



Beyond Mobility

Massachusetts 2050
Transportation Plan



EXECUTIVE SUMMARY

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Massachusetts Commission Against Discrimination (MCAD)

One Ashburton Place, 6th Floor
Boston, MA 02109
Phone: 617-994-6000
TTY: 617-994-6196

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Office of Diversity and Civil Rights Massachusetts Department of Transportation

10 Park Plaza—3rd floor
Boston, MA 02116-3969

Phone: 857-368-8580

TTY: 857-368-0603

Fax: 857-368-0602

Email: MASSDOT.CivilRights@state.ma.us

Office hours: 9:00am to 5:00pm

This notice is available from the Office of Diversity and Civil Rights in large print, on audio tape, and in Braille upon request.

Additional Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

MassDOT, Title VI Specialist, Office of Diversity and Civil Rights

10 Park Plaza

Boston, MA 02116

857-368-8580

TTY: 857-368-0603

MASSDOT.CivilRights@state.ma.us

massDOT
Massachusetts Department of Transportation

Translations

ENGLISH | If this information is needed in another language, please contact the MassDOT Title VI Specialist at 857-368-8580.

PORTUGUESE | Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MassDOT pelo telefone 857-368-8580.

SPANISH | Si necesita esta información en otro idioma, por favor contacte al especialista de MassDOT del Título VI al 857-368-8580.

CHINESE SIMPLIFIED (MAINLAND AND SINGAPORE) | 如果需要使用其它语言了解信息，请联系马萨诸塞州交通部（MassDOT）《民权法案》第六章专员，电话857-368-8580。

CHINESE SIMPLIFIED (HONG KONG AND TAIWAN) | 如果需要使用其它語言了解信息，請聯繫馬薩諸塞州交通部（MassDOT）《民權法案》第六章專員，電話857-368-8580。

CHINESE SIMPLIFIED | Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь со специалистом по Титулу VI Департамента Транспорта штата Массачусетс (MassDOT) по тел: 857-368-8580.

HAITIAN CREOLE | Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Espesyalis MassDOT Title VI la nan nimewo 857-368-8580.

VIETNAMESE | Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Chuyên viên Luật VI của MassDOT theo số điện thoại 857-368-8580.

FRENCH | Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le spécialiste du Titre VI de MassDOT en composant le 857-368-8580.

ITALIAN | Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare lo Specialista MassDOT del Titolo VI al numero 857-368-8580.

KHMER | ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែព័ត៌មាននេះ សូមទាក់ទងអ្នកឯកទេសលើជំពូកទី6 របស់MassDot តាមរយៈលេខទូរស័ព្ទ 857-368-8580

ARABIC |

إن كنت بحاجة إلى هذه المعلومات بلغة أخرى، يُرجى الاتصال بأخصائي الفقرة السادسة على الهاتف

857-368-8580





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Purpose of Plan

Massachusetts' 2050 Statewide Long Range Transportation Plan, *Beyond Mobility*, is a strategic plan that documents the most pressing transportation issues for the Commonwealth of Massachusetts to address both now and in the future. As the primary steward of the Commonwealth's transportation system, the Massachusetts Department of Transportation (MassDOT) has developed a plan that crafts a vision and a set of actions for MassDOT and the Massachusetts Bay Transportation Authority (MBTA) to take to achieve a safer and more equitable, reliable, and resilient network. The action items documented in this plan respond directly to problems identified through extensive public engagement and data analysis performed as part of the process of building *Beyond Mobility*.

Each state is required by federal regulation to prepare a statewide long range transportation plan that provides for the development and implementation of the multimodal transportation system over a 20-year time horizon or longer. MassDOT has developed a document that goes *above and beyond* federal requirements to understand and meet the transportation needs of the Commonwealth's residents, visitors, and businesses.

The title of this Plan, *Beyond Mobility*, refers to the idea that equitable transportation planning is about more than just moving vehicles efficiently. Our transportation system is how people access *opportunity*—education, fulfilling jobs, and community and civic spaces. Good transportation planning also keeps our communities *clean* from environmental pollution, ensures the *safety* of all travelers using transit and roadways in Massachusetts, and makes *healthy and affordable choices*—like walking or biking—the easiest choices. Foundationally, this plan is about *equity* and creating a more just future. To that end, *Beyond Mobility* moves toward *centering people* in how MassDOT plans for the coming decades.

Beyond Mobility is structured by the following six “Priority Areas.” Each Priority Area contains a vision statement as well as a set of values, problem statements, performance measures, and action items:

- 
- SAFETY** refers to the ability of travelers to move through the transportation system free of physical or other harms.
 - RELIABILITY** refers to the consistency of transportation network conditions and predictability of travel times across modes.
 - SUPPORTING CLEAN TRANSPORTATION** refers to the transportation network's ability to accommodate carbon-free travel modes.
 - DESTINATION CONNECTIVITY** refers to the degree to which travelers of any mode can access opportunities and the places they need or want to go.
 - RESILIENCY** refers to the ability of the transportation network to anticipate, prepare for, and withstand the ongoing impacts of climate change.
 - TRAVEL EXPERIENCE** refers to conditions faced by travelers throughout the transportation network, including level of comfort and state of good repair.

Beyond Mobility Planning Process

The development of *Beyond Mobility* involved extensive public engagement, data analysis, and scenario planning to develop a comprehensive understanding of Massachusetts' largest transportation challenges as well as its greatest opportunities. This effort was undertaken in two phases: Phase 1 documented key transportation problems and defined the shared vision and values for long-term transportation planning, while Phase 2 developed a robust Action Plan of strategies responding to the key transportation challenges to achieve our vision.

Phase 1: Documented key transportation problems and defined the shared vision and values for long-term transportation decision-making.



PUBLIC OUTREACH. Targeted a diverse set of stakeholders and underserved communities using a variety of engagement techniques.



NEEDS ASSESSMENT. Performed quantitative analysis to define key challenges and disparities in transportation outcomes across communities.



PREVIOUS PLANNING EFFORTS. Inventoried existing plans, policies, and directives across the Commonwealth.



PRIORITY AREAS. Priorities defined by public input encompassing a comprehensive set of transportation needs.

Phase 2: Developed a robust Action Plan of strategies responding to key transportation challenges to achieve our vision.



ACTION ITEMS. Developed strategies and actions to address visions, values, and Problem Statements.



SCENARIO PLANNING. Explored which actions may be more pressing under different scenarios to support robust decision-making.



PERFORMANCE-BASED PLANNING. Identified performance measures to track progress towards desired outcomes.

Public engagement established the foundation of all phases of *Beyond Mobility*, including the assessment of needs, problems, visions, values, and solutions. All of the Plan's content is informed directly by ideas Massachusetts residents have about how the Commonwealth's transportation system could better serve their needs, as shared in focus groups, interviews, stakeholder workshops, and surveys. Chapter 3 and Appendix A contain a thorough summary of all *Beyond Mobility* public engagement findings.

Our approach to public engagement was dynamic and designed to make participation easy through quick interactions and conversations in the places where people already work and live. MassDOT shared updates on plan development and engagement opportunities on the project website, social media, via email, through media outlets and advertisements catering to specific ethnic subgroups, and flyer hand-outs in over five languages. This ensured that diverse residents and stakeholders were aware of opportunities to share their perspectives.

