



Harvard Square  
Bus Stops

# MASSAVE4 IMPROVEMENTS Harvard Square



*Community Meeting  
October 2022*



# Purpose of Video

- This video will share:
  - Project background and history.
  - Existing conditions and design considerations for all users.
  - The draft concept for Mass Ave between Harvard Street and Garden Street.
  - How to provide feedback to the project team.
  - Next Steps.



# What drives our street design?

## Many policies and plans are foundational to our work:

- Cycling Safety Ordinance, Vehicle Trip Reduction Ordinance, Cambridge Growth Policy, Complete Streets Policy, Vision Zero Policy, Climate Protection Plan and others.

## We design for people of ALL ages and abilities. This means including:

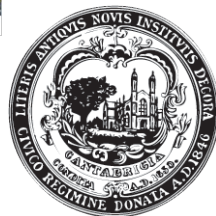
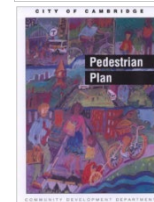
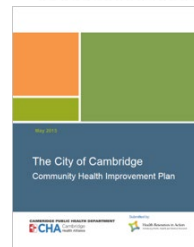
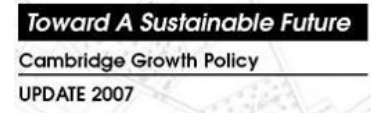
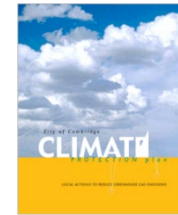
- People who many not have access to a car.
- Safe and accessible bike lanes that can be used by a wide range of people.
- Streets that are safe and accessible for all abilities.

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

- Buses run less frequently than cars and carry more people.
- Cannot ignore access for trucks and local deliveries.

## How we think about vehicle congestion and delay:

- Moving people slowly is moving people safely.
- We do not prioritize eliminating delay for people driving alone.

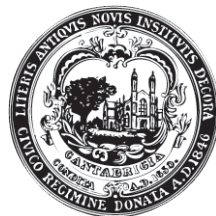


# Why Separated Bike Lanes?

- Fewer crashes.
- Eliminates threat of “dooring” from parked vehicles.
- Buffer space reduces conflicts between turning vehicles and people biking.
- Shorter crossing distances for people walking.
- Increased comfort for people biking of all ages and abilities.
- Increased comfort for people driving as they know where to expect people biking.
- Enables more people to choose cycling as a transportation option.
- Supports City’s climate goals.



Top Image: Mt Auburn St before a separated bike lane was installed  
Bottom Image: Mt Auburn St after a separated bike lane was installed in 2020



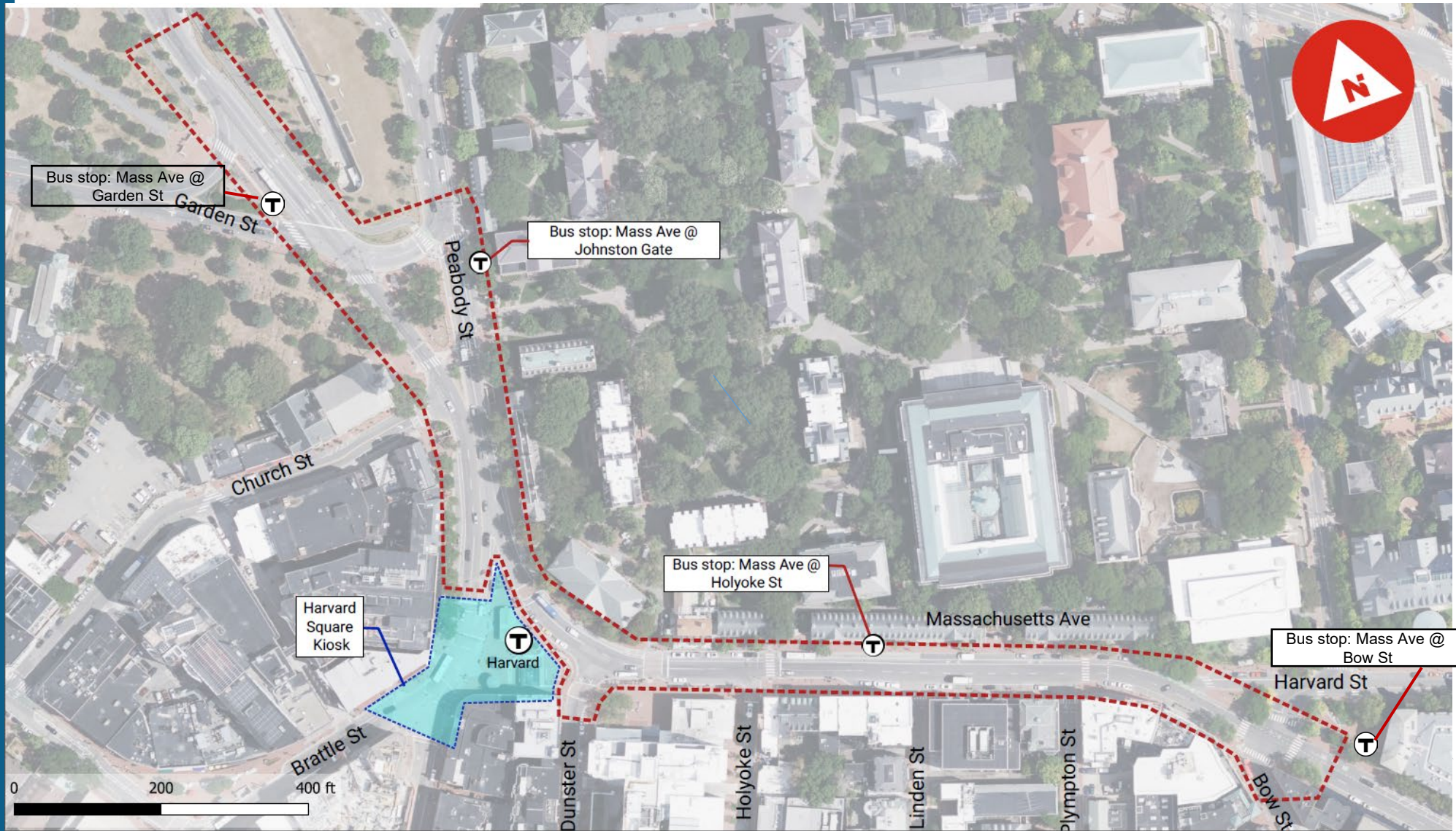
# MassAve4 Cycling Safety Ordinance Project

- The City's Cycling Safety Ordinance identified four segments of Mass Ave where installing separated bike lanes would be challenging due to unique complicating factors.
- The four segments are collectively referred to as the MassAve4 Project:
  - (A) Dudley Street to Beech Street.
  - (B) Roseland Street to Waterhouse Street.
  - (C) Church Street to Garden Street.
  - (D) Plympton Street to Dunster Street.

This presentation is an update on Segments C and D in Harvard Square.

