AGENDA

TRAFFIC SAFETY COMMISSION MEETING
The Dalles Public Works Department
1215 W 1st Street
The Dalles, OR 97058
March 18, 2026
7:00 a.m.

Via Zoom

1. CALL TO ORDER
2. ROLL CALL OF COMMISSION MEMBERS
3. PLEDGE OF ALLEGIANCE
4. APPROVAL OF AGENDA
5. PRESENTATION/PROCLAMATIONS
6. AUDIENCE PARTICIPATION

   During this portion of the meeting, anyone may speak on any subject which does not later appear on the agenda. Five minutes per person will be allowed. If a response by the city is requested, the speaker will be referred to Administrative Services support staff for further action. The issue may appear on a future meeting agenda for Commission consideration.

7. STAFF REPORTS
   - A. TRANSPORTATION DIVISION MANAGER REPORT
   - B. CITY POLICE REPRESENTATIVE REPORT
   - C. CODES ENFORCEMENT OFFICER REPORT
   - D. CITY ENGINEER REPORT
8. CONSENT AGENDA

9. DISCUSSION ITEMS

   A. Washington between 10th Street and 11th Street – School Safety Concerns

   B. Community Walkability Study Input Needed

   C. Ordinance Recommendation – Downtown Core Area Wheeled Vehicle Restrictions

10. ROUNDS TO COLLECT AGENDA ITEMS FOR NEXT MEETING

    Additional agenda items can be submitted until noon on the 1st Tuesday of each month. Mail traffic safety items to 1215 W First Street, The Dalles, OR 97058 or e-mail to **trafficsafety@ci.the-dalles.or.us**

11. ADJOURNMENT

This meeting is conducted In Person and via Zoom.

Prepared by/
Cindy Keever, Administrative Secretary
Public Works Department

PW Traffic Safety Commission Request Form

Print

Submitted by: Phil Williams

Submitted On: 2026-03-09 12:42:53

Submission IP: 198.236.188.18 (172.31.22.38)
proxy-IP (raw-IP)

Status: Acknowledged

Priority: Normal

Assigned To: James Sprague

Due Date: Open

Attachments

- Traffic Safety around The Dalles High School.pdf - 2026-03-09 12:42:56 pm

CITY of THE DALLES PUBLIC WORKS
1215 WEST FIRST STREET
THE DALLES, OREGON 97058
(541) 296-5401

Traffic Safety Commission Request Form

The Commission is an advisory body that forwards recommendations to the Public Works Director. The purpose of The Dalles Traffic Safety Commission is:

- To coordinate traffic planning.
- To conduct traffic surveys, studies and investigations.
- To prepare and publish traffic reports as requested.
- To prepare and recommend proposals for improving traffic conditions.
- To hold public hearings relating to traffic control problems, proposals and solutions.
- The Planning Commission or City Council may refer matters to the Traffic and Safety Commission for their review and input.

Citizens with traffic safety concerns can use this form to send a written description about the concern. For a dead animal in the roadway, please call the Public Works Department, (541) 296-5401.

For anything that poses an immediate danger, call 911.

This request will be considered a public document. All information submitted will be accessible to the public, in its entirety, on the City's website.

*** Date of Request:**

03/09/2026

Format: MM/DD/YYYY

*** Requestor First Name:**

Phil

Primary First Name

*** Requestor Last Name:**

Williams

Primary Last Name

*** Requestor Email Address:**

williamsp@nwasco.k12.or.us

Primary email address

Mailing Address:

220 East 10th Street

*** Phone:**

5415063400 Ext 2000

Daytime Phone Number

Cell:

Ex. (123) 456-7890

*** What would you like to report/request:**

☑ **Damaged / Missing / Blocked Sign** ☐ **Pollutants in or blocked storm drain** ☐ **Pothole / Sinkhole** ☑ **Traffic Control Issues**
☐ **Traffic Signal Issues** ☐ **Yellow curb request** ☐ **Other (please explain in detail section below)**

