# **Mobility Plan**

Universal access to safe, reliable, efficient, and sustainable transportation is key to building an inclusive economy, reducing greenhouse gas emissions, improving public health, and creating a high quality of life for all people in Cambridge. The City's mobility policies have restrained the growth of automobile traffic, despite significant population growth locally and regionally. Yet the city's transportation systems will need to adapt over time as the region grows, technology advances, and the economy changes. Cambridge should address these challenges by enhancing its multimodal network locally, expanding connections to regional sustainable transportation, and advocating for progressive transportation policies across the region.

#### **Coordinated Efforts**

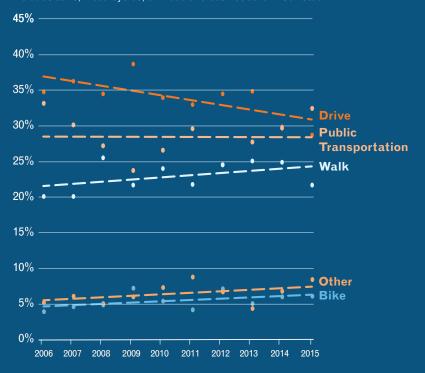
The City of Cambridge has multiple plans and projects to improve mobility across the city and region, including the 2015 Bicycle Plan, 2015 Transit Strategic Plan, the Pedestrian Plan, and the annually updated Five-Year Sidewalk and Street Reconstruction Plan, as well as targeted efforts such as the Grand Junction Greenway and Watertown-Cambridge Greenway. These plans align with City's Vision Zero Action Plan, which is a blueprint for eliminating fatalities and serious injuries resulting from transportation. Implementing these plans involves collaboration between City departments, including Community Development; Traffic, Parking, and Transportation; and Public Works. The City also works closely with MassDOT, MBTA, and DCR on regional projects including the Green Line Extension and Allston I-90 Interchange Reconstruction, in order to secure the most progressive outcomes that align with Cambridge's mobility goals.

#### Mobility

# Context

#### Cambridge Residents' Mode Choice for Commuting, 2006–2015

Source: American Community Survey, 2006–2015 1-year estimates. "Drive" includes people driving alone and with others, but excludes those taking taxis. "Other" includes taxis, motorcycles, or mode choices not otherwise listed.



"I support 'livable streets' and want Cambridge to rethink all public roads to incentivize green transportation with protected lanes for walkers and cyclists, prioritizing bus and bike traffic at lights, and slowing down all motorized traffic."

- North Cambridge resident via online survey

#### Sustainable Transportation

Cambridge's residents commute by walking, bicycling, and transit at uncommonly high rates for the region: 30% choose to walk or cycle and 27% commute by transit. Similarly, the majority of shoppers use sustainable transportation modes to get to all of Cambridge's commercial districts, with the exception of Alewife. Despite significant local and regional population growth, automobile traffic volumes have remained stable over time, and the share of Cambridge residents commuting by car has trended down. Nonetheless, some areas of Cambridge still face very high levels of traffic congestion, much of which is unrelated to homes or jobs in Cambridge.

A majority of Envision Cambridge survey respondents mentioned walking, cycling, and transit as important features of their vision for the future of mobility. Many expressed a desire to reduce traffic, though different groups proposed markedly different solutions. A majority of participants across engagement events and in surveys felt expansion of sustainable transportation to be the best way to reduce automobile traffic, though a portion of people felt that sustainable infrastructure investments like bike lanes exacerbate traffic congestion.



A young community member at Danehy Park Family Day 2017 designs his ideal right-of-way using the Envision Cambridge Streets activity.

For more context and data on mobility in Cambridge, see pages 94–113 of *Cambridge Today*, the Envision Cambridge report on existing conditions.

"I want transportation to be safe for walking and biking, with strong public transit options that are clean, reliable, affordable."