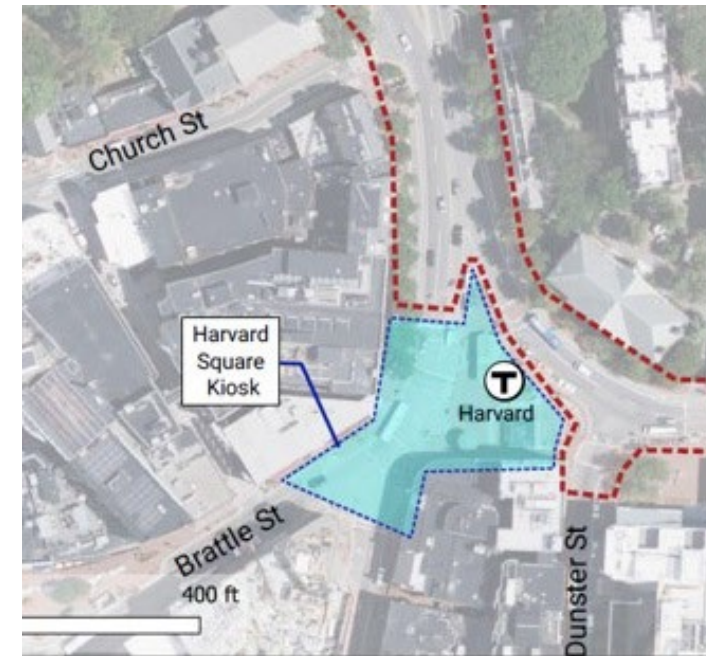


# Harvard Square Area



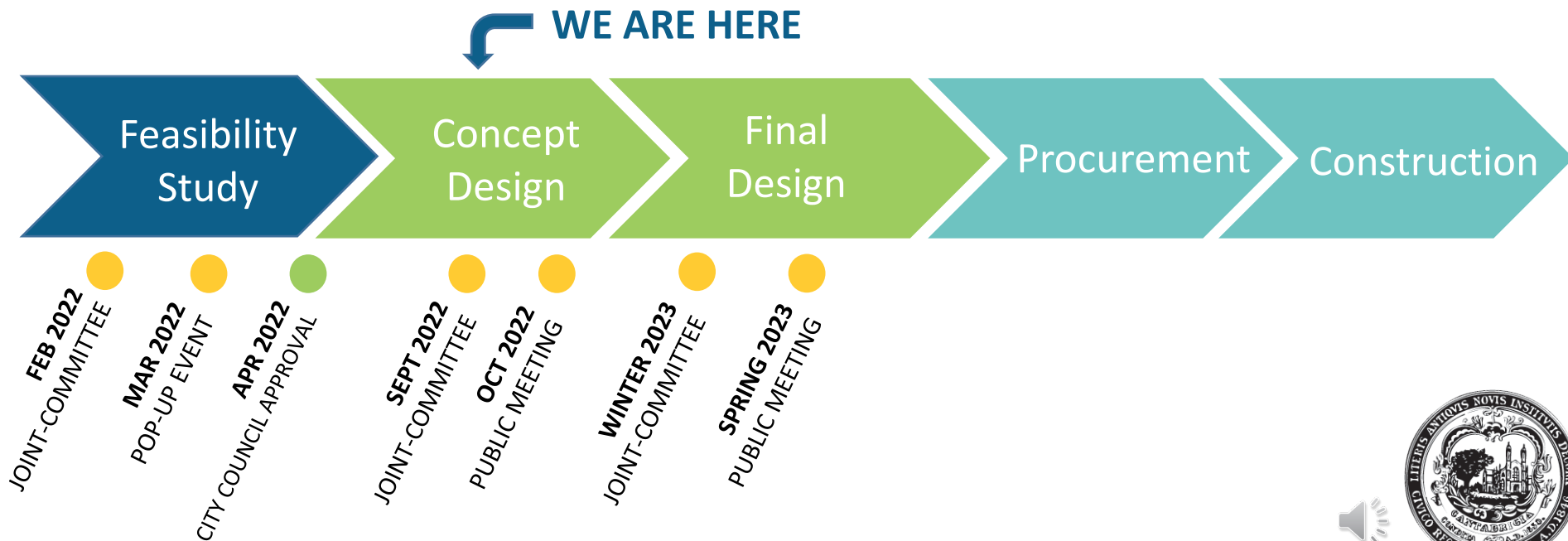
# Out of Town News Kiosk and Plaza Reconstruction Project Updates

- Out of Town News Kiosk:
  - The City awarded a contract to Wes Construction in April 2021.
  - Due to supply chain issues and unforeseen conditions, the contract end date has been extended by four months.
  - The estimated completion date is now February 2023.
- Plaza Reconstruction:
  - The City awarded a contract to Newport Construction in April 2022.
  - Construction estimated to commence late Fall 2022.
  - Estimated completion is Summer 2024.



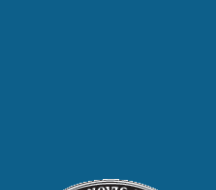
# How did we get here?

- The City's Cycling Safety Ordinance requires separated bike lanes on Mass Ave.
- The City released the MassAve4 Impact Analysis report in April 2021.
- Additional analysis to review quick-build vs construction implementation was completed and presented to the public in March 2022.
- Full construction of Segments C and D in Harvard Square was recommended. The approach was approved by the City Council in April 2022.
- The project limits have expanded to include the connecting segments.

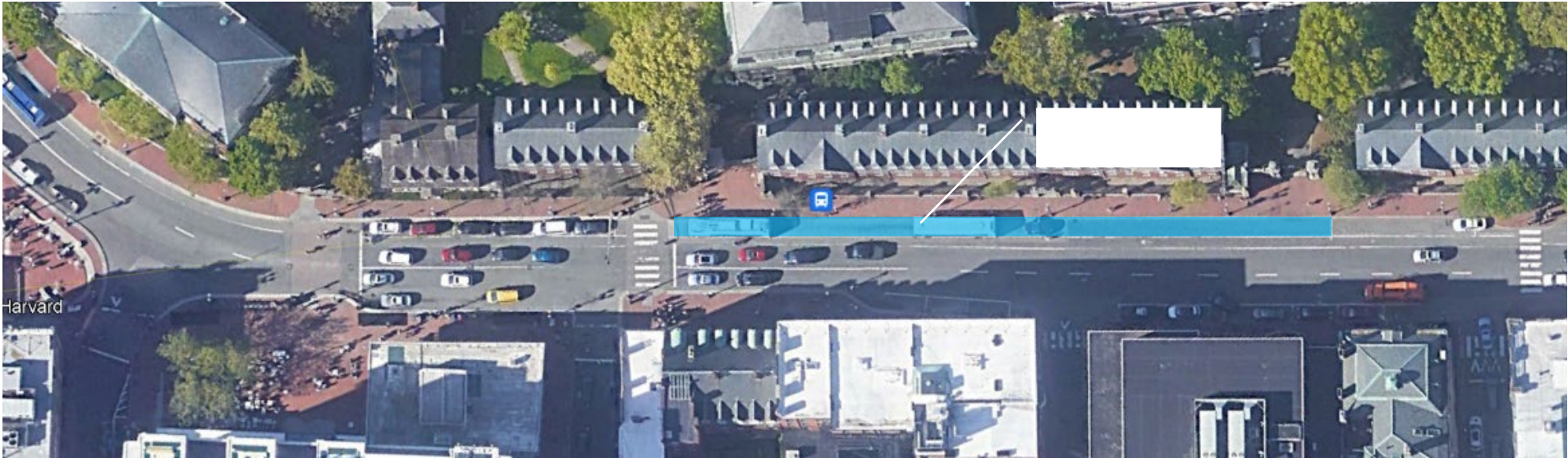
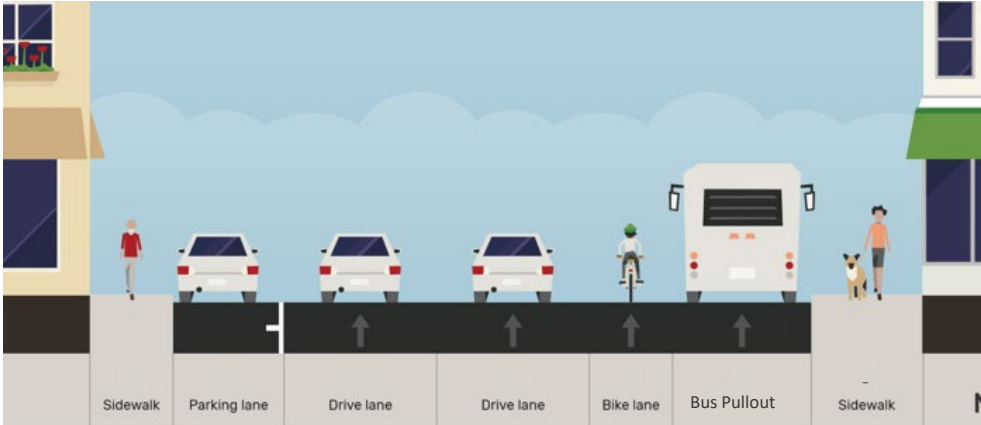