*** Location of report/request:**

Washington Street & E. 10th Street and Washington Street & E. 11th Street

More detail if needed:

Please see the attached letter

Upload a drawing or picture (optional)

Choose File No file chosen

Upload a drawing or picture (optional)

Choose File No file chosen

History

Update By: James Sprague

Public - 15 hours ago () - #1

- Changed status from **Open** to **Acknowledged**
- Changed assigned user from **Traffic Safety** to **James Sprague**
- Sent templated email: **Agenda Item - Internal**

Thank you for your submission, your request and letter will be shared with the Traffic Safety Commission for discussion at our upcoming March meeting.

Update Submission

Status

Acknowledged

Priority

Normal

Due Date

Assigned To

James Sprague

Department

Public Works - Traffic Safety

Attachments

Choose Files No file chosen

Post a new Comment

Normal

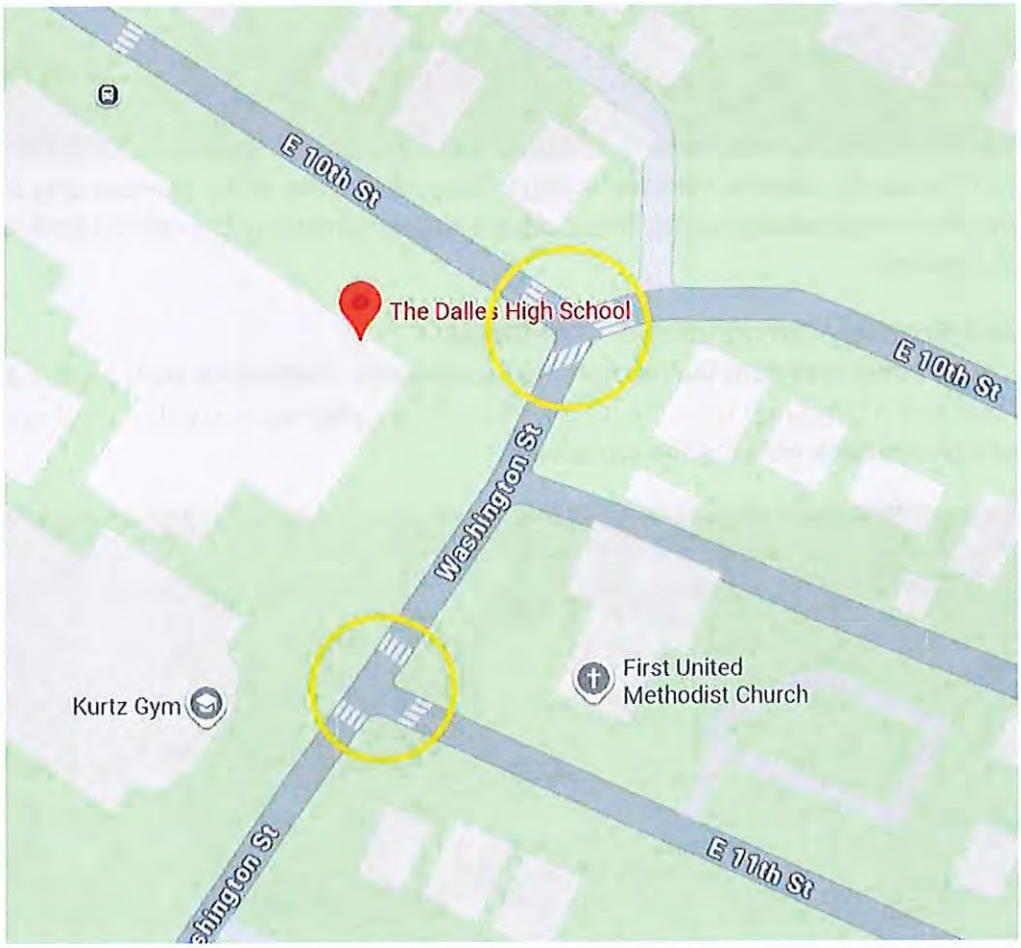
The Dalles High School

220 East 10th Street, The Dalles OR 97058 - 541-506-3449

Subject: Traffic Safety Concerns and Improvement Request – School Zone Around The Dalles High School

