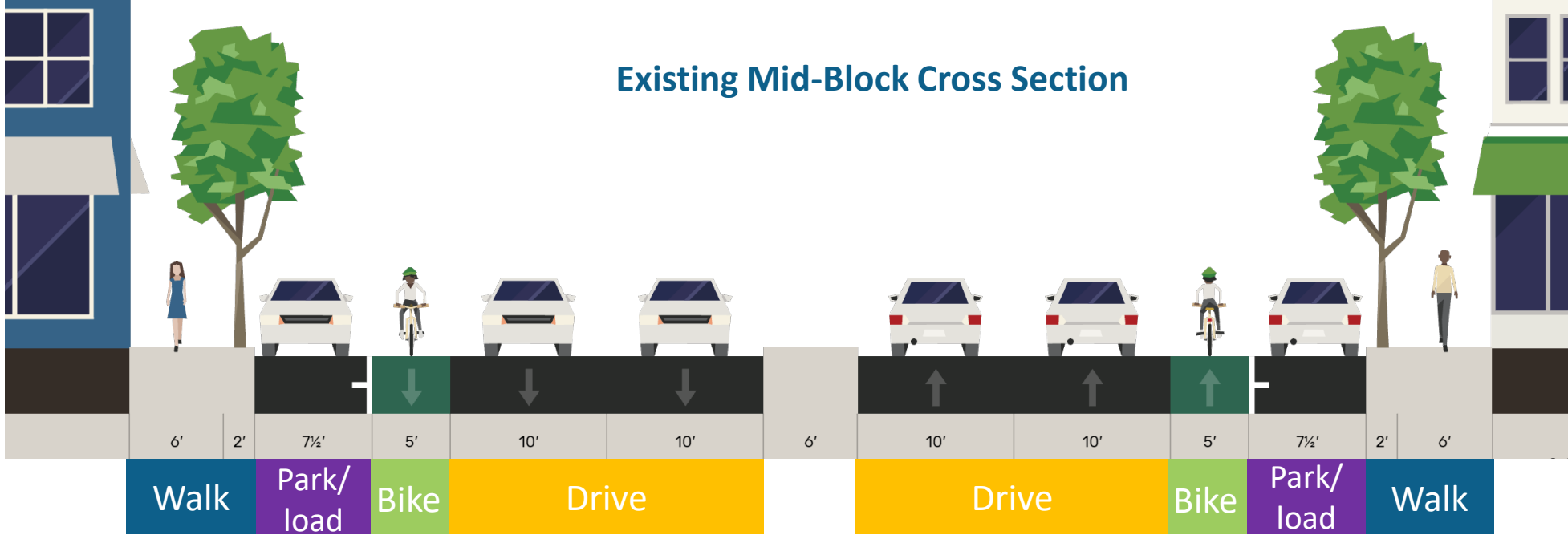
### Existing Mid-Block Cross Section



