

City of Cambridge

Fourth Annual Cycling Safety Ordinance Progress Report

Separated Bike Lane Year Four:
May 1, 2023 to April 30, 2024



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Learn More

Want to learn more about the Cycling Safety Ordinance and related projects?

Visit www.cambridgema.gov/cso-projects

Introduction

Cambridge's Cycling Safety Ordinance sets ambitious requirements for the installation of about 25 miles of separated bike lanes between 2020 and 2027.

The Ordinance requires annual progress reports on improvements made each year. Many deadlines and timelines set out in the Ordinance follow a "Separated Bike Lane Year" between May 1 and April 30.

This fourth annual report:

- Details separated bike lane progress made in Separated Bike Lane Year 4 (from May 1, 2023 to April 30, 2024).
- Outlines the work planned for Separated Bike Lane Year 5 (from May 1, 2024 to April 30, 2025).

New information shared in this year's report includes:

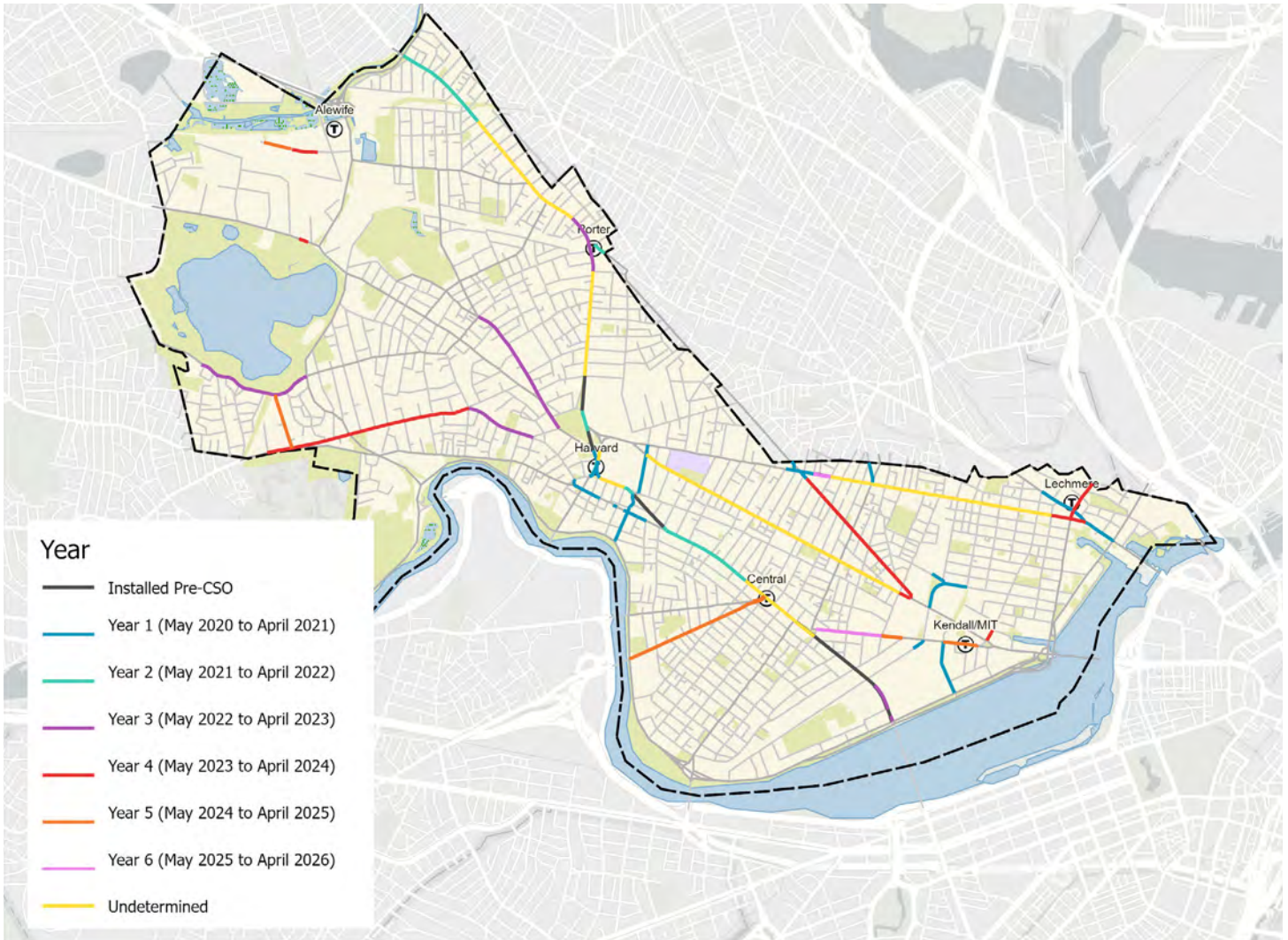
- Information about safety improvement projects, engagement activities and parking impacts.
- An overview of related reports and work conducted during Separated Bike Lane Year 4.
- Work planned for Separated Bike Lane Year 5.
- Updates on other in-progress separated bike lane projects that will be installed after April 30, 2025.
- Evaluation plans for future separated bike lane projects.

