Which Wheels Go Where

Report

Contents

Overview

"Micromobility" means devices with a small profile and lower speed compared to most motor vehicles, such as bicycles, scooters, skateboards, rollerblades, and other vehicles. They may be human powered vehicles or lightweight electric vehicles with a top speed of 20 mph or less. With recent battery and technology advances, the options are expanded and changing rapidly.

Today, people use human and lightweight electric vehicles to move about the city; however, many of the laws pertaining to these devices are outdated. Current laws create a fragmented, inconsistent, and often unsafe network (Table 1). Our mobility choices are changing, and our laws need to stay current to regulate, educate, and enforce the safe use of these devices on city facilities and create a fair physical and legal environment for their use.

Background

Fort Collins' robust bicycle network is well suited to accommodate micromobility, and the City is constantly working to improve the bicycle network. Supporting the use of new devices provides community members more mobility choices that move away from use of motor vehicles which emit greenhouse gases and cause traffic congestion. Therefore, this aligns with several City plans and priorities, such as Our Climate Future, Active Modes Plan, Strategic Trails Plan, Vision Zero Action Plan, Shift Your Ride, and 15-Minute City.

Goal

The goal of Which Wheels Go Where is to accommodate more kinds of micromobility and protect pedestrians, people with disabilities, seniors, and children, through updating and simplifying the laws governing micromobility operations on streets, bike lanes, sidewalks, and paved trails (for example, Table 2), and clarifying right of way and behavior.

Accommodate more kinds of micromobility
AND
Protect pedestrians, people with disabilities, seniors, and children.

To inform this project, community members who experience bicycle and pedestrian facilities in different contexts were engaged to determine how best to accommodate human powered vehicles and lightweight electric vehicles on city facilities and to develop strategies to address concerns. We collected internal and external stakeholder input and reviewed crash data and experiences in other communities. The Community Engagement Summary summarized the community outreach and input received in the questionnaire, which received almost 1,500 responses from July to November, 2024. This report (a companion to the Community Engagement Summary) summarizes research and input received outside of the questionnaire.

Table 1. Where current ordinance allows and prohibits various types of vehicles

	Bicycles	E-bikes, Class 1 & 2	E-bikes, Class 3	E-scooters	Human powered vehicle	Lightweight electric vehicle	Low-power scooter
Street	Allowed	Allowed	Allowed	Allowed	Prohibited	Prohibited	Allowed
Bike lane	Allowed	Allowed	Allowed	Allowed	Prohibited	Prohibited	Prohibited
Sidewalk	Allowed	Allowed	**???**	**???**	Allowed	Allowed	Prohibited
Sidewalk – Dismount zone	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Paved Trails (except Mason Trail)	Allowed	Allowed	Prohibited	Prohibited	Allowed	Prohibited	Prohibited
Mason Trail	Allowed	Allowed	Prohibited	Allowed	Allowed	Allowed	Prohibited
Crosswalk	Ride	Ride	Ride	Dismount	Ride	Ride	Dismount
Crosswalk – Dismount zone	Dismount	Dismount	Dismount	Dismount	Dismount	Dismount	Dismount

Table 2. Possible future ordinances regulating various types of vehicles

	Human powered vehicles	Lightweight electric vehicles	Low power scooter
Street	Allowed	Allowed	Allowed
Bike lane	Allowed	Allowed	Prohibited
Sidewalk	Allowed	Allowed	Prohibited
Paved Trails	Allowed	Allowed	Prohibited
Crosswalk	Ride	Ride	Dismount
Dismount zone	Dismount	Dismount	Prohibited

Plan Congruence
Which Wheels Go Where is an outcome of the Active Modes Plan and supports several City plans and priorities, including Our Climate Future, Strategic Trails Plan, Vision Zero Action Plan, Shift Your Ride, and 15-Minute City.

Active Modes Plan
The Active Modes Plan has the goals of 50% active mode share by 2032 and zero active mode fatalities and serious injuries by 2032. The plan is oriented around five Big Moves.

One progress tracker of the Big Move “A Complete and Connected Network” is “Ability of residents to reach community destinations from their homes by walking, biking, rolling, and using micromobility on continuous facilities without gaps in available infrastructure”. Existing policies governing some kinds of micromobility result in network gaps.