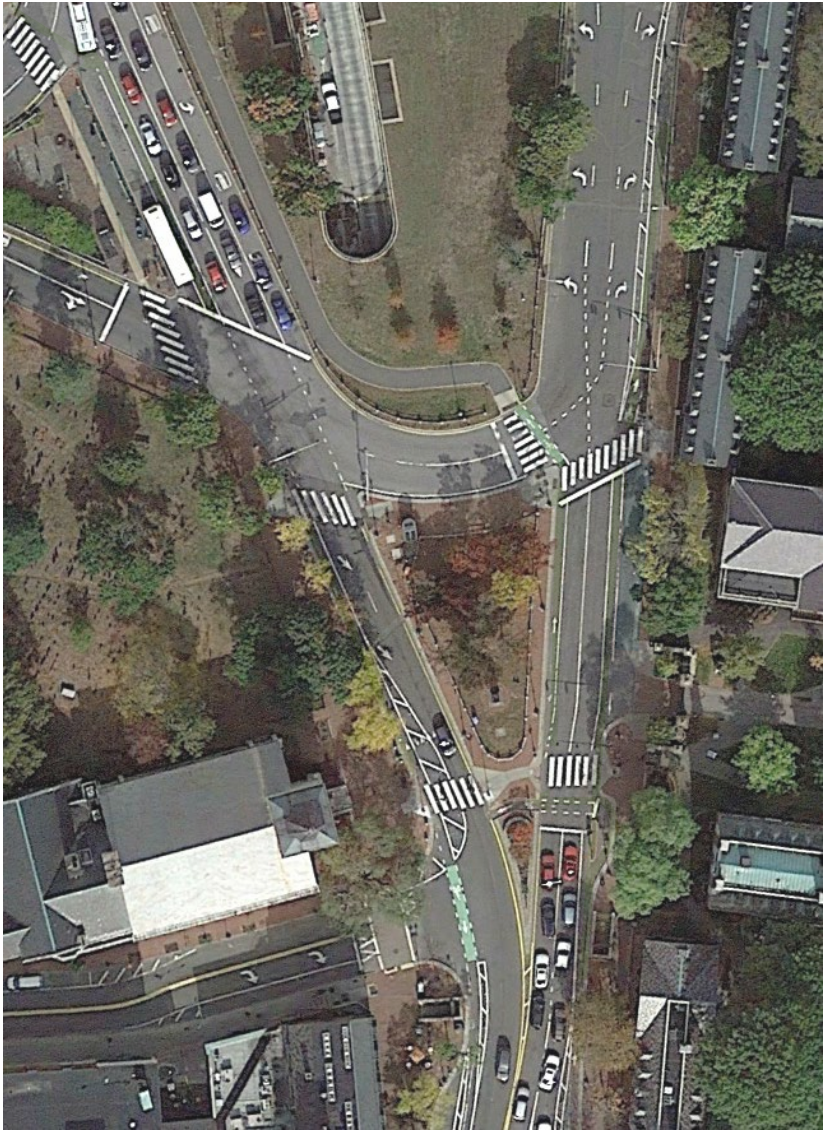
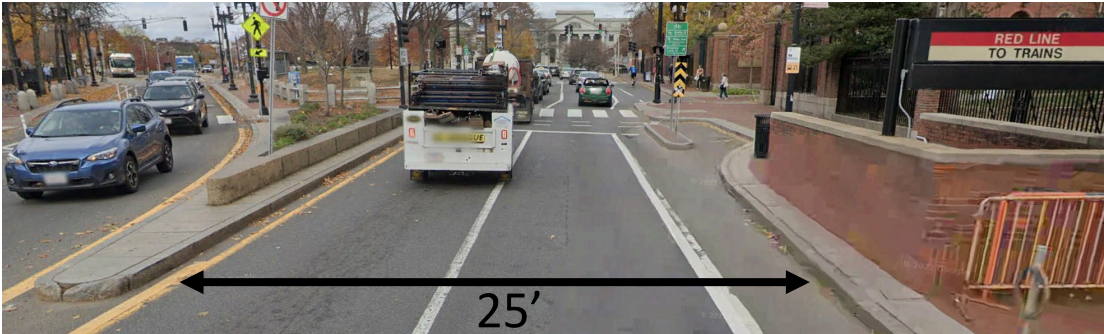
# Existing Conditions



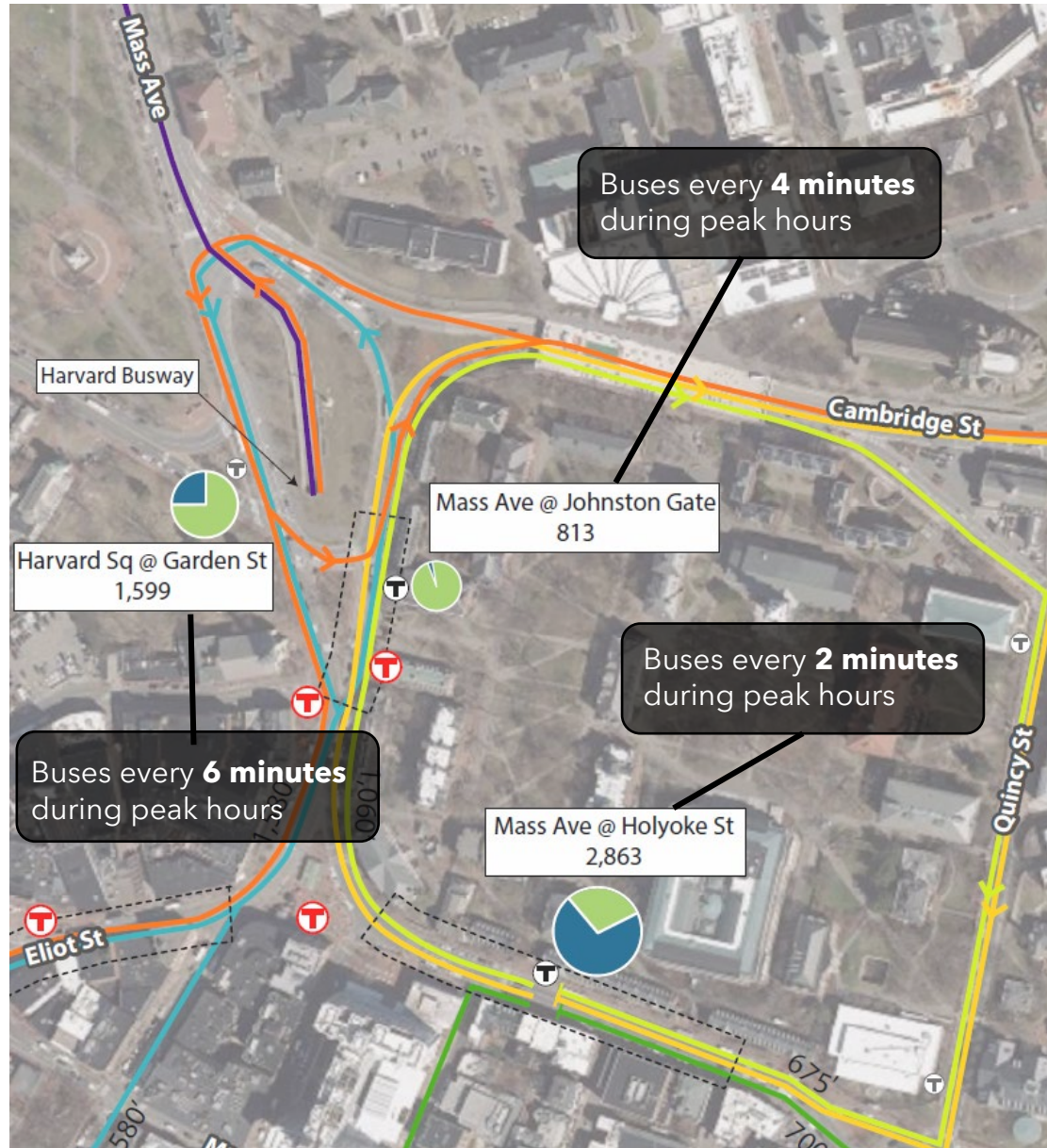
# Plympton to Dunster – Existing



# Church to Garden – Existing






# Existing Bus Routing








Stop Name  
Total Weekday  
Ridership



-  Mass4 Segment Bus Stop
-  Other Bus Stop
-  Harvard Station Red Line Head House