Dear City of The Dalles Public Works Department Traffic Safety Team,

I am writing to request a review of several traffic safety concerns in the 20-mph school zone surrounding The Dalles High School. In particular, I am concerned about the safety of the intersections and crosswalks at **Washington Street & E. 10th Street** and **Washington Street & E. 11th Street**, where large numbers of students cross each day.



As principal of the high school, I regularly supervise students during bus loading and dismissal. From both direct observation and from my office window overlooking the area, I frequently see drivers speeding, failing to yield to pedestrians, and appearing confused by the traffic configuration. Recently, a school employee was struck by a vehicle while crossing in the crosswalk at Washington and E. 10th Street, which highlights the urgency of addressing these safety concerns.

Key Safety Concerns

1. Confusing Intersection Configuration (Washington St. & E. 10th St.)

This intersection is unusual due to the curve in Washington Street as it approaches 10th Street. Traffic traveling northbound is divided into two lanes—one designated for left turns only and one for right turns only. Because of the curve to the left, the stop sign located on the far right side of the roadway can be difficult for drivers to see, particularly for those in the left-turn lane.

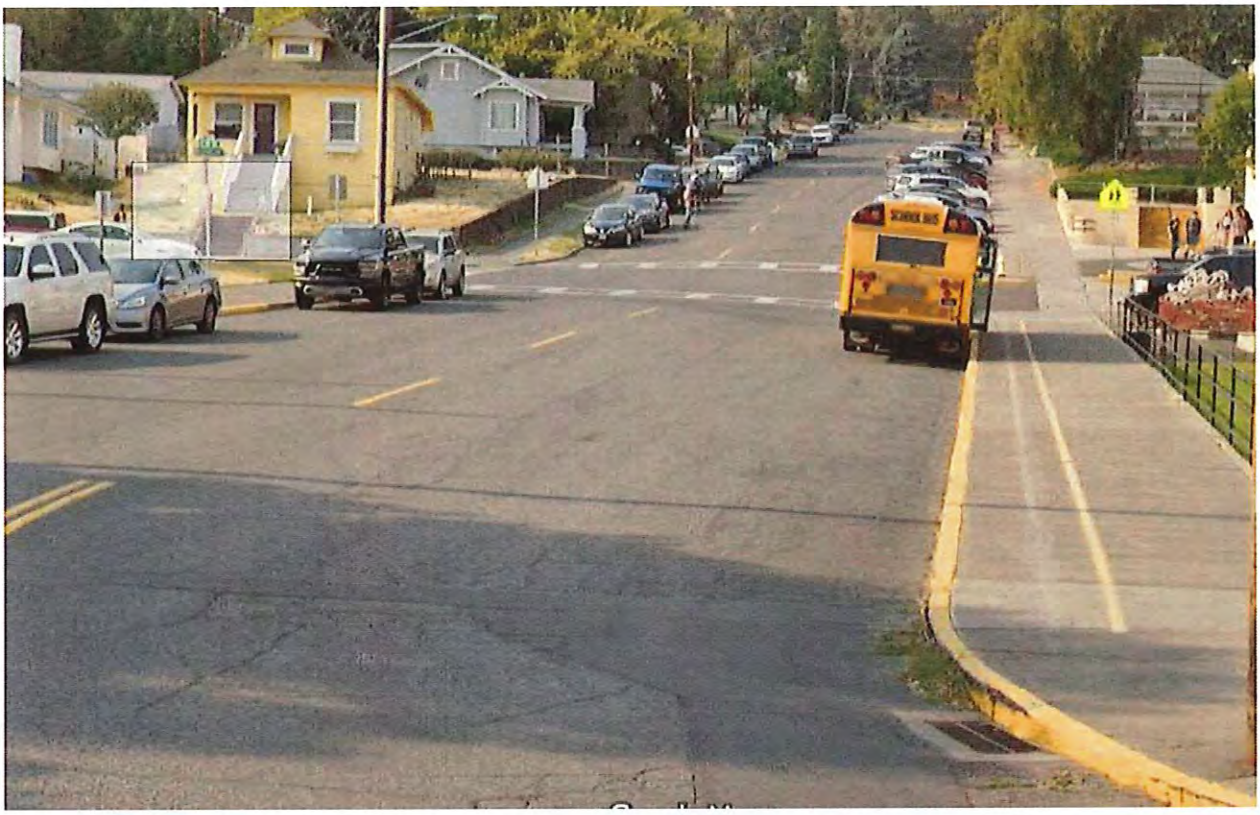
From my office window I frequently observe vehicles failing to stop, especially in the left-turn-only lane where the stop sign is angled away from approaching traffic. Many drivers appear unsure of the correct lane movement or do not realize a stop is required.