One progress tracker of the Big Move “Safe and Comfortable Travel” is “Low-stress network of protected bicycle facilities, detached sidewalks, and off-road multiuse trails that is also accessible to micromobility users, including motorized micromobility”.

The Active Modes Plan has five categories of policy and program recommendations. Recommendation 3e (from Category 3, “Aligning Standards with Active Modes Goals”) is “Revise standards and regulations to support micromobility as a mode of transportation”. In action, this means: “Identify ordinances and regulations that restrict the network for micromobility users. Engage stakeholders to determine what changes to ordinances and regulations could provide a safe and connected network for micromobility users.”

The Which Wheels Go Where project fulfills recommendation 3e.

Our Climate Future
One of the three goals of Our Climate Future is to reduce greenhouse gas emissions 80% below 2005 levels by 2030. Big Move 4 is “Convenient Transportation Choices: It is safe, easy, fast and affordable to get around without a car”. Micromobility offers many varied transportation alternatives to motor vehicles.

Strategic Trails Plan
The paved trails are the heart of the bicycle network. Most of the paved trails are owned and maintained by the Parks Department or Natural Resources. The Strategic Trails Plan provides a framework for planning, design, maintenance, and preservation of the recreational paved trail system of the Parks Department.

Vision Zero Action Plan
The Vision Zero Action Plan has eleven transformative actions and 33 supporting actions in five goal areas, with a Focus on Vulnerable Road Users as an overarching goal. Vulnerable road users are people walking, bicycling, or riding micromobility.

The first goal area, Support Mode Shift, identifies three City plans and programs to increase mode shift: Transit Master Plan, Active Modes Plan, and Shift Your Ride program. The transformative actions in this goal area are to implement these plans and programs. The rationale behind this is that motor vehicles are involved in nearly all severe crashes, and removing or reducing the "threat" – motor vehicles – is the most impactful strategy to eliminate severe crashes.

Updating rules to accommodate more kinds of micromobility gives people a wider variety of alternatives to driving motor vehicles. As one of just five Platinum Bicycle Friendly Communities in the nation, Fort Collins has a robust bicycle network and rules governing bicycle use. Recent efforts have expanded accommodations for e-bikes and e-scooters. In addition to bicycles, e-bikes, and e-scooters, some people may find other human powered or lightweight electric vehicles more appealing or feasible as alternatives to driving motor vehicles.

Shift Your Ride

The objectives of the Shift Your Ride program are 1) reduce travel demand by employing transportation demand management strategies and 2) support the transition to cleaner fuels like electric vehicles. Accommodating more kinds of micromobility supports the three aims of the program.

1) Expand convenient transportation options – Accommodating more kinds of micromobility expands convenient transportation options.
2) Promote low-carbon travel options – Micromobility options are lower carbon than driving motor vehicles and can replace vehicle trips.
3) Improve community health – When micromobility trips replace motor vehicle trips, there is a beneficial effect on both air quality and severe traffic crashes. Human powered vehicles directly improve physical health. Many lightweight electric vehicles also have a positive impact on physical health, even if they do not require pedaling, as standing and balancing are physically beneficial.

15-minute city

One of the 2024-2026 Council priorities is "Advance a 15-minute city by accelerating our shift to active modes". Accommodating different kinds of micromobility provides more active modes options.

Micromobility networks

Under current rules, micromobility devices other than bicycles and Class 1 and 2 e-bikes do not have access to the entire bicycle network.

- E-scooters and other lightweight electric vehicles are restricted from most paved trails.
- Skateboards, e-skateboards, and other human powered and lightweight electric vehicles other than bicycles, e-bikes, and e-scooters are restricted from bike lanes and streets.

However, many riders reported being unaware of these restrictions and choosing to ride where they feel is safe and convenient.

Scooter and skateboard crash analysis

To understand the potential safety implications of formally allowing human powered and lightweight electric vehicles to ride on streets, crashes involving scooters and skateboards were analyzed. E-scooters are allowed to ride on streets while kick scooters and skateboards are currently classified as "toy vehicles" and are not allowed to ride on streets.

