

NEW JERSEY MICROMOBILITY GUIDE



May 2025



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

**New Jersey
Department of
Transportation
Research Showcase**

October 29, 2025

Presented By:

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Presenters



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Agenda

Why a Micromobility Guide?

Defining device types in NJ

Safety best practices

Other important laws and guidance

What is micromobility?

A range of compact, electric- and human-powered devices designed for short-distance travel, including traditional bicycles, e-bikes, e-scooters, and other low-speed wheeled devices.



Why this guide?



Micromobility is growing in popularity

NJ communities are expanding active transportation infrastructure

Micromobility regulations are still not common knowledge

Why now?

New laws have been passed in New Jersey

2019 Low-Speed E-bikes and E-scooters Law

2022 Safe Passing Law

2025 Driver education, testing and MVC Driver's Manual Updates for the NJ 4-foot Safe Passing Law

What does the data tell us?



Journal of Cycling and Micromobility Research

Volume 4, June 2025, 100061



Comparing injuries from e-scooters, e-bikes, and bicycles in the United States

Hannah Younes¹✉

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<https://doi.org/10.1016/j.jcmr.2025.100061> ↗

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Descriptive statistics

- Race/Ethnicity: Primarily white, not Hispanic/Latino. Injured e-micromobility users are more diverse
- Age: 44 years on average, 32 years for e-scooter users
- Gender: 75% male for bike/e-bike, 65% male for e-scooter users
- Alcohol/Substance use: 6% alcohol (9% for e-scooter users), 2.4% drugs (1.3% e-scooter users)

| | Bicycles | | E-scooters | | E-bikes | | Total | |
|-------------------------------|----------|-------|------------|-------|---------|-------|--------|-------|
| 2021 | 6,049 | 50.8% | 520 | 44.6% | 235 | 35.9% | 6,804 | 49.5% |
| 2022 | 5,862 | 49.2% | 646 | 55.4% | 420 | 64.1% | 6,928 | 50.5% |
| Black/African American | 1,777 | 14.9% | 298 | 25.6% | 145 | 23.4% | 2,220 | 16.2% |
| 18-24 | 1,491 | 12.5% | 315 | 27.0% | 90 | 13.7% | 1,896 | 13.8% |
| 65+ | 1,982 | 16.6% | 40 | 3.4% | 88 | 13.4% | 2,110 | 15.4% |
| Male | 9,113 | 76.5% | 753 | 64.6% | 493 | 75.3% | 10,359 | 75.4% |
| Treated and admitted | 1,823 | 15.3% | 111 | 9.5% | 88 | 13.4% | 2,022 | 14.7% |

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Micromobility injuries with motor-vehicles

26% of bicycle injuries

23% of e-scooter injuries

33% of e-bike injuries

... involved a motor vehicle

Head injuries are the most common injured body part

| | Bicycle (N = 2,057 17.3%) | | E-scooter (N = 195 16.7%) | | E-bike (N = 118 18.0%) | |
|------------------------|------------------------------|-------|------------------------------|-------|---------------------------|-------|
| Internal Injury | 1,430 | 69.5% | 132 | 67.7% | 86 | 72.9% |
| Concussion | 254 | 12.3% | 20 | 10.3% | 10 | 8.5% |
| Laceration | 152 | 7.4% | 21 | 10.7% | 10 | 8.5% |

Factors Influencing Admission to Hospitals

Injury type

Age

Older adults are more likely to be admitted

Gender

Males are more likely to be admitted

Motor-vehicle involved

**Alcohol/
Substance use**

Not significant:
Micromobility mode

Who is this guide for?



