

A large tree with thick, textured bark stands on the left side of the image. In the background, a modern building with large glass windows and a reddish-brown facade is visible. The text is overlaid on the image in a large, white, sans-serif font.

# Safety Improvement Project on Cambridge Street Community Meeting #1

December 12, 2023 | 6:00 pm | Zoom

# Safety Improvement Project on Cambridge Street

## Between Inman Square and Second Street

---

### First Community Meeting

December 12, 2023

### Provide Feedback after the Presentation

- You will find information on how to give feedback at the end of the presentation
- Please be respectful to attendees and City staff
- Avoid personal attacks and foul language

### Cameras + Microphones

- Your camera is off
- We will enable your microphone only when you are speaking

### We are Recording

- We will post the recording of tonight's meeting on the project web page

[www.cambridgema.gov/CambridgeStSafety](http://www.cambridgema.gov/CambridgeStSafety)



# Meeting Purpose, Outcome, + Process

## Purpose

- We are creating a new design for Cambridge Street as part of the City's Cycling Safety Ordinance. Today, we will introduce the project and you will learn about its goals and background.

## Outcome

- You'll have enough background information to be able to provide feedback today and make suggestions to help us start designing the project.

## Process

- City staff will present a slide show and then have a question-and-answer session for public input. In the coming months, there will more opportunities to be involved in different ways.

# Agenda

## Planning Background

- How do we design our streets?
- Why are we making changes?

## Project Introduction

- What's Cambridge Street like today?
- What's changing?

## Design Considerations

- What are we thinking about?
- What influences the design?

## Measuring Success

- Are we meeting our goals?

## Community Outreach

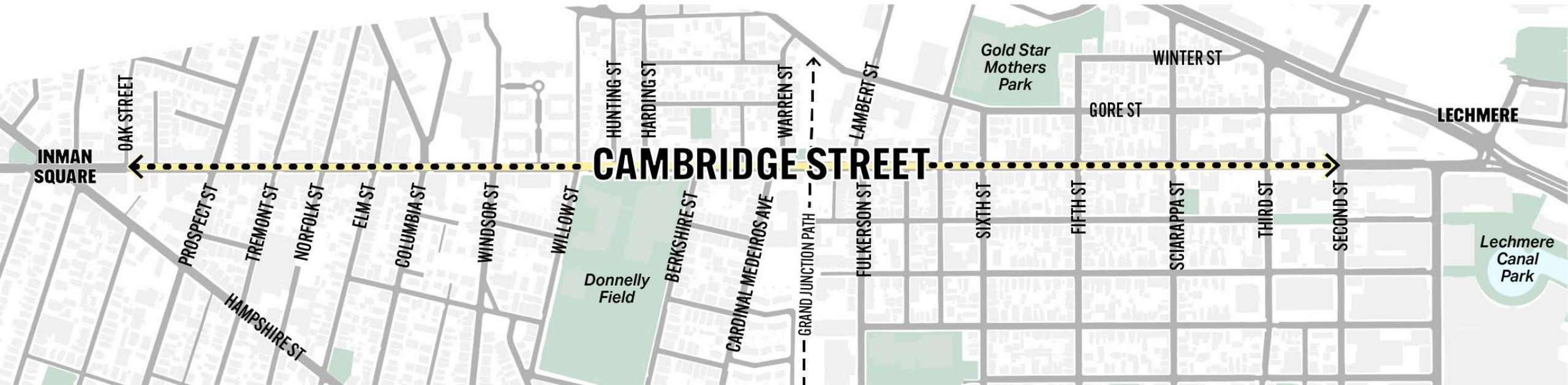
- How can we reach you?
- How can you be involved?

## Questions + Feedback



# Project Area

Cambridge Street: Between Inman Square and Second Street



# Project Timeline

1

## Fall 2023

- First Round of Project Open Houses
- First Virtual Community Meeting

Begins Phase 1 Outreach: Feedback on existing conditions, personal experiences, and parking needs

2

## Winter/Spring 2024

- Second set of virtual community meetings

Begins Phase 2 Outreach: Draft Design feedback

3

## Spring/Summer 2024

- Final Round of Project Open Houses
- Third set of Virtual Community Meetings

Begins Phase 3 Outreach: Final Design feedback

4

## Summer 2024

- Community gives feedback on revised plan
- We make final changes to the design

5

## Fall 2024

- Finalize design
- Prepare bid documents and procurement

6

## Spring 2025

- Implementation\*

\* At the open houses, we estimated implementation in Fall 2024. Additional construction will now extend the timeline into 2025.

# Project Team

---

**Project Manager:** Andreas Wolfe, A.I.C.P., Street Design Project Manager  
*Traffic, Parking, + Transportation Department*  
617-349-9531

---

**Project Email:** [cambridgestreet@cambridgema.gov](mailto:cambridgestreet@cambridgema.gov)

---

## Traffic, Parking, + Transportation Department

- Brooke McKenna, Transportation Commissioner
- Jeff Parenti, Asst. Commissioner for Street Management
- Stephen Meuse, Street Design Project Manager
- Elise Harmon-Freeman, Communications Manager

## Community Development Department

- Andy Reker, Transit Program Manager
- Cara Seiderman, Transportation Program Manager

## Department of Public Works

- Jerry Friedman, Supervising Engineer

## Design Consultants

- Toole Design
- Kleinfelder



# Planning Background: Street Design + Policies

# What guides our street design?

We design for people of all ages and abilities.

- People who may not have access to a car
  - ▶ May not be able to drive
  - ▶ May not want to drive
  - ▶ May not be able to afford to drive
- People who use different kinds of mobility devices
  - ▶ Mobility scooters
  - ▶ Adult tricycles
  - ▶ Child trailers
  - ▶ Adaptive bicycles
  - ▶ and more!



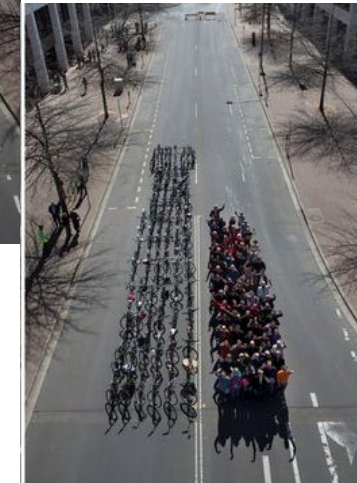
# What guides our street design?- Continued

## How we think about vehicle congestion and delay:

- ▶ Moving people slowly is moving people safely
- ▶ We do not prioritize eliminating delay for people driving over the safety of others

## Focus is on moving people and goods, not their vehicles

- ▶ Biking and riding transit is a more efficient use of limited street space
- ▶ Safe and accessible facilities, including bike lanes, that can be used by a wide range of people, young and old
- ▶ Need to safely allow access for trucks and local deliveries
- ▶ Public space on streets can also be used for other purposes, such as outdoor dining or public gathering



Images: Amount of street space occupied by the same number of people on a bus, on bicycles, and in single-occupant vehicles



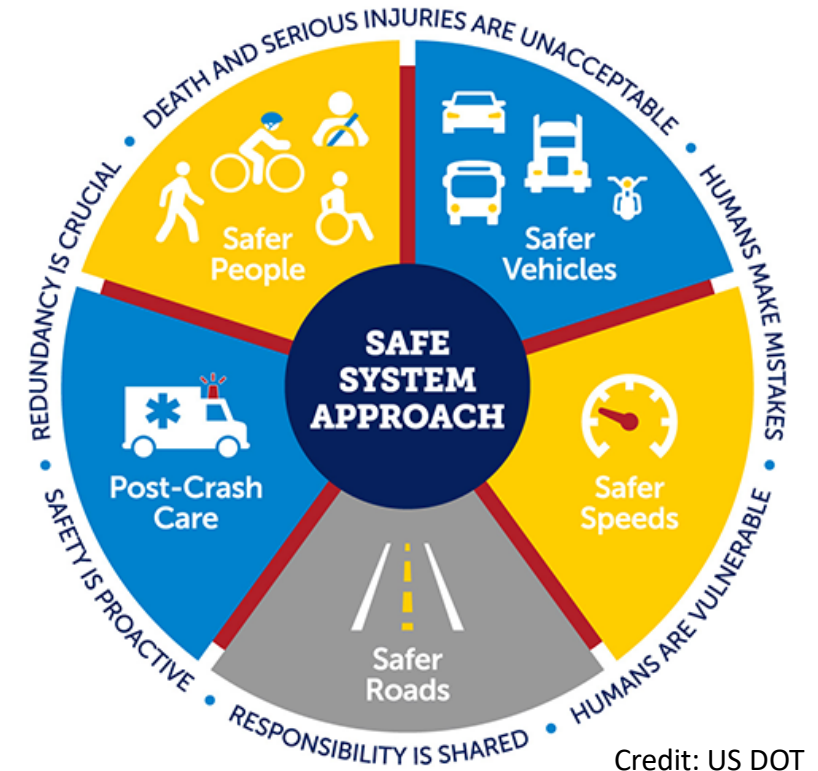
# Street Design - Enforcement - Education

## Street Design

- ▶ We take a human-centered approach to street design. We design our streets to prevent errors as much as possible and lessen the impacts of errors when they do occur.
- ▶ Shifts away from individual blame to create a safe system
- ▶ Keep road users safe by designing for the most vulnerable (i.e. people not in cars)
- ▶ Crash prevention is more effective than crash mitigation

## Enforcement and Education

- ▶ Enforcement and Education are supplemental to proper street design, not a replacement



Example: A momentary distraction can mean a driver doesn't see a cyclist or vice versa.