A 2019-2023 crash data report was generated from the Fort Collins crash database using the keywords "scooter" and "skateboard". The crash narrative and other fields were manually analyzed to determine if a stand-up scooter or skateboard was involved and 32 crashes identified (Table 3).

Table 3 Number of scooter and skateboard crashes 2019-2023

Scooter/Skateboard	Number of crashes
E-scooter (any)	18
Spin e-scooters	5
Kick scooter	2
E-skateboard	3
Longboard	2
Skateboard	7
All scooter	20
All skateboard	12
All scooter/skateboard	**32 (6.4/year)**

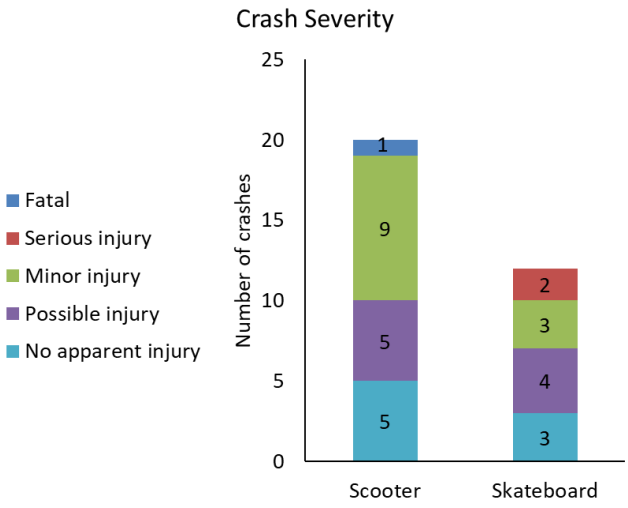

Figure 1 Crash severity

Crash severity

One of the 32 crashes resulted in death and two in serious injuries (Figure 3).

Probable fault

Probable fault was assigned to a motorist in the majority of crashes, including 12 of the 20 scooter crashes and 8 of the 12 skateboard crashes (Table 4).

Of the eight crashes determined to be caused by a person riding a scooter, the riders' errors were:

- Fail to yield – 4
- Distracted (involved a parked motor vehicle) – 1
- Improperly parked e-scooter (involved a bicyclist and a Spin scooter) – 1
- Ran stop sign – 1
- Wrong direction – 1

Of the four crashes determined to be caused by a person riding a skateboard, the riders' errors were:

- Fail to yield – 2
- Fell off – 1
- Crossed against the light – 1

Table 4 Party at fault in scooter and skateboard crashes

Fault	Scooter	Skateboard
Motorist	12	8
Rider	8	4

Toy in roadway citations

Skateboards are classified as "toy vehicles" and as such are prohibited from streets. A person riding a skateboard in a street can be cited for "Toy in roadway". E-scooters are not toy vehicles.

In the skateboard and scooter crashes analyzed, the "Toy in roadway" citation was used twice:

1. In one skateboard-involved crash, the person driving stopped at a stop sign and then proceeded through the intersection, colliding with the person riding a skateboard in the bike lane who did not have a stop sign. It was dark and the person riding the skateboard did not have lights. The person riding the skateboard was cited for "Toy in roadway" and the crash report identified the probable cause as "pedestrian failed to yield".
2. There was one citation for "Toy in roadway" in an e-scooter crash. No other information was available.

Partner feedback

This project was led by FC Moves and Parks staff who gathered feedback and discussed strategies with internal and external partners.

Internal partners

Internal partners provided guidance on community engagement, identified gaps in feedback, and shared concerns and challenges with existing conditions and possible changes.

Internal partners engaged
The May 24, 2024 kick-off meeting included with staff from City Attorney Office, Communications and Public Involvement Office, FC Moves, Natural Areas, Office of Equity & Inclusion, Parks, Police Services, Recreation, Traffic Operations. Rangers from both Parks and Natural Areas were present. After an overview of the project, staff were enthusiastic about the need for updates and for extensive public engagement on updates and behavior expectations, particularly with older residents, people with low income, and youth.