Installation Summary*

- In Year 1, we completed or started construction on **4.19 miles** of separated bike lanes.
- In Year 2, we completed or started construction on **2.15 miles** of separated bike lanes.
- In Year 3, we completed or started construction on **3.67 miles** of separated bike lanes.
- In Year 4, we completed or started construction on **4.21 miles** of separated bike lanes.
- In Year 5, we plan to install or start construction on **1.82 miles** of separated bike lanes.

**Mileage totals have been adjusted based on a standardized GIS measurement process*

Map of streets where we have installed or begun construction on separated bike lanes as part of the Cycling Safety Ordinance





Brattle Street Safety Improvement Project, October 2023 by Kyle Klein.

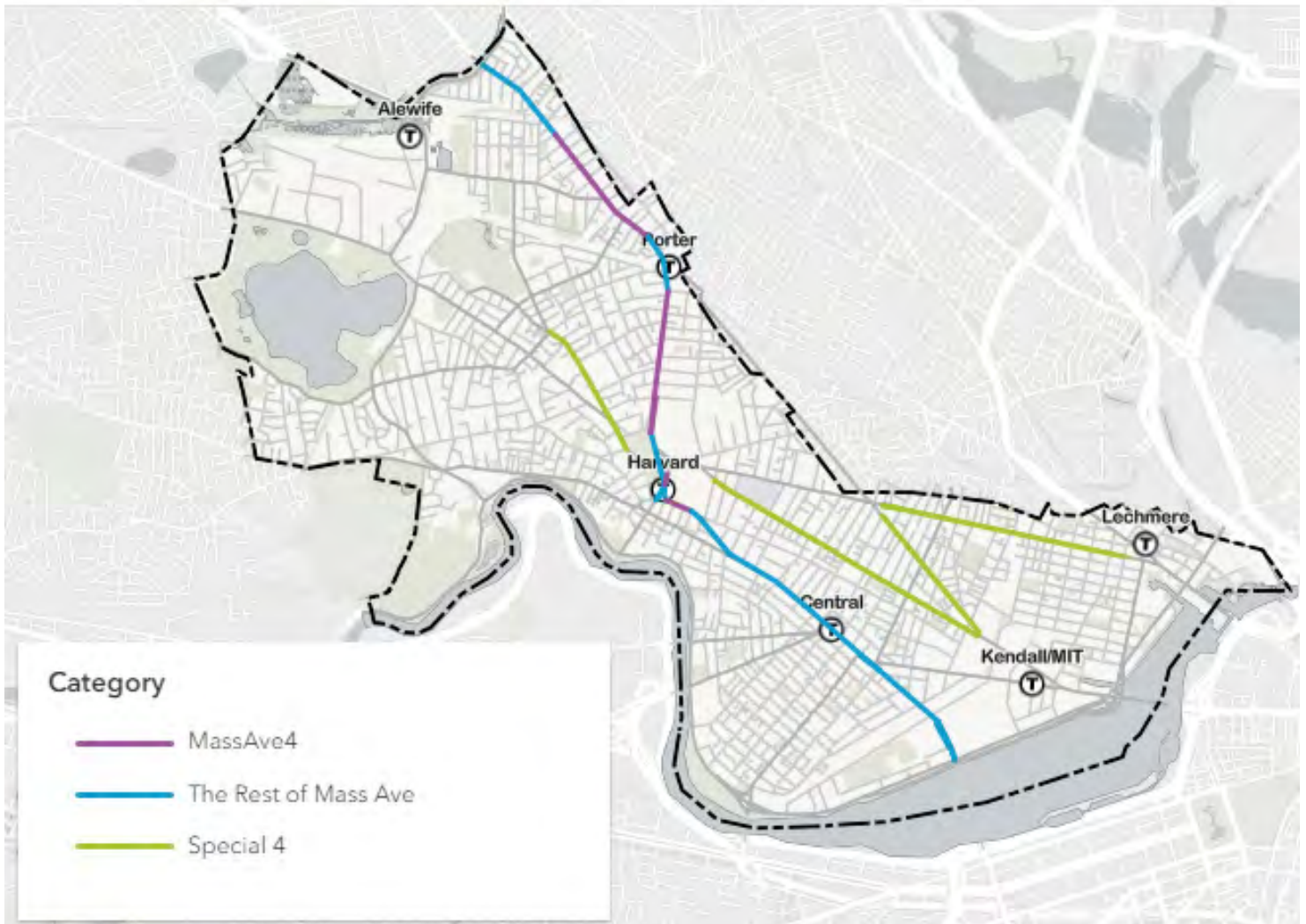
Background

In 2019, the Cambridge City Council passed the Cycling Safety Ordinance. The Ordinance requires that the City construct separated bike lanes on streets designated for “greater separation” in Cambridge’s Bicycle Network Vision, if the street is being reconstructed as part of the City’s Five-Year Plan for Streets and Sidewalks.

In 2020, the Council passed amendments to the Ordinance, setting ambitious requirements for the installation of approximately 25 miles of separated bikes lanes within five to seven years. The location of these facilities will be informed by both the Cambridge Bicycle Network Vision and specific requirements in the Ordinance.