### MBTA Bus Route

-  01
-  66
-  68
-  69
-  86
-  96



# Design Considerations



# Design Considerations

## Safe for people who...



Ride a bike

- Separated bicycle lanes.
- Pedestrian and driver interactions.



Take a bus

- Bus stops.
- Bus operations.



Take a train

- Connections to the Red Line.



Walk

- Accessibility and connectivity.



Drive

- Curb use.
- Parking.
- Pick-up/drop off.



# Design Considerations – Bike



- Helps manage pedestrian/cyclist interactions along a facility where space for physical separation is limited.
- Less likely to conflict with underground utilities.



- Furnishing zones used to create clear separation between operating spaces.
- Helps facilitate access to curbside passenger loading across a bike lane (bus stops, cab stands, etc).



# Design Considerations – Bike



Ride a bike

Preferred min. buffer from continuous obstructions

Bike lane

Shy distance at pinch points - Light poles, signs

2'

5'

1.5'

Min 7' of total clearance





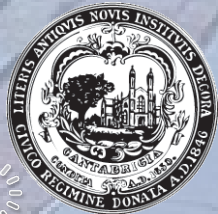
# Design Considerations – Bike



Ride a bike

Fencing

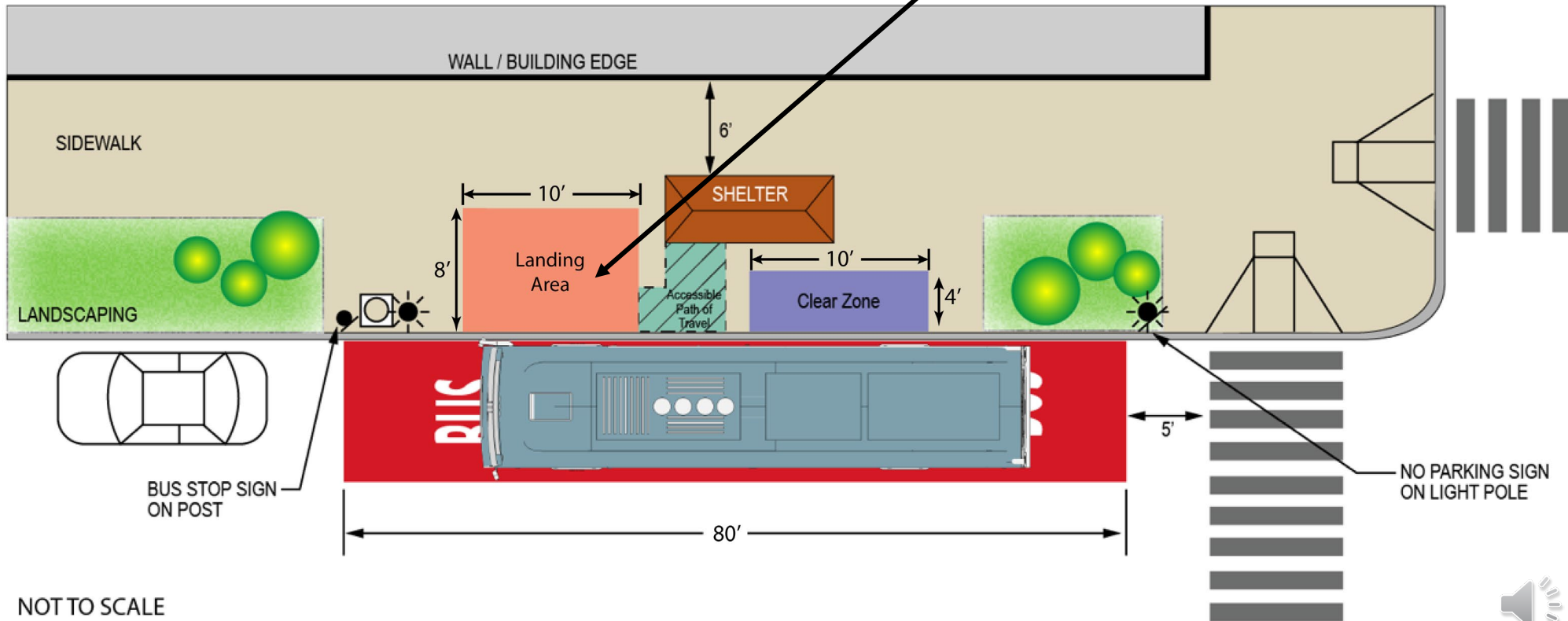
Marked pedestrian crossings



# Design Considerations – Bus



Maintain clear space for passenger path of travel and wheelchair ramp loading



# Design Considerations – Bus



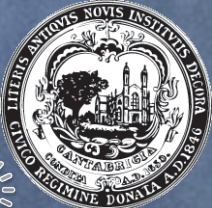
Take a bus



Bus stop platform with clear zone

Sidewalk