Several meetings were held to gather feedback and develop strategies:

- May 2, 2024 – City Attorney's Office
- June 26, 2024 – City Attorney's Office, Police Services (Traffic Unit), Traffic Operations
- July 10, 2024 –City Attorney's Office (prosecutors)
- July 11, 2024 – Police Services (Traffic Unit), Traffic Operations
- July 15, 2024 – Police Services (HOPE Team)
- August 6, 2024 – Police Services (Traffic Unit), Boulder Police
- October 29, 2024 – FC Moves Education and Outreach
- October 30, 2024 – Police Services (Traffic Unit), Traffic Operations
- March 17, 2025 – Police Services (Traffic Unit)
- May 8, 2025 – Natural Areas

Natural Areas' motorized mobility policy was reviewed to ensure compatibility with rule changes affecting paved trails.

Enforcement perspective
Police officers and rangers expressed the following perspectives about allowing human powered and lightweight electric vehicles on streets and paved trails:

- More resources might be needed
    - For responding to crashes if crashes increase
    - For enforcement of behavior or equipment rules
- Education and outreach considerations
    - Resources and identifying responsibility for conducting outreach

    - Challenges of reaching people and constant effort to reach new students and residents
    - Consistency of messaging across departments
- Considerations of legal recourse
    - Protection for motorists' damage if involved in a collision with an at-fault uninsured rider.
- Potential for increased crashes on streets
    - Speed differential between motor vehicles and other riders on streets
    - Ability to maneuver on different vehicles
    - Ability to stop on different vehicles
    - Lack of safety equipment, such as helmets, lights, and brakes
    - Some studies suggest scooter crashes result in severe injuries

Other outstanding questions

Some questions raised by internal partners can be addressed as new rules are drafted. Others may require more resources and actions. Some questions raised by internal partners reflect those also heard from police officers and community feedback; they are included here for completeness.

- Safety
    - Potential for increased crashes on streets due to the speed differential between motor vehicles and other riders
    - Some communities experienced an increase in certain types of injuries when e-scooters were introduced
    - Speed bumps could be barriers to some vehicles like e-scooters (currently allowed on streets) and skateboards (not currently allowed on streets)
    - Some vehicles and riders may lack safety equipment, such as helmets, lights, or brakes
    - Some vehicles have different maneuverability than others
- Definitions
    - Differences in definitions between communities may create confusion for travelers and enforcement
- Expanding where devices are allowed to operate
    - Challenges to enforcement
    - Differences between municipal code and state code could create issues in civil court
- Data
    - Crash data is limited if it doesn't involve a motor vehicle

External partners

The Community Engagement Summary (a companion to this report) summarizes the community outreach and input received in the Which Wheels Go Where questionnaire, which received

almost 1,500 responses. This section summarizes research and input received outside of the questionnaire:

- Advisory Boards that provided input were Active Modes Advisory Board, Disability Advisory Board, Natural Resources Advisory Board, Senior Advisory Board, Transportation Advisory Board, and Youth Advisory Board. Several board members of these and other advisory boards provided feedback during a Super Issues meeting.
- Colorado State University Police
- Downtown Development Authority
- High school students
- Skateboarder

Advisory Boards

Board members and students felt that it is important to provide safe, comfortable routes with predictable and consistent rules for micromobility riders. Rules should protect both riders and pedestrians. Board members emphasized:

- Simplifying regulations
- Support for education efforts
- Support for signage
- Creating a culture of mutual respect
- The need for safe infrastructure and maintenance of infrastructure
- The importance of audible signals
- Not all devices have speedometers

Colorado State University

Because Colorado State University has a high number of people using different kinds of micromobility, CSU police were interviewed on 11/18/2024. Campus has a very high volume of all kinds of human powered and lightweight electric vehicles. Protecting pedestrians is a high priority. The important thing is how people are riding, not what kind of micromobility vehicle. The “careless riding” citation can be applied to bicycles, e-bikes, and e-scooters. It would be helpful if there were a similar citation for other human powered and lightweight electric vehicles.
There is a disconnect between City ordinances regarding “toy vehicles” (which includes human powered and lightweight electric vehicles other than bicycles, e-bikes, and e-scooters) and the needs of the campus community. On CSU-owned streets, these devices are allowed on streets and they are prohibited from sidewalks if a bike lane is adjacent, while the current City ordinance restricts them from all streets. Since some streets on campus are CSU-owned and some are City-owned, this discrepancy creates confusion.