Individuals
with limited
mobility

Delivery
workers

Young people

Older adults

Law
enforcement
officers

Planners &
policymakers

Drivers

Everyone on
NJ roads



11 device types in New Jersey



E-bikes

Class 1 e-bike



Class 2 e-bike



Class 3 e-bike



| | | | |
|--------------------------------------|-----------------------------|--|--------------------------------|
| Maximum Assisted Speed | 20 mph | 20 mph | 20 mph – 28 mph |
| Motor | Electric, pedal assist only | Electric, throttle can be used exclusively | Gas (Up To 150cc.) or electric |
| Age Minimum | None | None | 15 years |
| License/Registration Required | No | No | Yes |
| Helmets Required | Under age 17 | Under age 17 | Yes |
| Allowed In Bike Lanes | Yes | Yes | Yes |


 Low Speed Electric Bike


 Motorized Bicycle

LOW SPEED E-SCOOTER

Under New Jersey law (N.J. Stat. § 39:1-1), a “low-speed electric scooter” is a scooter with a floorboard that can be stood upon by the operator, with handlebars, and an electric motor that is capable of propelling the device with or without human propulsion at a maximum speed of less than 19 miles per hour.

A local government can restrict where low-speed electric scooters may be ridden.

Low-speed electric scooters are considered motor vehicles, and users of these devices have the same rights and responsibilities as operators of other motor vehicles.



| Characteristics | Power Source | Propulsion Method | Max. Assisted Speed | |
|----------------------|---|-----------------------------|--|--------------|
| | Electric | Kickstart & Throttle | 19 mph | |
| Requirements | Minimum Age | Helmet | License | Registration |
| | None | Required under 17 years old | Not required | Not required |
| Where is it allowed? | Paved Bikeways, Shared-Use Paths, & Surfaced Trails | Public Streets | Parking on Sidewalk | |
| | Yes* | Yes | Yes, if not blocking pedestrian access | |

| | When is it allowed on transit? | | |
|------------------------|--|---------------------------------|--|
| | Type of Transit | Folding | Non-Folding |
| NJ TRANSIT | Atlantic City Rail Line | All times | All times |
| | Northeast Corridor, North Jersey Coast Line, Morris & Essex Lines | All times | Off-peak times** Not permitted on holidays |
| | Raritan Valley, Montclair-Boonton, Gladstone, Main, Bergen County, Pascack Valley, Port Jervis Lines | All times | Weekdays off-peak** Weekends all times Not permitted on holidays |
| | NJT Bus | All times | If a front rack or underfloor storage space is available |
| | Hudson Bergen Light Rail & Newark Light Rail | All times | Weekdays off-peak** Weekends all times |
| OTHER TRANSIT SERVICES | River Line | All times | All times |
| | PATH Trains | No | No |
| | PATCO Trains | Nothing mentioned in guidelines | |
| | Amtrak | All times, as a carry on | Requires a reservation (\$20 fee, limited number per train)** |
| | Private Commuter Buses, Shuttles, and Jitneys | Varies** | Varies** |
| | NY Waterways | All times | All times |

*E-scooters are not permitted on trails designated for non-motorized vehicles with natural surface, such as wood chips or bare earth, unless permitted by the trail's owner.

**Check the transit operator's website for specific information.

Updated March 2025.