2. Limited Visibility and Roadway Curvature at E. 10th Street

The roadway along E. 10th Street curves to the left near two crosswalks. Visibility for both drivers and pedestrians is limited due to the curve and a large tree near the intersection. This combination creates blind spots that make it difficult for drivers to see pedestrians entering the crosswalk.

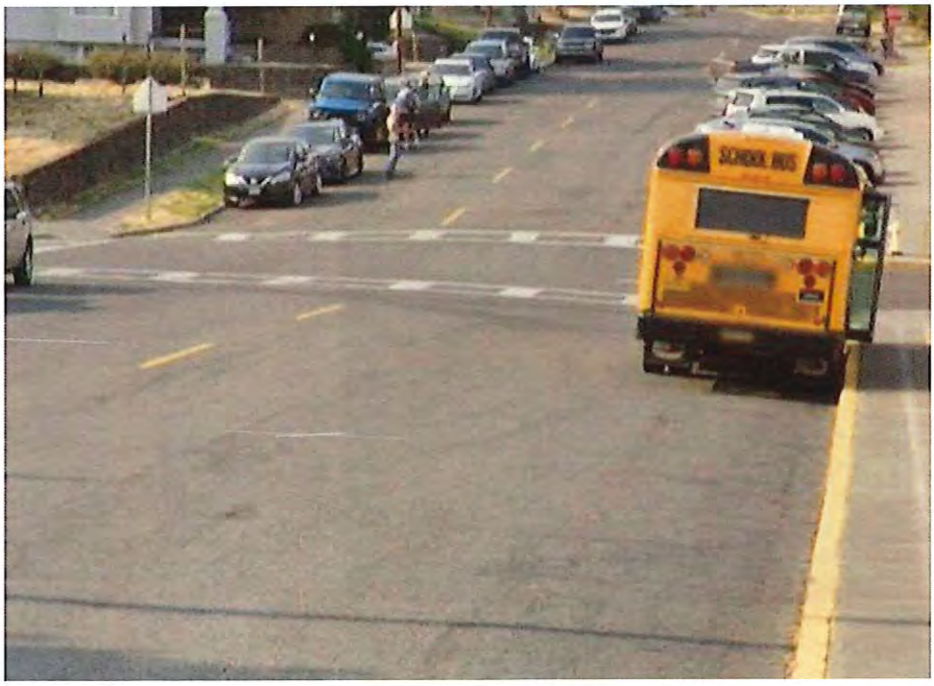
3. Heavy Pedestrian Activity During School Hours

Hundreds of students cross Washington Street daily, particularly during arrival, lunch, and dismissal times. School buses load and unload along Washington Street, and parked buses can obstruct sightlines for both drivers and pedestrians.