Engagement activities collected input on transportation challenges across the Commonwealth and highlighted differences in priorities and needs facing different demographic groups and geographic areas. Input from Environmental Justice (EJ) communities was a large focus of all *Beyond Mobility* outreach efforts, as EJ communities are deeply affected by transportation policy and experience disproportionately negative outcomes of the transportation system. Public comments collected through prior planning processes in the Commonwealth also informed *Beyond Mobility*, adding valuable historical, localized, and mode-specific context.



Overall, the public engagement process included outreach and feedback efforts resulting in over 5,000 pieces of unique feedback. Engagement methods included:

- ✓ **3,650** responses to two public surveys
- ✓ **6** multilingual and multicultural focus groups and interviews
- ✓ **1** virtual public meeting
- ✓ **10** Meeting-in-a-Box interactions with community stakeholders
- ✓ **11** community activations in underserved communities
- ✓ **22** stakeholder interviews



In addition to using extensive public feedback to shape the vision statements, priorities, and actions included in *Beyond Mobility*, a quantitative Needs Assessment was performed to put the stories we heard on people's lived experiences into a larger context. The *Beyond Mobility* Needs Assessment analyzed how lack of service, congestion, poor safety, asset condition, and limited access to destinations may disproportionately impact different groups based on geography, demographics, and access to public transit.

The Needs Assessment was driven by analyses that incorporated data on social and geographic equity and publicly available key indicators falling under each of the Plan's six Priority Areas, which informed the Problem Statements and Action Items within each Priority Area.

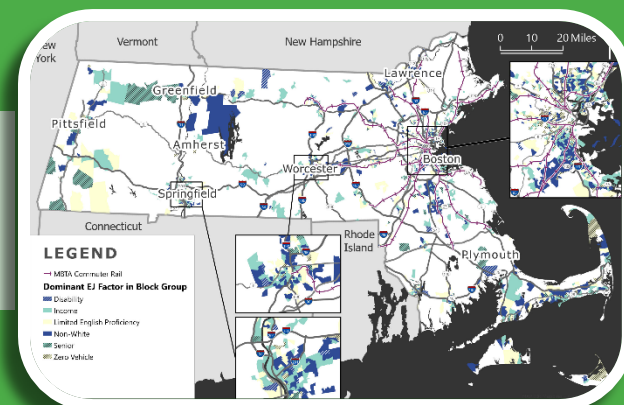
To better understand differences in transportation outcomes across demographic groups and to perform “equity checks” on key data points, MassDOT developed the *Beyond Mobility* Regional Environmental Justice Plus (REJ+) data layer, which was used to identify communities with a higher concentration of any of the six following categories relative to nearby communities:

- Low-income households;
- Non-white households;
- People with limited English proficiency;
- Households without access to a vehicle;
- People with disabilities; and
- People aged 65 years and over.

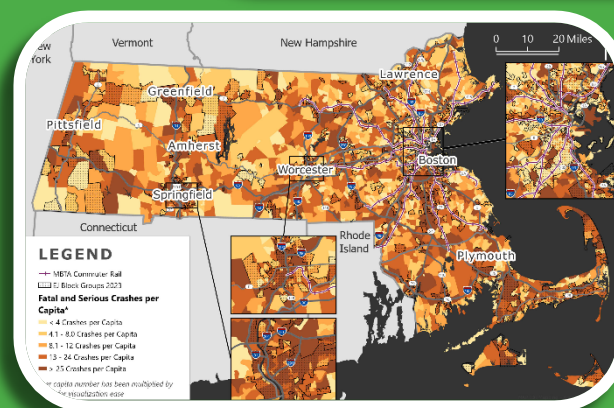
Quantitative analysis of needs expanded upon public and stakeholder input. In-depth information gathering, mapping, and analysis helped identify transportation-related barriers, needs, and inequities throughout the Commonwealth. Data analysis results were summarized, highlighting challenges across a variety of areas such as safety, state of good repair, multimodal accessibility, and more.

For more in-depth description of these findings, see Chapter 4 and Appendix C of the Plan.

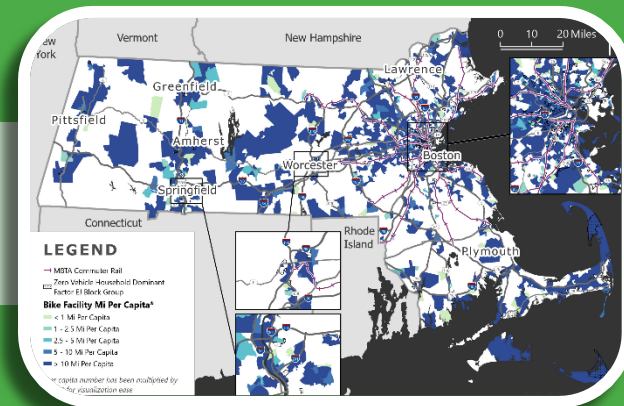
EQUITY AREAS OF FOCUS, MOST DOMINANT EQUITY FACTOR BY REGION

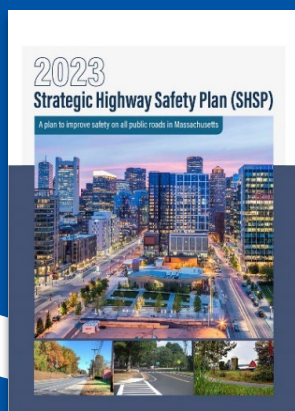
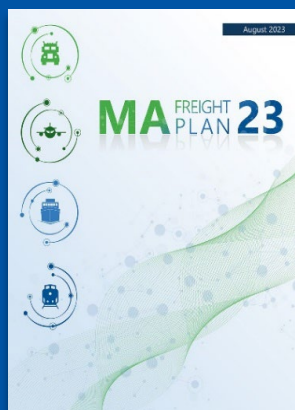
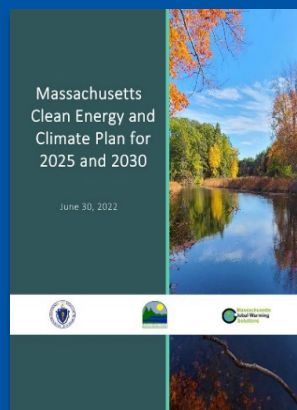
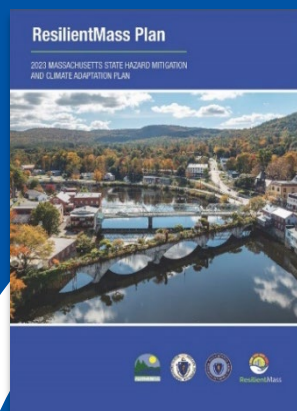


FATAL AND SERIOUS INJURY CRASHES (2017-2019)



EXISTING AND PLANNED BIKE FACILITIES PER CAPITA





MassDOT recognizes that transportation is one component of interconnected systems including public health, economic development, housing, and climate. As such, *Beyond Mobility* is designed to both learn from and support other statewide planning efforts and policies.