Downtown Development Authority

Downtown is a different environment than the rest of the City and could be uniquely affected by changes to code. Staff from the Downtown Development Authority (interviewed 1/22/2025) don’t foresee negative impacts from allowing human powered and lightweight electric vehicles on streets within the DDA boundary. They see a need to educate people about the dismount zone

when there are code changes to ensure that dismount zones are not negatively impacted by rule changes.

High school students

Questionnaire responses were low from the age groups under 15 years old and 15-19 years old, so additional feedback was sought in conversations with high school students in the Bike Tech class and the Environment classes.

- Skateboarders don't feel as if they belong anywhere and feel that drivers are hostile.
- Drivers should treat bicyclists and skateboarders the way they would like to be treated
- Micromobility riders need safe infrastructure, with wide bike lanes, separated bike lanes, and raised sidepaths
- New drivers feel nervous around bicyclists and skateboarders, and feel more comfortable when there are wide bike lanes, separated bike lanes, and raised sidepaths
- Fort Colllins has a great bike culture

Skateboarder case study

To get a more complete understanding of the experience of skateboarders, Sam, a skateboarder, was interviewed (11/17/2024). Sam has been "shredding" in Fort Collins for three decades and is well connected with the local skateboarding community. Some years, the skateboard was Sam's primary transportation.

Skateboarders have the same goals as other travelers – a place that is safe and easy to get around. Skateboarders will look for the smoothest path, and that means they switch between facilities. Sidewalks don't always work for skateboarders. For example, while skateboarding, Sam once passed a bicyclist in a bike lane. At that speed, the sidewalk wasn't a safe option for Sam or for pedestrians.

Because there is a strong skateboarding community in Fort Collins, there are opportunities for education. The skateboard advocacy group "Lauch Community through Skateboarding" can disseminate information through social media, website, and posters in the Market Skate Shop. Signage at skateparks where skateboarders congregate can be effective. The FC Moves bicycle education program could be adapted for skateboarders if City rules for skateboarding aligned with the practical operation of a skateboard as a mode of transportation.

Peer cities

Relevant rules and experience from peer cities are described in this section.

Boulder

The Which Wheels Go Where project was informed by Boulder's similar effort, also named Which Wheels Go Where, which resulted in code changes in 2021. Key elements of Boulder's code changes were:

- Clearly distinguish between lightweight electric vehicles and electric vehicles that are more powerful, such as low power scooters
- Defined where human powered vehicles and lightweight electric vehicles can be operated
- 15 mph speed limit on paved trails and 8 mph speed limit in crosswalks

After these code changes, education has been the primary strategy to address issues on multi-use paths and on streets and sidewalks. Clearly defining different categories of vehicles made it possible to accommodate more types of vehicles and educate what is and isn't allowed. The code changes support education and enforcement. Police are involved in education, and clear, understandable rules help in the rare situations when enforcement is necessary.

Police in Boulder were concerned that there would be severe crashes after allowing skateboards on streets. This concern did not materialize as there has not been an increase in any crashes (severe or otherwise) involving skateboards since allowing skateboards on streets in 2021.

Denver

Denver updated rules in 2020 to allow electric devices on trails:

- 15 mph speed limit
- Stay to the right except when passing
- When passing, yield to opposing traffic
- Sound warning when passing
- Yield to pedestrians

Denver code contains some inconsistencies, such as both a prohibition of bicycles and e-scooters on sidewalks as well as a 6 mph speed limit for bicycles and e-scooters on sidewalks. Neither the speed limit nor the prohibition apply to sidewalks that are part of a designated bicycle route. Denver does not allow roller skates, skateboards, and toy vehicles in the roadway.

Figure 2 Outreach graphic used in Denver

Loveland

In 2023, the City of Loveland created an Open Lands and Trails Division Policy that allows Class 1 and 2 e-bikes, e-skateboards, e-scooters, and other electronic micromobility devices on City trails.