4. Speeding Within the School Zone

Despite the posted 20-mph school zone, many vehicles traveling downhill on Washington Street exceed the speed limit. Drivers turning from 10th Street onto Washington must also navigate around buses and pedestrians, creating additional risk during already congested periods. Students crossing in front of buses are often not visible to southbound traffic, and students themselves cannot clearly see approaching vehicles from the north.

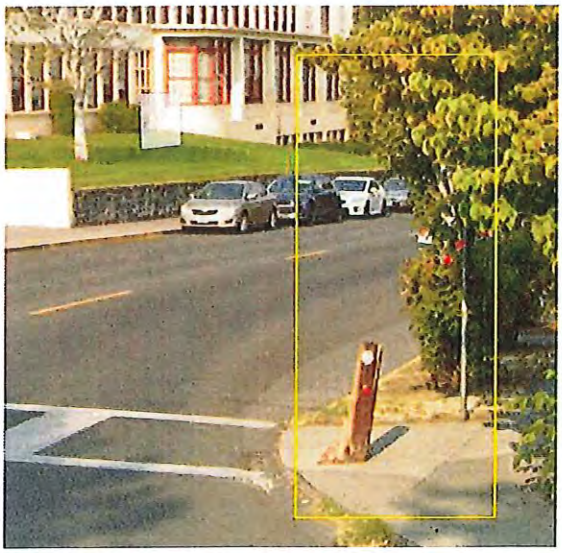


While high-visibility school crossing signs exist, several issues reduce their effectiveness:

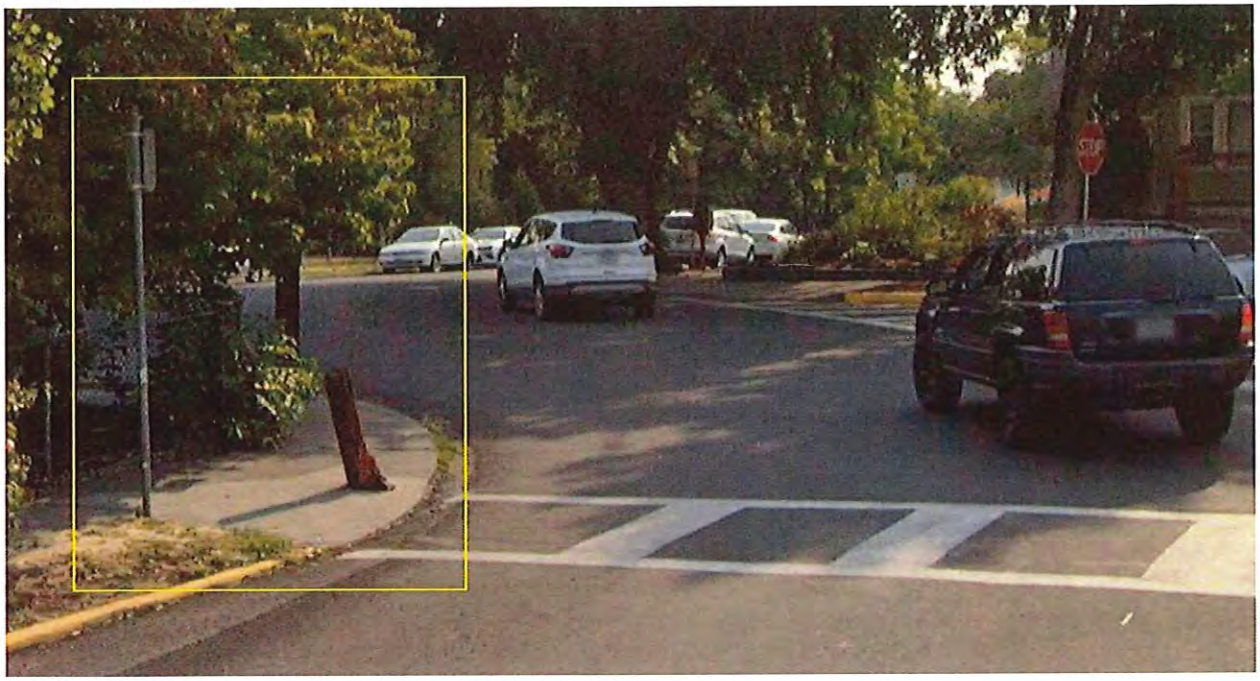
- Some signs are set back from the roadway and may be blocked by parked buses during peak school times.
- Directional arrows on certain signs appear confusing and may not clearly indicate the intended crosswalk.
- Road surface markings such as lane arrows and turn indicators are worn and difficult to see, especially at night or during poor weather conditions.