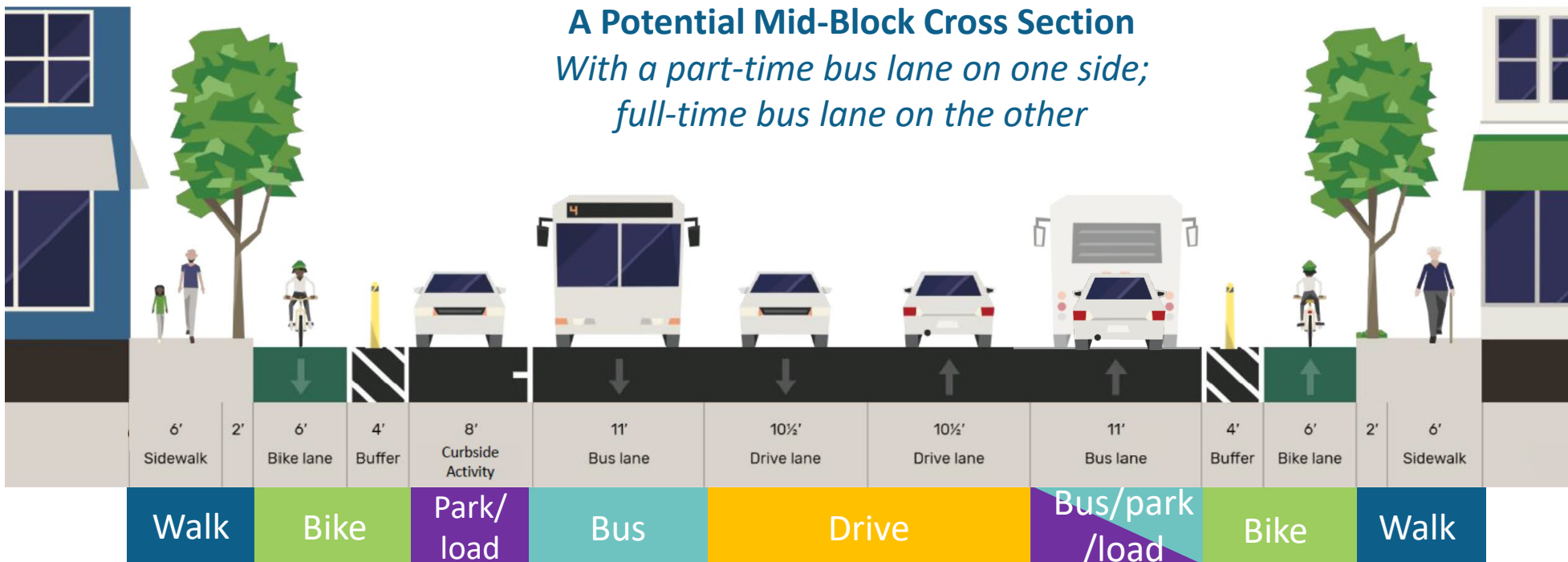
### A Potential Mid-Block Cross Section *with bus lanes on both sides*