— Cambridgeport resident via online survey

#### **Transportation Safety**

Approximately 1,500 crashes were reported in Cambridge in 2017, of which 17% resulted in an injury of some kind. Most crashes exclusively involve people driving automobiles. While the overall number of reported crashes involving people riding bicycles has increased since the mid-2000s, the rate of bicycle crashes has decreased as the total number of bicycle trips has grown. Even one crash resulting in a serious injury or death is too many, and Cambridge has adopted a Vision Zero Action Plan, with the goal of eliminating these serious crashes entirely.

Many respondents to Envision

Cambridge surveys stressed the importance of safe mobility options for all users, regardless of mode choice, age, or physical ability. Some respondents framed clear separation of transportation modes in streets and sidewalks as a solution. Safety was a particular concern for focus group participants discussing conditions in Alewife. They pointed to heavy traffic and a lack of connectivity as problems, especially for children, the elderly, and people with disabilities.

#### The Future of Mobility

The mobility landscape is changing in Cambridge. Nearly

6.8 million ride hailing trips originated in Cambridge in 2017. More people are choosing personal mobility devices like scooters and one-wheelers. as well. Autonomous vehicles are on the horizon, though it is unclear how soon they will be adopted on a mass scale. Meanwhile, destinations are changing with the growth of new regional job centers like Assembly Square that do not have robust transit connections to Cambridge. As the nature of mobility changes in the region, Cambridge will need to ensure systems can adapt to maintain access for all.

## **Vision**

Everyone who lives, works, studies, or plays in Cambridge has a variety of mobility choices that are safe, affordable, convenient, sustainable, and resilient. Transportation in the city is not just about moving between locations efficiently. It is also about creating access to opportunity and spaces for community in the process. Cambridge transportation initiatives reflect innovation and promote equity, and the City remains a national leader in progressive transportation policy.

#### Goals

<b>Equity and Accessibility:</b> Ensure a diverse set of travel options that meet the access and mobility needs of people of all ages, abilities, and incomes.	Everyone should have a robust set of mobility choices to meet their needs. These choices should be equitably distributed across Cambridge and should adhere to universal design principles.
<b>Reliability and Efficiency:</b> Ensure people and goods can reliably move within Cambridge and around the region, and encourage space-efficient transportation choices like walking, biking, transit, and carpooling.	Cambridge's transportation system should ensure all trips occur with minimal delay, and all people should be able to choose the most space- and time-efficient mode that suits their needs.
Safe and Active Transportation: Eliminate traffic fatalities and serious injuries while encouraging active living and improving comfort for people of all ages and abilities.	Cambridge's streets should be safe for all users, enabling more people to choose active mobility options such as walking, cycling, transit, and micromobility devices like scooters, which is key to improving public health.
Connectedness and User-Friendliness: Create an easy-to-understand, integrated, continuous, and comfortable transportation network for all people.	Moving within and through Cambridge should be easy and enjoyable for all, with street designs and wayfinding that help people choose the most safe, effective, and pleasant route.
Community Character and Vitality: Ensure that the city's transportation system supports shared community spaces and enhances neighborhood streets.	Mobility in Cambridge should add to the character of the city's unique places. Streets, which make up the majority of city-owned land, should also be spaces for social connection.
Climate Mitigation and Resilience: Achieve a carbon- neutral transportation system and adapt to climate change.	Cambridge should create a resilient, carbon-free mobility system by increasing walking, biking, and transit use, shifting to renewable energy, and preparing for flooding and extreme heat.

#### **Connections to Our Core Values**

Outlined here are key ways that the core values of the Cambridge community, identified through the Envision Cambridge process, are reflected in the Mobility goals and recommendations. For more about the community's vision and core values, see page 26.

**Livability:** We value a vibrant built and natural environment and support sustainable transportation with affordable and convenient access to daily needs and recreational resources.

The way we move through the city plays a large part in our everyday experience the city. This section focuses on mobility options that are safe, sustainable, reliable, efficient, friendly to use, and that provide convenient access to our everyday needs as well as to recreational

resources. Our walkable, bikeable city provides opportunities for social connections and supports shared community spaces and enhanced street life.

**Diversity and Equity:** We are a welcoming community that celebrates our diversity and ensures access to affordable housing choices and opportunities to succeed.