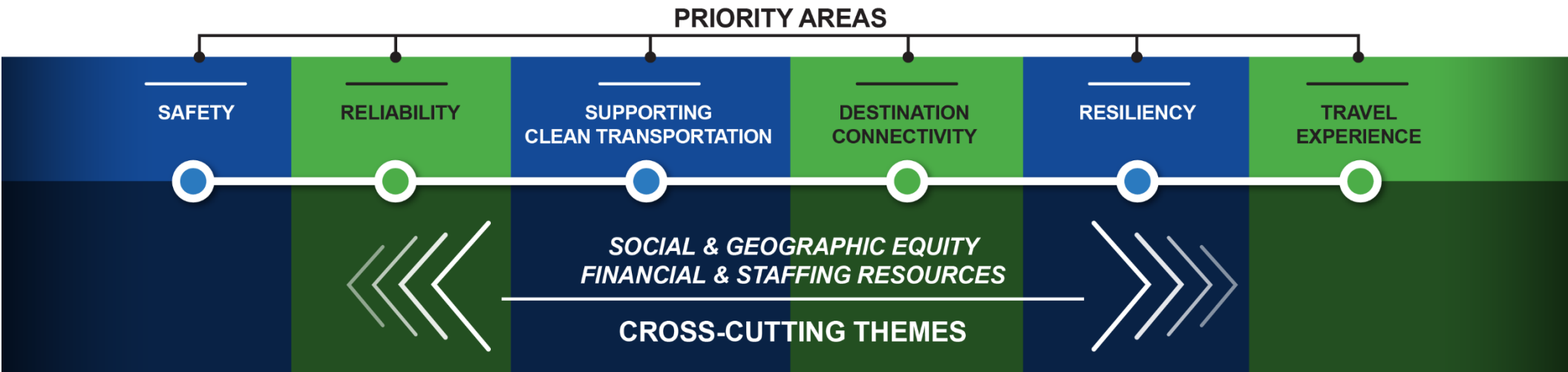
Municipalities, other state agencies, and Metropolitan Planning Organizations (MPOs) play a critical role in advancing the Commonwealth's shared vision for a better transportation future. *Beyond Mobility* reviewed related local and regional plans, engaged with local stakeholders, and sought insights from subject matter experts. Together, these efforts ensure strong linkages between *Beyond Mobility* and other planning and implementation efforts.

Beyond Mobility builds upon the existing conditions, identified challenges, and other transportation elements of existing reports, plans, and programs, such as:

- *ResilientMass / State Hazard Mitigation and Climate Adaptation Plan* (2023).
- *Comprehensive Economic Development Plan*, Massachusetts Executive Office of Housing and Livable Communities (2023).
- The *MBTA Strategic Plan* (2023).
- *Massachusetts Clean Energy and Climate Plan for 2025 and 2030*, Massachusetts Executive Office of Energy and Environmental Affairs (2022).
- Prior MassDOT modal plans, including the *Freight Plan* (2023), *Bicycle Plan* and *Pedestrian Plan* (2019), the *Bicycle and Pedestrian Plan Update* (2021), and the *State Rail Plan* (2018).
- Prior MassDOT policy reports, including *Congestion in the Commonwealth* (2019) and the *Report of the Commission on the Future of Transportation in the Commonwealth* (2018).
- Safety plans and programs, including the Highway Safety Improvement Program (HSIP), *Strategic Highway Safety Plan* (SHSP), and public transportation agency safety plans.

Beyond Mobility Priority Areas

Six Priority Areas and two cross-cutting themes emerged from the public engagement and data analysis activities described above. Each Priority Area contains a vision statement as well as a set of values to which MassDOT will adhere in the pursuit of each vision, Problem Statements unique to each Priority Area, Action Items to take directly in response to stated problems, and performance measures that can be used to evaluate progress toward achieving outcomes.



The cross-cutting themes of “Social and Geographic Equity” and “Financial and Staffing Resources” underlie all six Priority Areas. These themes represent both MassDOT’s commitment to growing its focus in these areas and the understanding that these themes relate to each Priority Area in a distinct way.

CROSS-CUTTING THEME: SOCIAL & GEOGRAPHIC EQUITY

For MassDOT, equity refers to the critical need to ensure that people, communities, and lived experiences are prioritized in MassDOT’s work. MassDOT recognizes this has not always been the case, leading to significant inconsistencies in how people in different communities are affected by and utilize the Commonwealth’s transportation system.

Equity is not just a single outcome; it should be integrated throughout all processes. Equity means going *beyond* the bare minimum for public engagement, data analysis, and planning. For example, as part of the *Beyond Mobility* planning process, MassDOT activated street teams, held multicultural and multilingual focus groups, and deployed dynamic strategies like Meeting-in-a-Box to ensure engagement prioritized historically underserved communities including but not limited to non-English speakers, lower-income residents, tribal organizations, and youth.

MassDOT is committed to advancing transportation equity and mobility justice for all users of the transportation system. Social and geographic equity will continue to be a systemic element throughout every aspect of MassDOT’s policies, programs, projects, initiatives, and investments.

**ENVIRONMENTAL JUSTICE COMMUNITIES
HAVE 18.4 TIMES MORE ROADWAY MILES
AT HIGH RISK FOR PEDESTRIAN CRASHES
AND 13.7 TIMES MORE ROADWAY MILES AT HIGH
RISK FOR BICYCLE CRASHES
THAN ALL OTHER COMMUNITIES.**

CROSS-CUTTING THEME: FINANCIAL & STAFFING RESOURCES

MassDOT cannot realize the vision of *Beyond Mobility* without dedicated funding programs (existing and new), flexibility in how that funding can be used, necessary staffing resources to manage that funding, and responsible program stewardship.

**OVER 3,000 EMPLOYEES WORK AT MASSDOT,
INCLUDING OFFICE AND ADMINISTRATIVE
WORKERS, BUS DRIVERS, CIVIL ENGINEERS,
HIGHWAY DESIGNERS, SKILLED TECHNICIANS,
TRANSPORTATION PLANNERS, AND LABORERS.**

To be successful, MassDOT must leverage formula and discretionary funding and seek additional resources to ensure that ongoing needs are met and that appropriate system expansions and upgrades are realized.

Additionally, MassDOT needs an expanded workforce and strong organizational structure to ensure resiliency and responsiveness to the recurring and sometimes unexpected challenges that lie ahead. For example, to be in a position to maximize the use of all new funding opportunities, MassDOT will need to grow its workforce to ensure existing organizational capacity is in place in the proper areas.

Although many of the challenges MassDOT and the MBTA face in this area center around workforce challenges and the lack of funding flexibility, the availability of funding is a particular issue for rail and transit needs. This leads to funding shortfalls in areas required to maintain a consistent level of service on passenger and freight railways in the state.

PRIORITY AREA: SAFETY



VISION

By 2050, Massachusetts will have made significant progress toward advancing a future without transportation-related serious injuries and fatalities and will have eliminated the disparity in crash rates between Environmental Justice communities and all other groups. Residents will experience no infrastructure-related safety risks when walking, bicycling, rolling, driving, and riding transit within any community in Massachusetts.



VALUES

MassDOT is committed to addressing safety risks through a **human-centered lens** and a **Safe System Approach**.

MassDOT is committed to moving toward a future with zero roadway fatalities and serious injuries statewide in line with the “**Vision Zero**” initiative.