In 2024, the Cambridge City Council began the process of further amending the Cycling Safety Ordinance to adjust the timelines for certain projects. These specific deadlines are stated in the progress bars at the end of this report.

Map of streets where the Cycling Safety Ordinance requires the installation of separated bike lanes. In addition to the lanes below, the CSO requires an additional 11.6 miles to be installed in locations from the Bicycle Network Vision.



In general, the Ordinance requires the installation of separated bike lanes on:

- All of Massachusetts Avenue
- Broadway from Quincy Street to Hampshire Street
- Cambridge Street from Oak Street to Second Street
- Hampshire Street from Amory Street to Broadway
- Garden Street, eastbound from Huron Avenue to Berkeley Street, and westbound from Mason Street to Huron Avenue

The Ordinance also requires that the City install 11.6 more miles of separated bike lanes in other locations that are part of the Bicycle Network Vision.

In its requirements and timelines, the Ordinance distinguishes between Quick-Build and construction. Quick-Build methods include pavement markings, flex-posts, signage, and signal changes, and can usually be installed over a few weeks or months. The City reports Quick-Build

separated bike lane mileage in the year that the project is installed.

Construction involves more extensive changes, including potentially moving curbs and/or removing medians. Work becomes more complex any time we dig into the ground, and construction projects may include work on infrastructure that is underground (e.g., pipes, electrical and gas lines). Construction projects often take multiple years to complete, and the City reports constructed separated bike lane mileage in the year that construction begins.

For additional information about the Cycling Safety Ordinance, please visit www.cambridgema.gov/cyclingsafetyordinance. This page details the specific requirements and the associated timelines and provides additional links to individual Cycling Safety Ordinance projects.

Work Completed During Separated Bike Lane Year 4: May 1, 2023 through April 30, 2024

Project Installation & Construction

Between May 1, 2023, and April 30, 2024 (Separated Bike Lane Year 4), we installed or began construction on 4.21 miles of separated bike lanes, bringing our total to 14.22 miles since May 1, 2020.

Summary Table: Projects Completed in Year 4

Street	From/To	Category	Project Type	Miles	Status
Brattle Street: Phase 2	Sparks Street to Mt. Auburn Street (both directions)	Other Locations	Quick-Build	1.65	Completed summer 2023
Broadway	Portland Street to Hampshire Street (both directions)	Special4	Quick-Build	0.11	Installed fall 2023, included one block of Broadway.
Cambridgepark Drive	Mid-150 Cambridge Park Dr to 50 Cambridgepark Dr	Other Locations	Construction	0.10	Completed
Cambridge Street	Second Street to O'Brien Highway	Other Locations	Construction	0.32	Under construction as part of O'Brien Highway reconstruction and Cambridge Crossing developer mitigation.
Hampshire Street	Inman Sq to Broadway	Special4	Quick-Build	1.45	Completed fall 2023
Mt. Auburn Street	Aberdeen Ave to Homer Ave (both directions)	Other Locations	Quick-Build	0.23	Substantial Completion
North First Street	Jacobs Street to Cambridge Street (both directions)	Other Locations	Construction	0.30	Divco West, the developer of Cambridge Crossing, is reconstructing part of O'Brien Highway and some nearby streets. This includes separated bike lanes on North First Street.

Street	From/To	Category	Project Type	Miles	Status
Third Street	Broad Canal Way to Broadway (southbound)	Other Locations	Quick-Build	0.05	Northbound lane installed in 2018. Southbound Quick-Build lane added in Year 4.
Total Mileage				4.21 miles	

Project Highlights



Brattle Street Safety Improvement Project, October 2023 by Kyle Klein.

BRATTLE STREET SAFETY IMPROVEMENT PROJECT PHASE 2

Length: 1.65 miles

Category: Other Locations

Status: Completed Summer 2023

Through the Brattle Street Safety Improvement Project, we installed two-way separated bike lanes on Brattle Street between Mason Street and Mount Auburn Street, made improvements to pedestrian crossings, and improved safety and comfort for people walking, biking, and driving. Phase 2, between Sparks Street and Mt. Auburn Street, was installed in summer 2023. In Phase 2, we constructed pedestrian crossing islands between bike lanes and vehicle travel lanes at crosswalks near five street intersections.

Parking Impacts:

- Phase 1 (Separated Bike Lane Year 3): Total number of spaces decreased from approximately 100 to 50.
- Phase 2 (Separated Bike Lane Year 4): 34 parking spaces removed, 5 spaces added on Fresh Pond Lane.
- This includes a net reduction in spaces from Fresh Pond Parkway to Mt Auburn Street, including spaces added on Fresh Pond Lane from approximately 55 spaces to 34 spaces.
- Between Sparks Street and Fresh Pond Parkway, a few spaces were relocated from the north side of the street to the south side of the street. Total quantity of spaces did not change.

Engagement highlights (for both phases):

- Postcards introducing the project sent to local addresses in spring 2022.
- Physical signage posted on-street ahead of each meeting.
- Four virtual community meetings. These meetings served as updates to project status.
- Two in-person drop-in open houses with information about the project design and installation plans. Attendees were able to ask staff questions about specific concerns and to identify additional locations for improvement.
- Presentations at three Historical Commission meetings.
- One-on-one conversations with community members, schools, and houses of worship.
- Project survey.
- Online updates on project webpage, project email list, news stories, City's Daily News Updates.