The policy stipulates:

- Electronic micromobility devices have motors that generate less than 750 watts of power, weigh less than 100 pounds, and have an axle width less than half the width of the trail
- All trails users ride or walk on the right, warn others of approach and when passing, and pass on the left.
- Riders yield the right of way to pedestrians.

Other cities

Cities that allow e-scooters on paved trails include Boulder, Denver, Loveland, Fayetteville, AR; Salt Lake City, UT; and Columbus, OH. Boulder and Loveland also allow other lightweight electric vehicles on paved trails.

Facilities

The facility options for human powered and lightweight electric vehicles are sidewalks, paved trails, bike lanes, and streets. This section discusses sidewalks and streets, including bike lanes. Paved trails will be explored further after the 18-month safety education campaign.

Current regulations allow bicycles, Class 1 & 2 e-bikes, and e-scooters to use sidewalks and streets, including bike lanes and crosswalks. The network for human powered and lightweight electric vehicles other than these, considered “toy vehicles”, is constrained because current regulations restrict electric toy vehicles from every facility except sidewalks and restrict human powered toy vehicles from streets.

Sidewalks

Sidewalks in Fort Collins range from narrow, 18-inch sidewalks with mountable curbs to standard width sidewalks of 4.5 to 7 feet. Narrow sidewalks are not complaint with current standards, including ADA accessibility.

Sidewalks and sidepaths are both paths alongside roads, unlike paved trails which are mostly NOT alongside roads. Sidewalks are intended for the use of pedestrians while sidepaths are multiuse: designated for use by pedestrians, bicycles, human powered vehicles, and lightweight electric vehicles. To simplify regulations, the proposed code addresses the regulation of multi-use paths, which includes both paved trails and sidepaths.

While sidewalks are intended for pedestrians, people often use human powered and lightweight electric vehicles on sidewalks, typically because the bicycle facility does not feel safe or is not present. Adult riders are discouraged from riding on the sidewalk because while it may feel safer, there are hidden risks at driveways and parking lot entrances and exits. However, there are gaps in the bicycle network and places where inadequate sidewalks are the best available option for riders. Therefore, regulations should protect and prioritize pedestrian safety and comfort.

Current regulations: All human powered vehicles and lightweight electric vehicles are permitted on sidewalks, except in dismount zones. A person riding a bicycle, electrical assisted bicycle, or electric scooter on a sidewalk required to yield to pedestrians and sound warning.

Proposed regulations: All human powered vehicles and lightweight electric vehicles are permitted on sidewalks, except in dismount zones. Human powered and lightweight electric vehicles required to yield to pedestrians and sound warning and are prohibited from careless riding.

Changes:

- Other human powered and lightweight electric vehicles would be added as classes of vehicles that are required to yield to pedestrians and sound warning.
- Prohibition of careless riding would be applied to riding any human powered and lightweight electric vehicles on sidewalks.

Streets

Streets and bike lanes are considered together because existing regulations governing bicycles, e-bikes, and e-scooters of do not distinguish between bike lanes and streets.

Bicycles, e-bikes, and e-scooters are currently permitted in bike lanes and on streets; other human powered vehicles and lightweight electric vehicles are prohibited from bike lanes and streets.

Opportunities
Allowing human powered vehicles and lightweight electric vehicles to use bike lanes and streets, instead of restricting them to sidewalks, opens up these vehicles as transportation options. Some people may not be able to own or operate a bicycle, e-bike, or e-scooter. They may want the human powered skateboard or kick scooter that gives them more physical exercise, simpler components, no need for charging, and is easy to transfer to other modes and keep with them to avoid theft. They may want the lightweight electric vehicle that is smaller and easier to carry and store than an e-scooter or e-bike.

In the questionnaire, about 10% report riding human powered vehicles or lightweight electric vehicles that aren't bicycles, e-bikes, or e-scooters in bike lanes and on streets without bike lanes. Comments on this topic within the questionnaire and in in-person interactions expressed surprise that this is not permitted. Therefore, changing the rule is unlikely to affect behavior, while education may promote safer riding practices in bike lanes and on streets.

People on these vehicles may feel very comfortable on low traffic, low speed streets, which are the majority of streets in Fort Collins. Current regulations prohibit this regardless of traffic volume or speed or whether a bike lane is present. Officers stated they do not and would not enforce this activity on low traffic, low speed streets or in bike lanes, but as long as the restriction is present, riders cannot be encouraged to practice safer riding behaviors in bike lanes and on streets in education opportunities.