Safety Best Practices



General Safety
Tips

Speed Limiters

Shared
Micromobility
Services

Preventing
Lithium-Ion
Battery Fires

Riding on Trails
and Off-Road
Facilities

Securing and
Parking
Devices

Traveling with
Micromobility
on Transit

General Safety Tips



Follow the
law

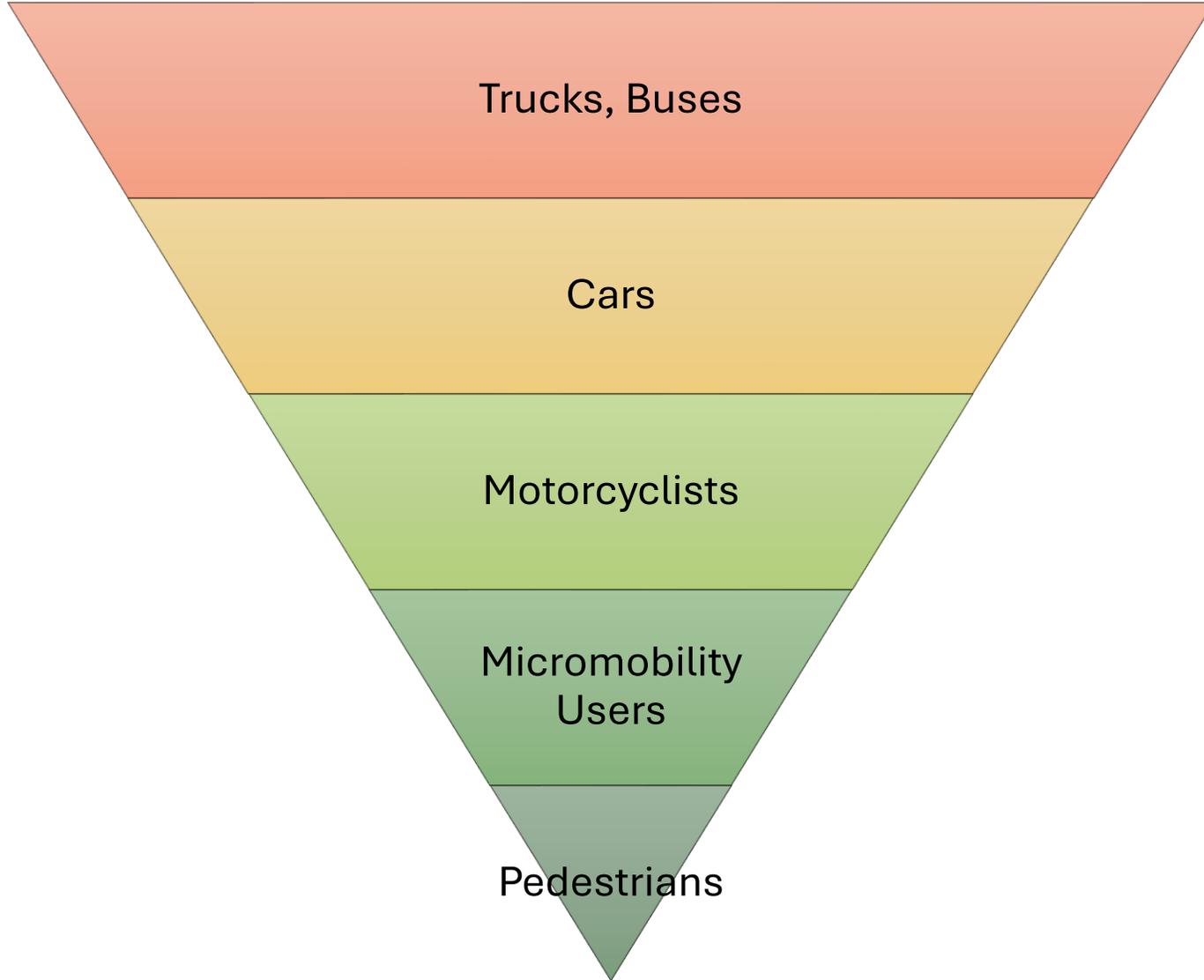
Be
predictable

Be visible

Think
ahead

Ride ready

Hierarchy of Vulnerability



Trucks, Buses

Cars

Motorcyclists

Micromobility
Users

Pedestrians



Less vulnerable

Heavier, faster, larger
blind spots

More risk of injuring
others

More vulnerable

Lighter, slower, better
visibility

Less risk of injuring
others

Existing Laws

Helmets

- Required for riders up to 17 years old
- Required for all riders on motorized bicycles (including Class 3 e-bikes) and motorcycles

Riding in groups

- Allowed to ride no more than two abreast

Safe Passing Law

- Drivers required to move over, slow down, and leave 4 feet when passing

More Resources on the Safe Passing Law

For more information on the Safe Passing Law, visit the NJDOT Bicycle & Pedestrian Resource Center's [Guidance Page](#) and the NJ Bike & Walk Coalition's [Safe Passing Law Resource Center](#).



