



Cycling Safety Ordinance Mass Ave Partial Construction and Mass Ave Harvard Square, formerly the MassAve4 Program: Year 3 Update

The Cycling Safety Ordinance identified four segments of Massachusetts Avenue where installing separated bike lanes would be challenging due to unique complicating factors which include significant underground utilities, major bus stops, a center median, and the MBTA's overhead trolley bus wires.

These four segments, collectively referred to as the MassAve4 since the passage of the Ordinance, are defined below. With some of the limits of the projects changing, there are no longer four unique segments, so we have updated the names of the projects to be more relevant.

Mass Ave Partial Construction (Waterhouse to Alewife Brook), formerly MassAve4 Segments A and B

- Dudley Street to Beech Street (A) - north of Porter Square
- Roseland Street to Waterhouse Street (B) - south of Porter Square

Mass Ave Harvard Square, formerly MassAve4 Segments C and D

- Church Street to Garden Street (C): northbound bus stop at Harvard University's Johnston Gate
- Plympton Street to Dunster Street (D): bus stop/layover at Harvard University's Morgan Gate

In April 2022, the City submitted a report to the City Council with recommended approaches and timelines for the installation of separated bike lanes in these four segments.

[The full report can be found at this link](#), or under the “MassAve4” section at www.cambridgema.gov/cso-timeline.

In summary, the report recommended:

- A **partial construction** approach for Segments A and B. The center median would be removed except at key locations for pedestrian crossings, traffic signals, and traffic control. Separated bike lanes would be installed using flex posts or pre-cast concrete curb separation. The MBTA has committed to working with the City to remove the overhead catenary wires and poles that supported its now-retired trolley bus infrastructure. The removal of this above-ground infrastructure provides significantly more design flexibility for curbside uses.
- A **full construction** approach for Segments C and D. Due to heavy bus stop activity and the need for bus layovers, full construction would be needed to implement separated bike lanes at the bus stop locations. The recommended project limits were Mass Ave from Plympton Street to Garden Street.

The City Council approved these recommendations, and Mass Ave Partial Construction and Mass Ave Harvard Square are now included in the City’s Five-Year Capital Plan. The FY24 Budget includes \$50 million for Mass Ave Partial Construction, and the FY23, FY24, and FY25 budget includes a total of \$17 million for the full construction approach for Mass Ave Harvard Square in the Complete Streets budget.

During Separated Bike Lane Year 3, City staff and the City’s engineering consultants conducted detailed analyses, evaluated the condition of the City’s utilities, and coordinated with private utility companies, the MBTA, Harvard University, and the Cambridge Historical Commission. Year 3 activities for the MassAve4 segments are described in more detail below.

Mass Ave Partial Construction (Waterhouse Street to Alewife Brook Parkway), formerly MassAve4 Segments A and B

To allow for a more thoughtful evaluation of the full corridor between Waterhouse Street and Alewife Brook Parkway, the City expanded the limits of the partial construction project beyond MassAve4 Segments A and B. The City has extended project limits to include two segments where quick-build separated bike lanes were previously installed. These two segments, the section of Mass Ave near Porter Square and the section north of Dudley Street, are adjacent to Segments A and B. Together, the four segments comprise a contiguous two-mile multimodal corridor bustling with retail shops, restaurants and other uses and activities. The expanded project is referred to as the “Mass Ave Partial Construction Project.”

During Separated Bike Lane Year 3, the City has been evaluating the existing surface and subsurface infrastructure in the area, conducting traffic analyses, and identifying potential improvements.

A 14-member working group representing a diverse set of perspectives was appointed by the City Manager in April 2023, and a kickoff meeting is scheduled for May. The Mass Ave Partial Construction Working Group will help shape the design of the street improvements and the streetscape.

Summary of Year 3 Activities

- Expanded the project limits to allow for a unified design approach
- Announced a working group, interviewed applicants, recommended members, and appointed members
- Collected additional traffic count data and conducted traffic analyses
- Researched record drawings and documentation for existing infrastructure
- Performed various field activities (surveys, assessments of existing conditions of utilities and infrastructure, traffic counts, existing tree review)
- Coordinated with Eversource regarding necessary upgrades to gas infrastructure
- Coordinated with the MBTA regarding bus operations, ridership, removal of the electric trolley infrastructure and the renovation of the North Cambridge Bus Facility

Planned Year 4 Activities

While continuing with many of the Year 3 activities, the following activities are planned for Year 4:

- Meet and collaborate with the working group: on-board, provide background information, and dive into the details of the corridor.
- Hold meetings with Cambridge transportation committees, the public, various City departments, and other stakeholders
- Develop design concepts and advance the design phases
- Review sewer and stormwater collection system inspections and identify necessary repairs
- Evaluate the condition of the water distribution system
- Develop a phased construction approach along the two-mile project limits
- Monitor progress on other construction activities within the project limits (MBTA, Eversource)

Mass Ave Harvard Square, formerly MassAve4 Segments C and D

Separated Bike Lane Year 3 focused on fully developing the project scope for Mass Ave Harvard Square while actively engaging with the public and stakeholders. A newly-reconstructed streetscape will be a focal point for visitors, residents, students, and tourists for years to come.