Bike lane



Commonwealth Avenue, Boston



# Design Considerations – Bus

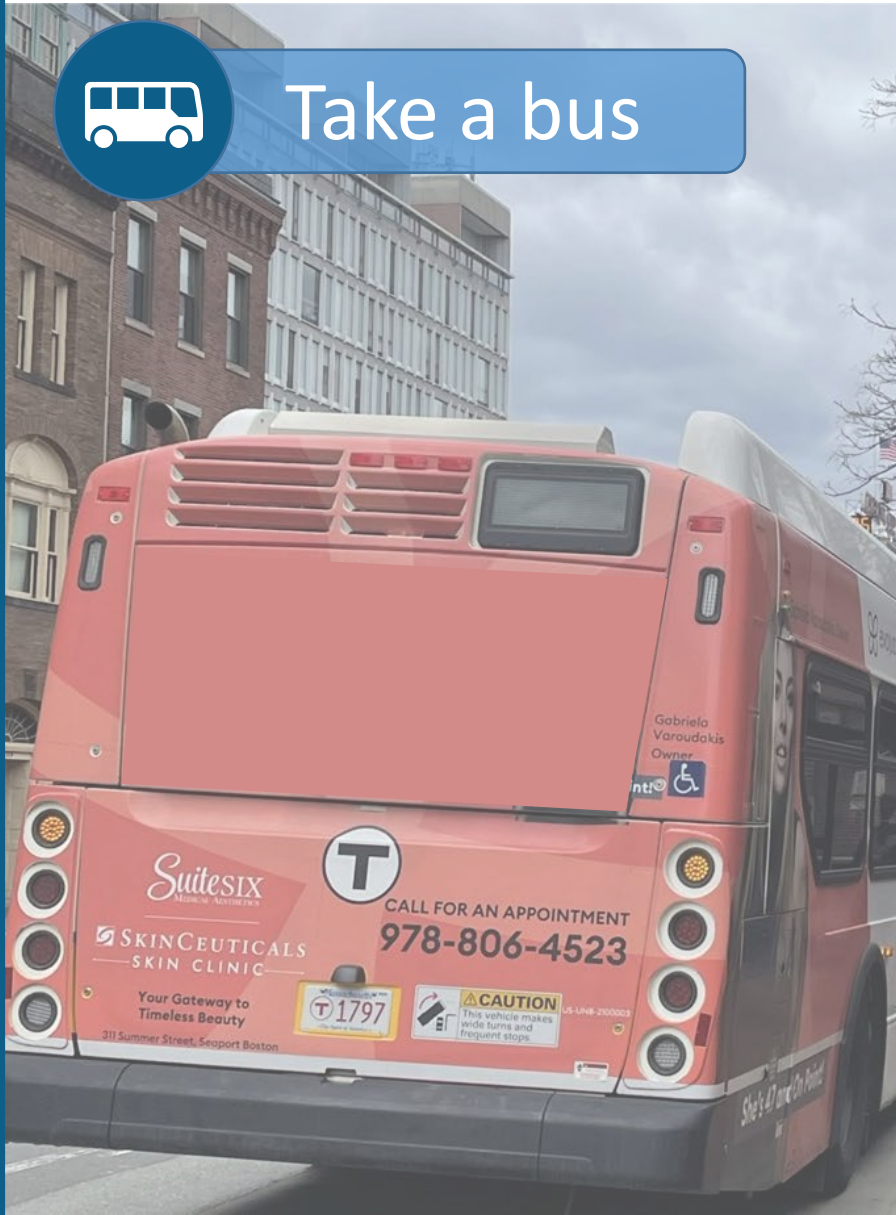


Take a bus

## Bus Operations

- During peak service, there is one bus every two minutes.
- Some bus routes must “layover”, or wait between their last stop and first stop to align schedules.
- Minimum bus stop lengths allow buses to pull in and out of bus stop as needed.

**Further coordination with MBTA is needed to determine layover and operational needs**



# Design Considerations – Bus



Take a bus



## Bus Priority

- Priority Measures help improve bus reliability. These measures include:
  - Transit Signal Priority.
  - Bus Queue Jumps.
  - Dedicated Bus Lanes.

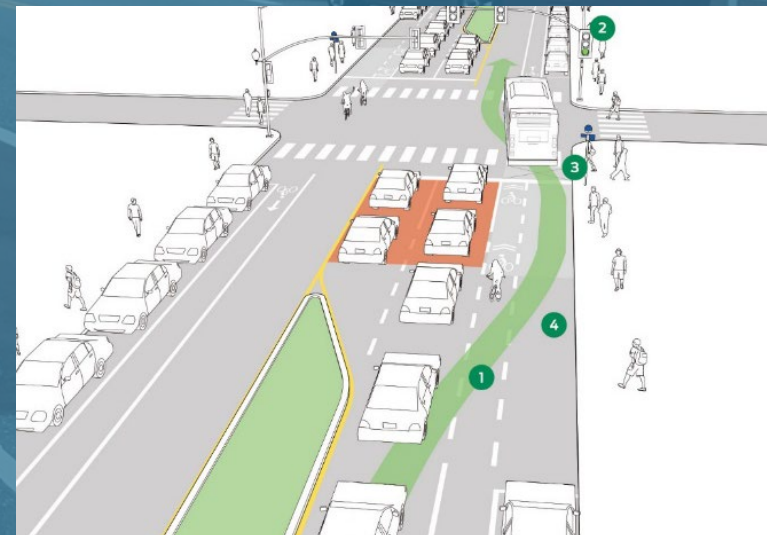


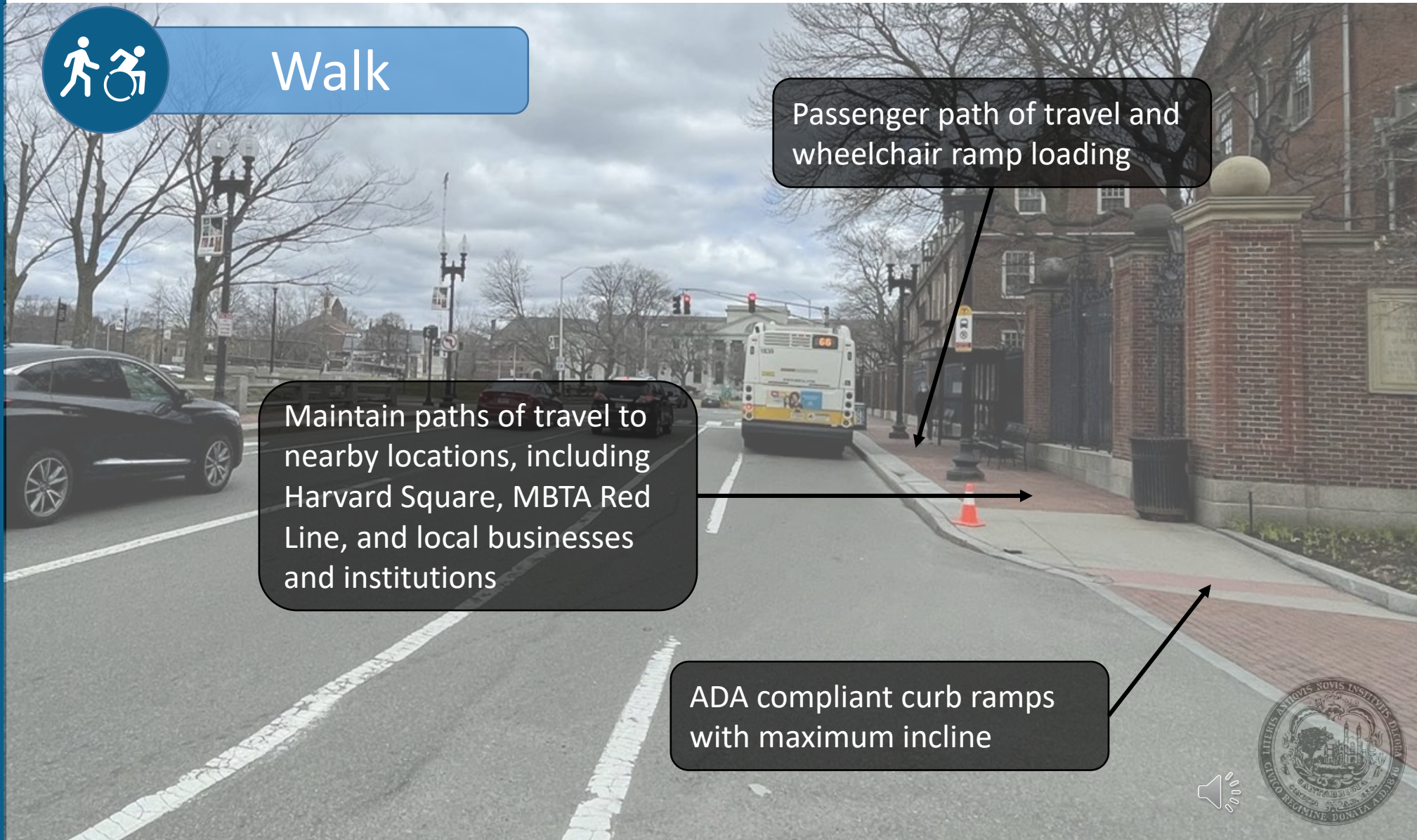
Diagram of a “Queue Jump” lane (Source: NACTO)



# Design Considerations – Walk



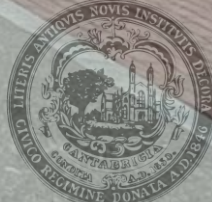
## Walk



Passenger path of travel and wheelchair ramp loading

Maintain paths of travel to nearby locations, including Harvard Square, MBTA Red Line, and local businesses and institutions

ADA compliant curb ramps with maximum incline



# Design Considerations – Drive



Drive

Delivery access  
for businesses

Pick-up /  
drop-off

Short-term  
Parking

Traffic  
Signals



# Design Considerations - Landscape

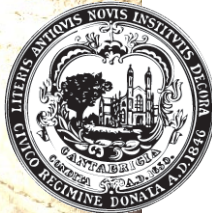
- Plantings.
- Site Furnishings.
- Sidewalk Materials.



