Special Commission on Micromobility

Meeting 5

November 3, 2025

Today's Agenda

Meeting Theme:
Review & Refine

1. Call to Order & Agenda
2. Recommendations & Schema Review
3. Background Break-Out Sessions
4. Open Discussion
5. Next Steps & Assignments

Welcome from

Undersecretary Jonathan Gulliver

Recommendations Review

Recommendations Review

16 recommendations to review today, broken into four groups

- Identification (which includes the schema)
- Enforcement & Safety
- Infrastructure
- Growth

Process notes:

- Recs presented **in green** received majority support in Meeting 4: edits at this stage are still welcome, removal from report is unlikely
- Not seeking unanimous consent, looking for edits to improve the recommendations
- Diagreement is not a veto, but multiple-member disagreement will revise or remove
- Commission Members will take turns reading out the recommendations
- Please use the raise hand feature in zoom throughout our review ✋

Recommendation Group – Identification

Recommendation 1

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 2

The legislature should add the necessary legal definitions to MGL, and update all existing relevant definitions, to accommodate these new additions. The legislature or the relevant regulatory body should enact appropriate statutory and/or regulatory changes that would provide the legal framework for the classification schema in Recommendation 1.

Recommendation Group – Identification

- Our classification framework is anchored in **maximum speed** (findable, enables field identification and enforcement, supports tier-based regulation), since higher speed directly correlates to crash risk and injury severity.
- Within each speed tier, devices are grouped into **categories by type and function.**
- This two-step structure makes it easy to understand, apply, and extend to new devices.

Recommendation Group – Identification *(core schema)*

Tier 0

Maximum speed: **0-20 MPH**

0.A Human powered micro-mobility(MM) devices (e.g., skateboards, bicycles, scooters)

0.B Mobility aid devices

0.C Powered* cycles, scooters and other MM devices

*Motors and/or Power can be gas or electric or a combination

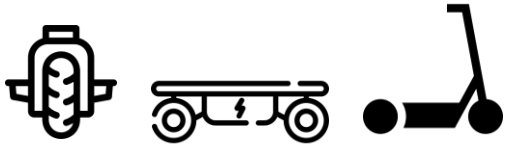
Recommendation Group – Identification *(core schema)*

Tier 1

Maximum speed: **21-30 MPH**

1.A Class 3 e-bikes
(up to 28mph)

1.B Powered* MM Devices
(e.g., scooters, unicycles, hoverboards, skateboards)



1.C Motorized Bicycles (aka mopeds) 2 or 3 wheels

*Motors and/or Power can be gas or electric or a combination

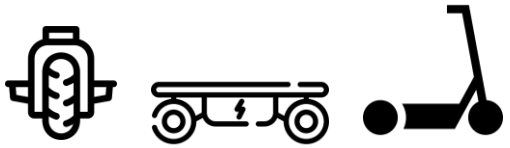
Recommendation Group – Identification *(core schema)*

Tier 2

Maximum speed: **31-40 MPH**

2.A Powered* Cycles (including class 4 e-bikes)--
Limited Use Motorcycle

2.B Powered* MM Devices
(e.g., scooters, unicycles, hoverboards, skateboards)



*Motors and/or Power can be gas or electric or a combination

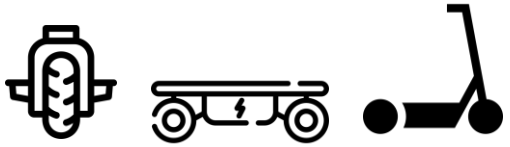
Recommendation Group – Identification *(core schema)*

Tier 3

Maximum speed: **41+ MPH**

3.A Powered* Cycles (including e-bikes)–
Motorcycles (2 or 3 wheels)

3.B High Speed Powered* MM Devices
(e.g., scooters, unicycles, hoverboards, skateboards)