Everybody should have access to a robust set of mobility choices that are equitably distributed around Cambridge. Recommendations in this section focus on ensuring a range of travel options that meet the access and mobility needs of people of all ages, abilities, and incomes to support access to economic opportunity as well as participation in civic life for all members of our community.

**Economic Opportunity:** We provide opportunity and stability through access to quality jobs, workforce development and training, and livable wages that support economic security for residents.

The ability to move about the city should not be a barrier to economic opportunity or security. Recommendations in this section emphasize affordable, convenient, and reliable ways to move around the city and support access to quality jobs, training and education, and other resources.



Small-group discussion at a public workshop in 2016.



Mobile engagement station responses during StoryWalk Cambridge at Newtowne Court in 2017.

#### Sustainability and Resilience:

We take responsible action to reduce our impact on the environment and build a resilient city and strong community.

This section recommends strategies and actions that encourage a greater share of our transportation to be through active and sustainable modes, an important part of reducing our greenhouse gas emissions. Increasing walking, biking, micromobility, and transit use, shifting vehicles to renewable energy, and preparing for the flooding and extreme heat support a more resilient mobility system.

Community Health and Wellbeing: We promote healthy and active lifestyles in supportive, safe community with diverse opportunities to connect with our neighbors and nature and to engage in civic life.

Sustainable modes like walking and biking are not just about meeting everyday needs or getting from one place to another as quickly as possible, but these mobility choices support a healthy lifestyle and improved public health. Public rights-of-way can be more than spaces for movement, but also spaces that can foster social connection and create community.

**Learning:** We embrace lifelong learning and celebrate art and creativity in our culturally rich community.

Access to a variety of ways to move around the city facilitates participation in civic life. Strategies and actions recommended in this section include continuing to improve public information, outreach, and educational resources about ways to move sustainably, efficiently, and safely within and through Cambridge.

# **Strategies & Actions**

# **1** Expand access to sustainable transportation choices and the physical reach of sustainable transportation infrastructure.

Access to sustainable mobility options is uneven across Cambridge and beyond the city's borders. These disparities cause unnecessary traffic congestion, limit economic opportunity, and create artificial

social barriers. Expanding infrastructure for walking, cycling, and public transit into underserved areas will improve mobility for all street users.

Action	Action Type	Status	Completion Timeframe
Install co-located car-share and bike-share at transit nodes in areas that are currently underserved to help reduce automobile traffic.	Capital investment	New	Ongoing
Undertake a detailed feasibility analysis of the bicycle network vision presented in the Bicycle Plan.	Study or plan	New	Near term
Build a pedestrian, bicycle, and transit connection across the railroad tracks connecting the Alewife Quadrangle to the Triangle.	Capital investment	New	Medium term
Develop an implementation plan and increase funding to complete gaps in the updated Bicycle Network Plan to create a completely connected network of high-quality infrastructure citywide.	Capital investment	New	Long term
Increase funding to improve multimodal access to key public facilities such as schools, parks, community centers, recreation centers, retail areas and libraries by adding crosswalks, bus shelters, protected bike lanes, bike parking, etc.	Capital investment	Expanded	Ongoing
Develop a program framework for shared micromobility services, including a scooter-share system.	Study or plan	New	Nearterm
Encourage and incentivize the use of sustainable transportation by City employees through increased transportation benefits and programming.	Programs and operations	Expanded	Ongoing

# 1 Expand access to sustainable transportation choices and the physical reach of sustainable transportation infrastructure. (Continued)