Providing separation between people in cars and people on bikes decreases the chance that a momentary distraction leads to a deadly crash.

# Sustainable Transportation

Sustainable transportation options allow people to get around in ways that reduce emissions and congestion, such as walking, biking, and public transit.

The City supports this through many policies, plans, and ordinances, including:

- ▶ Vehicle Trip Reduction Ordinance (1992)
- ▶ Parking & Transportation Demand Ordinance (1998)
- ▶ Climate Protection Plan (2002)
- ▶ School Wellness Policy (2017)
- ▶ Envision Cambridge (2019)

- ▶ Complete Streets (2016)



- ▶ Vision Zero (2018)



- ▶ Cycling Safety Ordinance (2019)



# Our Cambridge Street

You told us some of your priorities recently during the “Our Cambridge Street” community planning process.

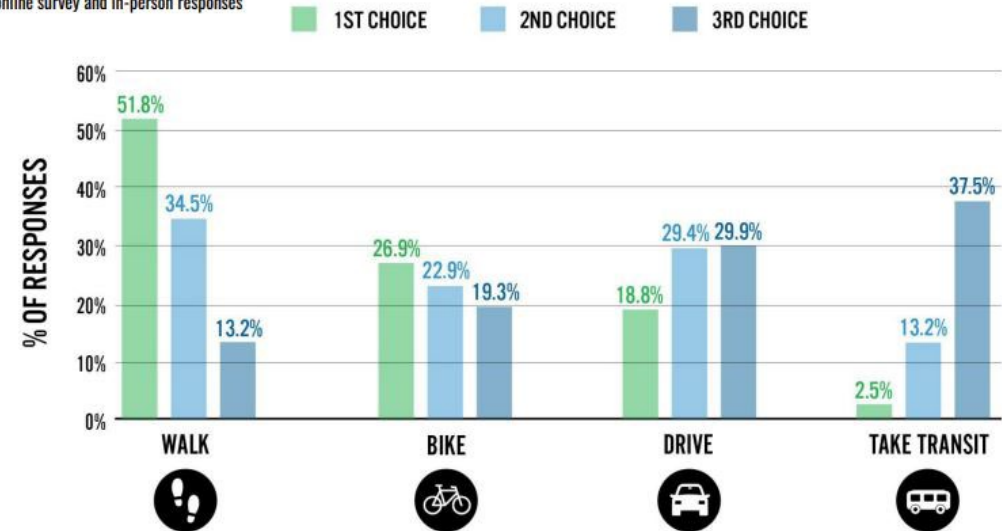
As part of the Safety Improvement Project, we can:

- ▶ Make it easier and safer to bike
- ▶ Improve the pedestrian experience
- ▶ Support business and economic growth
- ▶ Improve public transit



## HOW DO YOU USUALLY TRAVEL ON CAMBRIDGE STREET?

\*Includes online survey and in-person responses



## WHAT DO YOU THINK ARE THE MOST IMPORTANT PRIORITIES FOR CAMBRIDGE STREET?

### PRIORITIES

- 1 MAKING IT EASIER AND SAFER TO BIKE (57.4%)
- 2 INCREASING TREE COVER AND GREEN SPACE (43.3%)
- 3 IMPROVING THE PEDESTRIAN EXPERIENCE (INCLUDING WITH A MOBILITY AID) (42.7%)
- 4 SUPPORTING BUSINESSES AND ECONOMIC GROWTH (41.1%)
- 5 BUILDING NEW HOUSING (26.6%)
- 6 IMPROVING THE PUBLIC TRANSIT EXPERIENCE (25.2%)
- 7 INCREASING PUBLIC SPACE (23.7%)

The survey results show that **bike safety, tree cover/green space, pedestrian experience and supporting businesses** are top priorities.

Additionally, respondents also clarified some priority options provided in the survey. For instance, “supporting businesses and economic growth” was written in as “support for *small* businesses,” and “building new housing” was written in as “building new *affordable* housing.”



# **Planning Background: Cambridge Bicycle Plan and Separated Bike Lanes**

# Cambridge Bicycle Plan

The *Vision* of the 2020 Bicycle Plan is that Cambridge will be a place where:

- ▶ Bicycling is equally available to everyone
- ▶ All destinations can be reached by bike
- ▶ Streets are designed to accommodate bicycling for people of all ages, abilities and identities.

We're removing the barriers that make it harder for people to choose to bicycle in Cambridge. Creating safe and comfortable streets makes it easier for people to bike instead of drive.





# Cambridge Bicycle Plan- A Plan for Everyone

Who should feel comfortable biking in Cambridge?  
Everyone!

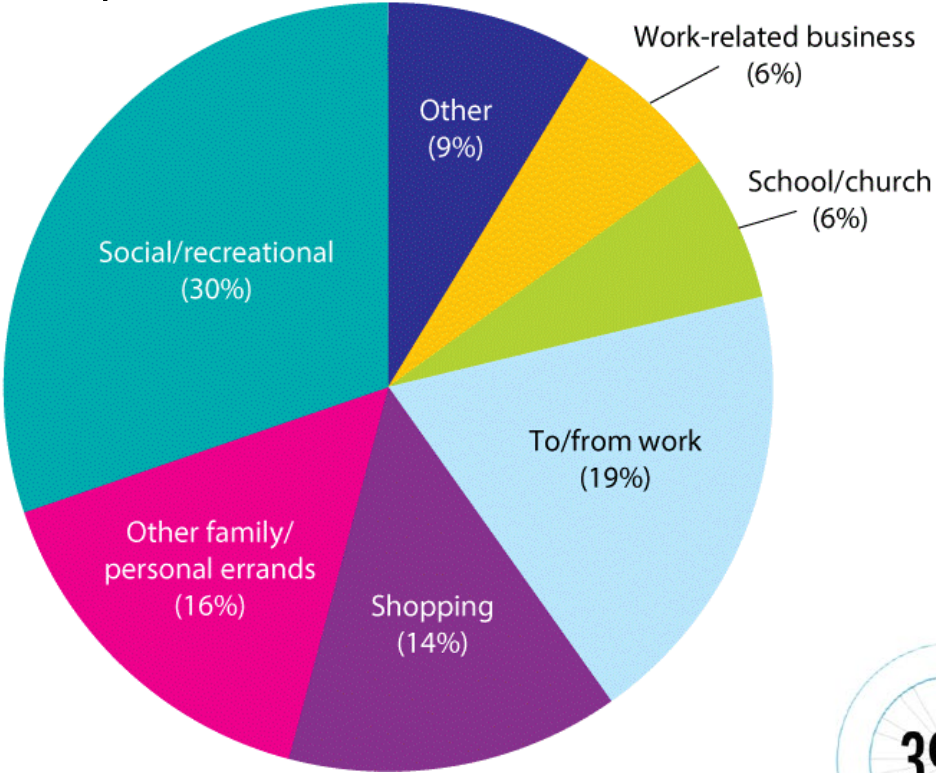
That means:

- ▶ Young children to seniors
- ▶ New cyclists to confident riders
- ▶ Low income to high income riders
- ▶ Non-English speakers
- ▶ People of all physical abilities, races, genders, and cultural backgrounds