Project website: www.cambridgema.gov/BrattleStSafety.

Project Photos: [Phase 2 \(Kyle Klein, October 2023\)](#)



Hampshire Street Safety Improvement Project, April 2024 by Kyle Klein.

HAMPSHIRE STREET SAFETY IMPROVEMENT PROJECT

Length: 1.56 miles, including a short section of Broadway

Category: Special4

Status: Completed Fall 2023

Through the Hampshire Street Safety Improvement Project, the City added separated bike lanes to Hampshire Street, creating a more comfortable biking connection between Inman Square and The Port/Kendall Square. The project area included:

- Hampshire Street from Inman Square to Broadway
- One block of Broadway, from Hampshire Street to Portland Street

Parking Impacts: Project decreased total parking and loading spaces from 179 to 88, a net removal of 91 spaces. Block-by-block parking information is available on the project website.

Engagement highlights:

- Postcards sent to about 5,000 addresses around the project area to announce the project in October 2022.
- Postcards introducing the project sent to local addresses in spring 2022.
- Physical signage posted on-street ahead of each meeting.
- Signs with location-specific information about changes posted ahead of project installation.
- Three virtual community meetings. These meetings served as updates to project status.
- Two in-person open houses. Attendees were able to ask staff questions about specific concerns and to identify additional locations for improvement.

- Comment map to gather input on existing conditions, which received 176 comments.
- Design options survey to gather block-by-block input on parking and bike lane layout, with 545 total responses.
- One-on-one conversations with community members, businesses, property owners, and houses of worship.
- Online updates on project webpage, project email list, news stories, City's Daily News Updates.

Project website: www.cambridgema.gov/HampshireStSafety

Project Photos: [Completed Hampshire Street \(Kyle Klein, April 2024\)](#)

MT. AUBURN STREET AT ABERDEEN AVENUE INTERSECTION IMPROVEMENT PROJECT

Length: 0.23 miles

Category: Other Locations

Status: Installed Spring 2024

The Mt. Auburn Street at Aberdeen Avenue Intersection Safety Improvement Project updated traffic signal equipment at Aberdeen Ave and Mt Auburn St. As part of the project, we added a two-way separated bike lane between Aberdeen Avenue and Homer Avenue, connecting to the Brattle Street two-way separated bike lane.

Parking Impacts: No parking changes

Engagement highlights:

- Physical signage posted on-street ahead of each meeting and installation.
- Flyers distributed about project ahead of virtual community meeting and second open house.
- One virtual community meeting. These meetings served as updates to project status
- Two in-person open houses. Attendees were able to ask staff questions about specific concerns and to identify additional locations for improvement.
- Online updates on project webpage, project email list, news stories, City's Daily News Updates.

Project website: www.cambridgema.gov/MtAuburnAberdeen.

Project Cost Estimates

City staff are in the process of developing project cost estimates for each completed project. This information will be made available later this year.

Advancing Transportation Initiatives: Reports and Collaborative Efforts

Transportation Advisory Committees and Cambridge Commission for Persons with Disabilities

All projects included reviews with the City's Transportation Advisory Committees, which include the Cambridge Bicycle Committee, Cambridge Pedestrian Committee, and the Cambridge Transit Advisory Committee. These meetings included a meeting at the start of the design process for each project to get preliminary feedback, a second, and additional meetings as necessary to review the proposed design and gather additional feedback.

In addition, staff coordinated with the Cambridge Commission for Persons with Disabilities regarding each project. This included a closer review of the design, including the location of accessible/disability parking, MBTA bus stop locations and separated bike lane and crosswalk design.

Cycling Safety Ordinance (CSO) Advisory Group Work

The Cycling Safety Advisory Group advises the City on outreach, engagement, and evaluation for Cycling Safety Ordinance projects. Members include representatives from City boards and business associations.

Since its first meeting in March 2023, the Group has met ten times. The Group's key achievements this year include:

1. Engagement Best Practices: Learned about the typical outreach and engagement process for Quick-Build safety improvement projects, advised City staff on the most effective methods and ways to improve, and produced a [memo on Community Engagement Best Practices](#).
2. Quick-Build Project Evaluation Planning: Reviewed evaluation metrics for past bike lane projects and advising City staff on what data to collect and report for Quick-Build project evaluations. This feedback was formalized in the CSO Quick-Build Project Evaluation Work Plan, which the City will use to evaluate future projects (see "Work Planned for Year 5 – Evaluation" for more information).
3. Design Considerations and FAQ Responses: Discussed the design considerations and trade-offs involved in designing a Quick-Build separated bike lane project, highlighted frequently asked questions, and advised City staff to add an FAQ to the CSO webpage. This information has been added.
4. Installation and Post-Installation Outreach Improvements: Started a conversation about ways to improve installation and post-installation communications and outreach. These discussions are ongoing.
5. Review of CSO-related activities: Received regular updates on and discussed the status of the CSO Economic Impact Study, the 2023 Bike Data report, the Parking Study, and individual CSO projects.