Whether or not riders are allowed to use paved trails, some riders will still need to use streets and/or sidewalks at some point in their journey to access destinations.

Concerns
Members of the Active Modes Board and Transportation Board commented that the rules should be simple. For example, restricting the type of street or where on the street a rider may operate certain kinds of devices makes the rules more complicated and difficult to explain and understand.

Boulder

Since 2021, Boulder has permitted these types of vehicles on streets and now has three years of experience with these rules. While Boulder's ordinance permits all types of micromobility – bicycles, e-bikes, e-scooters, human powered vehicles, and lightweight electric vehicles – on streets and in bike lanes, the educational chart created to explain the new rules shows restrictions that are not reflected in the ordinance (Figure 2):

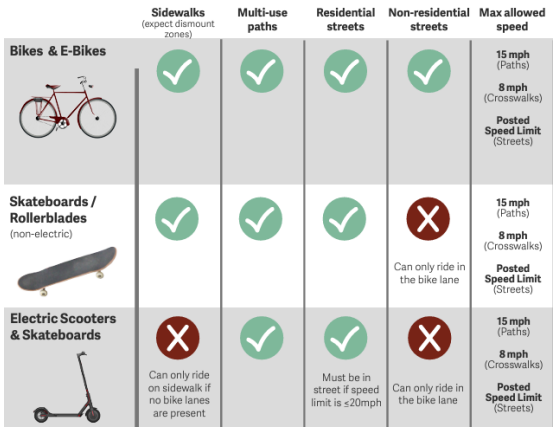

Figure 3 Boulder guide to where different micromobility devices can be used (different from Boulder ordinance)

- Human powered vehicles that are not bicycles or e-bikes may be used on any residential streets
- Lightweight electric vehicles may be used on residential streets with posted speed limit ≤20 mph
- Human powered and lightweight electric vehicles that are not bicycles or e-bikes must use the bike lane on nonresidential streets.

Since the rule changed, a Boulder police officer shared:

- They expected to see more impact when the rule changed than what was observed.
- Before the rule change, people couldn't ride skateboards in the street but did anyway.
- They have not observed an increase in crashes (severe or otherwise) related to the rule change.
- Some Boulder officers are still disappointed that the rule was changed.

Strategies

Speed limit enforcement challenges

A desire for speed limits and enforcement of speed limits was heard from internal and external stakeholders. Denver established 6 mph speed limit on sidewalks, Boulder established 8 mph speed limit in crosswalks, and both Denver and Boulder established 15 mph speed limit on paved trails.

Technology, legal requirements and staffing have significant limitations to ticketing infractions of very low speed limits.

- Technology
    - The lowest limit of radar speed detection is 10 mph. More expensive models ($2,500 per radar gun) can detect 5 mph.
    - The lowest limit of lidar speed detection is 3 mph. Lidar guns are $4,800 each and require 3-day certification training.
    - Both have limitations detecting low speed limits; however, egregious speed violations could be detected.
- Legal requirements
    - To issue a speeding ticket, speed limit signs must be posted at every entry point. This is a hurdle for paved trails and is impossible for sidewalks and bike lanes which can be entered at virtually any point.
    - State law minimum age to receive a speeding ticket is 10 years.
    - Points are not assessed for bike infractions.
- Staff
    - Park rangers and Natural Area rangers are not certified in lidar or radar speed enforcement and cannot pursue or detain people.
    - Community Service Officers (CSO) are not authorized to issue citations.
    - The Traffic Unit is fully occupied with enforcement on roads and doesn't have the capacity to patrol and enforce traffic infractions on paved trails, sidewalks, or bike lanes.

Police have not observed issues on paved trails to justify patrols. Fort Collins Police Services created Homeless Outreach and Proactive Engagement (HOPE) in April 2023 with four bike-certified officers who visit paved trails Monday-Thursday during daytime hours to offer resources and opportunities to unhoused people. A HOPE Team officer reported that she has not observed blatant speeding and rarely saw dirt bikes on paved trails, however, the HOPE Team looks for people experiencing homelessness and not traffic issues.