# People Travel for Many Reasons

All trips



Source: Bureau of Transportation Statistics

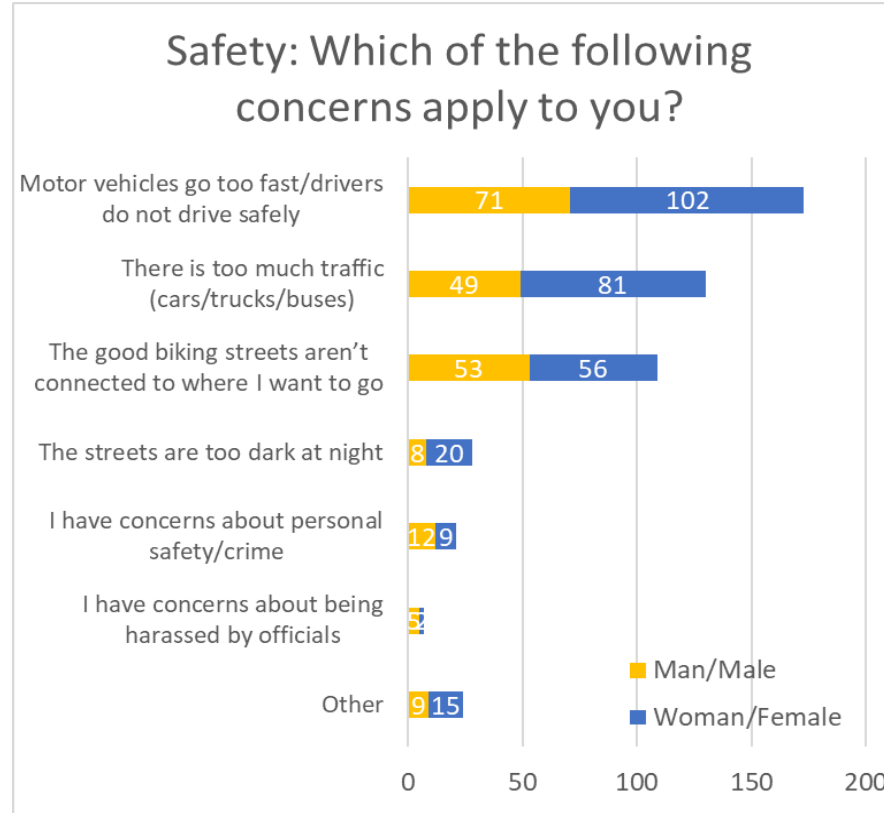
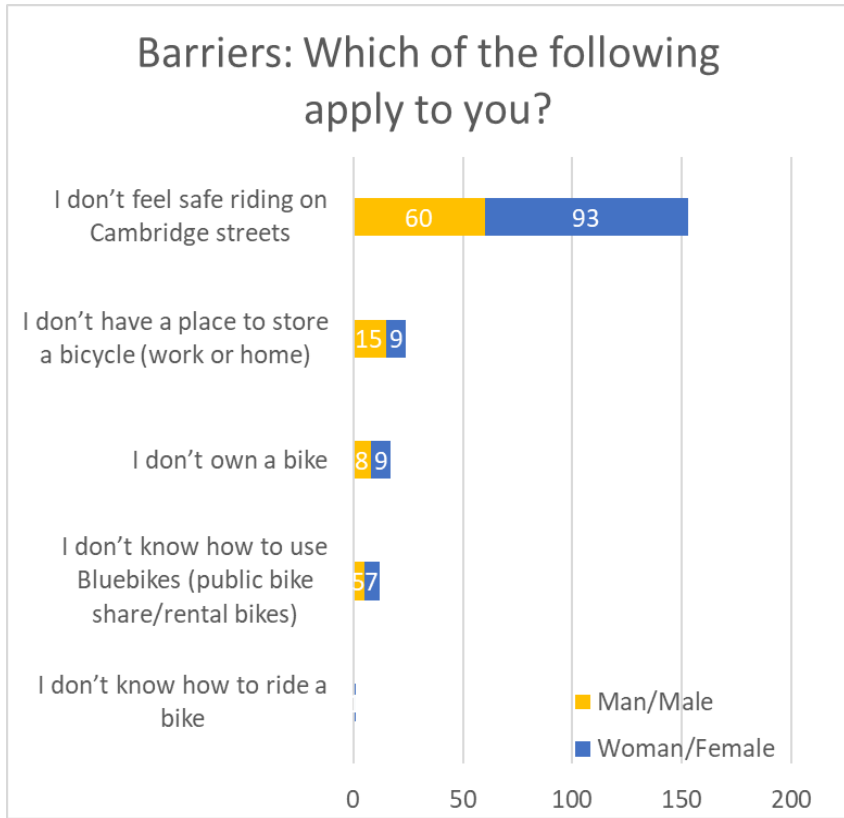


Trips by bicycle





# Resident Voices - Safety Concerns



Source: Community Needs Survey, 2020



# Bicycle-Related Crashes

Implementing the Cambridge Bicycle Plan has made biking safer in Cambridge.

## Crash Rate

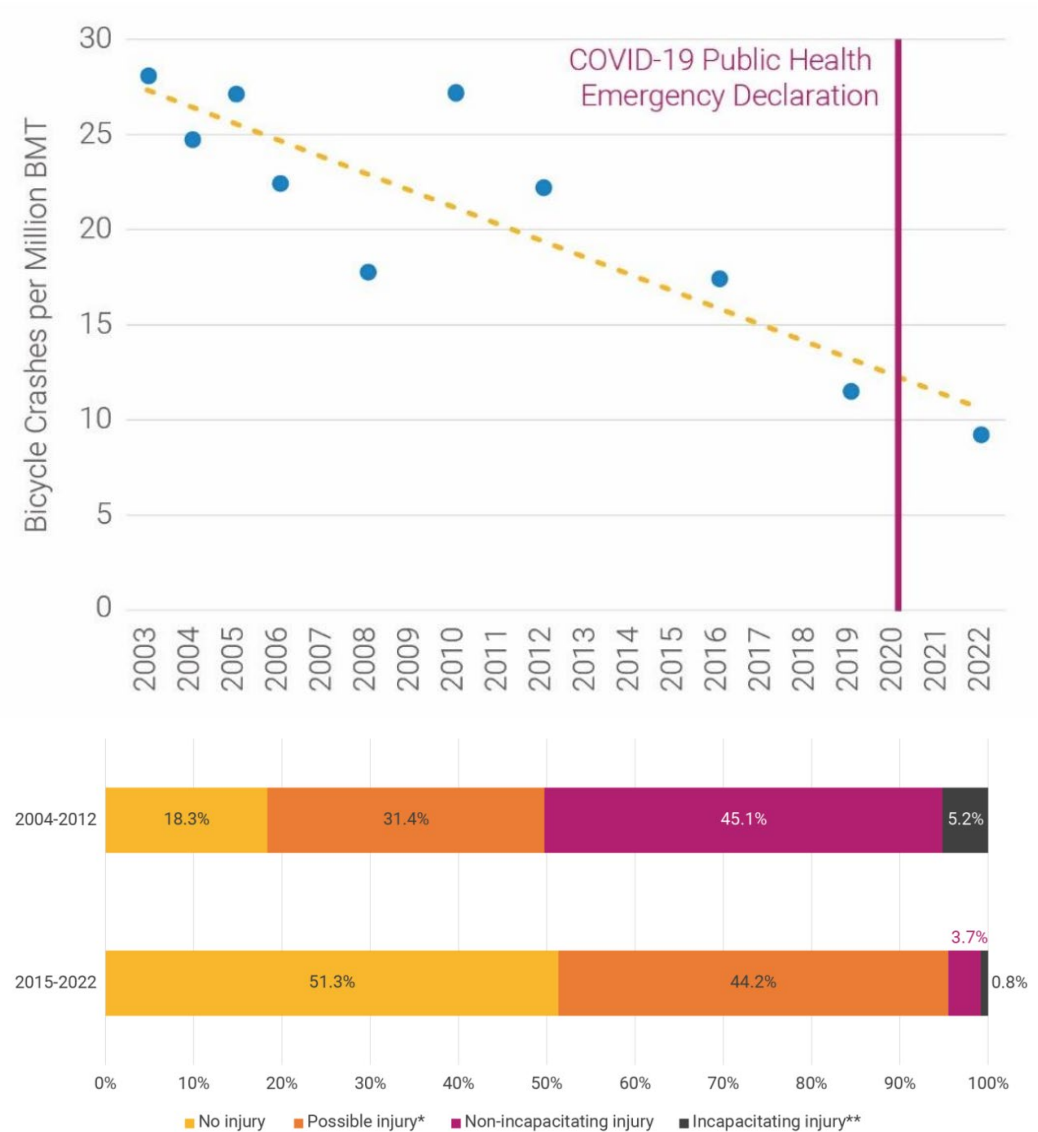
The crash rate—number of crashes per million bicycle miles traveled (BMT)—has steadily decreased since 2003, with 2022 the lowest rate to date.

The likelihood of a crash for someone biking continues to decline.

## Crash Severity

Of the crashes that do occur, more than 50% of bicycle-related crashes have become non-injury (from 18.3%), city-wide.

Incapacitating injury crashes have declined from 5.2% to 0.8%, a decrease of 84%.



Source: Bicycling in Cambridge, Data Report 2023



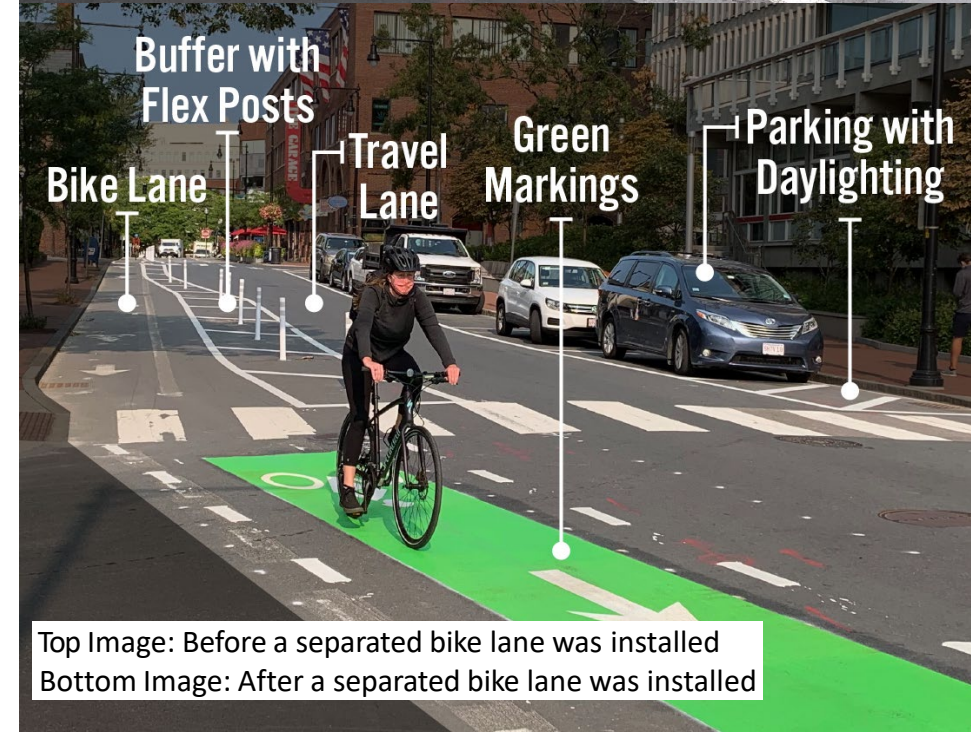
# Separated Bike Lanes

## What are separated bike lanes?

- People biking and driving are each provided dedicated travel space
- The bike lane has physical separation from the vehicle lane (i.e., curb, flex post)