MassDOT is committed to helping realize **safer speeds** across the Commonwealth to prevent serious crashes.

MassDOT is committed to promoting **transit safety** through coordinating with transit providers on safety initiatives, rail transit operations, capital project delivery, and other activities.

PRIORITY AREA: RELIABILITY



VISION

By 2050, people traveling by any mode or for any trip purpose in Massachusetts will be able to expect consistent travel times at any time of day.



VALUES

MassDOT is committed to **prioritizing reduced car travel** and reliance on single-occupancy vehicles as the priority strategy for reducing the recurring congestion that contributes to unreliable travel times.

MassDOT is committed to ensuring that travelers can expect **consistency and dependability** in travel times for all modes and at all times of day.

MassDOT **does not believe in roadway expansion** as a means to reduce congestion.

PRIORITY AREA: SUPPORTING CLEAN TRANSPORTATION



VISION

By 2050, MassDOT will have made significant progress in electrifying public transit and investing in other low- or no-emission technology, strategically leveraged assets to address critical electric vehicle charging infrastructure gaps, and made investments in infrastructure and initiatives to promote significantly more trips using carbon-free modes such as walking and bicycling.



VALUES

MassDOT will be intentional about **investing in carbon-free transportation infrastructure** that benefits Environmental Justice communities. MassDOT will incorporate climate science and data into key decision-making processes to ensure the best and most up-to-date science.

MassDOT is committed to ensuring that **fast charging infrastructure** along major highways promotes ease of access to charging for drivers of electric vehicles.

MassDOT is committed to **supporting the transition to low- and zero-emission public transit fleets** and the maintenance facilities required to support this transition.

MassDOT believes that fully achieving decarbonization goals must involve a multi-pronged and systems thinking approach that goes beyond electrification to emphasize the importance of **moving more people with fewer vehicles** and cross-disciplinary problem solving.

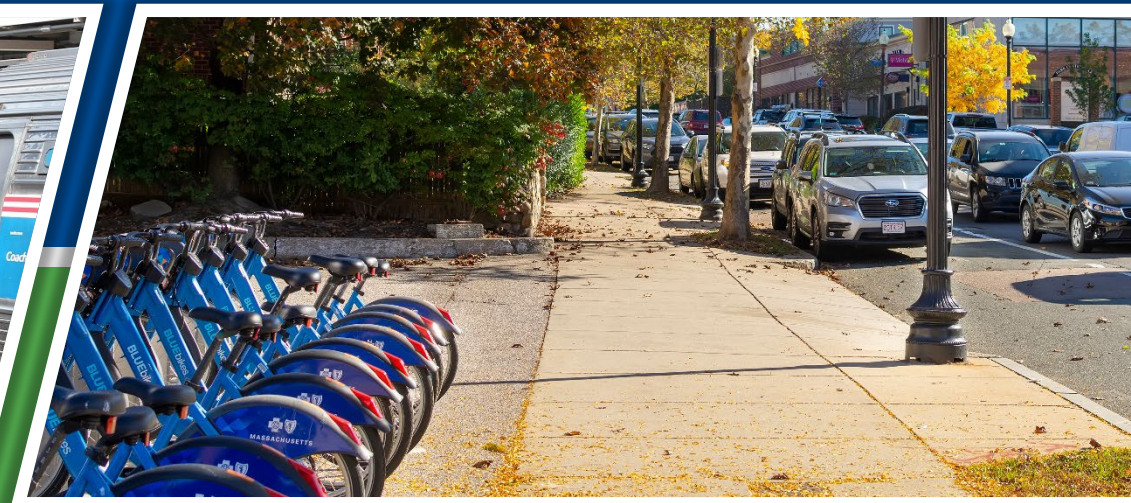
MassDOT will collaborate on decarbonization efforts **across the government** and ensure decarbonization efforts are consistent with other state agencies' efforts.

PRIORITY AREA: DESTINATION CONNECTIVITY



VISION

By 2050, due to targeted investments that have expanded access to everyday destinations for transit-critical and historically underserved communities statewide, there will be significantly more modal options, more equitable travel times, increased transportation choices, and far fewer first- and last-mile gaps for these communities.



VALUES

MassDOT believes that the primary purpose of the transportation system is to **connect people to the places that they need and want to go**.

MassDOT believes in the importance of measuring how **people, rather than just vehicles**, pass through the transportation system.

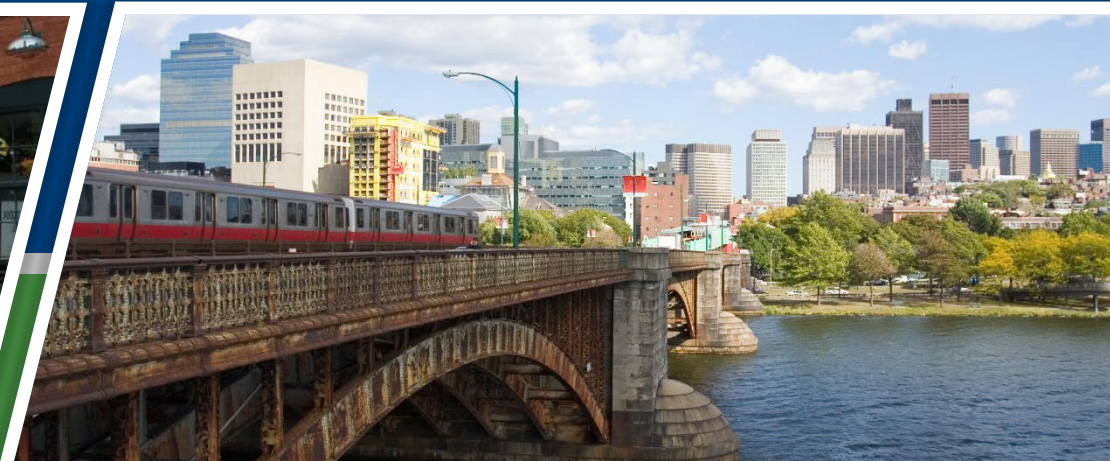
MassDOT is committed to the principle that a “**regional rail**” system with expanded service throughout the day is critical to building a stronger and more inclusive state economy.

MassDOT is committed to supporting **robust on-demand transit services** using dedicated drivers and vehicles across the Commonwealth, especially in communities served by Regional Transit Authorities (RTAs) that may not have and/or lack the density to support fixed-route service.

PRIORITY AREA: RESILIENCY

VISION

By 2050, significant investments to mitigate climate threats and impacts (such as urban heat islands, flooding, sea level rise, and stormwater runoff) have protected transportation assets against natural hazards and climate change impacts.



VALUES

MassDOT will be proactive about **understanding the elements of the network at the highest risk from climate change** and implementing strategies to reduce these risks.

MassDOT will **pursue resiliency efforts across the entire agency**, including each modal division and all shared services.

MassDOT investment decisions about new transportation infrastructure will **take into account floodplains and sea level rise projections**.

MassDOT will **prioritize resiliency improvements by targeting the largest risks from climate change impacts**, including sea level rise and flooding.

Acknowledging that a whole-of-government approach is needed to tackle the climate crisis, MassDOT will collaborate on resiliency efforts **across the government** and ensure resiliency efforts are consistent with other state agencies' efforts.