Action	Action Type	Status	Completion Timeframe
Collaborate with the MBTA on bus service planning to support bus priority initiatives—particularly in underserved areas—and advocate for additional service.	Regional partnerships	Expanded	Medium term
Update the Citywide Pedestrian Plan.	Study or plan	Modified	Nearterm
Undertake a community engagement process to prioritize the implementation of separated bicycle projects and bus priority treatments on key street segments.	Community interface and outreach	Existing	Near term
Use quick-build infrastructure to complete a network of separated bicycle facilities while long-term implementation of the Bicycle Network Plan is proceeding.	Capital investment	Existing	Medium term
Promote a shift to electric/clean emissions vehicles, including electric buses.	Community interface and outreach	Existing	Ongoing
Integrate planning efforts for walking, cycling, public transit, and other mobility services to ensure the highest degree of flexibility in mobility choices with minimal disruptions to connectivity between them.	Study or plan	Existing	Ongoing
Continue to provide reduced-priced bike share memberships to income-eligible people.	Programs and operations	Existing	Ongoing
Improve the health and wellbeing of Cambridge residents by prioritizing programs and projects that encourage active transportation, as outlined in the Community Health Improvement Plan and the Vehicle Trip Reduction Ordinance.	Capital investment	Existing	Ongoing
Supplement the public transportation network by owning, operating and expanding the regional bike-share system with Boston, Somerville, and Brookline.	Programs and operations	Existing	Ongoing

Action	Action Type	Status	Completion Timeframe
Ensure that streets reconstructed through the Five-Year Sidewalk and Street Reconstruction Plan, the Sewer Separation and Stormwater Programs, and development mitigation include sidewalks and bicycle facilities that adhere to the Complete Streets approach to design streets for all users.	Capital investment	Existing	Ongoing
Provide affordable transit access for low-income young people by offering the MBTA Youth Pass Program.	Programs and operations	Existing	Ongoing
Advocate for high-quality greenway links that complete gaps in the regional shared-use path network to alleviate cutthrough traffic in Cambridge.	Regional partnerships	Existing	Long term



 $Grand\ Junction\ Park\ in\ Kendall\ Square\ is\ the\ first\ constructed\ portion\ of\ the\ Grand\ Junction\ Greenway.$ 

## 2 Enhance existing sustainable transportation infrastructure to be more convenient, reliable, and resilient.

While Cambridge's infrastructure for walking, cycling, and transit is already well-developed compared to most US cities, infrastructure should be improved to make a more convenient and reliable mobility system for all users, including those using emerging mobility choices. This infrastructure also must be able to withstand the impacts of climate change.

"We need great public transportation options that are easy to access, cheap, and convenient in terms of stops and timing, with better public transport for people from elsewhere, so fewer cars are coming in town."

—Huron Village resident

Action	Action Type	Status	Completion Timeframe
Prepare transportation infrastructure to be resilient to periodic flooding, possible salt water contamination, and high temperatures associated with climate change by relocating mechanical and electrical equipment and introducing more passive cooling features.	Capital investment	New	Ongoing
Advocate for the MBTA to conduct a vulnerability assessment and preparedness planning of all transit facilities in Cambridge, primarily the Red Line.	Regional partnerships	New	Ongoing
Finalize a Transit Strategic Implementation Plan to create a high-quality transit experience in the city.	Study or plan	New	Nearterm
Develop a policy to allocate space within public rights- of-way to balance cars with sustainable modes of transportation.	Study or plan	New	Medium term
Collaborate with the MBTA to effectively implement next- generation Automatic Fare Collection, which will enable off-board fare payment and all-door boarding on all transit lines, reducing delays.	Regional partnerships	New	Medium term
Collaborate with the MBTA to review and modify bus layover locations to find increased efficiencies.	Regional partnerships	Expanded	Ongoing

Action	Action Type	Status	Completion Timeframe
Attract more people to walk, especially in high pedestrian traffic locations, through interventions such as: (a) adjusting signal timing to prioritize pedestrians; (b) installing raised crosswalks; (c) widening sidewalks and/or adding curb extensions; (d) converting underutilized vehicle space into pedestrian plazas and/or shared streets; (e) advocating to DCR for improvements along DCR-owned lands; and (f) developing guidelines for sidewalk widths for a range of sidewalk use types and volumes.	Capital investment	Existing	Ongoing
Increase bike parking in neighborhoods and at transit nodes.	Capital investment	Existing	Ongoing
Improve conditions for people biking in Cambridge and promote bicycling as a means of transportation through the Bicycle Program (e.g., Bicycle Committee, Bicycle Parking Program, bike workshops, and the implementation of the Cambridge Bicycle Plan).	Capital investment	Existing	Ongoing
Implement amenities as defined in the Bus Stop Improvement Program (including real-time information) as well as the Bus Shelter program to improve the experience of people using transit.	Capital investment	Existing	Ongoing