## Benefits for people biking:

- Increases comfort and access for people of all ages and abilities
- Reduces crash and injury risk
- Eliminates threat of "dooring" from parked vehicles
- Reduces potential conflicts between vehicles and people biking
- Encourages slower traffic speeds by visually narrowing the roadway width



Top Image: Before a separated bike lane was installed  
Bottom Image: After a separated bike lane was installed

# Separated Bike Lanes- Usage Data

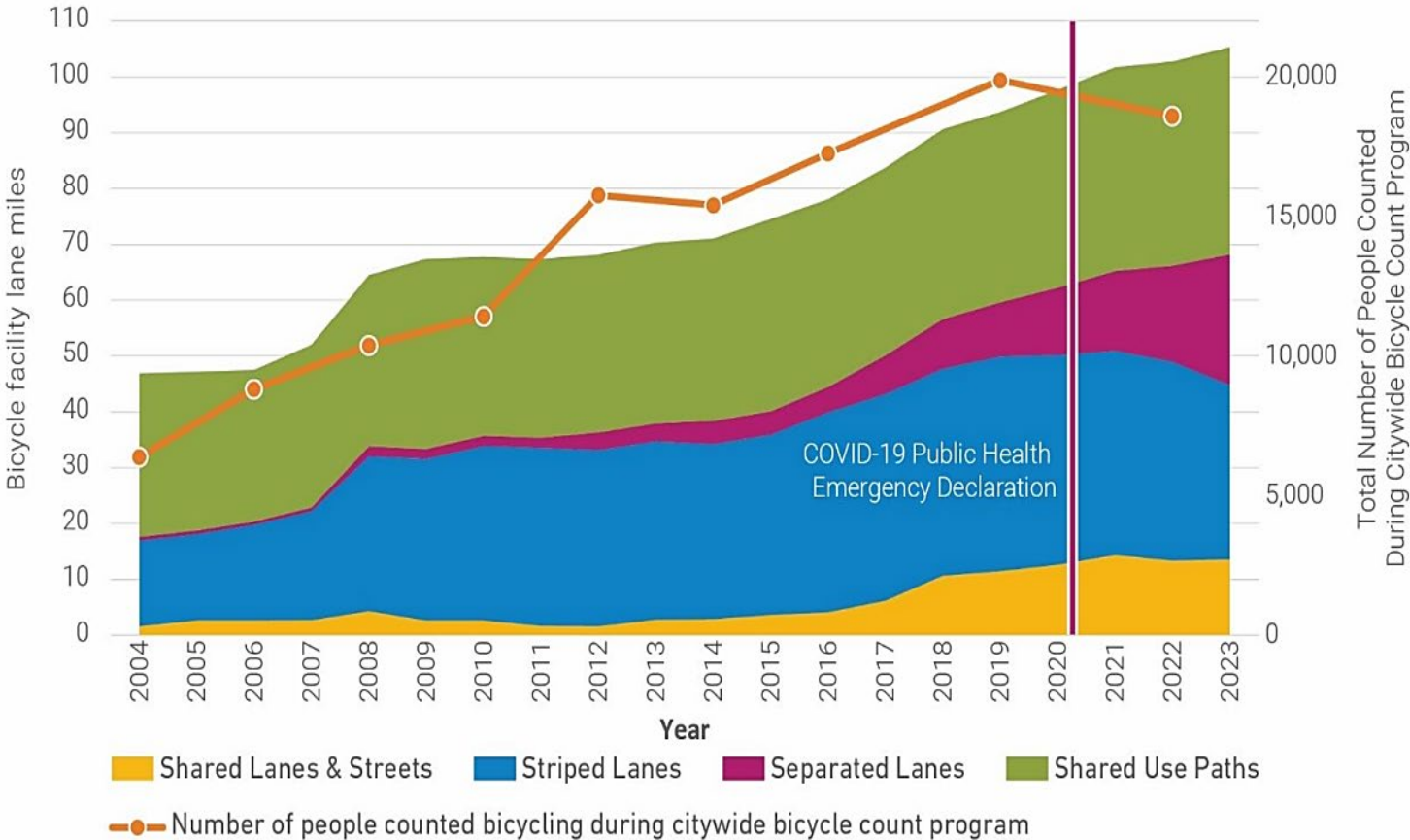
More people ride bicycles when we build more bicycle infrastructure.

A lack of safe and accessible routes and facilities for people of all ages and abilities prevents many people from biking.

As we've built more, we've enabled a wider variety of people to bike.



Bicycle Facility Lane Miles + Number of People Bicycling (2004-2023)

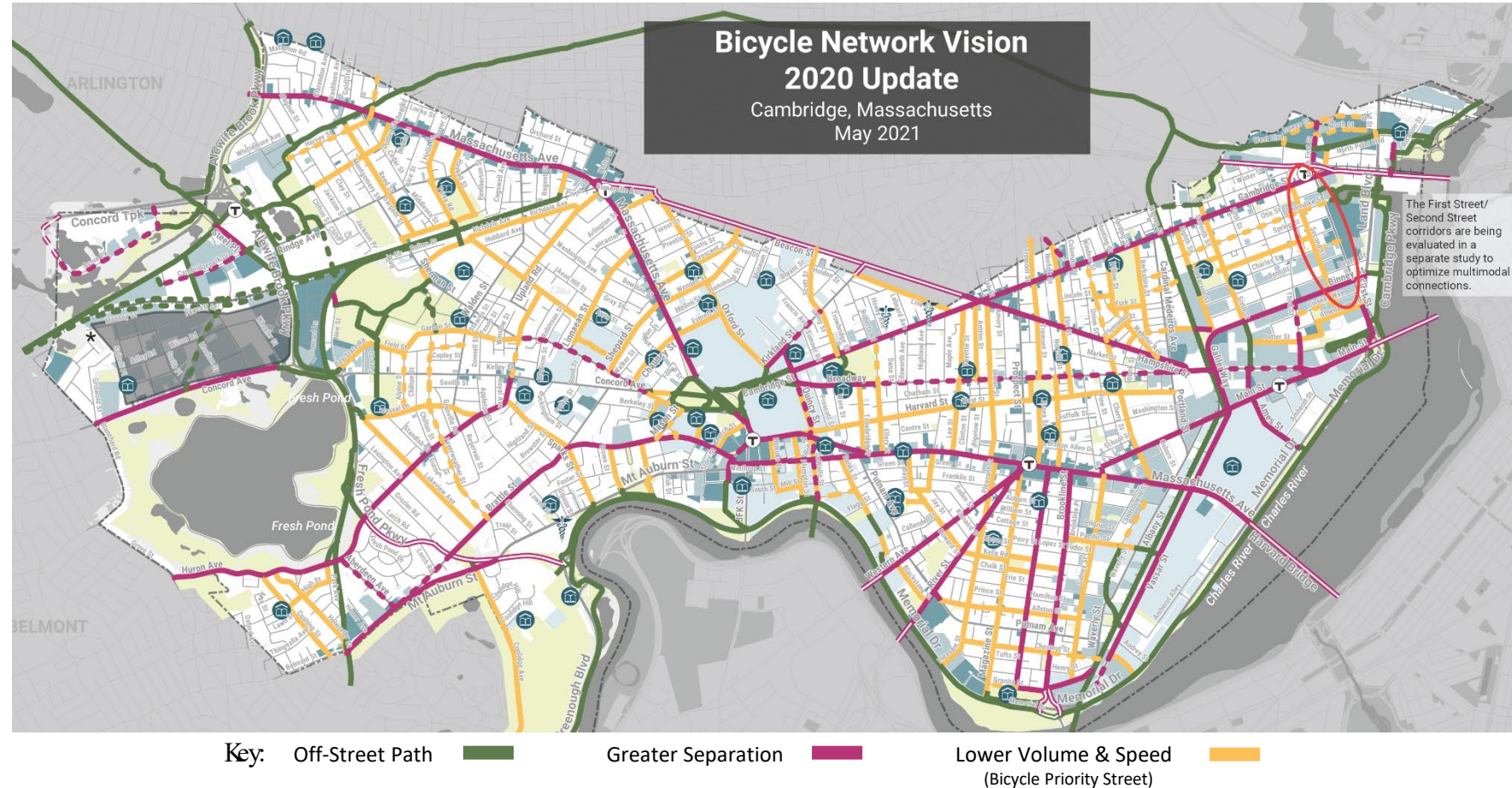




# The Bicycle Network Vision

We are creating a network for biking that is safe, comfortable, connected, and people-centered.

A safe, comfortable network that connects important destinations throughout the City helps more people choose to bike if they would like to.