*Motors and/or Power can be gas or electric or a combination

Recommendation Group – Identification & Applications

- **Operational Requirements** – licensing, registration, inspection, enforcement
- **What needs to change** – Legal and other implications: leverage existing statutes, suggest targeted changes, identify gaps
- **Future Work** – areas requiring further analysis, stakeholder engagement and alignment

Operational Requirements

	Tier	Helmet	Age 16+	License/ Education	Insurance	RMV Registration	State Micro-ID /Decal
<=20 MPH	**0.A**: Human powered	■ †					
	0.B: Mobility aid						
	0.C: Powered MM	■ †					
21-30 MPH	**1.A**: Class 3 e-bikes	■	■	Education			■
	1.B: Powered MM	■	■	Education			■
	1.C: Motorized bicycle (moped)	■	■	■ Class D	■	■	
31-40 MPH	**2.A**: Limited use motorcycle	■	■	■ Class M	■	■	
	2.B: Powered MM	■	■	■ Type TBD	■		■
>40 MPH	**3.A**: Motorcycles	■	■	■ Class M	■	■	
	3.B: Powered MM*	■	■	■ Type TBD	■		■

■ Added since 10/14 meeting based upon Commission discussion

† Bicycle Helmet Law applies to riders ages 16 and younger

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

massDOT Massachusetts Department of Transportation

Travel Allowances

	Tier	Sidewalks‡#	Bike Lanes‡#	Shared Use Paths‡#	Roadways	Limited Access Highways (>40 MPH)
<=20 MPH	**0.A**: Human powered	■ *	■ *	■ *	■ *	
	0.B: Mobility aid	■	■	■	■	
	0.C: Powered MM		■ *	■ *	■ *	
21-30 MPH	**1.A**: Class 3 e-bikes		■*		■	
	1.B: Powered MM		■*		■	
	1.C: Motorized bicycle (moped)				■	
31-40 MPH	**2.A**: Limited use motorcycle				■	
	2.B: Powered MM				■	
>40 MPH	**3.A**: Motorcycles				■	■
	3.B: Powered MM				■	

Regardless of tier, devices over 36" wide prohibited from operating
■ Added since 10/14 meeting
‡Local authorities and state agencies may adopt additional rules
*Follow bike rules.

massDOT
Massachusetts Department of Transportation

Device Requirements

	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: Mobility aid						
	0.C: Powered MM	UL 2849	UL 2271	■			
21-30 MPH	**1.A**: Class 3 e-bikes	UL 2849	UL 2271	■ *		■	-
	1.B: Powered MM	UL 2272				■	-
	1.C: Motorized bicycle (moped)	UL 2849		■ **		■	■
31-40 MPH	**2.A**: Limited use motorcycle	UL 2849	UL 2271	■ **	■	■	■
	2.B: Powered MM	UL 2272				■	■
>40 MPH	**3.A**: Motorcycles	UL 2849	UL 2271	■ **	■	■	■
	3.B: Powered MM	UL 2272				■	■

- Removed since 10/14 meeting based on Commission discussion
† Tier 0 vehicles require a bell instead of a horn and reflectors in addition to lights
* Follow the federal motor vehicle guidelines for bicycles (eCFR Title 16 Chapter II Subchapter C Part 1512)
** Follow FMVSS standards (already set in 49 CFR part 571)