# **Mount Auburn Street Bus Priority**



In Fall 2018, the City of Cambridge and its project partners (Watertown, MBTA, and DCR) launched the Mount Auburn Street bus priority project to bring more efficient and reliable bus service to 12,000+ daily trips on MBTA routes 71 & 73. The City also expects shuttle riders and bicyclists to benefit. The pilot features:

- Dedicated, all-day bus & bike lanes
- "Queue jumps" at intersections giving priority to buses and shuttles
- Retimed traffic signals and transit signal priority

## 3 Enhance and expand safety infrastructure for all street users.

Safety of all street and transit users is the most important factor in developing Cambridge's mobility system. The City has already committed to Vision Zero, the goal

to eliminate all traffic fatalities and severe injuries. Cambridge should focus on these efforts to create a mobility system that is both safe and comfortable for all users.

Action	Action Type	Status	Completion Timeframe
Increase funding to improve intersection safety in locations with high rates of crashes.	Capital investment	New	Medium term
Develop a "walking school bus" program by hiring local residents to lead groups of children walking to school.	Programs and operations	New	Medium term
Commit funds to improve pedestrian comfort and safety on key streets and paths that connect the open space network, and keep them well maintained with periodic renovations.	Capital investment	Expanded	Ongoing
Expand the Safe Routes to School program to ensure all students receive pedestrian, transit, and bicycle education and are encouraged to use active transportation to commute to school.	Capital investment	Expanded	Medium term
Continue and enhance the pedestrian program to promote a more comfortable, safe, and pleasant environment for walking in Cambridge through public education and engagement, traffic law enforcement, and monitoring implementation of pedestrian improvements.	Community interface and outreach	Existing	Ongoing
Carry out the Vision Zero Action Plan to meet the goal of zero fatalities and severe injuries.	Capital investment	Existing	Ongoing
Design streets using physical measures to encourage people to drive more slowly, to provide a more livable environment and allow people to walk and bicycle more comfortably and safely.	Capital investment	Existing	Ongoing
Prioritize the safety and availability of mobility services for Cambridge seniors and residents with disabilities through door-to-door transportation programs.	Programs and operations	Existing	Ongoing
Develop a comprehensive database of mobility-related deaths and serious injuries to guide safety improvements.	Programs and operations	Existing	Ongoing

# **4** Adjust regulatory incentives and pricing of public assets like space for parking to limit unnecessary car trips and parking and to allocate public space effectively.

Incentives and pricing are two of the strongest tools the City has to influence how people use public assets, such as space on the street. Cambridge should encourage sustainable transportation choices and limit unnecessary use of the transportation system with these regulatory tools.

Parking and Transportation Demand Management Cambridge's Parking and Transportation Demand Management (PTDM) ordinance ensures that large property owners who increase parking will limit the percent of drive-alone trips to their properties, for example by offering discounted transit passes.

Action	Action Type	Status	Completion Timeframe
Implement demand-based pricing for all parking meters owned by the City of Cambridge to reduce the amount of driving spent looking for empty spaces and to improve parking availability for those driving while incentivizing the use of other modes.	Other regulatory changes	New	Medium term
Create an impact fee on new development proportional to a project's trip generation to support multimodal infrastructure and safety improvements.	Other regulatory changes	New	Medium term
Evaluate Residential Parking Permit pricing structure with the goal of supporting sustainable transportation	Study or plan	New	Medium term

"I envision transportation will be priced, automated, seamless, custromer-friendly, and focused."