Automated speed enforcement used on roads depends on being able to identify a road user by license plate. License plates aren't required on vehicles that are legal on paved trails.

Prosecutors from City Attorney's Office and Police expressed hesitation over regulations such as a speed limit that can't be or isn't intended to be proactively enforced. On the other hand, educational efforts could benefit an adopted speed limit. For example, a sign that reads "15 mph speed limit" is more compelling than "15 mph courtesy speed limit".

Education

The primary strategy for addressing existing issues with micromobility on sidewalks, paved trails, bike lanes, and streets is education. Areas that are the most popular for micromobility are the areas that experience the most issues, such as paved trails where they see the highest use, downtown surrounding Old Town Square (a pedestrian mall), and CSU campus.

Education and outreach promotes:

- Yielding to pedestrians on sidewalks and paved trails
- Yield to oncoming traffic on sidewalks and paved trails
- Stay to the right on paved trails unless passing
- Sound warning when passing on paved trails
- 15 mph speed limit on paved trails
- Slow down for sharp curves

Boulder experience
Boulder, CO created education materials to encourage sound warning when passing and yielding to pedestrians that are used on paved trails and downtown.

Four Point Trail Safety Strategy
To address issues on paved trails, the Strategic Trails Plan proposes a four-point safety strategy:

- Trail safety education multimedia campaign
- Refreshed courtesy and etiquette signs
- Trail widening, centerline striping and warning signs at bridges, underpasses, and junctions
- Bicycle Ambassador Program to include routine trail pop-up events

FC Moves Education and Outreach
To address issues on sidewalks, bike lanes, and streets, the FC Moves department education and outreach programs, Safe Routes to School and Adult Education and Outreach, can disseminate information. These avenues are also available for Parks' paved trail safety education campaign.

Safe Routes to School (SRTS) teaches bicycle and pedestrian safety to nearly 6,000 K-12 students each year at 20-plus elementary, middle, and high schools. On average, K-12 students participating in SRTS programming receive more than two hours of personal interaction with SRTS instructors. SRTS teaches youth how to navigate local streets and trails more safely. At

the high-school level, students also take a Bicycle Friendly Driver course, helping them become safer drivers.

The Adult Education and Outreach program reaches people through classes, social media, and a monthly newsletter. Classes include Smart Cycling that teaches best practices for bicycling and Fort Collins Friendly Driver that teaches drivers how to drive around people on micromobility. This program manages the FC Moves Facebook and X social media posts with about 4,000 followers. The Momentum newsletter reaches 5,330 subscribers.

Appendix

Crash Analysis Methodology

Information used to determine if an e-scooter, kick scooter, or skateboard was or was not involved in a crash included:

- Brand names such as “Tao Tao” (a gas-powered small motorcycle) or “Segway” (a stand-up electric scooter).
- Vehicle description, such as “stand up scooter”, “longboard”, or “e-skateboard”.
- “Nonmotorized” indicated in any field suggests that it was a stand-up scooter, either e-scooter or kick scooter.
- “Motorized bicycle” indicated in any field suggests it was not a stand-up scooter.

In many cases it was impossible to determine if a vehicle was a stand-up electric scooter vs. a sit-down scooter. These cases were not included in the analysis.

In crash reports, the rider was sometimes identified as ‘pedestrian’, ‘bicyclist’, or ‘pedestrian on skates/skateboard’. However, ‘pedestrian on skates/skateboard’ was used once when the crash narrative described a stand-up scooter and once when the crash narrative described a sit-down scooter. Therefore, this category alone was not considered a reliable identification of a skateboard.

From an initial set of 69 scooter-involved crashes, it was determined that 43 definitely did not involve an e-scooter or kick scooter and it could not be definitively determined whether an e-scooter or kick scooter was involved for 6 crashes, leaving 20 crashes that definitely or likely involved riders of e-scooters or kick scooters. From an initial set of 16 skateboard-involved crashes, one was a scooter (and was already included in the scooter analysis), and it could not be definitively determined whether a skateboard was involved 3 crashes, leaving 12 crashes that definitely or likely involved riders of skateboards.