CSO Economic Impact Study 2024 Report

In January 2024, the Community Development Department released the first [Cycling Safety Ordinance Economic Impact Study](#) report, produced by the U.S. Department of Transportation's Volpe Center. The study included both quantitative and qualitative data to assess the impacts of separated bike lane projects on retail sales and neighborhood economic vitality.

It includes:

- Review of existing published literature and prior studies on this topic.
- Summary of the study methodology.
- Analysis of available data across multiple sources and datasets, including Census data on employment and income, commercial databases covering real estate and retail sales, and survey responses from local business owners and customers.

Multiple meetings were held concerning the study while it was being conducted, including a public information session, two City Council Economic Development and University Relations Committee meetings, an update to business associations, and an update to the CSO Advisory Committee.

The survey found that the data sources presented a mixed picture of the effects of bicycle infrastructure projects on retail/service sales.

The report's takeaways included:

- Looking strictly at quantitative employment and commercial real estate data, there are little to no discernable differences between "treatment" areas and otherwise similar "control" areas. This reflects the underlying limitations of the data sources, which were generally not designed for analysis at this highly detailed geographic scale.
- Survey data indicated that businesses in treatment areas were more likely than those in control areas to report a decrease in revenue.

To help improve data analysis and support businesses in the future, the City will:

- Collect more economic data:
 - Increase business and customer surveys, focusing on corridors that are pre- or post-bike lane installation, rather than citywide data.
 - Reach out to the state to see if any tax data can be shared.
 - Continue to look for sales data, including from third-party data sources.
- Collect more parking data:
 - Conduct pre- and post-installation parking occupancy studies for all upcoming CSO separated bike lane corridors. We are exploring technology solutions that will allow us to do this without manual data collection.
- Collect more bike and pedestrian counts pre- and post- project installation.
- Increase communications and mitigation efforts:
 - Continue to meet with businesses during project design phase.
 - Develop post-installation marketing and communication support for CSO corridors.

- Create guidance and programs to help customers and employees get to businesses, including parking and transit maps for businesses, information on reduced Bluebike and T fare programs, and information on shuttles.
- Update Zoning and Parking and Transportation Demand Management (PTDM) policies to allow for the wider use of underused existing off-street parking spaces where a loss of metered on-street parking spaces is anticipated.

The City will continue to collect data and report on the impacts of separated bike lane infrastructure on businesses.

Bicycling in Cambridge Data Report

In October 2023, the Community Development Department released the [Bicycling in Cambridge Data Report 2023](#). This report provides an overview of high-level data on the state of the bicycling network in the City. In the report, the City shares key data and measures the progress we are making towards our 2020 Bicycle Plan Update goals, as well as overall City goals such as those of Vision Zero.

Key takeaways from the report include:

- Bicycle crash rates continue to decline. The crash rate has declined from 28 crashes per million Bicycle Miles Traveled (BMT) in 2003 to 9.3 crashes per million BMT in 2022, a decrease of 67 percent.
- The percentage of reported crashes that result in serious injuries continues to decline. Between 2004 and 2012, 50.3 percent of crashes resulted in reported serious injuries. Between 2015 and 2022, 4.5 percent of crashes resulted in reported serious injuries. *Please see page 25 of the “Bicycling in Cambridge Data Report 2023”.*
- Bluebikes ridership reached their highest-ever levels in 2022.
- The percentage of Cambridge residents biking to work as their primary mode of transportation is at an all-time high of 9 percent, according to ACS Community Survey data.
- The number of adults cycling with children is increasing, showing that we’ve improved at making our bike lanes comfortable for people of all ages. Between 2014 and 2022, there was a 3.5x increase in children counted on bicycles.

Findings along CSO project corridors included:

- At mid-Mass Ave (at Sellers Street), 32 percent of all vehicles on the street were bikes when we counted in September 2023. Separated bike lanes were installed in Fall 2021.
- On North Mass Ave, bicycle ridership increased by 68 percent from 2016 to 2022. Separated bike lanes were installed in 2021.
- People riding on sidewalks has decreased in areas where we build separated bike lanes, indicating that people feel more comfortable riding in the street. This increases safety and comfort for pedestrians. On both North Mass Ave and Mid-Mass Ave, there was over an 80 percent decrease in sidewalk riding.

These citywide findings will be supplemented by individual project evaluations in places that we’ve installed separated bike lanes. (See “Work Planned for Year 5 – Evaluation”)

Work Planned for Separated Bike Lane Year 5: May 1, 2024 to April 30, 2025

Project Installation & Construction

By April 30, 2025 (the end of Separated Bike Lane Year 5), we plan to install or begin construction on 1.82 miles of separated bike lanes, bringing the total to 16.04 miles since May 1, 2020.