massDOT Massachusetts Department of Transportation

Statutory Changes in MGL Required by Schema Adoption

New Term	New Definition
Cycle	Has functioning pedals OR If it does not have pedals but rider has to be seated in a typical operation (cannot stand and operate)
Scooter	Does not have pedals and rider can sit and/or stand on a footboard (i.e., platform) for typical operation (standing only, sitting or standing)
Solely Human Powered micromobility device	A micromobility device (non-electric bicycles, push scooters, skateboards, longboards, unicycles, roller skates, inline skates etc) designed to transport a single person that is propelled exclusively by human muscular effort and has no onboard motor capable of delivering tractive power to device
Mobility aid device	A device, other than one used for general transportation, used by a pedestrian with a mobility disability to assist with indoor and outdoor locomotion. Will encompass existing EPAMD mentioned in VU and group wheelchairs, mobility carts etc.
Powered micromobility device	A micromobility device (scooters, skateboards, hoverboards, unicycles etc.) designed to transport a single person that has an onboard motor capable of delivering tractive power to device either as power assist or as sole propulsion. Excludes class 1-3 e-bikes
Class 3 e-bikes	Define class 3 e-bikes pedal assisted top speed of 28 mph
Speed Tiers	Define maximum design speed-based tiers (tier 0: <=20 mph, tier 1: 21-30 mph, tier 2: 31-40 mph and tier 3: >40 mph) for devices

Statutory Changes in MGL Required by Schema Adoption

Category	Changes Needed
Micromobility device lightweight registration	(NEW AUTHORITY) Provide authority to MassDOT to have rulemaking authority to design an identification and registration program for devices in tier 1 and above where one does not exist today in 540 CMR; after working group on micro-ID
Tier 3 micromobility device	(NEW MANDATE) A tier 3 micromobility device will be regulated as a motorcycle
Micromobility device operating rules and requirements	(NEW AUTHORITY) Provide authority to MassDOT to have rulemaking authority to design operational and device requirements by device and speed tiers in 540 CMR
Enforcement and penalties	(NEW AUTHORITY AND PROVISIONS) For micromobility devices, provide penalty guardrails (ranges, caps, aggravators allowed, civil vs criminal disposition, impound authority, due-process etc) by speed tier and grant power to specific officials to enforce
Amendments	(NEW DEFINITIONAL CHANGES) Identify amendments to the existing definitions and sections e.g. motorized bicycle, motorized scooter, expand limited use authority to micromobility devices. Identify and address any clashes or conflicts with existing definitions

Recommendation Group – Identification (cont.)

Recommendation 3

The legislature should establish a time-limited working group with funding to design a statewide Micro ID Decal pilot. This multi-agency working group should develop a tamper-evident decal that confirms device tier and basic safety compliance and includes limited personally identifiable information for authorized parties for theft reclamation or insurance purposes.

State Micro-ID Decal (Concept)

BENEFITS

- Light-touch identifier – not a license plate or VIN
- Binds device to applicable rules for tier and category
- Quick roadside verification (tier, compliance) and enforcement
- Enables real compliance programs
- Tamper-evident; reduces counterfeits and mismatched tiers
- Supports safety & usage data collection
- Flexible issuance: POS, self-service, fleet API

CONCEPT STAGE – NEEDS DEVELOPMENT

Recommend creating advisory task force to:

- Design e-registration process (privacy, data security, renewal)
- Clarify roles: dealers/manufacturers vs RMV
- Define renewal & compliance cycle
- Evaluate tech standards (QR/NFC, UL docs, tamper features)
- Design roadside enforcement process and penalties

Recommendation Group – Enforcement & Safety

Recommendation 4

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 Group – Enforcement & Safety (cont.)

Recommendation 5

The legislature should amend state law to enable the inclusion of micromobility-involved crashes, both those involving and not involving motor vehicles, within MassDOT's crash data system. Following this statutory update, MassDOT should implement the expanded data collection system within 15 months of enactment, with functionality to distinguish between crash types and updates to the Vulnerable User section of the Massachusetts Crash Report to improve reporting accuracy. All law enforcement agencies should adopt the updated crash reporting forms within three years of system implementation. MassDOT should continue to study methods to improve the accuracy and reliability of micromobility crash data once incorporated into the state crash system.

Recommendation Group – Enforcement & Safety (cont.)

Recommendation 6

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

Recommendation 7**

The Legislature should establish a default maximum speed of 20 miles per hour on shared use paths, applicable statewide, unless otherwise posted. Path-owning entities continue to have the authority to lower the limit based on context-specific factors such as user volume, path width, crossings, geometry, and adjacent land uses.