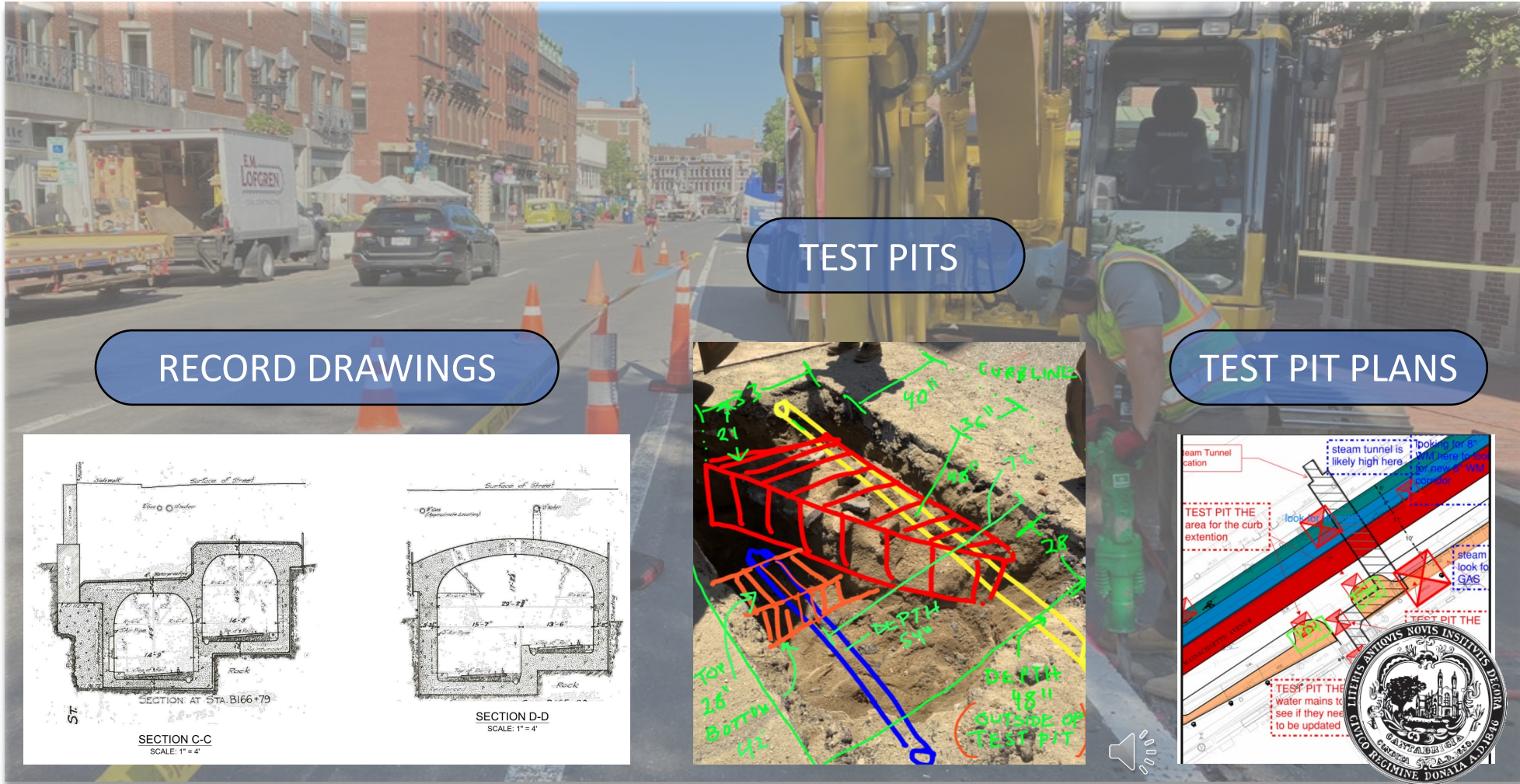


# Design Considerations - Underground

- Condition and location of public utilities (water, sewer, stormwater, traffic signals, street lighting).
- Condition and location of private utilities (gas, electric, telecommunications).
- MBTA Red Line infrastructure.



# Design Considerations - Underground











# Proposed Concept



# Church to Garden – Proposed Space Allocation

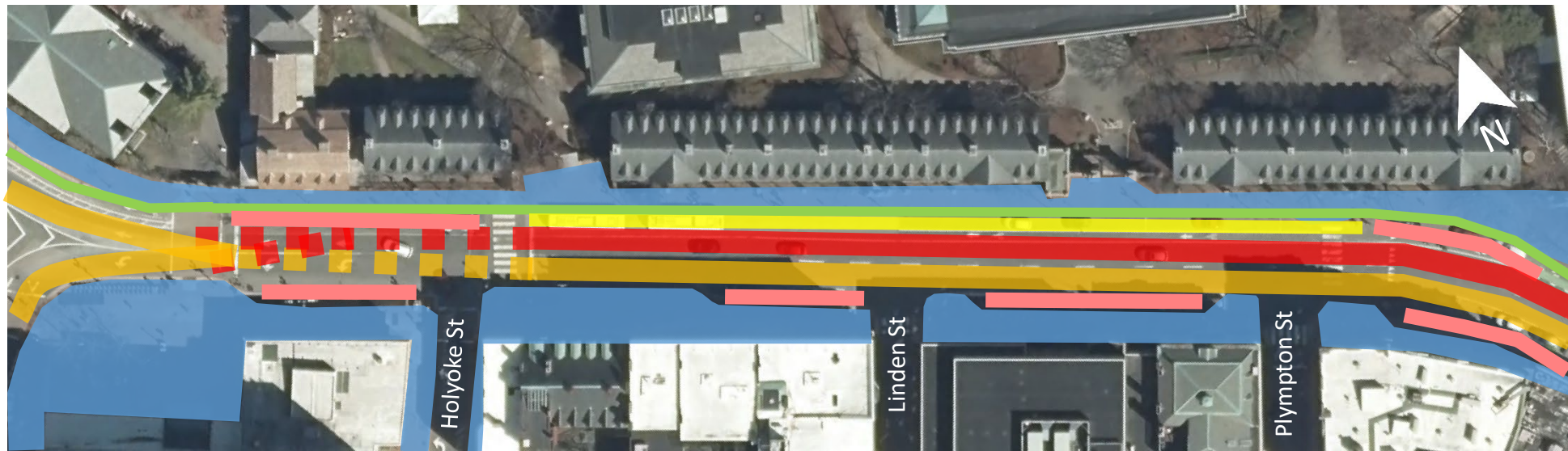


-  Red Line entry
-  Bus Stop
-  Pedestrian zone
-  Bike zone
-  Bus loading/waiting area
-  Bus stop zone
-  Driving zone
-  Taxi zone