Summary Table: Projects Planned for Year 5

Street	From/To	Category	Project Type	Miles	Status
Aberdeen Avenue	Huron Avenue to Mt. Auburn Street	Other Locations	Quick-Build	0.51	Project not yet started. We plan to install separated bike lanes on Aberdeen Avenue once utility work on the street is complete. We don't expect the bike lanes to impact existing parking.
Cambridgepark Drive	200 Cambridgepark Drive to 125 Cambridgepark Drive	Other Locations	Quick-Build	0.1	The City plans to install a short Quick-Build separated bike lane here in Year 5
Main Street	Albany Street to Portland Street (westbound)	Other Locations	Quick-Build	0.08	This quick-build separated bike lane will be installed by the Ragon Institute in summer 2024.
Main Street	Portland Street to Albany Street (eastbound)	Other Locations	Construction	0.08	This separated bike lane will be constructed by the Ragon Institute as part of their new building construction summer 2024.

Street	From/To	Category	Project Type	Miles	Status
Main Street	Ames Street to Hayward St	Other Locations	Quick-Build	0.31	<p>We plan to install about .31 miles of separated bike lanes on Main Street between Ames Street and Hayward Street in Year 5. We will work closely with the Cambridge Redevelopment Authority to continue design work that supports prior conceptual design efforts.</p> <p>Broadway Main & Third Streetscape Report — Cambridge Redevelopment Authority</p>
River Street	Memorial Drive to Massachusetts Avenue (eastbound)	Other Locations	Construction	0.68	<p>River Street Reconstruction Project is fully designed. Construction of separated bike lanes will begin in Year 5.</p> <p>www.cambridgema.gov/riverstreet</p>
Western Avenue	Mass Ave to Green Street (southbound)	Other Locations	Construction	0.06	<p>River Street Reconstruction Project is fully designed. Construction of separated bike lanes will begin in Year 5.</p> <p>www.cambridgema.gov/riverstreet</p>
Total Miles:				1.82	

Upcoming Projects

Besides the 1.82 miles of separated bike lanes planned for Separated Bike Lane Year 5, we plan to make progress on the following projects as future installations.

SAFETY IMPROVEMENT PROJECT ON CAMBRIDGE STREET

The [Safety Improvement Project on Cambridge Street](#) will add an additional 2.03 miles of separated bike lanes to the network.

The Traffic, Parking, and Transportation Department launched the project in December 2023. We have introduced the project to the community, but haven't shown any designs yet. So far, the Department has:

- Hosted one virtual community meeting.
- Held two in-person open houses.
- Gathered feedback on existing conditions via an [online map](#).
- Dropped off project flyers at all businesses throughout the corridor, and set up 1:1 meetings. Meetings are ongoing.

In Separated Bike Lane Year 5, we will present draft designs to the public, solicit feedback on those designs, and adjust project plans based on that feedback. We will also start planning for project installation.

MAIN STREET

The Main Street Safety Improvement Project will add an additional 0.60 miles of separated bike lanes to the network between Lafayette Square and Portland Street. We began outreach on this project in March 2023 and continue to accept feedback on design alternatives.

So far, the department has

- Held two virtual community meetings
- Four in-person open houses
- One ice cream party/open house.

A third community meeting and related open houses are planned as the project moves along in the design process. We anticipate installation in summer/fall 2025 (Separated Bike Lane Year 6).

BROADWAY

In Year 5, we plan to start outreach on a project that will add 2.61 miles of Quick-Build separated bike lanes to Broadway between Quincy Street and Portland Street. We expect to install the first phase of this project in Separated Bike Lane Year 6.

CENTRAL SQUARE: MASSACHUSETTS AVENUE BETWEEN SIDNEY STREET AND BIGELOW STREET

We plan to construct separated bike lanes on the section of Massachusetts Avenue between Sidney Street and Bigelow Street through Central Square. This will be one element of a major capital project that will upgrade the overall streetscape. The project will include:

- Upgrading sidewalks and crosswalks.
- Improving bus stops.
- Urban design and landscape improvements.
- Rehabilitating existing public and private utilities.
- Full-depth reconstruction of the roadway.

The project will engage the community and be designed to work in harmony with adjacent projects at Carl Barron Plaza and River Street.

During Separated Bike Lane Year 4, the City's Department of Public Works has been coordinating with other City departments to develop a scope for the design process. A Request for Proposal will be submitted to the City's Engineering Services consultants this summer, and a designer services contract should be awarded by the fall. FY23 included a \$5M appropriation to support the design, and a \$45M appropriation to support the construction is anticipated in FY26.

Anticipated work over the next year includes evaluation of the City's utilities to determine the existing conditions and coordination with private utility companies regarding repairs or replacements they may need to complete ahead of the City's construction project. The project is on track to begin construction by December 31, 2025. The City also anticipates advertising the opportunity to join the project's working group.

CYCLING SAFETY ORDINANCE MASS AVE PARTIAL CONSTRUCTION AND MASS AVE HARVARD SQUARE, FORMERLY THE MASSAVE4 PROGRAM: YEAR 4 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 were collectively referred to as the MassAve4 in the ordinance. With the expanded limits of the projects, there are no longer four unique segments. The names of the projects were changed in 2023 as described below.

- Mass Ave Partial Construction (Waterhouse Street to Alewife Brook Parkway), formerly MassAve4 Segments A and B
- Mass Ave Improvements - Harvard Square, formerly MassAve4 Segments C and D

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 [here](#).