Speed Limiters

Removing speed limiters from e-devices:

Is illegal

voids the
warranty

Degrades
performance

Can pose a
safety risk

Preventing Lithium-Ion Battery Fires

Primary causes:

- Use of low-quality batteries and chargers
- Improper charging practices

Less common causes:

- Improper battery storage
- Battery tampering
- Prolonged use
- Age and degradation
- Poor maintenance

Preventing Lithium-Ion Battery Fires

Buy high
quality
batteries

Charge
Safely

Store Safely

Inspect
Regularly

Dispose
safely



Riding on Trails and Off-Road Facilities

According to Title 39, low-speed e-bikes and e-scooters are:

Allowed where a bicycle is permitted

Exception: Trails with 'natural surface'

Exception: trail owner restriction

Exception to the exception: Trail owner permission

Riding on Trails and Off-Road Facilities

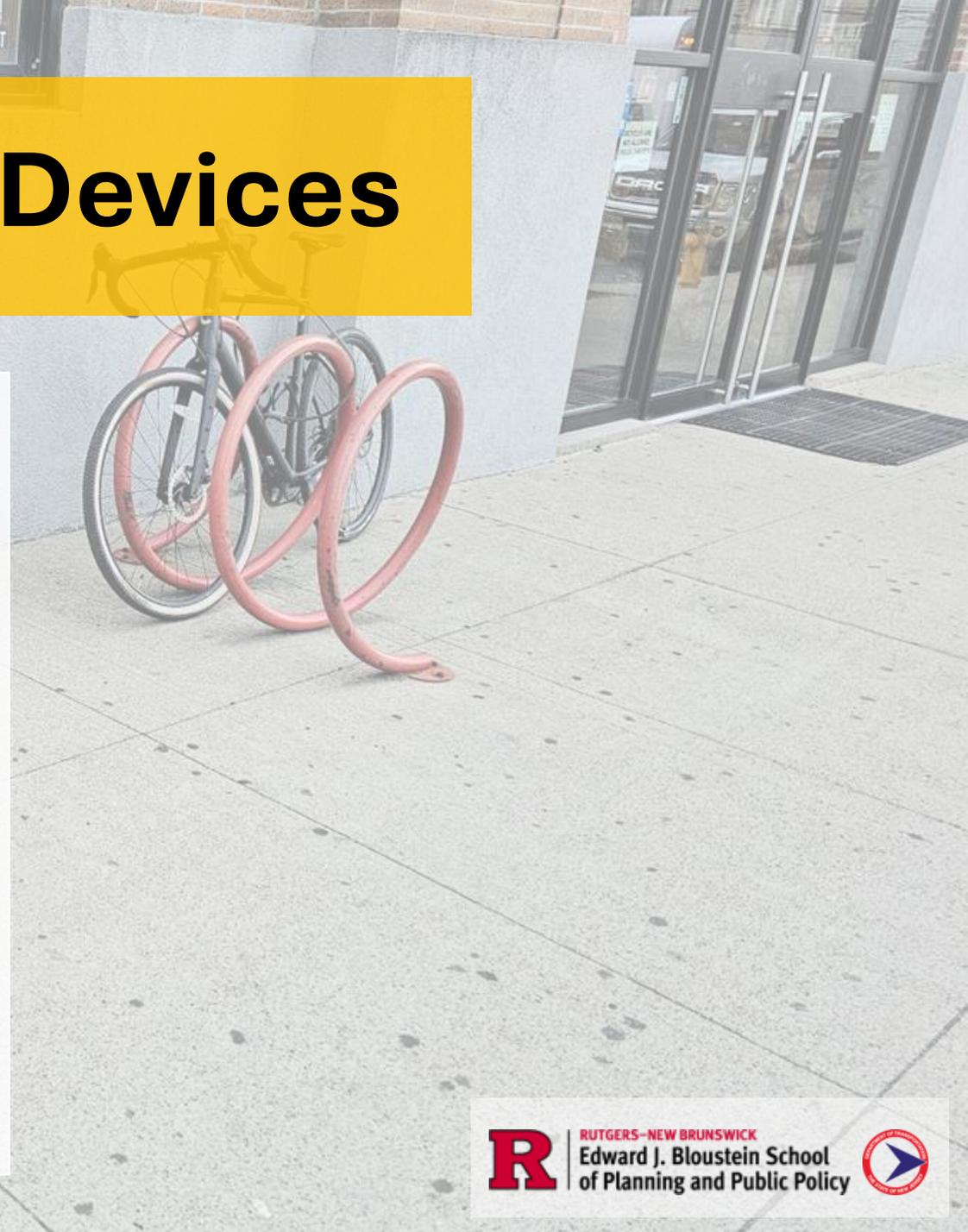
Regulations for **shared-use paths** and **boardwalks** vary by municipality – **always check local regulations before riding!**

