

The Special Commission on Micromobility

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Do these devices all have the same name?



Same form factor, different performance



18 mph



31 mph



50 mph

Which of these is a Motorized Bicycle?



Are these all “e-bikes”?



MGL: Class 2 E-Bike



MGL: Class 2 E-Bike



MGL: Off-Highway Vehicle*

*N.B. Some e-dirt bikes cannot be registered with MA Environmental Police because they lack WMC/PIN Codes

Tragedy, Device Terms, The Press, and Marketing

NEWS

Boy, 11, dies in crash of electric bicycle in Charlton

Telegram & Gazette

July 11, 2025 | Updated July 15, 2025, 8:09 a.m. ET

LOCAL NEWS

Community mourns 13-year-old killed in Stoneham e-bike crash



Updated: 5:49 AM EST Nov 24, 2025

The devices in these three crashes were NOT e-bikes according to current law

The deadly crash has spurred safety talks on Beacon Hill.

safety after Stoneham teen's fatal crash

Updated: Nov. 24, 2025, 4:41 p.m. | Published: Nov. 24, 2025, 4:37 p.m.

MASSACHUSETTS

E-bike crash that killed boy, 13, spurs safety talk on Beacon Hill

LOCAL

Teenager hurt after a car strikes an e-bicycle in Plymouth



By Boston 25 News Staff

June 21, 2025 at 5:43 am EDT



Special Commission on Micromobility

Background

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- **Established by the Legislature in November 2024**, to review current laws, provide recommendations on regulations and recommendations to support the expansion of micromobility use, including shared options for municipalities
- **Chaired by the Secretary of Transportation** and comprised of Transportation Committee Co-Chairs, EOPSS, DCR, WalkMass, MassBike, small business owners, academics, law enforcement, City of Boston, Town of Amherst, and the Consulting Planners of Massachusetts
- **16 overall recommendations in the final report created by the Commission** to clean up confusion, improve safety, and enable further adoption of this mobility mode
- **Recommended 14 new definitions** and a handful of modified definitions in state law to address confusion about device and infrastructure terms and give rulemaking authority to RMV to establish device requirements
- **Speed as a defining characteristic** to classify vehicles; linked to safety

Speed-Based Tiers for Device Classification

Commission Recommendations

Speed Tier Classification

Tier 0 0-20 MPH	A. Human-powered micromobility devices
	B. Powered Micromobility Devices <i>(including Class 1 and Class 2 e-bikes)</i>
	C. Mobility Aid Devices
Tier 1 21-30 MPH	A. Class 3 e-bikes
	B. Powered Micromobility Devices
	C. Mopeds with 2 or 3 wheels
Tier 2 31-40 MPH	A. Limited Use Motorcycles
	B. Powered Micromobility Devices
Tier 3 41+ MPH	A. Motorcycles
	B. Powered Micromobility Devices

Commission Recommendations

Device Requirements: What is the device required to have to be street legal?

	Tier	UL Electrical Standard	UL Battery Standard	Lights, Brakes, Horn	Motorcycle Equipment	Speedometer	Stop and Turn Signals
<=20 MPH	0.A: Human-powered	n/a	n/a	■			
	0.B: Powered Micromobility	UL 2849 or UL 2272	UL 2271	■			
	0.C: Mobility Aid Device						
21-30 MPH	1.A: Class 3 E-bike	UL 2849	UL 2271	■ *		■	
	1.B: Powered Micromobility	UL 2272		■		■	
	1.C: Moped [^]	UL 2849		■ **		■	■
31-40 MPH	2.A: Limited use motorcycle	UL 2849	UL 2271	■ **	■	■	■
	2.B: Powered Micromobility	UL 2272		■		■	■
>40 MPH	3.A: Motorcycle	UL 2849	UL 2271	■ **	■	■	■
	3.B: Powered Micromobility [#]	UL 2272		■	■	■	■

[^] Currently called Motorized Bicycle in MGL ■ Denotes a change from current law or regulation

*Follow the federal motor vehicle guidelines for bicycles ** Follow FMVSS Standards (49 CFR part 571)

[#] Need to follow the motorcycle pathway i.e. FMVSS, VIN etc. or else illegal on public roadways

Commission Recommendations

Travel Allowances: Where can the device be used?