*** new inclusion based on feedback from multiple municipalities*

Recommendation Group – Enforcement & Safety (cont.)

Recommendation 8

Law enforcement and state and local stakeholders should develop an educational campaign to inform micromobility users about state laws, regulations, local ordinances, and safety practices.

Recommendation 9

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

Recommendation Group – Infrastructure

Recommendation 10

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

Recommendation Group – Infrastructure (cont.)

Recommendation 11

The MBTA and other RTAs should adopt and implement a micromobility integration plan that includes:

- Providing secure micromobility parking at park-and-ride lots, subway and commuter rail stations, intermodal hubs, and bus centers;
- Designating bike-friendly rail cars, subway cars, and buses where feasible, taking into account space, safety, and accessibility constraints;
- Exploring opportunities for fare integration and/or discounts with micromobility providers (e.g., Bluebikes and ValleyBike), while recognizing the complexity and long timeline of current fare system upgrades;
- Evaluating the potential for charging infrastructure at select locations, in alignment with safety protocols and emerging best practices regarding battery fire risk.

Recommendation Group – Infrastructure (cont.)

Recommendation 12

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 transitioning from interim bicycle facility treatments, such as paint and flex-post delineation, to designs that provide durable, physical separation. Municipalities receiving such funds should be encouraged to develop and publish retrofit implementation schedules within 12 months of such grant award to guide and communicate their progress toward physically separated networks. In parallel, MassDOT should enhance its training, technical assistance, and outreach efforts through the Complete Streets Program to support municipalities in planning, designing, and delivering these facilities.

Recommendation Group – Growth

Recommendation 13

The legislature should establish a reliable and sustainable funding mechanism to support publicly owned docked bikeshare systems by expanding the Last Mile Grant program to include bikeshare, or through a new dedicated program. A combination of formula-based operating support and competitive grants for system expansion should be explored.

Recommendation 14

The legislature should fund, and MassCEC should expand, the statewide e-bike rebate program that was piloted in 2024.

Recommendation Group – Growth (cont.)

Recommendation 15

The legislature should 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 to learn what, if any, additional regulations are appropriate to apply to commercial use vehicles.

Recommendation 16

The legislature should commission a study to understand the effects of moving to "Presumed Liability" in the event of a crash, assigning fault by default to a motorist who strikes a vulnerable road user.

Background Breakout Groups

Will take place on Microsoft Teams

Breakout Group Instructions

In small groups, we will be discussing a few questions to help inform the narrative of the report.

1. You will receive a **Microsoft Teams room** invite in your email
2. Please join that room; a facilitator will be there and will share questions
3. You can stay in the Zoom room, off-camera and off-mic
4. We will rejoin the Zoom room to wrap-up

Breakout Group Instructions

Three Questions for *all* Commission Members to discuss:

10 minutes
Explain in your own words **the current state of micromobility in your community** and why the work of this Commission is relevant

5 minutes
What do we absolutely need to include in the report other than the recommendations and what is required by statute?

15 minutes
Each Commission member should take ~3 minutes, pick a recommendation, and tell us:

- Why it's important and why it matters right now
- What potential pushback it might receive
- How the future looks if we get that recommendation "right" (i.e., it is implemented well)