Learn more: [cambridgema.gov/2020bikeplanupdate](https://cambridgema.gov/2020bikeplanupdate)

# Cycling Safety Ordinance Overview

## 2019: City Council Passed the Cycling Safety Ordinance

- Requires construction of separated bike lanes when streets are being reconstructed as a part of the City's "Five-Year Plan for Streets and Sidewalks" and when they have been designated for "Greater Separation" in the Bicycle Network Vision

## 2020: City Council Passed Amendments to the Ordinance

- The amendments set ambitious requirements for the installation of approximately 25 miles of separated bike lanes within the next five to seven years.
- The location of these facilities is informed by both the Cambridge Bicycle Network Vision and specific requirements in the Ordinance.





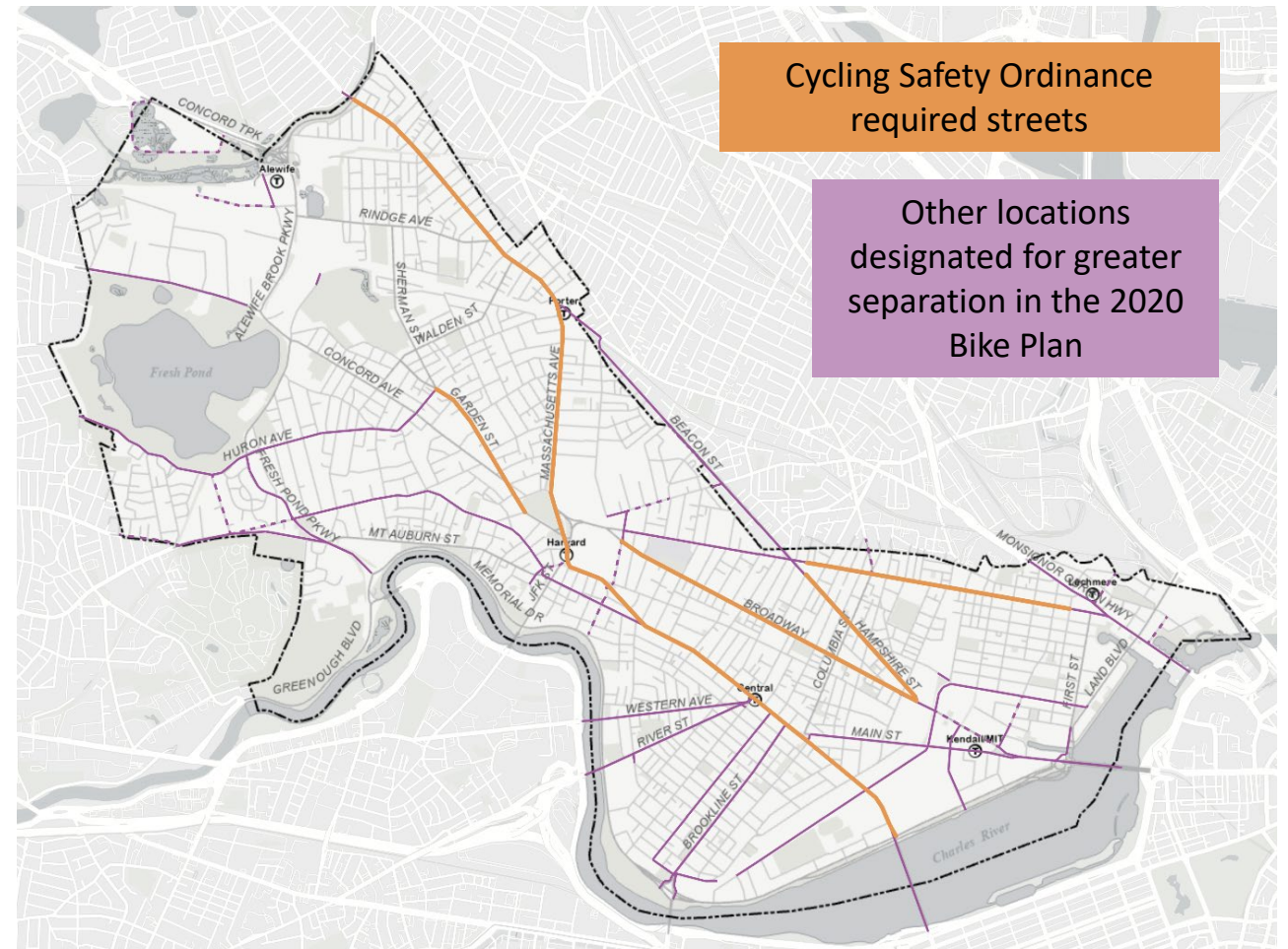
# Cycling Safety Ordinance Overview- Continued

In general, the Ordinance requires the City to install separated bike lanes on:

- All of Massachusetts Ave;
- **Broadway** from Quincy St to Hampshire St;
- **Cambridge St** from Oak St to Second St;
- **Garden St** from Huron Ave to Berkeley St/ Mason St;
- **Hampshire St:** from Amory St to Broadway;

It also requires 11.6 miles of separated bike lanes in other locations identified in the 2020 Bicycle Network Vision.

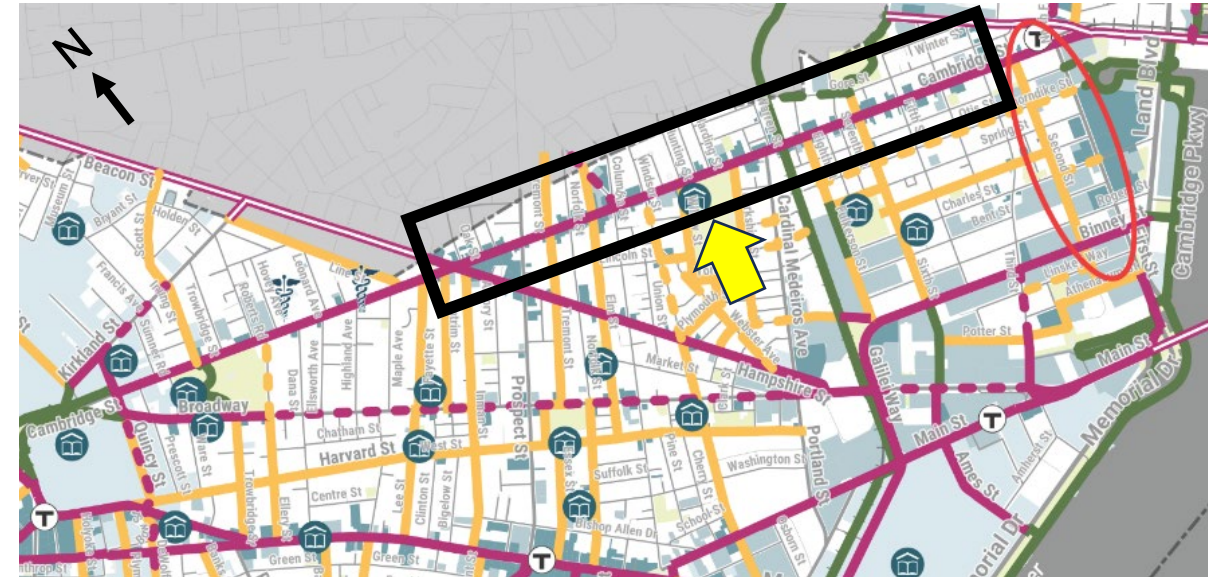
Learn more at:  
[cambridgema.gov/cycling-safety-ordinance](http://cambridgema.gov/cycling-safety-ordinance)



# Context- Cambridge Street in the Bike Plan

## Why Cambridge Street?

- Designated for “greater separation”
- Parking and loading conflicts
- High vehicle volumes
- Important connection for residents to bike to jobs, businesses, friends, etc.
- History of crashes






Key: Off-Street Path  Greater Separation  Lower Volume & Speed (Bicycle Priority Street) 



Image: Existing Cambridge Street bike lane blocked by illegal stopping/parking.



# Project Introduction

# Project Scope



Install separated bike lanes



Improve crossing locations for people walking



Identify a side of the street for parking and loading



Address safety at key intersections



Improve access and reliability for the MBTA Route 69

# Quick-build vs Capital Construction

## This will be a quick-build project

- Quick-build projects can be installed significantly faster than typical construction projects. Within months.
- Capital Construction projects must be included in the City's Five-Year Sidewalk and Street Reconstruction Plan for funding and coordination with utilities. Can take 2-5 years depending on the amount of work.
- Quick-build projects allow us to address road safety concerns *quickly*

Western Avenue is an example of a separated bike lane built by Capital Construction





# Quick-build Separated Bike Lanes

There are quick-build separated bike lanes throughout many US cities

- We design our bike lanes based on state and federal standards
- Designs and operations are not unique to Cambridge



Image: Milwaukee Avenue, Chicago. Source: Chicago Department of Transportation



Image: Winter biking on Mass Ave, Cambridge.