	Tier	Sidewalks	Bike Lanes	Shared Use Paths	Roadways	Limited Access Highways (>40 MPH)
<=20 MPH	0.A: Human-powered	■	■ [¶]	■ [¶]	■ [¶]	
	0.B: Powered Micromobility		■ [¶]	■ [¶]	■ [¶]	
	0.C: Mobility Aid Device	■	■	■	■	
21-30 MPH	1.A: Class 3 e-bike		■ [¶]		■	
	1.B: Powered Micromobility		■ [¶]		■	
	1.C: Moped [^]				■	
31-40 MPH	2.A: Limited use motorcycle				■	
	2.B: Powered Micromobility				■	
>40 MPH	3.A: Motorcycle				■	■
	3.B: Powered Micromobility				■	

[¶] Follow local bicycling rules

[^] Currently called Motorized Bicycle in MGL

Denotes a change from current law or regulation

Commission Recommendations

Operational Requirements: What is required of a user?

	Tier	Helmet	Age 16+	License/ Education	Insurance	RMV Registration	State Micro ID /Decal
<=20 MPH	0.A: Human-powered	■ ‡					
	0.B: Powered Micromobility	■ ‡					
	0.C: Mobility Aid Device						
21-30 MPH	1.A: Class 3 e-bike	■	■	Education			■
	1.B: Powered Micromobility	■	■	Education			■
	1.C: Moped^	■	■	■ Class D	■	■	
31-40 MPH	2.A: Limited use motorcycle	■	■	■ Class M	■	■	
	2.B: Powered Micromobility	■	■	■ Type TBD	■		■
>40 MPH	3.A: Motorcycle	■	■	■ Class M	■	■	
	3.B: Powered Micromobility	■	■	■ Type TBD	■		■

‡ Bicycle Helmet Law applies to riders ages 16 and younger

^ Currently called Motorized Bicycle in MGL

■ Denotes a change from current law or regulation

Recommendations Spotlight

Special Commission on Micromobility

Recommendations + Safe System Approach

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Safety is Proactive

Creating speed tiers and allowances provides awareness and education for many parties, which can create a safe riding environment and a culture of safety and responsibility

Safer Speeds

Promoting safer speeds in all environments through a combination of thoughtful, equitable, context-appropriate design, appropriate speed limit-setting, targeted education, outreach campaigns, and enforcement

Safer Vehicles

Reducing risk of fire by creating new battery certification and safety equipment requirements for devices that can go over 20 MPH and which are used on public infrastructure

Safer People

Requiring helmets and minimum operating age for some devices and restricting use of higher speed devices where pedestrians are present



Commission Recommendations Spotlight

Crash Reporting and VRU Data Collection

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"The legislature should ... enable the **inclusion within MassDOT's crash data system of micromobility-involved crashes** that don't also involve an operated motor vehicle."

- We don't currently have a scalable, reliable way to understand micromobility-involved crash rates and hotspots
- Collecting crash data helps inform crash prevention programming in the future
- Updating the current Vulnerable User section of the Crash Form would also improve data accuracy

Please complete a section for each vulnerable user involved in the crash.