Special Commission on Micromobility

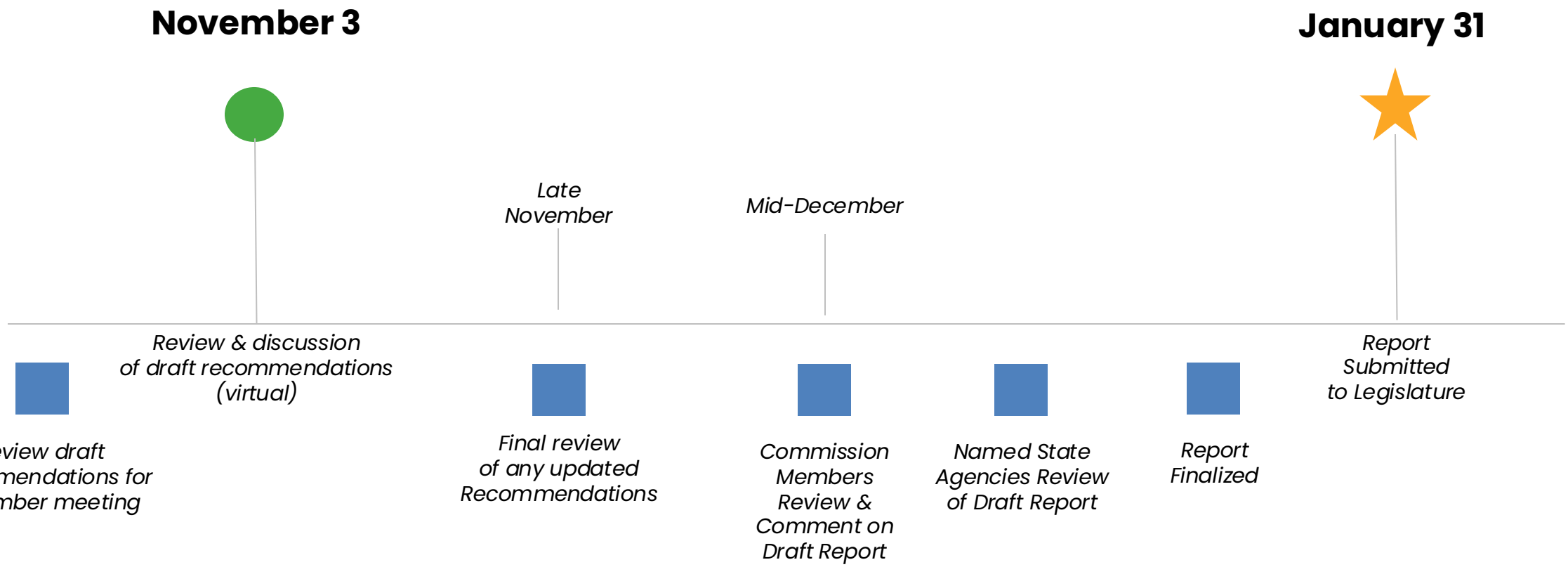
November 3, 2025

Commission Members are currently in a breakout room session

Open Discussion
(if needed)

Next Steps & Assignments

Next Steps



Key

- Meeting
- Milestone
- Asynchronous Task

massDOT
Massachusetts Department of Transportation

Commission Member Assignments

1

Review any updated recommendations

We will make minor adjustments to the recommendations based upon today's conversation and circulate those back to Commission members for awareness.

2

Review draft report

We will share a draft of the report in the weeks ahead for you to read. We are doing our best to capture the spirit of the commission and the work done in those pages. Please review for any factual errors.

3

Champion the work

In January, we'll submit the report and need your help in making these recommendations realities. Begin to think about how you, in your role, can assist in bringing them towards implementation.

Appendix

Appendix: UL Standards

- **UL 2849 (e-bike "system" safety):** A system-level standard that evaluates an e-bike's entire electrical system working together — battery, motor/controller, wiring and the specific charger — for fire/electrical hazards. It's certified by an OSHA-recognized NRTL (e.g., UL, Intertek, SGS) and includes construction + test requirements and required markings.

- **UL 2271 (battery pack safety for LEVs):** A pack-level standard for lithium-ion battery assemblies used in light electric vehicles (including e-bikes/scooters). It focuses on the battery pack's design, BMS, abuse/thermal tests, production checks, and labeling. It's distinct from automotive EV batteries (UL 2580).

- **UL 2272** applies to **personal e-mobility devices** (e-scooters/hoverboards, etc.) at the device electrical system level.

- Many jurisdictions pair **UL 2272 for scooters** with **UL 2271 for their batteries**, and **UL 2849 for e-bikes**.