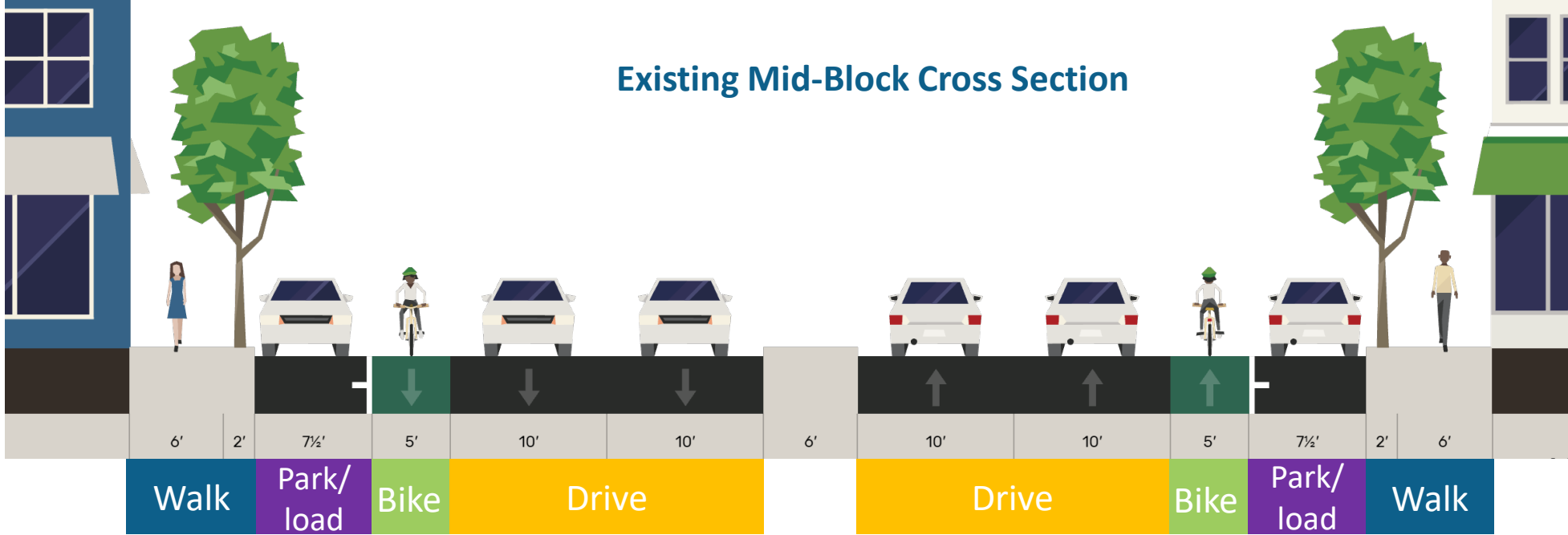
## Existing Mid-Block Cross Section



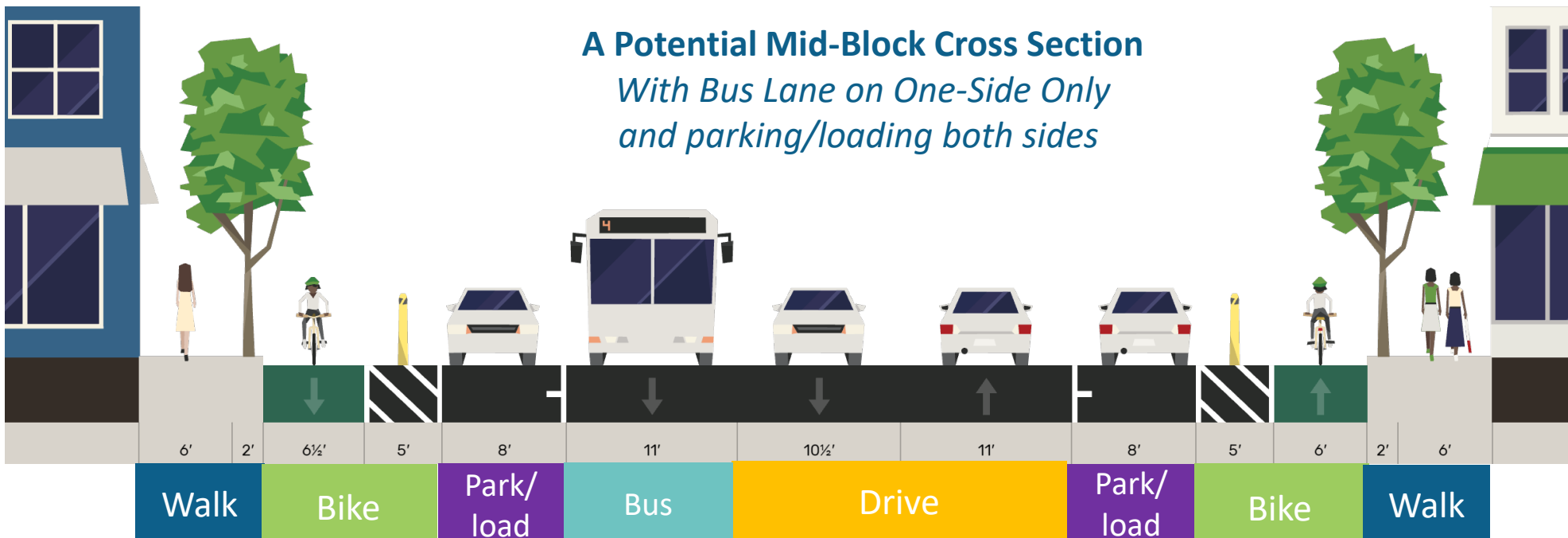
## A Potential Mid-Block Cross Section *With a part-time bus lane on one side; full-time bus lane on the other*