Image: 30th Street, San Diego  
Courtesy: Stephan Vance



Image: Spring Street/Cedar Street, Gaithersburg, MD  
Source: Montgomery County Department of Transportation



# Street Layout Today

## Cambridge Street has conventional bike lanes

- No separation for people biking
- Design does not keep bike lane clear of stopped or parked vehicles

## Parking and loading on both sides of the street

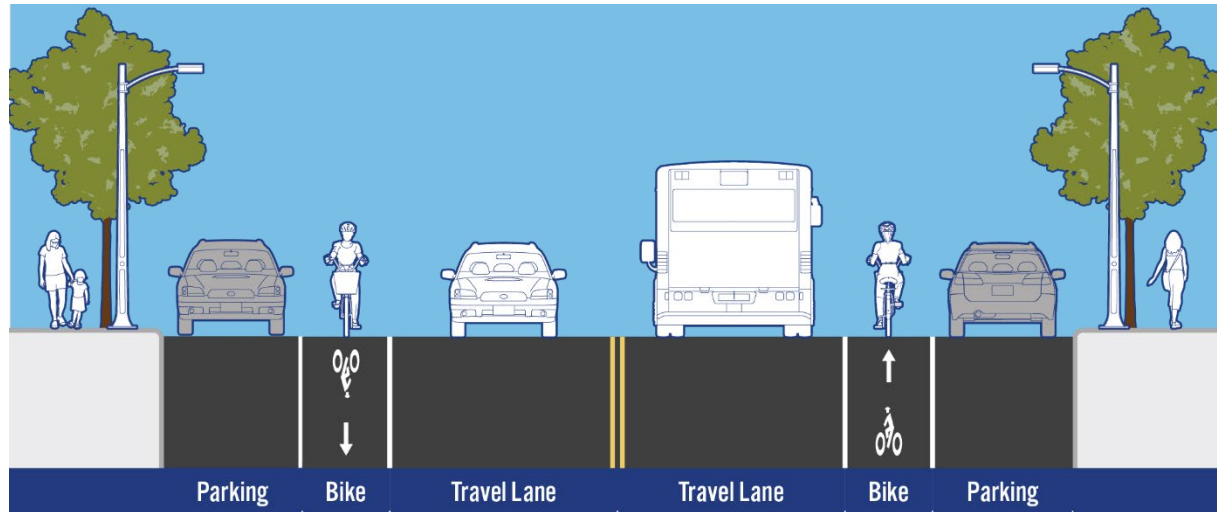


Image: Existing bike lane on Cambridge Street



Image: Bike Lane on Main Street. Credit: Dan Ryan, Boston Globe

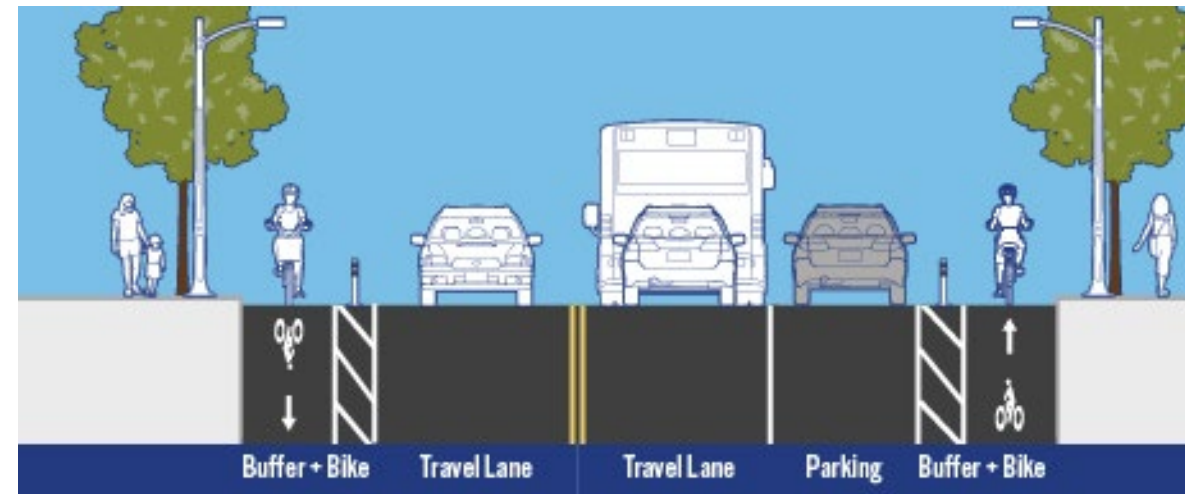
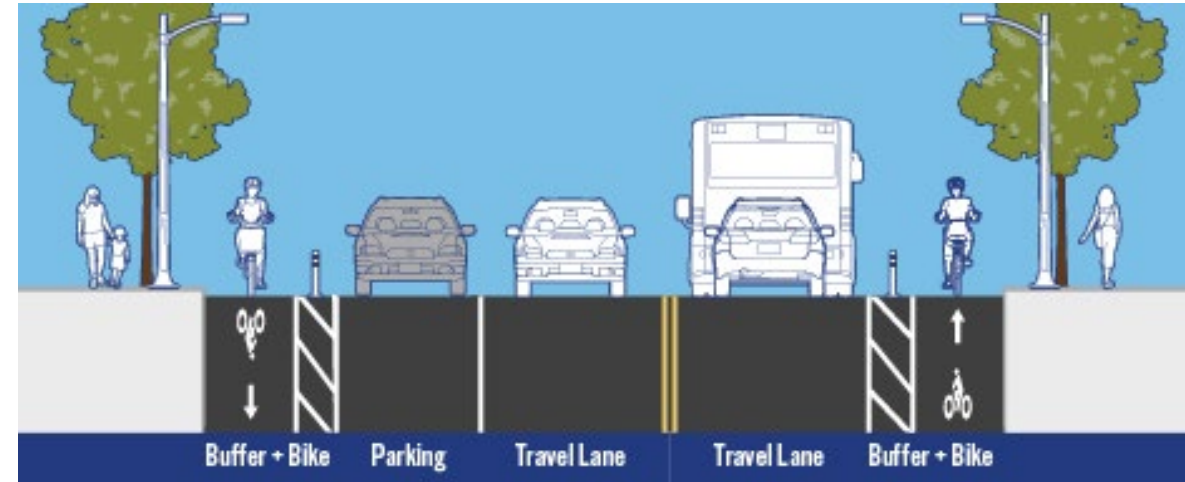
# Street Layout with Separated Bike Lanes

## People bike along the curb

- Flex-posts or parked cars separate people driving and biking

## Parking on one side of the street

- Parking can only fit on one side of the street each block
- The parking side would depend on the needs of abutting land uses



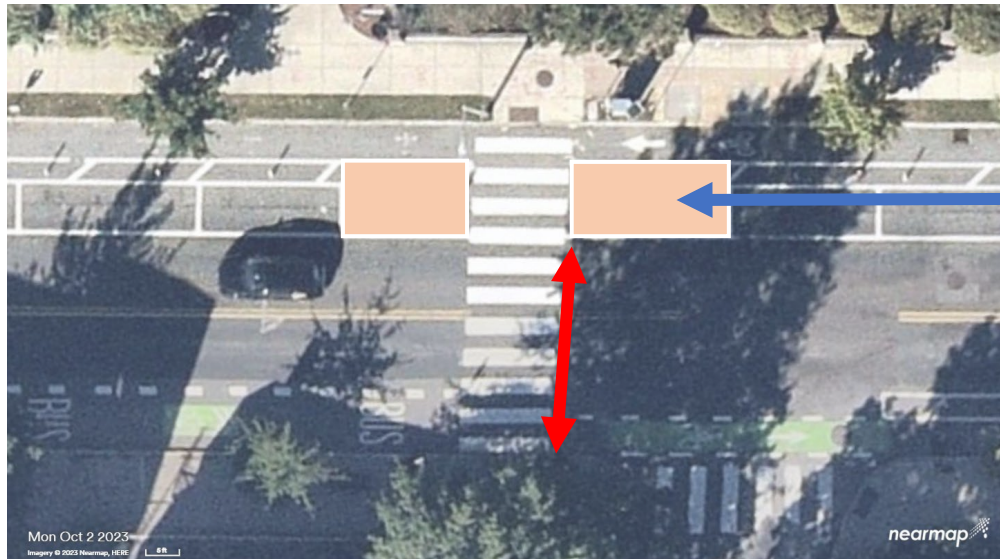
# Design Considerations



# Considerations- Safety for People Walking

## Make it easier and safer to cross the street

- Shorter crossing distances: Each potential conflict can be handled separately (i.e., cross bike lane, then vehicle lanes)
- Better sightlines
- Visually narrowed roadway for drivers, encouraging lower speeds and higher yielding rates at crosswalks



Painted crossing island between bike lane and travel lanes



Example: Separated bike lane at crosswalk at Mass Ave at Clinton St

# Considerations- MBTA Buses

## Some barriers exist at bus stops

- Bus stops are too short to allow buses to pull to the curb to deploy the accessible boarding ramp
- Motorists sometimes leave cars stopped in bus stops while visiting destinations

## Some bus stops are close to each other

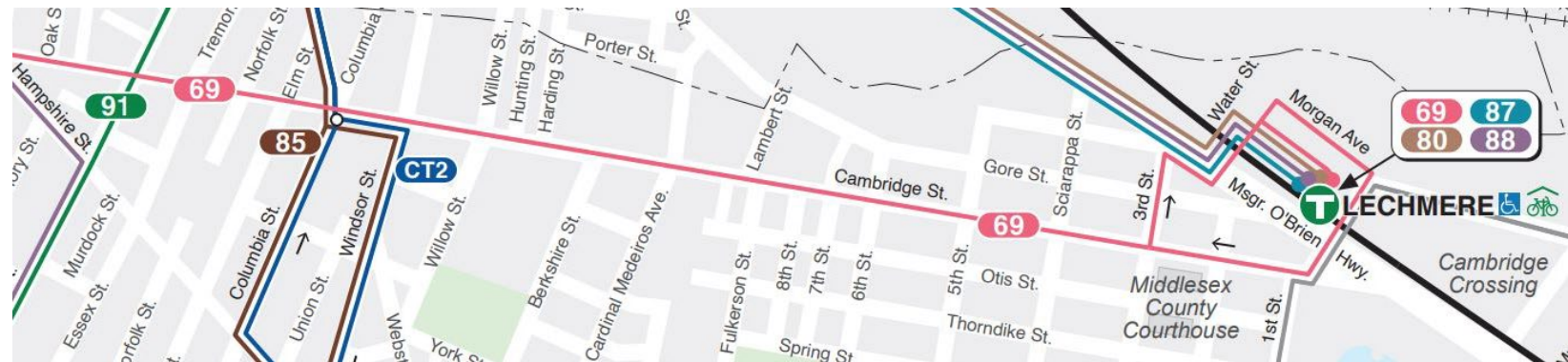
- We will locate stops evenly along Cambridge Street and at places that make bus travel more reliable and accessible



Bus stops that are shorter or before an intersection (as shown) make it harder for the bus to reach the curb. This makes it harder for people to use the accessible boarding ramp, when needed.