-Visitor to Russell Field

#### **5** Adjust land use policy to support sustainable transportation choices.

Transportation choices are shaped by not only transportation infrastructure but also the types and density of uses that the infrastructure connects. For a transportation system to be most effective, land use policy should be coordinated to concentrate density near transit hubs, disincentivize driving when other choices are available, and co-locate uses like housing, neighborhood retail, and open space to incentivize walking.

See the chapter "Urban Form" on page 181 for relevant land use goals, strategies, and actions.

#### **Urban Design for Sustainable Mobility**

Cambridge's citywide urban design objectives, which are codified in the City's Zoning Ordinance, explicitly encourage new developments that are pedestrian-, bike-, and transit-friendly.

Action	Action Type	Status	Completion Timeframe
Change zoning to reduce maximum parking requirements near transit nodes and in key squares and corridors, with lowered parking requirements citywide, while balancing impacts of parking spillover on residential streets.	Zoning changes	New	Near term
Revise traffic impact study guidelines and process.	Zoning changes	New	Nearterm
Require development projects to minimize adverse traffic impacts by complying with Article 19 of the Zoning Ordinance, which establishes traffic and urban design standards and requires transportation demand management measures and mitigation measures.	Zoning changes	Existing	Ongoing

"I envision we will maintain communityoriented, walkable design."

-North Cambridge resident via online survey

# **6** Better manage freight movement to limit freight-related congestion and improve efficiency and safety.



Large trucks transport goods on mixed-use streets, such as Cambridge Street (pictured).

Freight transportation is an often overlooked issue, but goods movement is a key component of the mobility ecosystem. While the movement of goods is critical to a functional economy, trucking (especially by large trucks) is especially disruptive to quality of life in Cambridge and the movement of automobiles and bicycles. Deliveries are of particular concern, as they are growing in number with the rise of online shopping, and they generate more stops than traditional freight movement.

Action	Action Type	Status	Completion Timeframe
Study peak period pricing in loading zones to ensure that trucks find curb space without double parking.	Study or plan	New	Medium term
Advocate at the state level for improved regulation of truck safety.	Regional partnerships	Expanded	Ongoing
Advocate at the state level for policies that encourage use of smaller trucks for local deliveries.	Regional partnerships	Expanded	Ongoing
Require vehicles owned by the City and companies contracted with the City to have truck sideguards and other vehicle safety devices that reduce the likelihood of pedestrian and cyclist fatalities.	Other regulatory changes	Expanded	Near term
Create incentives and new loading zones that encourage large trucks to deliver off-peak.	Other regulatory changes	Expanded	Medium term
Analyze consolidated neighborhood delivery pick-up spots which can minimize excessive door-to-door deliveries and offer reduced shipping costs.	Study or plan	Expanded	Medium term
Increase enforcement of truck violations.	Programs and operations	Expanded	Medium term

# 7 Enhance public information on how to safely and efficiently move within and through Cambridge, and expand public education efforts on transportation safety.

A transportation system can be very efficient, but if people do not believe it serves their needs, know how to navigate the system, or use it reliably and safely, that efficiency is wasted. Modern communications

tools and an expanded education program will improve mobility, especially when grouped with improvements to physical infrastructure.

Action	Action Type	Status	Completion Timeframe
Investigate working with nearby driver's education programs to enhance curricula and offer mobility education workshops.	Study or plan	New	Medium term
Expand and increase funding for marketing of sustainable transportation modes within the city, in order to encourage broader participation, with a focus on better translation and interpretation services.	Programs and operations	Expanded	Ongoing
Display real-time information at City buildings, in locations near mobility services, at bus stops, and on City websites to expand the availability, accessibility, and visibility of transit, bike share, and car share services.	Capital investment	Expanded	Ongoing
Expand citywide pedestrian and bike wayfinding between key destinations, such as transit hubs, bike-share locations, and community resources like libraries, retail areas, and parks.	Capital investment	Expanded	Medium term
Continue outreach and education programs and events (e.g. CitySmart, Park(ing) Day, Cambridge Street Code, Getting Around Cambridge map and magazine, and Walk/Ride Day) to connect residents with information and resources to encourage the use of sustainable transportation.	Community interface and outreach	Existing	Ongoing

# **8** Establish new regulatory frameworks to prepare for technology-driven disruptions in mobility systems.

#### **Autonomous Vehicles**

In April 2018, the Cambridge City Council voted to allow testing of autonomous vehicles on city streets, as long as those vehicles have appropriate safety oversight, obey posted speed limits, and submit all data to the City of Cambridge.