6. Missing or Damaged Roadway Markers and Vegetation Obstruction

Along E. 10th Street eastbound, vegetation has grown over a parking sign and a wooden roadside marker that indicates the sidewalk location. The wooden marker was damaged by a vehicle and has not been replaced. Currently, only two small reflectors remain to guide drivers through the curve at night.



Here is the parking sign and curb indicator from the other direction



Additionally, the guardrail ahead of the curve lacks reflective arrows or markers that would clearly signal drivers to follow the roadway to the left.

Request for Review and Possible Improvements

Given the high volume of student pedestrians and the recent accident involving a staff member, I respectfully request that the city evaluate this area for potential safety improvements. Possible measures might include:

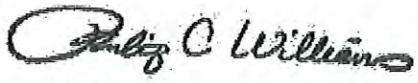
- Improved stop sign visibility and placement at Washington & E. 10th
- Refreshed pavement markings and lane arrows
- Additional curve warning signage and reflective markers on E. 10th Street
- Vegetation trimming and replacement of damaged roadside markers

- Lit signs to show lane choices
- Enhanced crosswalk visibility or additional pedestrian warning signs
- Consideration of traffic enforcement during peak school hours

The safety of our students and staff is a top priority, and these intersections present several risks that could be reduced through improved signage, visibility, and traffic management.

Thank you for your attention to this matter and for your continued efforts to keep our community safe.

Sincerely,



Phil Williams
Principal
The Dalles High School
541-506-3449 Ext. 2001
williamsp@nwasco.k12.or.us

Cindy Keever

From: Ann Moorhead
Sent: Monday, March 9, 2026 10:51 AM
To: Cindy Keever
Subject: Request for Input on Walkability Tool Development
Attachments: Built environment characteristics list.docx

Hello Cindy,

We are hoping you might take a look at our project and share it with the Traffic Safety Committee for feedback.

We are currently working with the University of Oregon to engage students and faculty in developing a tool to help us better understand walkability in our community.

We are seeking your support in two ways. First, during this initial round of feedback, we would like to learn how you define walkability and which built environment characteristics you believe most affect it. Second, once the students have developed the draft tool and methodology, we will be back in touch for additional feedback.

Walkability can be broadly defined as the extent to which the built environment supports and encourages walking by providing safe, comfortable, accessible, and attractive conditions for people to travel on foot for daily activities and recreation. Perceptions and experiences of walkability can vary--for example, older adults may prioritize smooth surfaces and resting opportunities, parents with children may emphasize safe crossings, and individuals with disabilities may focus on accessibility and barrier-free design. Your perspective will help ensure the tool reflects a range of experiences and priorities.

Please share how you approach walkability, the characteristics you think are most important to evaluate, and any questions you may have. A document with additional examples is attached for reference. We ask that you provide feedback by the end of the day on March 30.

Thank you for your time and support. We look forward to reconnecting in mid-April for the second round of feedback.