The City's recommended approaches for the four segments are summarized below:

- A **partial construction approach** was recommended for Segments A and B. This approach allows the center median to be removed except at key locations for pedestrian crossings, traffic signals, and traffic control. Separated bike lanes will be implemented using

flex posts or pre-cast concrete curb separation. During the last year, the MBTA removed the overhead catenary wires and is committed to working with the City to remove the catenary poles. Removal of this above ground infrastructure will provide significantly more design flexibility for curbside uses.

- A **full construction approach** was recommended 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 the Mass Ave Partial Construction and Mass Ave Harvard Square Projects are now included in the City's Five-Year Capital Plan.

Cycling Safety Ordinance Year 4 Progress Update

During Year 4 of the Cycling Safety Ordinance, 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, the Cambridge Historical Commission, and held several virtual and in-person public meetings and events. Year 4 activities and activities planned for Year 5 are described in more detail in the following sections.

MASS AVE PARTIAL CONSTRUCTION: WATERHOUSE TO ALEWIFE BROOK

In 2022, the project limits were extended as described in the Year 3 update 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. These extended project limits comprise a contiguous two-mile multimodal corridor bustling with retail shops, offices, restaurants and other uses and activities. Due to the project's two-mile length, construction along Mass Ave is currently planned to be implemented in three phases. Still, the concept and detailed engineering designs are being developed as one project. The phases are as follows:

- **Phase 1** – Mass Ave from Waterhouse Street to Linnaean Street
- **Phase 2** – Mass Ave from Linnaean Street to Dudley Street
- **Phase 3** – Mass Ave from Dudley Street to Alewife Brook Parkway

During Year 4 of the Cycling Safety Ordinance, the City has been evaluating the existing surface and subsurface infrastructure, conducting traffic analyses, and identifying potential improvements.

Summary of Year 4 Activities

- Kicked off a 14-member Mass Ave Partial Construction Working Group. Four working group meetings were held and three site walks were conducted which allowed collaboration with the working group including on-boarding the committee, providing background information and diving into the details of the corridor.
- Held meetings with Cambridge committees, the public, various City departments and stakeholders.

- Conducted traffic analyses.
- Developed design concepts and detailed designs.
- Developed a phased construction approach along the two-mile project:
 - **Phase 1** – The recommended concept is progressing from concept to detailed engineering design. Construction activities to support the Phase 1 implementation will begin in late 2024. Activities through late 2025 will include median removal between Waterhouse Street and Roseland Street and upgrades to affected utilities. The existing median will be replaced by a painted median which will allow more flexibility to manage traffic around construction work zones. Concurrently, the street design will be progressing through the detail design process. In late 2025, construction activities will transition to surface reconstruction.
 - **Phase 2** – Concept development is in progress and will transition to detailed design in 2024.
 - **Phase 3** – Concept development will begin in 2024.
- Researched record drawings and documentation for existing infrastructure.
- Coordinated with private utility companies to determine if there were utility repairs and/or upgrades needed along Mass Ave.
- Performed various field activities (surveys, assessed existing condition of utilities and infrastructure, conducted traffic counts, reviewed locations of existing trees, and performed additional test pits) to document and verify surface and subsurface conditions.
- Conducted and reviewed sewer and stormwater collection system inspections and identified necessary repairs.
- Worked closely with the Cambridge Water Department in conjunction with concept and design development to identify affected water mains and water services.
- Assisted the Cambridge Water Department with conducting lead and copper surveys of water infrastructure.
- Monitored progress on other construction activities within the project limits (MBTA, Eversource).
- Coordinated with the MBTA regarding bus operations, ridership, removal of the electric trolley bus infrastructure and the renovation of the North Cambridge Bus Facility.

Planned Year 5 Activities

While continuing with many of the Year 4 activities, the following activities are planned for Year 5:

- Continue to meet and collaborate with the working group to advance the corridor design.
- Continue to hold meetings with Cambridge committees, the public, various City departments and stakeholders.
- Continue to develop design concepts and advance the design phases.
- Continue to evaluate sewer and stormwater collection system inspections and identify necessary repairs.
- Continue to evaluate the condition of the water distribution system and coordinate with Cambridge Water to determine the extent of upgrades needed to address affected water infrastructure.

- Continue to refine the phased construction approach along the two-mile project.
- Continue to monitor progress on other construction activities within the project limits (MBTA, Eversource).
- Prepare construction contract documents for a public construction bid.
- Start Phase 1a construction in late 2024.

HARVARD SQUARE

The concept to 50 percent design phase had identified the need to upgrade public utilities, including water, stormwater and lighting infrastructure, in addition to optimizing traffic signals to improve safety and accessibility for pedestrians, cyclists, and public transit users in this historically significant area of Cambridge. During Year 4, additional field investigations were conducted, and detailed designs of public utilities were advanced. TPT is coordinating reviews of proposed street design changes with Cambridge public safety departments.