PRIORITY AREA: TRAVEL EXPERIENCE

VISION

By 2050, equitable access to a high-quality and well-maintained transportation network will be expanded throughout the Commonwealth, with special attention to Environmental Justice and rural communities. The system's state of good repair will be routinely positive and maintenance backlogs will be minimal. Enhanced wayfinding and information will support systemwide navigation for users of all ages, abilities, and languages. Transit facilities will be safe, clean, and comfortable with modern seating, lighting, and features that improve users' experiences.



VALUES

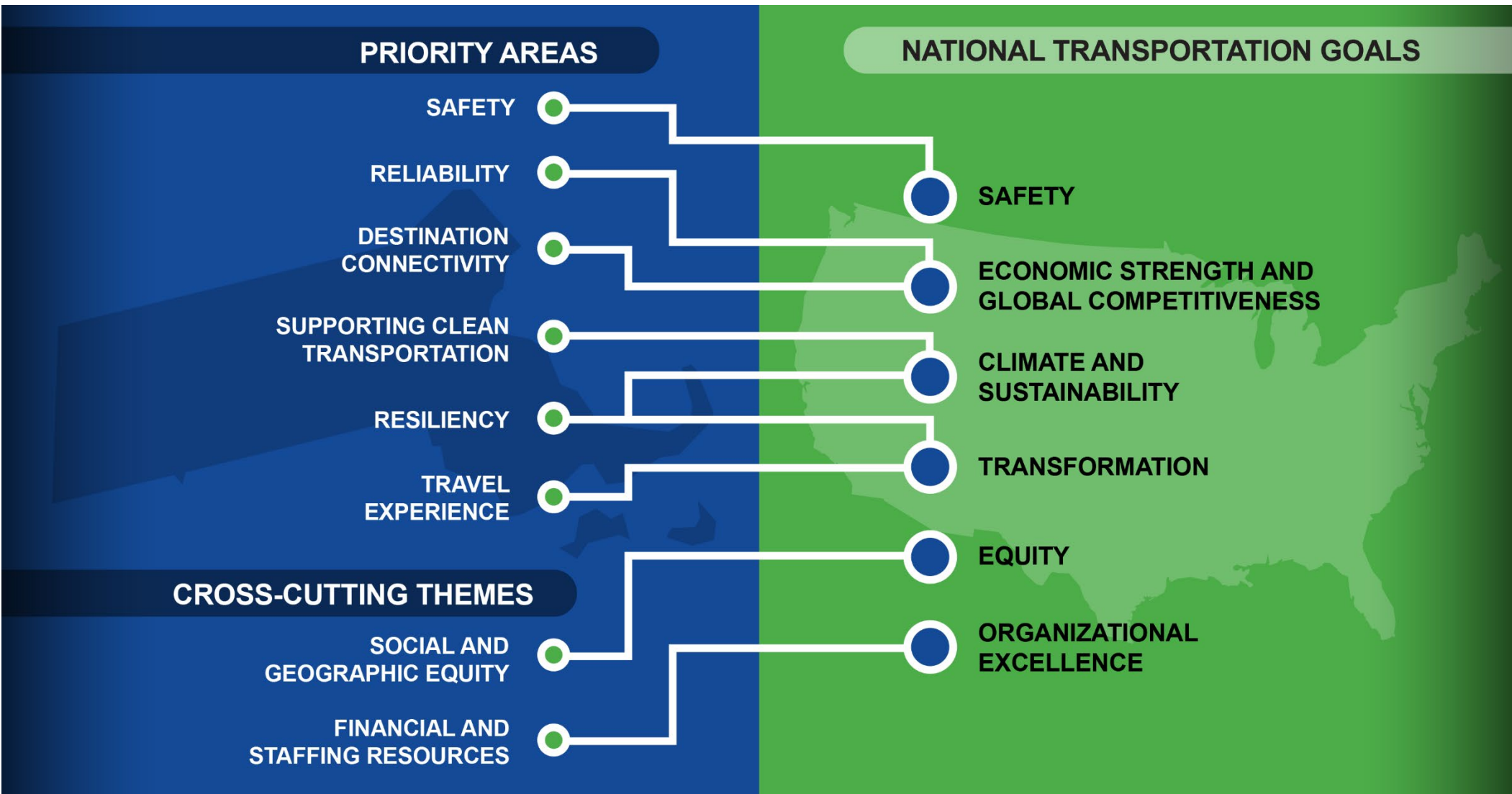
MassDOT believes that achieving a state of good repair for all transportation assets is important not only for a more pleasant and comfortable travel experience but also for **maintaining overall system quality**.

MassDOT believes that **all travelers in the state deserve** a transportation system that is easy to understand, ADA accessible, inclusive of signage and wayfinding on transit and roadways, and contains dynamic traveler information services and resources.

Consistent with statewide environmental goals, MassDOT's improvements in travel experience will be used to **encourage modal shift** from single occupancy vehicles to public and active transportation modes.

ALIGNMENT WITH NATIONAL TRANSPORTATION GOALS

Alignment with [national strategic goals set by the U.S. Department of Transportation \(USDOT\)](#) is a key component of ensuring that MassDOT supports national priorities and common goals such as safety and equity. The following graphic highlights how *Beyond Mobility* Priority Areas align with the USDOT strategic goals.



Plan of Action

Beyond Mobility outlines a robust plan of actionable next steps that address identified problems and denote responsible parties both within the organization and among partner agencies.

Each Priority Area identifies Problem Statements that highlight challenges faced by residents and others traveling in Massachusetts. The Problem Statements were developed based on public and stakeholder input as well as site-specific and systemwide Needs Assessments of current and future conditions.

The Action Items directly respond to these Problem Statements, organized by Priority Area. The Action Plan accounts for the ongoing initiatives and programs MassDOT and its partner agencies are already involved in, as well as proposes new strategies. The section below provides a one-sentence summary of each Action Item. Additional detail is included in Chapter 5 (“Action Items”).

Each Action Item falls into one of five categories:

- **POLICY AND PROGRAMMING EFFORTS.** The formulation of new policies and/or funding programs that address identified problems.
- **RESEARCH.** The development of scopes of work and/or Problem Statements in response to the issues identified, serving as a “Research Roadmap” for MassDOT and its partner agencies.
- **PARTNERSHIPS.** Coordination with regional, local, and Federal partners to advance new initiatives and ideas.
- **CAPITAL PLANNING EFFORTS.** Changes to MassDOT and MBTA capital plan budget program sizes and/or processes that direct funding within each program.
- **OPERATIONAL IMPROVEMENTS.** Changes to the operation of transportation services that would address identified problems.

Ongoing collaboration and coordination are essential to the success of these initiatives. To successfully implement these Action Items, MassDOT will work with a wide range of key partners, including:

- MBTA and RTAs.
- State agencies such as Massachusetts Department of Conservation and Recreation, Massachusetts Department of Environmental Protection, and Massachusetts Department of Fish and Game.
- Municipal, regional, and local public agencies and organizations.
- Non-profit, advocacy, and community organizations.
- USDOT modal administrations.
- Universities and research institutions.
- Private sector.