Not drawn to scale – for illustrative purposes only

# Plympton to Dunster – Proposed Space Allocation

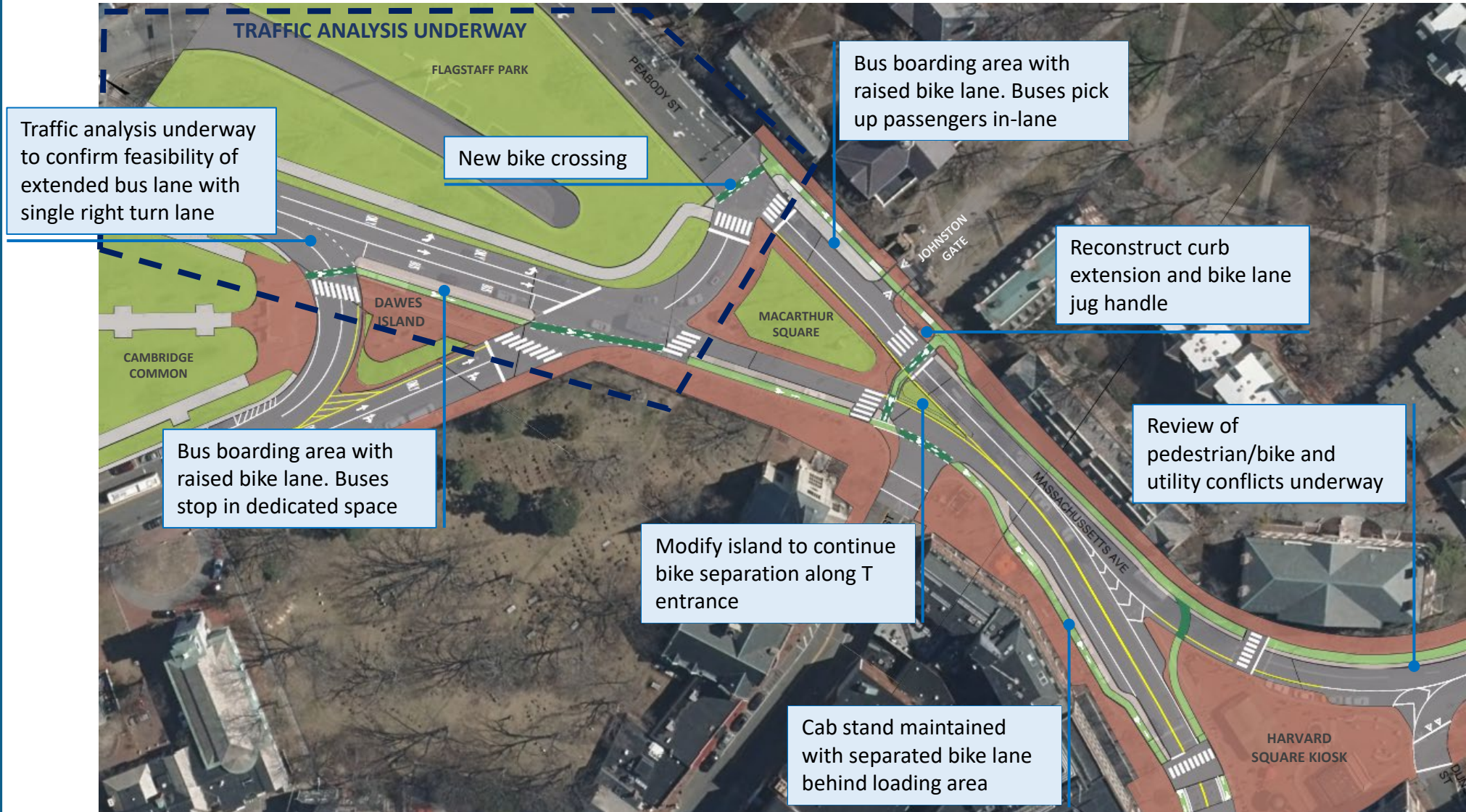


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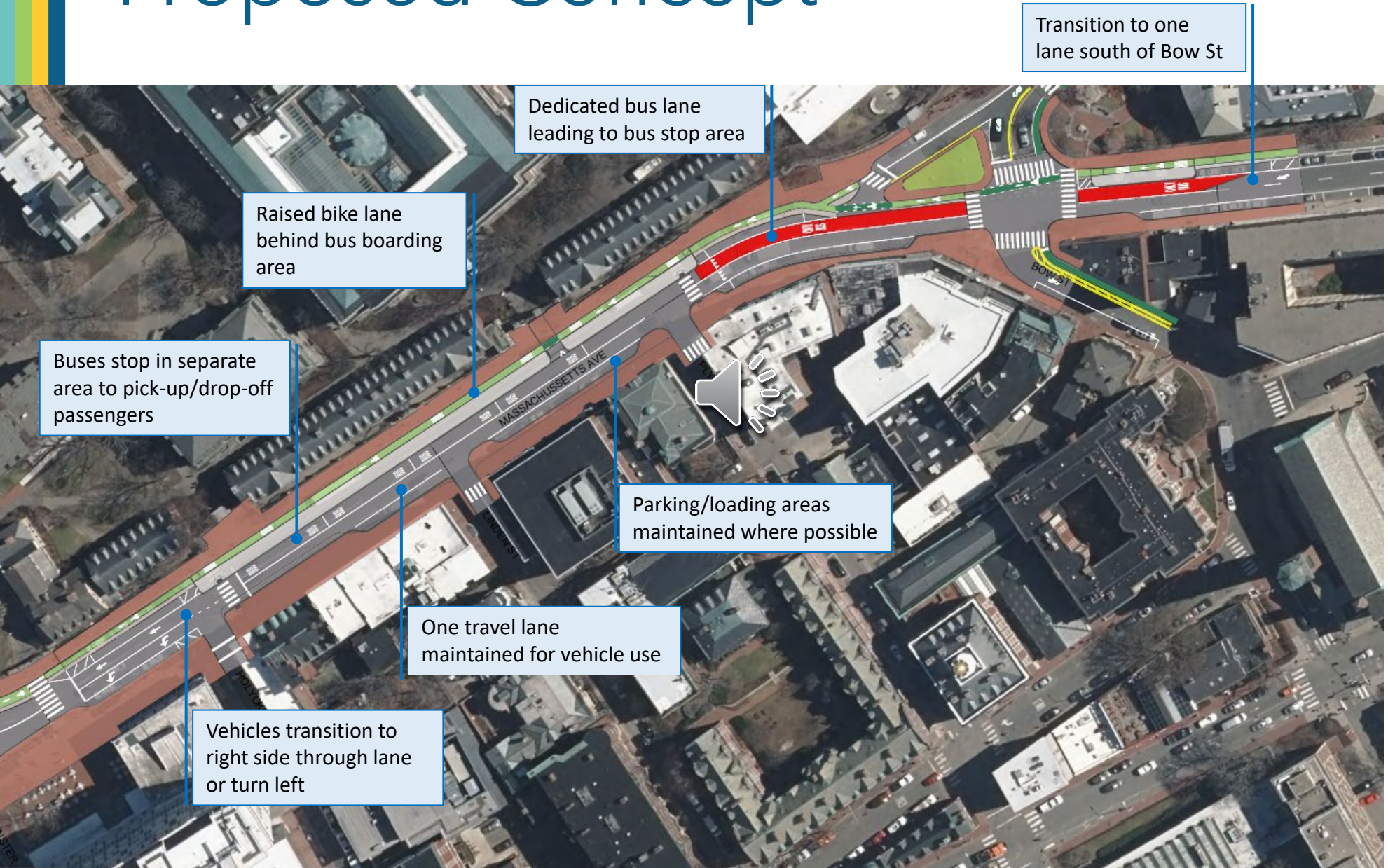
-  Pedestrian zone
-  Bike zone
-  Bus loading/waiting area
-  Bus zone
-  Parking/taxi zone
-  Driving zone