Technology is changing the way people and goods move through the city, and more change is likely to come soon. Regulations and physical infrastructure will both need to adapt to this shifting context to ensure our transportation system is focused on people's safety, convenience, sustainability, and efficiency of movement.

Action	Action Type	Status	Completion Timeframe
Prepare for the introduction of autonomous vehicles and motorized micromobility devices by developing policies that address equity and safety, and ensure that vehicles are both shared and electric.	Other regulatory changes	Modified	Ongoing
Create policies for flexible curb regulations using new sign designs, pricing, and electronics within business districts at times of increased demand. These regulations should better accommodate loading, bike and scooter parking, transit lanes, and shared-ride or autonomous vehicle loading.	Other regulatory changes	Modified	Medium term
Develop and implement a ride-hail curb use management policy to ensure the safety of other road users.	Other regulatory changes	Existing	Ongoing

"I envision transportation will be more autonomous and seamless."

-Visitor to Alewife

# **9** Advocate for the expansion of sustainable transportation infrastructure across the region, especially where it will directly impact traffic in Cambridge.

Many of Cambridge's mobility challenges are rooted in regional gaps in the multimodal transportation system, resulting from decades of underinvestment in non-automobile infrastructure.

Cambridge cannot rebalance regional mobility infrastructure alone, and it should work with other communities and state agencies to advance its policy goals.



An MBTA Commuter Rail Fitchburg train entering Porter Square Station.

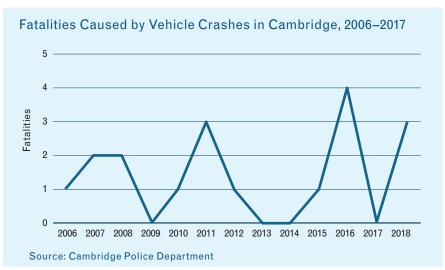
Action	Action Type	Status	Completion Timeframe
Work with regional partners to study a Charles River ferry or water taxi service.	Study or plan	New	Long term
Advocate for new funding sources for the MBTA and/or regional transit improvements.	Regional partnerships	Expanded	Ongoing
Partner with surrounding communities to create multi- jurisdictional bus rapid transit and bus priority routes. For example, collaborate with MassDOT and Boston on Route 1 improvements, with Watertown on Route 71 and Route 73 improvements, with Arlington on Route 77 improvements, and with MassDOT and the MBTA on bus priority for all routes entering and exiting Alewife Station.	Regional partnerships	Expanded	Near term
Work with MassDOT to advocate for urban rail on the Fitchburg Line and along the Grand Junction Railroad.	Regional partnerships	Expanded	Medium term
Create a conceptual design and continue to explore demand for two-track rail service (in conjunction with a bike/ pedestrian path) on the Grand Junction rail corridor between a future West Station and North Station.	Study or plan	Existing	Ongoing
To reduce cut-through traffic, promote state transportation infrastructure improvements, such as the bus/bike/pedestrian only Inner Belt Bridge, to enable reliable crosstown bus service between Sullivan Square, Kendall Square, and the Longwood Medical Area.	Regional partnerships	Existing	Ongoing
Advocate for regional solutions, including coordination between municipalities, employers, and other stakeholders, to move commuters from cars to transit.	Regional partnerships	Existing	Ongoing
Advocate for transit expansions, including extending the Green Line from Union to Porter, introducing light rail service along the Grand Junction between West Station and North Station, providing new Sullivan-Kendall-Kenmore-LMA bus service on the proposed CT4 alignment, constructing the Red-Blue connector, and introducing urban rail service on the Fitchburg Line.	Regional partnerships	Existing	Ongoing
Encourage property owners and employers to promote the use of mass transit, bicycling, walking, and carpooling to reduce vehicle traffic congestion and air pollution.	Community interface and outreach	Existing	Ongoing

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# **Indicators and Targets**

## **Progress Toward Vision Zero**

The City of Cambridge's Vision Zero policy sets a goal to eliminate traffic fatalities and serious injuries, while encouraging active living and improving comfort for pedestrians and cyclists. This indicator tracks Cambridge's ongoing progress toward this goal.