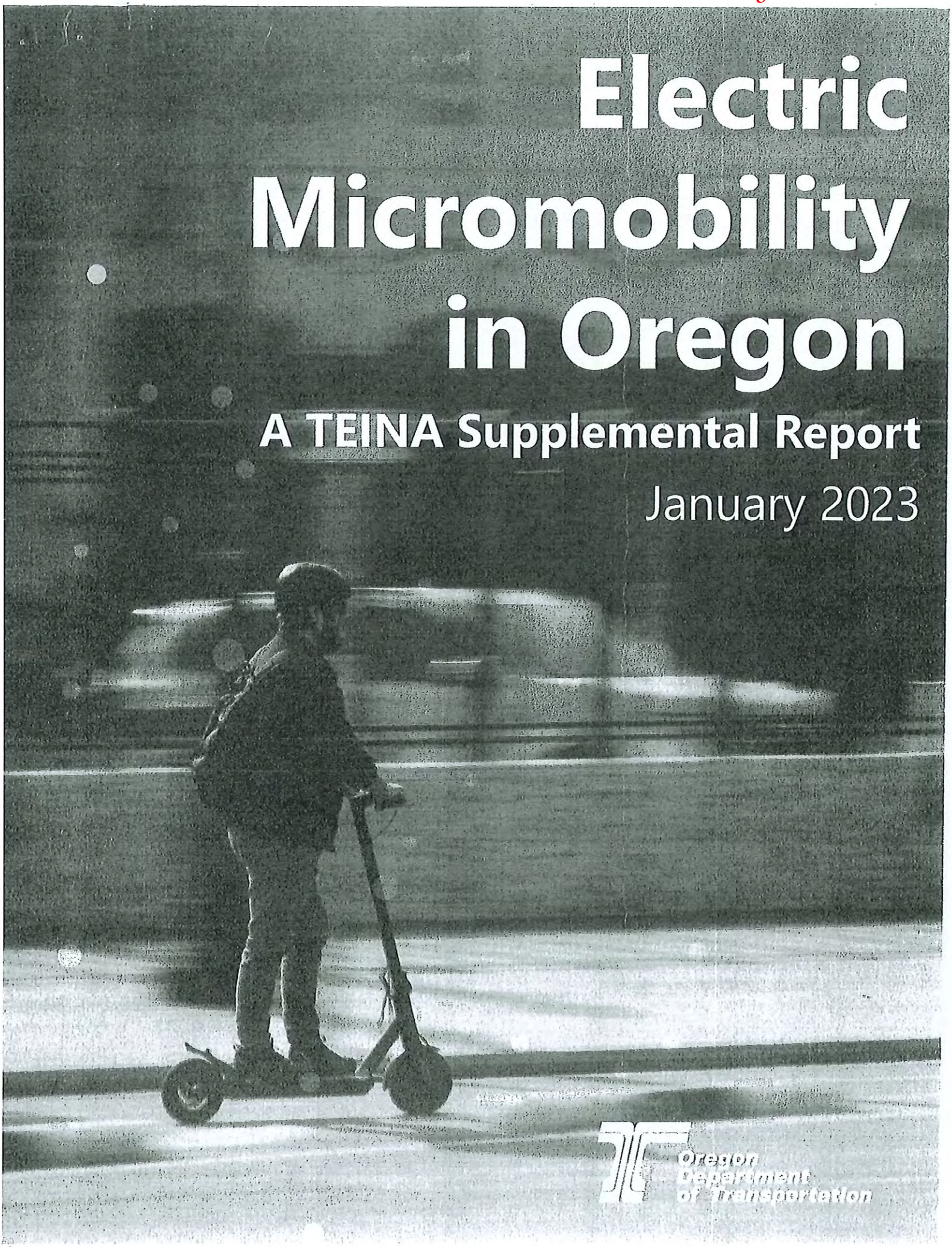
Best,

Ann Moorhead (she/her/élla)
Community Development Analyst
City of The Dalles
amoorhead@thedalles.gov