PRIORITY AREA: SAFETY

Problem Statement 1:

Environmental Justice (EJ) Communities—areas with larger populations of low income, limited English proficiency, and/or residents of color—are disproportionately burdened by transportation-related injuries and deaths on roadways, particularly those involving pedestrians and people on bicycles.

ACTION ITEMS:

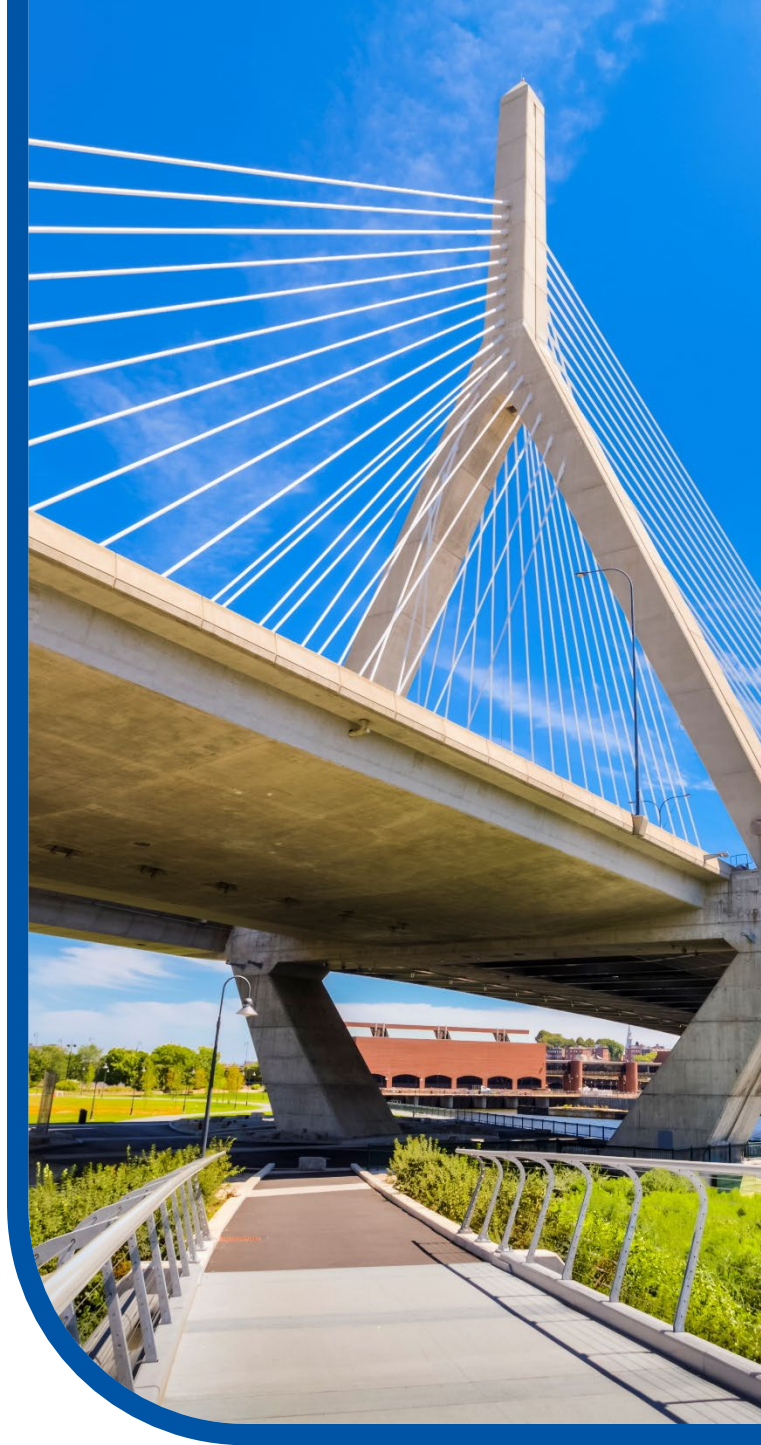
- 1.1 Build a bench of safety projects specifically in EJ communities in coordination with municipalities.
- 1.2 Provide technical assistance to EJ communities to develop robust safety action plans.
- 1.3 Incorporate crash rate disparities in MassDOT's performance management report, [*Tracker*](#).
- 1.4 Track crashes through an equity lens over time to better understand differences across groups.

Problem Statement 2:

Massachusetts traffic fatalities and fatality rates rose between 2019 and 2022, but have since begun trending downward.

ACTION ITEMS:

- 2.1 Use the “back-casting” approach to holistically outline steps needed to achieve Vision Zero goals.
- 2.2 Continue to direct funding toward projects that address the most common causes of serious injuries and fatalities.
- 2.3 Continue investing in systemic and low-cost proven safety countermeasures.
- 2.4 Develop a Capital Freight Program for dedicated freight-related safety investments.
- 2.5 Affect change to improve vehicle design.
- 2.6 Pilot automated enforcement technologies for running red lights and speeding, and develop recommendations for the Massachusetts Legislature's approval.





Problem Statement 3:

Users of active transportation modes, namely walking and bicycling, often experience unsafe, low-comfort, and disconnected facilities, especially in Gateway Cities and rural areas. Older adults are particularly vulnerable to serious injury or death when they are involved in crashes as pedestrians.

ACTION ITEMS:

- 3.1 Identify gaps in sidewalk and bicycle facility coverage statewide as a basis for capital investment.
- 3.2 Develop sidewalk performance measures for MassDOT's *Tracker* report.
- 3.3 Introduce traffic calming and speed management interventions at high-risk corridors. MassDOT will also explore 'dementia-friendly' design considerations presented by the Massachusetts Executive Office of Elder Affairs.
- 3.4 Prioritize maintenance efforts such as snow removal from bike lanes and sidewalks.

Problem Statement 4:

Residents perceive an unsafe environment on public transportation due to a combination of high-profile crashes and other safety events, as well as personal experience.

ACTION ITEMS:

- 4.1 Present updates to public and stakeholders on safety progress.
- 4.2 Continue the implementation of the MBTA's *3-Year Safety Improvement Plan*.
- 4.3 Employ organizational changes involving safety oversight.
- 4.4 Make safety-related station and vehicle safety improvements.

Problem Statement 5:

There is limited safety-related knowledge or guidance on certain issue areas, like driver's education in autonomous vehicles, the application of unmanned aerial systems for improved safety outcomes, or the impacts of limited cellular service on emergency responsiveness or real-time transit vehicle tracking.

ACTION ITEMS:

- 5.1 Perform a formal review of the driver's education curricula to promote road safety for all users.
- 5.2 Update driver's education content with new topics.
- 5.3 Research emerging technologies' relationship to safety.
- 5.4 Develop new driver education resources, materials, and public awareness campaigns.
- 5.5 Explore uses of Unmanned Aerial Systems (UAS) for safety assessments.

PRIORITY AREA: RELIABILITY

Problem Statement 1:

Massachusetts travelers by any mode experience congestion, resulting in low confidence about the conditions they will encounter and diminished access to everyday needs.