For more information about local regulations, check out our new blog article about riding along the Jersey Shore



Securing and Parking Devices

- **Park upright** and in **designated areas** if available
- **Avoid blocking:**
 - Sidewalks
 - Entrances and exits
 - Curb ramps
 - Bus stops
- Bring loose items with you
- **E-scooters:** lock through a non-removable part of the device



Traveling on Transit

Lock and
leave it

Know before
you go

No gas
motors

All that folds
is gold

Courtesy can
take you a
long way

Key Takeaways

Benefits of a comprehensive guide

Nuance in state laws

Greater understanding of micromobility users' rights and responsibilities

Uniformity in regulations within and across states

More research on how well micromobility laws are understood

Where Can I Find the Guide?



njbikeped.org/new-jersey-micromobility-guide-2025



Our Other Resources



New Jersey's E-Bike & E-Scooter Law

| VEHICLE TYPES | PROPULSION METHOD | POWER SOURCE | MAX ASSISTED SPEED (MPH) | LICENSE & REGISTRATION | HELMET | PARK ON THE SIDEWALK? | TAKE ON TRANSIT? |
|--|-----------------------------|---------------------------------|--------------------------|------------------------|--------------------|------------------------|------------------|
| LOW-SPEED ELECTRIC SCOOTER  | Kickstart and throttle | Electric | 19mph | No | Under 17 years old | If not blocking access | Yes* |
| LOW-SPEED ELECTRIC BICYCLE  | Pedal and optional throttle | Electric (<750W) | 20mph | No | Under 17 years old | If not blocking access | Yes* |
| MOTORIZED BICYCLE  | Pedal and optional throttle | Gas or Electric (<50cc/<1.5BHP) | 28mph | Required | Required | No | No |

<http://njbikeped.org/new-law-legalized-e-bikes-and-e-scooters-in-new-jersey/>

* Restrictions may vary by agency. PATH and NJT restrict non-collapsible vehicles during peak travel times. Bus racks have limited availability and may not fit all bikes.

E-mobility devices make it easier to:

- Save on gas, parking, and rideshare costs.
- Access destinations without needing to walk or drive.
- Reduce carbon emissions.
- Make "first-mile" and "last-mile" connections for bus and train trips.
- Climb hills and keep up with traffic without getting sweaty.

Low-speed e-bikes and e-scooters are regulated like bicycles. Drivers of low-speed e-bikes and e-scooters:

- Must ride in the same direction as traffic and obey all traffic lights, signs, and signals.
- Are advised to wear helmets to minimize potential head injury. Helmets are required in NJ for youth under age 17.
- Must park devices without blocking pedestrian and/or wheelchair access.

Off-road trails generally do not allow motorized bicycles, but may allow e-bikes and e-scooters.

Regulations vary by municipality and county. Check all local ordinances and policies. Ride slowly in areas with pedestrians.

For more information, visit the NJ Bicycle and Pedestrian Resource Center at njbikeped.org or the NJ Safe Routes Resource Center at saferoutesnj.org. 01.13.22

njbikeped.org/micromobility



saferoutesnj.org/research-reports

Micromobility and Youth Education, Engagement & Awareness

March 2023



**We want
to hear
your
thoughts
on e-
bikes!**

Share Your Voice!

Understanding the
Impacts of E-Bikes



What do you think?



Contact the NJDOT Resource Centers

NEW JERSEY Safe Routes to School



www.saferoutesnj.org



NJDOT Safe Routes to School
Resource Center

saferoutesnj.org

Telephone: (848) 932-7901

Email: srts@ejb.rutgers.edu

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