Vulnerable User

VU: Last First Middle
Address State Zip
City DOB/Age
License #
Traffic Control Device
Origin/Destination
Contact Point

Diagrams for VUI
VUI1
VUI2
VUI3
VUI4
VUI5
VUI6
VUI7
VUI8
VUI9
VUI10
VUI11
VUI12
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VUI99

VUI - Vulnerable User Type

- 1 Pedestrian
- 2 Bicyclist
- 3 Skateboarder
- 4 Train/Trolley Passenger
- 5 Roller Skater
- 6 In-Line Skater
- 7 Non-Motorized Scooter Rider
- 8 Non-Motorized Wheelchair User
- 9 Motorized Bicyclist
- 10 Hand Cyclist
- 11 Tricyclist
- 12 Motorized Scooter Rider
- 13 Electric Personal Assistive Mobility Device User
- 14 Horse Rider
- 15 Horse-drawn Carriage Driver
- 16 Farm Equipment operator
- 17 Other Micromobility Device User
- 18 Utility Worker - Outside of vehicle
- 19 Roadway Worker - Outside of vehicle
- 20 Emergency Worker - Outside of vehicle
- 97 Other
- 99 Unknown

Commission Recommendations Spotlight

Funding for Infrastructure Grant Programs

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“The legislature should **increase appropriations** ... particularly for the Complete Streets Funding Program and the Shared Streets & Spaces Program, **to further assist municipalities in expanding their networks and transitioning from interim infrastructure** treatments...”

- One way to encourage more micromobility use for more trips is to make infrastructure safer and more comfortable
- MassDOT should enhance its trainings, technical assistance, and outreach efforts through the Complete Streets Program to support municipalities...



*South Common, Lowell
Complete Streets Grant Funded Project*

Commission Recommendations Spotlight

Expand Public Micromobility Systems

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“The legislature should **establish a reliable and sustainable funding mechanism** to support **publicly owned, docked micromobility share** systems...”

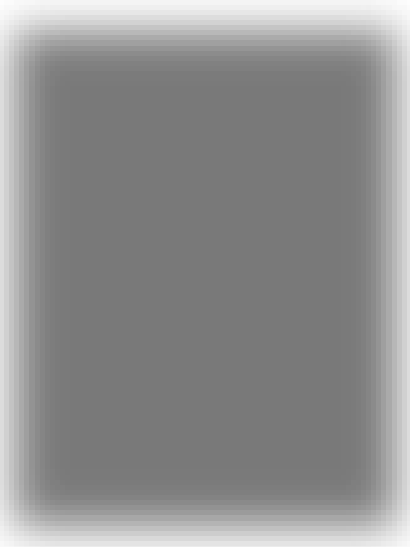
- Public ownership ensures that these systems can be planned and operated in the public interest
- Bikeshare is not a marginal service but one with sizeable and growing ridership
- Dedicated operating funding gives people more confidence in bikeshare’s reliability and increases the ROI of the infrastructure dollars for trails and paths.



ValleyBike Share, Northampton

Full Report, Short Report, and a Starting Place

There are recommendations focused on education campaigns and research projects that MassDOT will play an active role in going forward



Commission Full Report
(116 pages)



Full Report



Summary Report
(20 pages)



Summary Report

Thank You Commission Members & Staff

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Phil Eng	Chair, Interim Secretary of Transportation
Leonardi Aray	President, <i>Consulting Planners of Massachusetts</i>
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Gerald Autler	Director of Trails and Greenways, <i>DCR</i>
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And alternate members...

Alex Chilton, Brendan Kearney, Craig Kelley, Jonathan Gulliver, Stella Lensing, and Susan Terrey

And the MassDOT staff supporting the work of this Commission

Caroline DeMarco, Bonnie Polin, Niren Sirohi, Rebecca Yao, and Jaclyn Youngblood

Reflections and Discussion

Appendix

Commission Recommendations

Recommendations

Core Framework: Definitions, Speed Tiers, and Regulations

Safety & Enforcement

Infrastructure

Strategies for Growth

Commission Recommendations

Core Schema

Recommendation 1: Legislative and Regulatory Changes

The legislature should add the necessary legal definitions to Massachusetts General Law and update all existing relevant definitions or remove those that are no longer relevant.

Recommendation 2: Speed-Based Classification Schema

The Commission recommends that the legislature adopt a methodology to classify micromobility devices; define requirements for operating a device based on its classification; place restrictions on where a given device can be operated; define what standards a device should be manufactured to; and devise a way to identify an individual device.