# Proposed Concept



# Proposed Concept



Transition to one lane south of Bow St

Dedicated bus lane leading to bus stop area

Raised bike lane behind bus boarding area

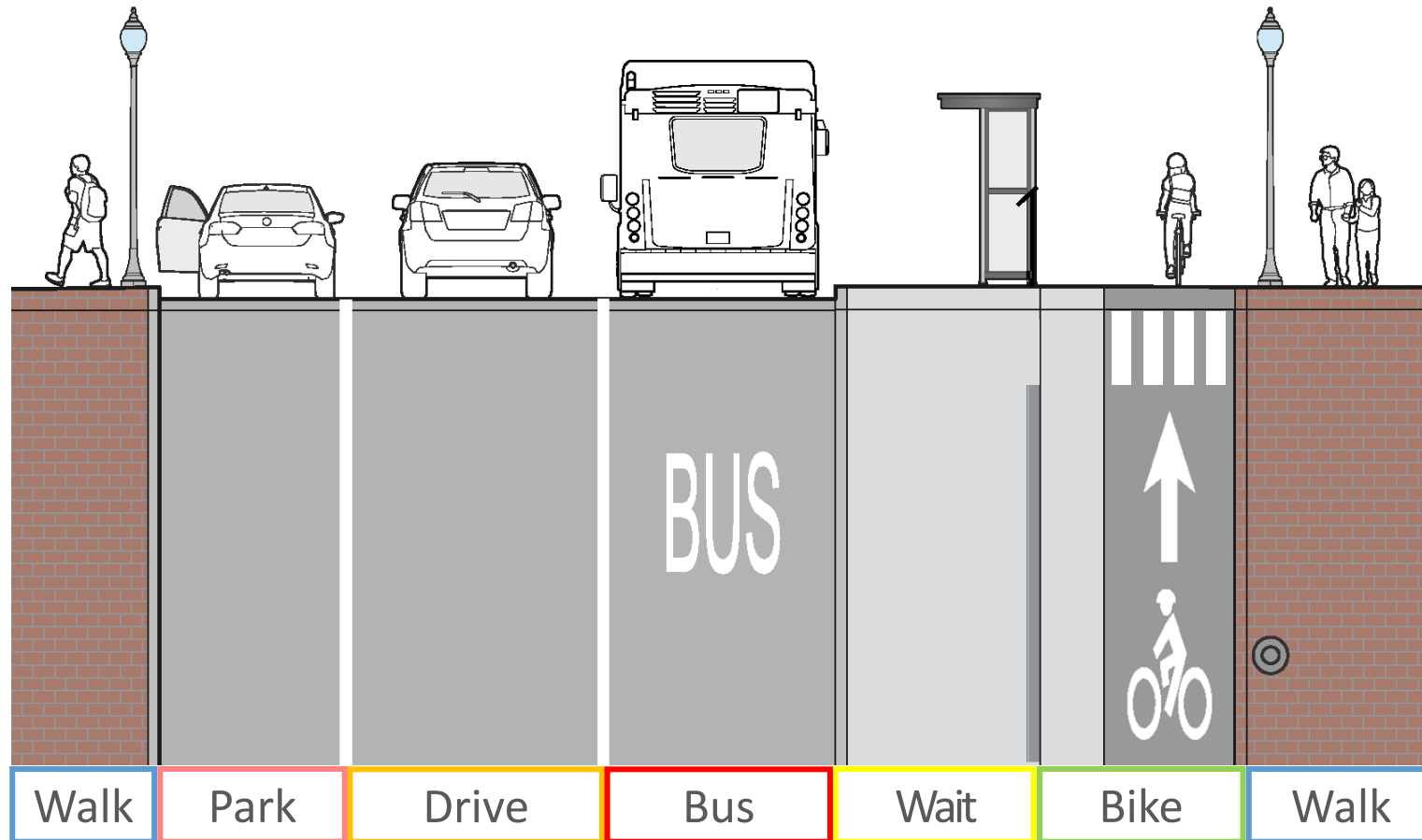
Buses stop in separate area to pick-up/drop-off passengers

Parking/loading areas maintained where possible

One travel lane maintained for vehicle use

Vehicles transition to right side through lane or turn left

# Plympton to Dunster – Cross Section

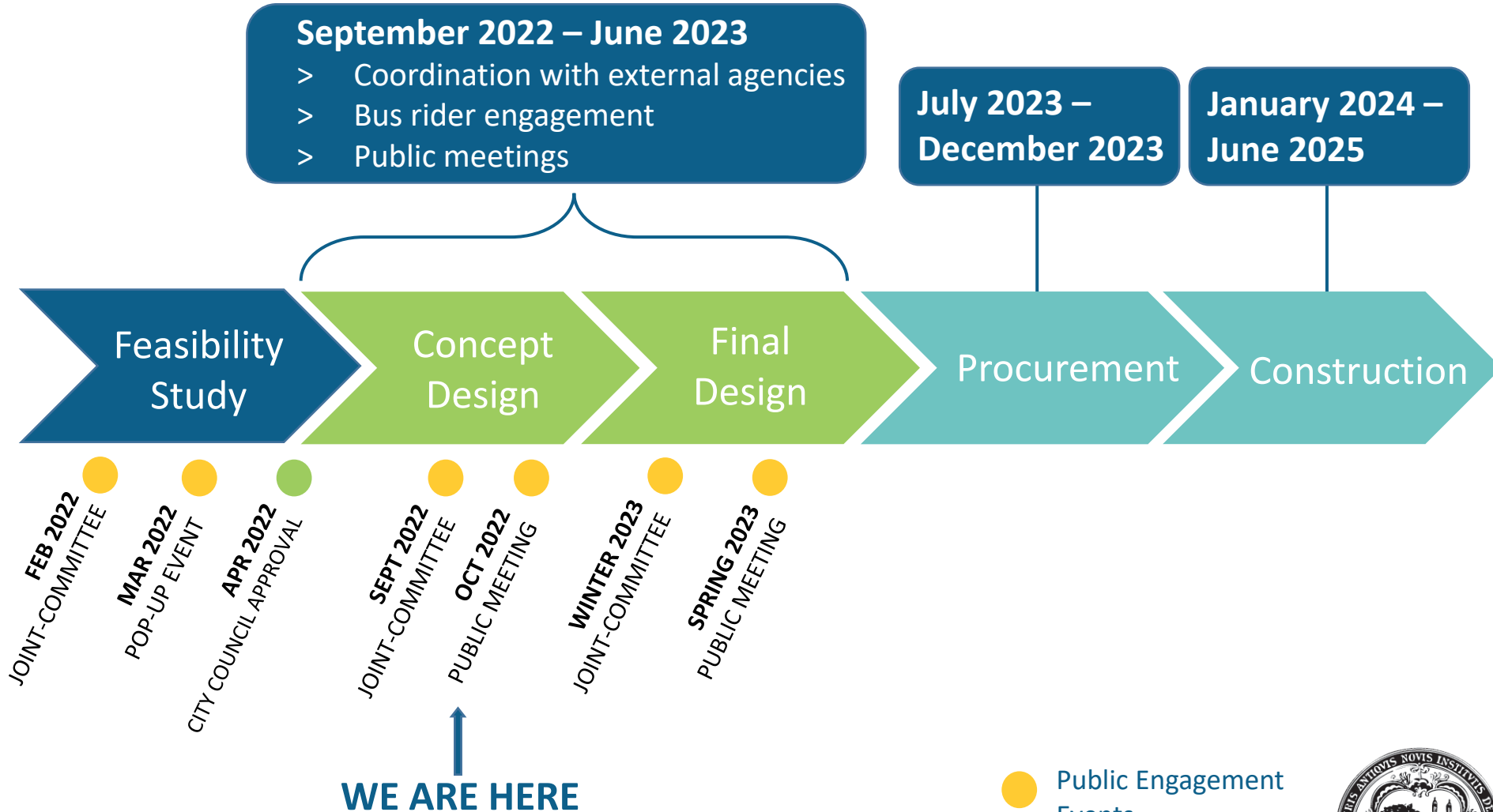




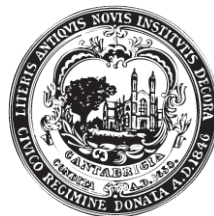
# Next Steps



# Next Steps



● Public Engagement Events



# Tell us what you think!

Is there a need for you as an individual or business owner that is not addressed?

Attend the community meeting:  
**October 12, 6-8pm on Zoom**  
Email the project team:  
[massave4@cambridgema.gov](mailto:massave4@cambridgema.gov)



Thank you