## Existing Mid-Block Cross Section

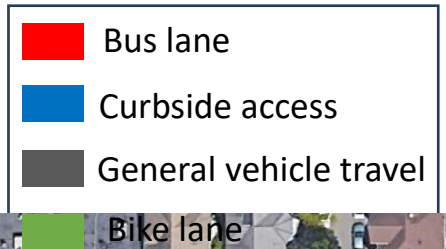


## A Potential Mid-Block Cross Section With Bus Lane on One-Side Only and parking/loading both sides



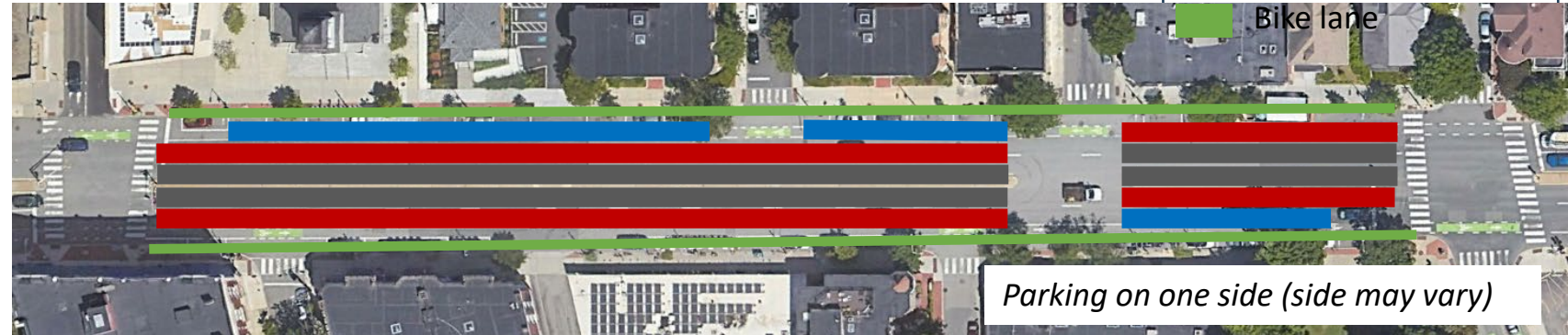


# Potential Options to Balance Curbside Uses and Bus Operations



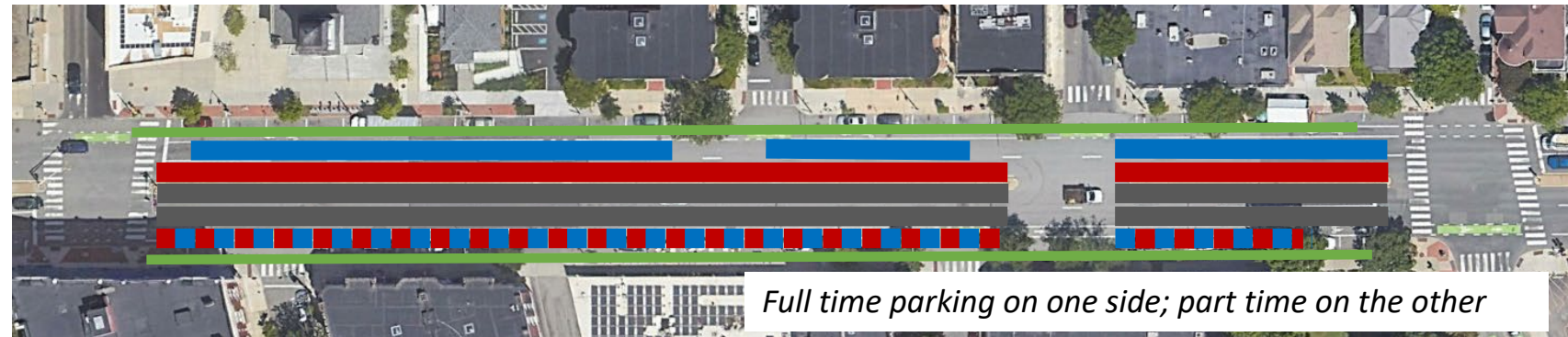
## Full time bus lanes

- Curbside access on one side at a time
- Benefits to bus operations



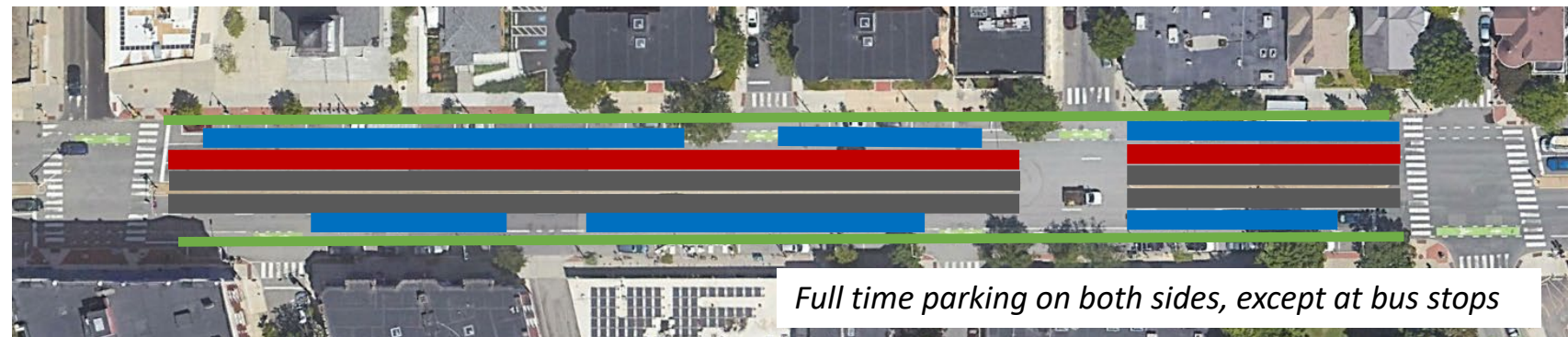
## Part time bus lane on one side

- Continuous curbside access on one side, off-peak access on other
- Benefits to buses during peak periods



## Bus lane on one side only

- Continuous curbside access on both sides
- Southbound bus in mixed traffic





Any clarifying questions on bus priority and the three potential options for bus lane and curbside access?



# Discussion

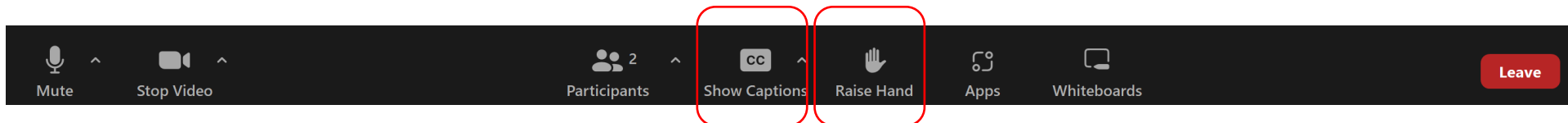
- > We are still performing technical analyses to determine outcomes and tradeoffs for all modes.
- > How should we talk about tradeoffs with the public?
- > What questions should we be asking stakeholders?
- > Is the approach missing anything important for the process to be successful?



# Reminder: Virtual Discussion Instructions

- Use "Raise Hand" button during discussion or press \*9 if you are joining by phone only
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**Bottom Panel  
of Zoom  
Screen**