ACTION ITEMS:

- 1.1 Investigate opportunities to execute recommendations in planning studies and reports focused on congestion and travel time reliability.
- 1.2 Address systemic issues that lead to rapid transit delays.
- 1.3 Improve public communications on transit project status and service delivery to ensure riders can better plan their trips.
- 1.4 Prioritize reliability projects in locations with major roadway bottlenecks and delays.
- 1.5 Study roadway pricing with a focus on the transit capacity needed for success as well as implications of roadway pricing on vehicle miles traveled (VMT) while accounting for social and geographic equity.
- 1.6 Explore options to expand regional rail services.
- 1.7 Complete the MBTA's next *Program for Mass Transportation* (PMT), ensuring that transit capital plans align to goals from statewide plans and the *MBTA Strategic Plan*.
- 1.8 Continue to address pavement and bridge state of good repair issues that affect reliability along roadways, according to MassDOT *Transportation Asset Management Plan* (TAMP) recommendations.
- 1.9 Develop a plan for expanding roadway asset management activities, including the condition of sidewalks and bicycle facilities as well as safety treatments to improve reliability.

Problem Statement 2:

Roadway congestion diminishes the reliability of public transit bus service, limiting its attractiveness and competitiveness.

ACTION ITEMS:

- 2.1 Support roadway investments to improve transit reliability and develop guidelines to ensure that these investments account for all modes and do not diminish safety.
- 2.2 Facilitate the stricter enforcement of traffic violations involving transit-priority infrastructure.
- 2.3 Explore creation of funding program for transit priority projects on municipal roadways.

Problem Statement 3:

Congestion and freight bottlenecks impact the efficient movement of goods, which drives up labor costs, lowers capital productivity, and often results in higher costs for households and businesses.

ACTION ITEMS:

- 3.1 Invest in infrastructure improvements.
- 3.2 Explore investments in multimodal freight movement.
- 3.3 Coordinate with rail-based freight transportation providers to reduce delay of passenger rail service operating on freight lines.





PRIORITY AREA: SUPPORTING CLEAN TRANSPORTATION

Problem Statement 1:

Transportation is the largest contributor of carbon emissions in Massachusetts and transportation-related emissions are disproportionately concentrated in Environmental Justice Communities.

ACTION ITEMS:

- 1.1 Expand programs to make Commonwealth's streets more complete.
- 1.2 Support electrification of public transit buses, paratransit, and Commuter Rail services in the spirit of statewide climate goals.
- 1.3 Support policies to reduce greenhouse gas emissions from freight vehicles.
- 1.4 Establish equity framework for prioritizing multimodal freight projects.
- 1.5 Implement all recommendations relevant to transportation included in the 2023 *Massachusetts Climate Chief's Report*.

Problem Statement 2:

Availability of suitable infrastructure is a potential barrier to low-emission transportation choices.

ACTION ITEMS:

- 2.1 Install fast-charger ports on Alternative Fuel Corridors to eliminate all gaps greater than 50 miles.
- 2.2 Invest in projects to support MBTA system electrification.
- 2.3 Collaborate on funding strategies to make sustainable aviation fuels available to operators in the Northeast.
- 2.4 Coordinate with other State departments and utility providers to support grid modernization.

PRIORITY AREA: DESTINATION CONNECTIVITY

Problem Statement 1:

People living in Environmental Justice communities are burdened by connectivity inequities across our transportation system, limiting their access to opportunities.

ACTION ITEMS:

- 1.1 Study commute time disparities between demographic groups.
- 1.2 Explore adding performance metrics for access to destinations to *Tracker*.
- 1.3 Explore discretionary funding opportunities to expand employment transportation with a focus on low-income individuals and people with disabilities.

Problem Statement 2:

The lack of contiguous, safe, high-comfort bicycle or pedestrian pathways connecting existing pedestrian and bicycle facilities limits the ability of people walking, bicycling, and using other non-motorized modes, including mobility-assistive devices, to access critical destinations.

ACTION ITEMS:

- 2.1 Develop a capital program focused on multimodal connections to transit.
- 2.2 Continue to use MassTrails grants and other bicycle and pedestrian projects to bridge gaps in the active transportation and shared-use path network.
- 2.3 Explore the creation of a new sidewalk formula program for municipalities to support expansion, accessibility, maintenance, and operations of local networks.
- 2.4 Update MassDOT's ADA Transition Plan by 2025.

Problem Statement 3:

Residents outside of inner core areas across the Commonwealth, particularly those in rural areas, lack convenient transit services and other non-vehicular transportation options and feel disconnected from cultural, economic, and other opportunities. Additionally, current passenger rail service opportunities for the western half of the Commonwealth are extremely limited.

ACTION ITEMS:

- 3.1 Expand local and regional funding opportunities for closing first- and last-mile gaps to fixed route transit, as well as access to critical destinations.
- 3.2 Seek and spend funds on MBTA projects focused on addressing first- and last-mile gaps, potentially involving microtransit service and public private partnerships in lower-density areas within the MBTA's service areas.
- 3.3 Continue efforts to advance Compass Rail.





Problem Statement 4:

Though the Commonwealth supports reduced vehicle travel as a climate change strategy, people traveling in Massachusetts find it difficult to get around using other modes including transit, bicycling, and water transportation.

ACTION ITEMS:

- 4.1 Analyze and compare accessibility outcomes for vehicle versus transit trips.
- 4.2 Coordinate with transit providers on bus transit improvements. Specific considerations will include expanding weekend service and increasing frequency overall.
- 4.3 Study the expansion of water transportation options and connections between ferries, critical destinations, and other modes of transportation.

Problem Statement 5:

Existing land use patterns reinforce vehicle travel and exclude many Massachusetts residents from having sufficient modal choices.

ACTION ITEMS:

- 5.1 Perform a study to identify areas for high-impact transit-oriented investments to prioritize investments and service delivery as well as better coordinate transportation with housing production goals.

PRIORITY AREA: RESILIENCY

Problem Statement 1:

Significant transportation infrastructure in Massachusetts is exposed to natural hazards.

ACTION ITEMS:

- 1.1 Identify and address transportation assets at risk due to flooding, extreme weather events and storms, and hazards.
- 1.2 Enhance project screening for climate risk through geospatial tools and multidisciplinary project scoping.
- 1.3 Leverage all available funding opportunities to address resiliency issues based on level of risk.
- 1.4 Conduct comprehensive culvert and drainage inventory and mapping.
- 1.5 Explore the creation of a State-managed discretionary capital improvements program for resiliency projects.
- 1.6 Explore the use of Unmanned Aircraft Systems (UAS) for disaster assessments.
- 1.7 Prioritize the protection of freight system assets and operations from climate change and extreme weather impacts.
- 1.8 Continue to invest in MBTA systemwide resiliency, asset hardening, maintenance, and flood protection.

ResilientMass Action Items

(Re-stated in *Beyond Mobility* for consistency):

- 1.9 Perform climate change adaptation training and guidance.
- 1.10 Complete a vulnerability assessment of key MBTA assets at risk due to climate change.
- 1.11 Develop the foundation for a Resilience Improvement Plan.
- 1.12 Update the MBTA's design standards to include climate resiliency.
- 1.13 Screen and prioritize resilience improvements to vulnerable roadway/bridge assets using a variety of inputs, including many of those described in prior Action Items.
- 1.14 Research best practices in resilience design and standards.
- 1.15 Continue the MBTA Tunnel Flood Mitigation Program.
- 1.16 Update the MBTA's Emergency Response Plans and GIS viewer for real-time storm response.
- 1.17 Utilize the Transportation Research Board's self-assessment tool in project development.