Recommendation 3: Micro ID

The legislature should establish a time-limited working group with funding to design a statewide Micro ID Decal pilot. This will convene a multi-agency working group to develop a light-touch micromobility identification framework using a tamper-evident decal that links to a record confirming device tier, basic safety compliance, and limited, opt-in personally identifiable information for authorized parties.

Commission Recommendations

Micro ID Working Group

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- **Legislature should establish a working group**, convened by the RMV, to refine if and how a Micro ID could work as a lightweight identifier
- A Micro ID *could* be a way to help law enforcement (or others) identify a particular type of vehicle for crash reporting, enforcement, and potential theft reclamation
- Could be issued at the point-of-sale and/or through an online portal
- Would be required for devices over 20mph that are not currently registered by the RMV per the Commission Recommendation



Intended for illustrative purposes

Commission Recommendations

Enforcement and Training

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Recommendation 4: Police Training

The Massachusetts State Police Academy and the Massachusetts Police Training Committee should develop and deliver training for law enforcement officers, consistent with new and current micromobility laws, regulations and guidelines.

Recommendation 5: Crash Report and Vulnerable User Data

The legislature should amend state law to enable the inclusion within MassDOT's crash data system of micromobility-involved crashes that don't also involve an operated motor vehicle.

Recommendation 6: Default Maximum Speed on Paths

The legislature should establish a default maximum speed of 20 MPH on shared use paths, applicable statewide, unless otherwise posted. Path-operating entities retain the authority to lower the limit based on context-specific factors such as user volume, path width, crossings, geometry, adjacent land uses.

Commission Recommendations

Enforcement and Training (continued)

Recommendation 7: Education Campaign

Law enforcement and state and local stakeholders, such as Safe Routes to Schools, should collaborate with relevant community partners, such as local bike shops, to develop and deliver an educational campaign to inform micromobility users about laws, regulations, local ordinances, & safety practices.

Recommendation 8: Automated Enforcement

The legislature should authorize automated enforcement on infractions that impact vulnerable users, such as speeding, the improper use of bus and bike lanes, and red light running.

Recommendation 9: Model Municipal Traffic Control Ordinance

MassDOT should include model micromobility traffic control regulations and prohibitions on obstructing bicycle lanes in its Sample Regulation for a Standard Municipal Traffic Code.

Commission Recommendations

Infrastructure

Recommendation 10: Design Guidance

MassDOT and DCR should develop context-sensitive design guidance for state and municipal trails and shared-use paths that establishes recommended design parameters: addressing the separation of pedestrian and wheeled modes, design speed, signage, and emerging-micromobility, incorporating variations appropriate to urban, suburban, and rural contexts.

Recommendation 11: Micromobility Integration

The MBTA and other RTAs should adopt and implement a micromobility integration plan.

Recommendation 12: Funding for Upgrades

The legislature should increase appropriations for existing state programs, particularly the Complete Streets Funding Program and the Shared Streets & Spaces Program, to further assist municipalities in expanding their networks and transitioning from interim infrastructure treatments.

Commission Recommendations

Growth

Recommendation 13: Expand Bikeshare

The legislature should establish a reliable and sustainable funding mechanism to support publicly owned, docked micromobility share systems. A combination of formula-based operating support and competitive grants for system expansion should be explored.

Recommendation 14: Fund More E-bike Subsidies

The legislature should fund, and MassCEC should expand, the statewide e-bike rebate program.

Recommendation 15: Commercial Use Micromobility Study

The legislature should allocate funds for MassDOT to commission a study from an academic partner to understand how micromobility is used in commercial settings, particularly in the package delivery and food delivery industries.

Recommendation 16: Presumed Liability Study

MassDOT should work with an academic partner to study the hierarchy of responsibility in a crash and the potential effects of introducing a “Presumed Liability” law.