Summary of Year 4 Activities

- Performed sewer and stormwater pipe inspections.
- Performed Ground Penetration Radar (GPR) survey to locate critical underground infrastructure.
- Obtained an MWRA permit to excavate test pits to field verify the location of MWRA's infrastructure.
- Collected samples of the pavement and subbase to evaluate existing conditions.
- Developed design documents for an MBTA license agreement application. The application was submitted in June 2023.
- Developed 50 percent lighting design.
- Coordinated with Cambridge public safety and other City departments to review the 50 percent design.
- 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 5 Activities

While continuing with many of the Year 4 activities, the following activities are planned for Year 5:

- Hold meetings with Cambridge committees, the public, various City departments, and stakeholders.
- Continue to coordinate with Cambridge public safety departments to review the 50 percent design.
- Complete roadway and pedestrian scale lighting designs to ensure adequate street lighting for the proposed streetscape and to replace inadequate and deteriorating streetlights and electrical connections.
- Develop 90 percent design phase that includes construction drawings and specifications

for all engineering disciplines.

- Coordinate with the MBTA for a license to perform construction activities above and/or in the vicinity of the Red Line infrastructure. An application was submitted in June 2023.
- Obtain a permit from the MWRA for construction near its water infrastructure.
- Monitor progress on other construction activities within the project limits (kiosk and plaza construction, Eversource).

Year 5 Plans for the Mass Ave Partial Construction and Mass Ave Harvard Square Projects

These projects have a significant amount of work planned for Year 5. 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 the construction.

PLANNING FUTURE PROJECTS

During Year 5, we will also undertake an analysis process to decide on the remaining locations of the separated bike lanes we will need to install to meet the CSO's mileage requirement. These projects will be installed in locations designated for greater separation in the City's Cycling Safety Ordinance.

TP+T is procuring a consultant that will help develop concepts and study the feasibility of installing Quick-Build separated bike lanes on street segments that are called out for "greater separation" on the Cambridge Bicycle Network Vision, do not currently have a separated bike lane installed, are not explicitly required as part of the "Special 4" as defined in the CSO, and do not have a design process already underway. This will help City staff determine which additional Quick-Build separated bike lane projects to pursue before the CSO deadline.

The City will evaluate the feasibility of Quick-Build separated bike lanes on the following list of the streets:

1. Mt Auburn Street – Belmont Street to Homer Ave (0.20 miles)
2. Mt Auburn Street – Aberdeen Ave to Fresh Pond Parkway (0.78 miles)
3. Huron Ave - 680 Huron Ave to Grove Street (0.53 miles)
4. Granite Street – Pearl Street to Brookline Street (0.10 miles)
5. Kirkland Street - Oxford Street to Scott St/Irving Street (0.6 miles)
6. Vassar Street – Audrey Street to Memorial Drive (0.40 miles)

Evaluating Past Quick-Build Projects

In Year 4, we developed a process and plan for evaluating Quick-Build separated bike lane projects after installation. This evaluation process was developed with the assistance of the Cycling Safety Ordinance Advisory Group and informed by recommendations in the CSO Economic Impact Study and citywide Parking Study.

Evaluating past projects will help the City determine whether projects are achieving the goals of the CSO, how streets are operating with changes, and if any adjustments are necessary. These reports will also help the City identify lessons to incorporate in future project design and communications.

Each Quick-Build Cycling Safety Ordinance project undertaken by the Traffic, Parking, and Transportation Department will undergo an evaluation. The purpose of these evaluations will be to determine:

- Whether projects are advancing the City's safety, health, and climate goals.
- How projects are advancing the goals of the Cycling Safety Ordinance.

In our evaluations, we will establish objective measures of the effectiveness of the CSO projects. The evaluations will assess the tradeoffs of each project by comparing benefits and costs.

Evaluations will include crash data, bike counts, pedestrian data, vehicle counts and speeds, parking data, transit data, and surveys. For more details, read the full Evaluation Framework at www.cambridgema.gov/cycling-safety-ordinance.

In Year 5, we plan to publish evaluations of the following projects:

- Mid-Mass Ave Safety Improvement Project
- South Mass Ave Corridor Safety Improvement Project

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.](#)

The MassAve4:

The MassAve4 includes Mass Ave from:

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



0%

0 of 2.5 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%

2.94 of 3.64 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).

The Special4

The Special4 includes:

- Broadway from Quincy Street to Hampshire Street
- Cambridge Street from Oak Street to Second Street
- Hampshire Street from Amory Street to Broadway
- Garden Street, eastbound from Huron Avenue to Berkeley Street, and westbound from Mason Street to Huron Avenue



2.73 of 7.45 miles installed or under construction

In April 2024, the City Council amended the requirements for the Special4. Separated bike lane installation will resume on the Special4 in Separated Bike Lane Year 6.

FUTURE DEADLINES:

- **By November 1, 2027:** New Installation Deadline as of April, 2024.

Other Locations

We must install 11.41 more miles of separated bike lanes in areas that are designated for greater separation in the Bicycle Network Vision.



8.1 of 11.41 miles installed or under construction

In Separated Bike Lane Year 5, we plan to install or begin construction on another 1.82 miles in other locations.

FUTURE DEADLINES:

- **By November 1, 2027**, We must install 11.6 miles of separated bike lanes in other locations.



Total: 13.77 of 25 miles installed or under construction