Indicator	Baseline	2030 Target
Number of fatalities caused by vehicle crashes	Significant variability from year to year, ranging from zero to four fatalities since 2006. See above chart for more information.	fatalities each year
Number of serious injuries caused by vehicle crashes	A data source is currently being investigated by the Vision Zero team.	serious injuries each year

Source: Cambridge Police and research via Vision Zero

## **How Residents and Employees Commute to Work**

The US Census Bureau's American Community Survey reports mode share for residents and employees annually. Tracking this data will illustrate success in reducing automobile dependence for both residents and employees.



Pedestrians, cyclists, automobiles, and the private Longwood Medical Area (LMA) Shuttle sharing the street along Main Street.

Indicator	2016 Baseline	2030 Target
Percent of people who work in Cambridge that drive alone to work	42%	32%
Percent of people who live in Cambridge that drive alone to work	26%	21%

Source: American Community Survey, 3-year averages

#### Walking and Bicycling Infrastructure

Modal access indicators measure progress towards improving important multi-modal infrastructure and expanding access for all to a variety of mobility modes.

Indicator:	Baseline	2030 Target
Bicycle infrastructure comfort level	of street segments in the Bicycle Network Plan meet the City's standard for bicycle comfort level in 2018	of street segments in the Bicycle Network Plan meet the City's standard for bicycle comfort level
Intersection comfort level for pedestrians	This measure has not been developed and data has not been collected. The Community Development Department will develop this indicator, contingent on the approval of funding.	A target for this indicator will be set upon development of the indicator and collection of baseline data.
	Source: City of Cambridge Community Development Department	

# Modes of Transport for all Trip Types by Neighborhood

Current data on mode share comes from the US Census, which asks about travel to work. To fully understand travel choices for Cambridge residents, it is important to understand the mode share of all trip types.

Indicator	Baseline	2030 Target
Percent of trips made by single-occupancy vehicles (all trip types)	This data has not yet been collected. The Cambridge Community Development Department will administer a new survey to collect this information.	A target for this indicator will be set upon collection of baseline data.
	Source: City of Cambridge Community Development Department	

#### **Access to Transportation Modes**

Measuring the number of transportation options that the average Cantabrigian has available is an indicator of overall freedom of movement.

One measure is the average number of high-quality transportation options available to Cambridge residents and workers, measured by whether their home or work is within:

- a quarter-mile to a bike-share dock
- a quarter-mile to a bicycle facility with a bicycle level of comfort of 1 or 2 (as defined by CDD)
- 150 feet to a pedestrian crossing
- a half-mile to an MBTA rapid transit station or a bus stop with a scheduled peak-hour frequency of 10 minutes or less (six buses per hour from 7am to 9am and 4pm to 6:30pm)

Related measures show how near people live to the bus or subway.



A bike-share dock in Harvard Square.

#### Indicator

Average number of mobility options available to residents of Cambridge

Average number of mobility options available to people working in Cambridge

Residents with access to an MBTA subway line

Residents with access to an MBTA high-frequency bus

#### Baseline

This data is currently being collected.

This data is currently being collected.

48%

residents live within 0.5 miles of an MBTA subway station

39%

residents live within 0.25 miles of a high frequency bus line

#### 2030 Target

This target will be set once the initial data is analyzed.

This target will be set once the initial data is analyzed.

68%

residents live within 0.5 miles of an MBTA subway station

**59%** 

residents live within 0.25 miles of a high frequency bus line

Source: American Community Survey 5-year estimates, Bluebikes, Cambridge Bicycle Infrastructure Data, MBTA