# Opportunity for Public Questions



# Working Group Stakeholder Discussion





# Stakeholder Engagement

- How can we ensure a constructive discussion with local businesses and the public?
- What are you hearing in your community about the project?
- How can we address business and general community comments and concerns?
- Do you have thoughts on stakeholder groups we should engage?



# Working Group Site Walk



# Site Walk Discussion

- Are you interested in participating in a site walk of part of the area?
- Would August work for you?
- Any thoughts on the format of the site walk or locations you would like to visit?



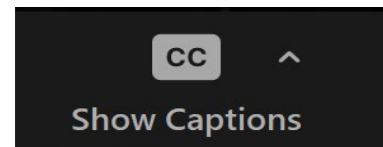
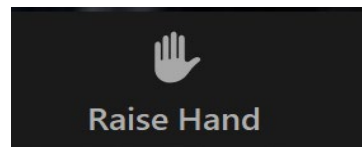
# Public Comment



# Public Comment

- Use "Raise Hand" button to signal you have a question or press \*9 if you are joining by phone only
- Please be kind to each other and help us hear from as many people as possible
- Technical support: [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov)

**Bottom Panel  
of Zoom  
Screen**





# Next Steps



# Expected Timeline and Next Steps

## July

- Working Group Meeting #3

## August

- Stakeholder Meetings
- Project Communications
- Optional Site Walk

## September

- Working Group #4
- Share draft concepts with City's joint transportation committee
- Public Meeting

## October

- Pop up events on corridor



# Questions?

Please reach out to members of our Project Team  
at [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov).