PRIORITY AREA: TRAVEL EXPERIENCE

Problem Statement 1:

All transit riders, including users of paratransit and human services transportation (HST), deserve a better user experience and increased affordability on transit, in Environmental Justice communities and across the Commonwealth.

ACTION ITEMS:

- 1.1 Explore expanded access to the MBTA's Free/Reduced Fare Program for eligible riders with disabilities, older adults, young people, and low income individuals.
- 1.2 Coordinate with Massachusetts' RTAs to continue piloting fare-affordability transit programs as recommended by the FY23 RTA Fare Free Pilot Program final report.
- 1.3 Support the MBTA and the State's RTAs to identify bus stops and other transit system access points and elements in need of capital enhancement, including increasing the comfort and safety of these access points and customer amenities offered at them.
- 1.4 Enhance the coordination between all state agencies involved in providing human services transportation, as well as the MBTA and RTAs.

Problem Statement 2:

Missing sidewalks, curb ramps, and crosswalks limit mobility options, especially for older adults, people with disabilities, and children. This is a particular issue in rural communities, where many such residents live.

ACTION ITEMS:

- 2.1 Build out high-quality, frequently updated data layers regarding pedestrian and bicycle infrastructure to ensure that our agency and partners are equipped with the most up-to-date information regarding conditions along these network elements.
- 2.2 Pursue funding for discretionary grant-making and to provide enhanced technical assistance to cities and towns for Complete Streets and Safe Routes to School projects.
- 2.3 Develop issue briefs documenting transportation challenges for traditionally underrepresented demographic groups.





Problem Statement 3:

Transit riders, people with disabilities, and limited English proficient (LEP) community members find it challenging to understand and navigate transit infrastructure, including stations, service changes involving diversions, and alternative routing options.

ACTION ITEMS:

- 3.1 Continue to invest in transit station and vehicle improvements that increase accessibility for people with disabilities.
- 3.2 Seek new opportunities to fund expanded signage and customer information for transit providers.
- 3.3 Complete inventory of wayfinding gaps and translation needs at transit stops and stations statewide.
- 3.4 Explore the development of a network of Regional Mobility Managers across the state.
- 3.5 Develop processes and protocols to ensure that MassDOT's Ride Match database is regularly updated and fully functional.

Problem Statement 4:

Bicyclists report that wayfinding and amenities at facilities are confusing or substandard.

ACTION ITEMS:

- 4.1 Provide technical assistance to municipalities and partner agencies for bicycle routes and wayfinding signage.
- 4.2 Conduct an inventory of amenities like benches, restrooms, and water fountains at key points along rail trails and major bicycle and pedestrian corridors.

Problem Statement 5:

The systems and protocols that support excellent customer service are not always prioritized.

ACTION ITEMS:

- 5.1 Expand customer survey efforts by MassDOT and transit providers to better understand overall customer satisfaction issues and to log customer complaints.
- 5.2 MassDOT's Registry of Motor Vehicles (RMV) will improve and modernize facilities and online services to improve operational efficiency, effectiveness and customer service.
- 5.3 MassDOT's Highway Division will identify and implement improvements for highway service centers and rest areas under its jurisdiction.

Measuring Progress

Beyond developing an initial list of actions, MassDOT will review outcomes of the actions defined over time and make changes as needed. This performance-based approach to evaluating progress will help ensure the Commonwealth is achieving its vision and goals.

MassDOT and its many partners collect and review data on the performance of the transportation system in Massachusetts. Appendix D, System Performance Report, documents Federally required performance measures and targets in four broad categories:

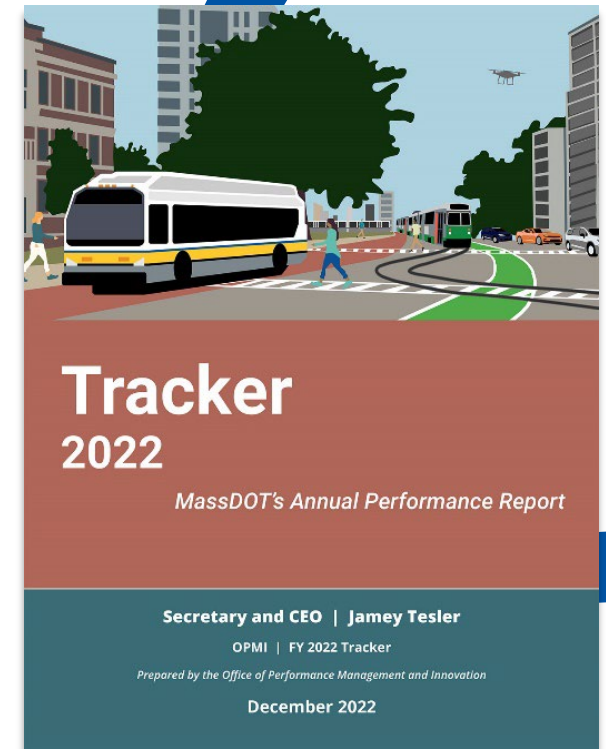
- **Safety (highway and transit),**
- **Infrastructure condition (highway and transit),**
- **System performance (highway), and**
- **Greenhouse gas emissions (highway).**

In addition, *Beyond Mobility* charges MassDOT with evaluating performance through an equity lens and tracking disparities across communities and travel types across the Commonwealth.

Examples of new performance measures identified in *Beyond Mobility* include:

- **Number of pedestrian crashes per capita in Environmental Justice communities**
- **Miles of sidewalk gaps in areas with older adults and people with disabilities.**
- **Number of electric vehicle charging stations in Environmental Justice communities.**
- **Difference in travel times between white and non-white commuters.**
- **Difference of poor/deficient bridges per capita between rural and urban communities**

Beyond Mobility plans to incorporate these performance measures and others (more detail in Chapter 6) into MassDOT's annual performance management report, [*Tracker*](#). *Tracker* illustrates to MassDOT, elected officials, and transportation system users which goals are being met and where MassDOT should focus attention for improvement.





Call to Action

Beyond Mobility is more than a plan; it is a commitment to a future driven by a safe, resilient, and universally-accessible transportation system. It is a vision of a Commonwealth with connected communities, racial and economic justice, and best-in-class public and environmental health. *Beyond Mobility* plots a roadmap for achieving this vision through people-focused policies, strategies, and investments.

Building this future is a collective effort; while MassDOT has a critical role to play, the agency cannot achieve this vision alone. It is important for *everyone* to play a part in shaping this legacy—state government, municipalities, industry, businesses, nonprofits, advocacy groups, and residents.

The voices, experiences, and respective areas of expertise of these stakeholders are crucial to addressing the transportation needs of today and anticipating the challenges and opportunities of tomorrow, many of which are documented as problem statements in *Beyond Mobility*. MassDOT encourages all Massachusetts communities to use this Plan as a call to action to highlight key problems and serve as a foundation for taking action.

This Plan presents an ambitious vision that calls for support from the full spectrum of the Commonwealth's stakeholders and institutions. Together, this Plan can help us begin the journey of seeing transportation not only as "mobility," but as a means of achieving a more just, equitable, and human-centered vision for the future.