## Which MBTA bus routes serve Cambridge Street?

- Route 69
- Routes 85 and CT2 use a section at Columbia Street in one direction
- Route 91 crosses at Prospect Street





# Considerations- Conflicts between Buses and Bikes

## We're considering locations for bus boarding islands

- Buses won't block the bike lane when stopping
- Allows for faster boarding; both doors open at sidewalk level
- Buses continue straight instead of merging into/out of traffic
- Can result in less parking impact

## Bus boarding islands require more construction than typical quick-build projects

- Approx 3-4 months of construction work, in addition to time for procurement and soliciting bids for work
- Will extend project schedule into 2025



Image: Bus boarding island on Western Avenue



Image: Standard bus stop with separated bike lanes on Mt Auburn Street.



# Considerations- Parking and Loading

## What is planned:

- About half the existing parking on Cambridge Street will need to be removed to make space for separated bike lanes. Parking will be on one side only each block.
- By request, we can consider changes to parking on side-streets (permit parking, meters, loading zones, accessible/disability spaces, etc.)

## Work done so far:

- We’ve inventoried existing parking supply and regulations
- We’ve noted existing parking regulations 300 feet down each side street

### Existing Parking Spaces Tally

Overall	North Side (Westbound)	South Side (Eastbound)
236	129	107

### Existing Parking Map



We’ve made a map of the existing parking regulations. A full resolution version is available on the project web page.

# Considerations- continued

## Accessible/disability parking needs

- Increase accessible/disability parking along the street
- Keep existing accessible/disability parking spaces
- Locate accessible/disability parking directly adjacent to the sidewalk (curbside)

## Curb ramp maintenance

- Improve curb ramps that are not accessible
  - Correct ramp slopes
  - Repair sidewalks and trip hazards

## Seasonal in-street dining

- Design will continue to allow in-street dining along the curb in locations where parking is maintained
- Bike lane will still be separated from vehicles



Image: Curbside accessible/handicap parking



Image: Recently reconstructed curb ramp at Cambridge Street and Cardinal Medeiros Avenue

# **Measuring Success: Are We Meeting Our Goals?**



# Goal: Increase Bike Ridership

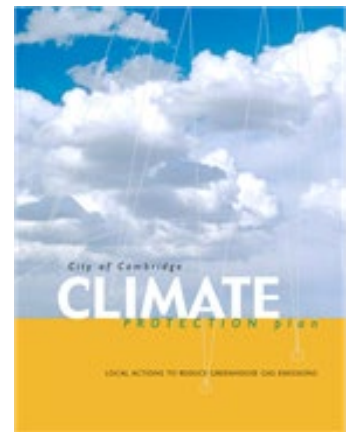
## Streets lacking proper bike infrastructure often have lower ridership

- By installing separated bike lanes, more people can visit destinations on Cambridge Street by bike
- We'll collect before/after data on bike ridership
- Encouraging cycling helps the City meet its overall goals to reduce emissions and congestion

## Other Cycling Safety Ordinance projects have led to more people biking

- 68% increase in cycling on northern section of Mass Ave (2016 to 2022)
- 24% increase on southern section of Mass Ave (2016 to 2022)
- 2022 and 2023 project data not yet available (Brattle St, Garden St, Hampshire St, etc.)

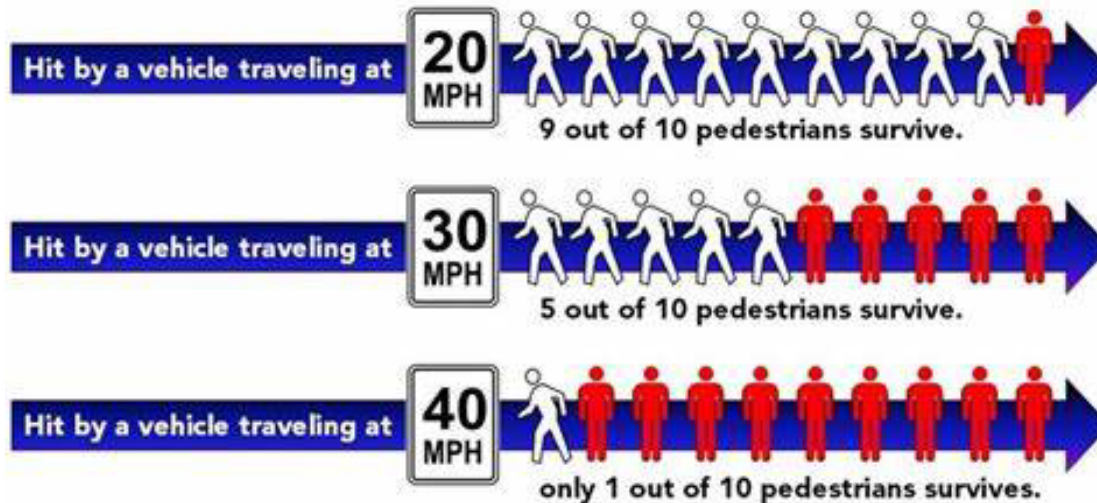
Location	Direction of Travel	AM Peak	PM Peak	All Day
On Cambridge St at Hampshire St	Westbound	89	89	317
	Eastbound	55	129	306
Bike counts collected September 19, 2023				



**ENVISION  
CAMBRIDGE**

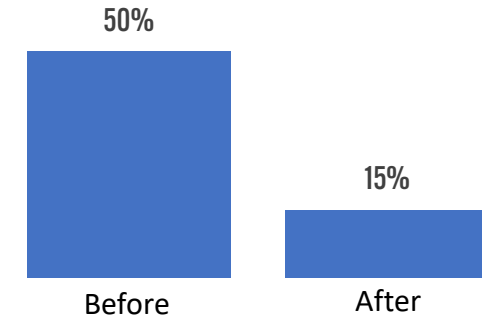
# Goal: Reduce Vehicle Speeds

- Separated bike lane projects narrow the roadway for drivers, both physically and visually
- This lowers vehicle speeds
- Lower speeds are safer for all users



Research suggest speeds of 20mph or below are suitable for places with high activity of people walking and biking  
(National Highway Traffic Safety Administration)

Percentage of drivers travelling above 25mph speed limit  
(Cambridge Street between Dana St and Ellery St)



Example: An earlier project on the other half of Cambridge Street (2017/2018) saw a reduction in overall speeds of about 25%



Cambridge Street separated bike lane (2017), between Inman Square and Harvard Square

# Goal: Reduce Crashes + Crash Risk

Crash Data on Cambridge Street (Inman Square to Second Street) Jan. 2021 - Sept. 2023

**Cambridge Vision Zero Policy:** Eliminate death and serious injury due to crashes

Involving	Number of Crashes	Injury Crashes
Driver & Driver	73	34%
Driver & Pedestrian	18	<b>89%</b>
Driver & Cyclist	31	<b>84%</b>
Driver & Object	28	14%
Cyclist & Pedestrian	0	N/A
Cyclist & Cyclist	0	N/A

An injury crash above is defined as a crash that resulted in a party being transported to a hospital.

Does not include unreported crashes

- 149 reported crashes
- People biking and walking are much more likely to be injured in a crash
- Sidewalk riding is an indication of people feeling unsafe riding in the street

After separated bike lanes installed:  
 People **riding bikes on the sidewalk** decreased by **80%** on North Mass Ave from 2016 to 2022

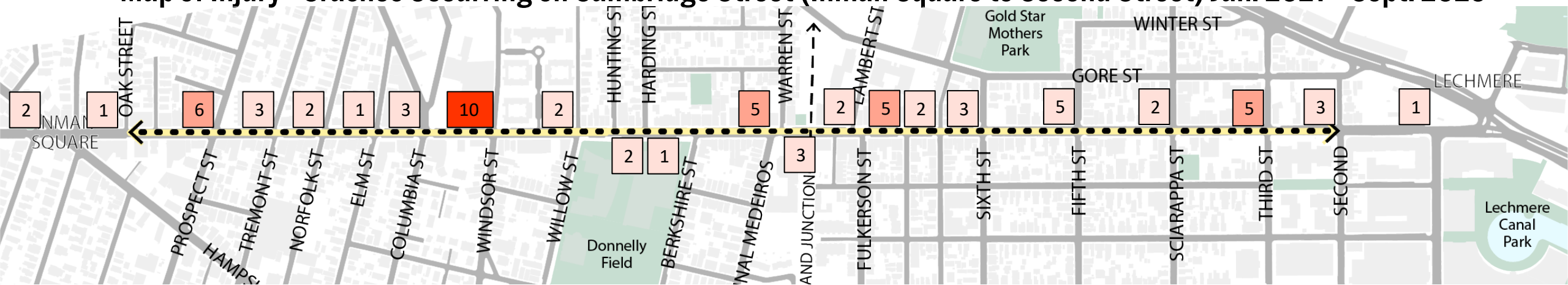




# Crash Map

- We're looking at where crashes occur to identify areas where additional design treatments are needed

## Map of Injury\* Crashes Occurring on Cambridge Street (Inman Square to Second Street) Jan. 2021 - Sept. 2023



\*An injury crash above is defined as a crash that resulted in a party being transported to a hospital.