The City has been evaluating the condition and functionality of the existing surface and subsurface infrastructure and conducting additional traffic analyses to understand traffic and pedestrian flows through the proposed project limits. The concept and 50 percent design phases have emphasized the need to upgrade infrastructure, enhance lighting, and optimize traffic signals to improve safety and accessibility for pedestrians, cyclists, and public transit users in this historically significant area of Cambridge.

Following a multidisciplinary review of the project and its goals, and consideration of comments received from the community to date, the City expanded the project limits to the south to include the bus stop at Bow Street, and to the north to include the bus stop at Dawes Island and the right turn slip lane from Mass Ave onto Garden Street. This expanded scope provides for a consistent, unified design.

Summary of Year 3 Activities

- Expanded the project limits to improve movements for people walking, cycling, taking transit, and driving into and through Harvard Square
- Held meetings with the Cambridge transportation committees (Bicycle, Pedestrian, Transit Advisory) on September 28, 2022, and the public on October 22, 2022, to present a project overview, design considerations, and conceptual design overviews.
- Researched record drawings and documentation for existing infrastructure
- Developed concept and 50 percent designs
- Performed additional traffic analyses
- Coordinated with various City departments to identify the full scope of necessary infrastructure replacements (trees, water, electrical, lighting, traffic signals and controls, sewer, drainage)
- Coordinated with Harvard University's Transportation, Engineering, and Utility Departments
- Coordinated with the MBTA regarding bus operations, ridership, and Red Line infrastructure
- Coordinated with the City's kiosk and plaza construction projects
- Coordinated with Eversource regarding necessary upgrades to gas infrastructure

Planned Year 4 Activities

While continuing with many of the Year 3 activities, the following activities are planned for Year 4:

- Hold meetings with Cambridge transportation committees, the public, various City departments, and stakeholders
- Develop 90 percent design plans that include construction drawings and specifications for all engineering disciplines
- Evaluate traffic pattern changes that could improve bus stop and bicycle facility integration
- Continue advancing the surface grading plan, drainage design, and water main design with the available information regarding the shallow Red Line infrastructure
- Complete roadway and pedestrian-scale lighting designs to ensure adequate street lighting for the proposed streetscape
- Continue coordinating with the MBTA to obtain a license to perform construction activities above and/or in the vicinity of Red Line infrastructure
- Obtain a permit from the MWRA for test pit excavations near its water infrastructure
- Monitor progress on other construction activities within the project limits (kiosk and plaza construction, Eversource)
- Review sewer and stormwater collection system inspections and identify necessary repairs and upgrades

Year 4 Plans for the Mass Ave Partial Construction and Mass Ave Harvard Square Projects

These projects have a significant amount of work planned for Year 4. The project teams will continue advancing the designs, tracking critical path items and activities, refining construction cost estimates and construction schedules, hosting community engagement events, and developing strategies for bidding the work and implementing construction.

Overall Progress Toward Targets

The Cycling Safety Ordinance details specific deadlines for installing separated bike lanes on different streets. In the section below, find:

- A simplified summary of the Ordinance's requirements and deadlines.
- Details on our progress toward meeting these deadlines (up to Separated Bike Lane Year 3)

The MassAve4

The MassAve4 includes Mass Ave from:

- Dudley Street to Beech Street
- Garden Street to Church Street
- Roseland Street to Waterhouse Street
- Dunster Street to Plympton Street

0%

0 of 2.51 miles installed or under construction

PAST DEADLINES

- **Complete:** By April 30, 2021: MassAve4 Impacts Analysis due to City Council
- **Complete:** By April 30, 2022: Construction timeline approved for Harvard Square Bus Stops (Church Street to Garden Street and Plympton Street to Dunster Street). Partial construction timeline approved for Dudley Street to Beech Street and Roseland Street to Waterhouse Street.

The Rest of Mass Ave

This section includes all segments of Massachusetts Avenue, from Memorial Drive to Alewife Brook Parkway, that are not included in the MassAve4.

78%

2.75 of 3.51 miles installed or under construction

PAST DEADLINES

- **Complete:** By April 30, 2022: Install separated bike lanes on all parts of Mass Ave that are not in the MassAve4 or Central Square Exception
- **Complete:** By December 31, 2022: Begin design for constructed separated bike lanes between Sidney Street and Inman Street (Central Square)

FUTURE DEADLINES:

- **By December 31, 2025:** Begin construction of Central Square separated bike lanes (between Sidney Street and Inman Street)