Full crash data map, including non-injury crashes is available on the project web page.

# Economic Impact of Separated Bike Lanes

Cambridge's Community Development Department (CDD) is collecting economic data about business impacts related to the installation of separated bike lanes as part of the Cycling Safety Ordinance.

- Study began in Spring 2023
- Currently finalizing data results for year one
- Providing recommendations for future data
- First year report expected in early 2024
- There will be a yearly report each year for 6 years



The City study is a collaboration between the City of Cambridge and the U.S. D.O.T.'s Volpe National Transportation Systems Center (based in Cambridge)

## For more information:

**Contact:** Pardis Saffari: [psaffari@cambridgema.gov](mailto:psaffari@cambridgema.gov)

[www.cambridgema.gov/econimpactstudy](http://www.cambridgema.gov/econimpactstudy)

# Community Outreach



# Engagement Phases

## Phase 1: Introduction

Feedback on existing conditions, personal experiences and parking needs.

**Fall 2023 to  
Winter 2024**

**We are here!**

## Phase 2: Design Feedback

We'll use Phase 1 feedback to draft design options, and ask for your thoughts on those options.

**Late Winter to Spring  
2024**

## Phase 3: Final Feedback

We use Phase 2 feedback to create a single design, then gather your thoughts on final adjustments to those plans.

**Spring to  
Summer 2024**

# Notifications

## Postcards

- Mailed postcards with project website and meeting dates to roughly 6,000 households within project area

## Posters

- Roughly 80 placed along the street on sign posts

## A-frame poster boards

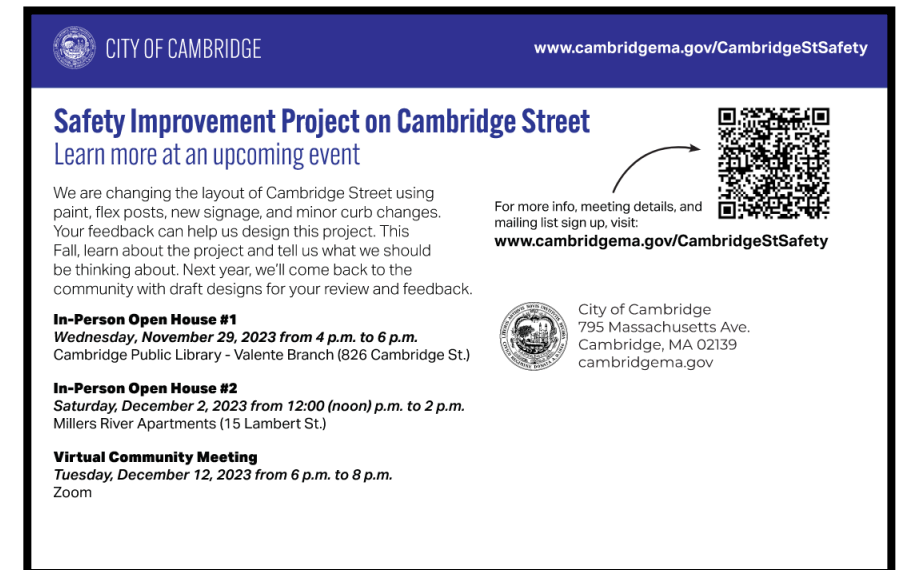
- Large format poster boards in high profile locations



Image: A-frame sign board outside Valente Branch Public Library



Images: Postcards mailed to project area



# Virtual Community Meetings/Webinars

## Tonight: Virtual Community Meeting 1

### Start of Phase 1 Engagement

- Overview of the project
- No design yet
- Early feedback to inform concepts

## Winter/Spring 2024: Virtual Community Meeting 2

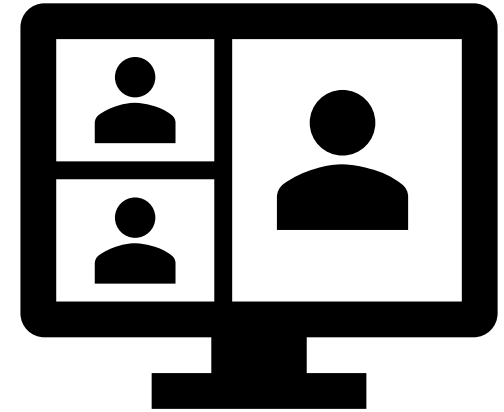
### Start of Phase 2 Engagement

- Feedback on first draft of design

## Spring/Summer 2024: Virtual Community Meeting 3

### Start of Phase 3 Engagement

- Final design feedback





# In-Person Open Houses

## Earlier This Fall: **Phase 1 Feedback**

- **Community Open House 1:** November 29
- **Community Open House 2:** December 2

## Winter/Spring/Summer 2024: **Phase 2 and 3 Feedback**

- **Community Open Houses 3 and 4:** Dates TBD



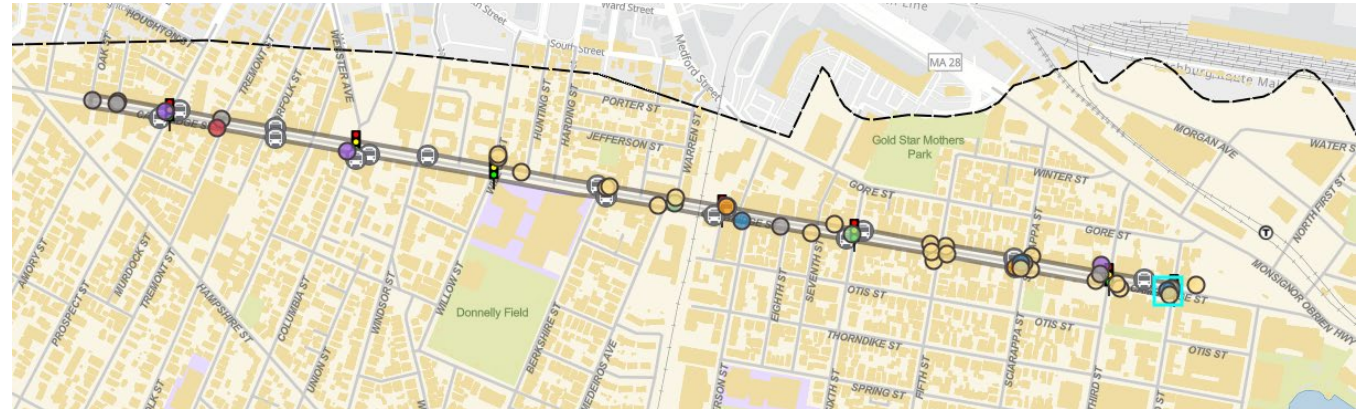
Image: Photo of our open house on November 29

# Online Comment Map and Comment Form

## Open Now: Share your thoughts online

- Online feedback map
- Open-ended comment form

First set of online surveys will close later this Winter.



Comment map with comments from Open Houses

## Spring 2024: Share your thoughts on the draft design

- Comment on a specific block or section
- Share open-ended comments

We will open the second survey in late Winter/Early Spring, after the Community Meeting 2, and close it in the late Spring.

[www.cambridgema.gov/CambridgeStSafety](http://www.cambridgema.gov/CambridgeStSafety)

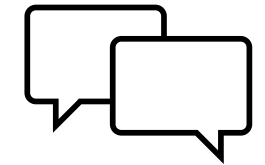
# Schedule a 1:1 meeting

## We Want to Hear From You!

- What are your loading needs?
- What are your questions about on-street dining and other curbside uses?
- What are your safety or design concerns on Cambridge Street?

## Ways to Communicate With Us

- Email [cambridgestreet@cambridgema.gov](mailto:cambridgestreet@cambridgema.gov).
- **Call us:**



## Project Manager:

**Andreas Wolfe, A.I.C.P.**  
617-349-9531  
awolfe@cambridgema.gov



# Questions + Feedback

# Questions + Feedback

- We will take comment in the order hands are raised
  - If calling in, dial \*9 to raise your hand / \*6 to unmute
- Additional questions can be asked using the Q+A function
- To allow everyone to speak, please try to limit your time to 1 minute

## Answering Questions:

- Approximately every 15 minutes, we will provide answers to questions
- The meeting is scheduled to end at 8:00 p.m.
- You may also contact the project managers directly to provide written or verbal feedback

## Contact the Project Manager:

**Andreas Wolfe, A.I.C.P.**

617-349-9531

[cambridgestreet@cambridgema.gov](mailto:cambridgestreet@cambridgema.gov)

[www.cambridgema.gov/CambridgeStSafety](http://www.cambridgema.gov/CambridgeStSafety)