Electric Micromobility in Oregon

A TEINA Supplemental Report

January 2023



Oregon Department of Transportation

Final Report

Electric Micromobility in Oregon

A TEINA Supplemental Report

Prepared for:
Oregon Department of Transportation
355 Capitol Street NE
Salem, Oregon 97301-3871

Prepared by:
Kittelson & Associates, Inc.
851 SW 6th Avenue, Suite 600
Portland, Oregon 97204

In association with:
Forth
RMI

January 2023

Contents

Foreword

This report was produced by the Oregon Department of Transportation's Climate Office under the guidance and direction of Jillian DiMedio, senior transportation electrification analyst; Suzanne Carlson, Climate Office director; and Mary Brazell, transportation electrification program manager.

The consultant project team that helped produce this report included representatives from Kittelson & Associates and Forth: from Kittelson, Wayne Kittelson, project manager, and Susan Mah, senior graphic designer and from Forth, Barrett Brown and Jeff Allen. They were joined by John MacArthur, sustainable transportation program manager at the Transportation Research and Education Center (TREC) at Portland State University.

The project team would like to thank the Portland Bureau of Transportation for its generous feedback and helpful suggestions for this report. Please note that the bureau was not asked to and has not formally endorsed the content of this report.

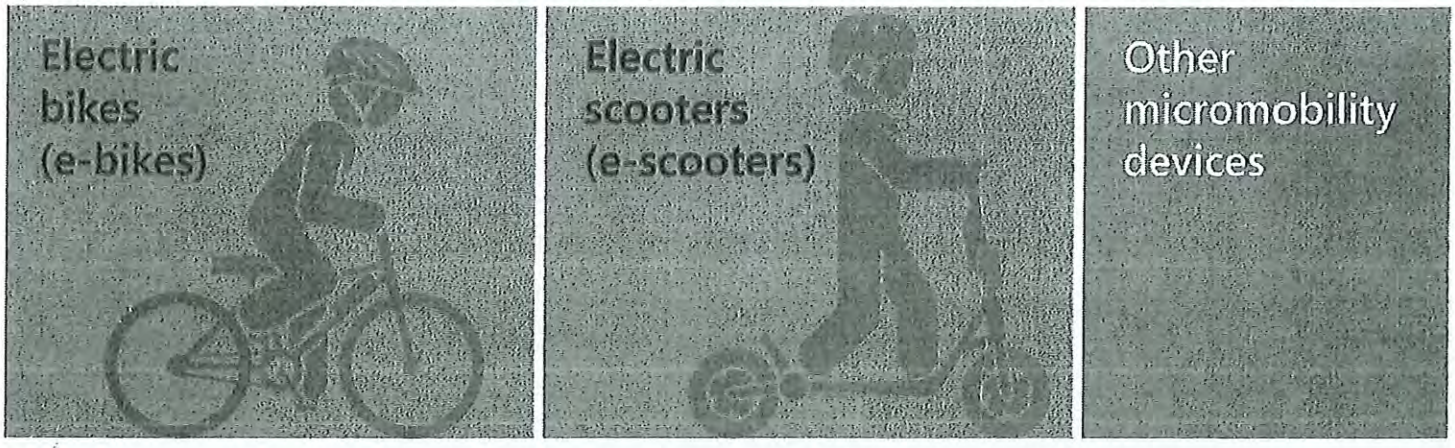
Executive Summary

About this Report

This report provides actionable strategies and best practices for the Oregon Department of Transportation (ODOT) to facilitate e-micromobility growth. It extends ODOT's work on the 2021 Transportation Electrification Infrastructure Needs Analysis (TEINA) project, which reported on electric vehicle charging infrastructure needs for light-duty, medium-duty, and heavy-duty vehicles in Oregon through 2035. (For more on TEINA, visit https://www.oregon.gov/odot/Programs/Pages/TEINA.aspx.)

What is E-Micromobility?

Electric micromobility, or e-micromobility, refers to small mobility devices that can travel up to 30 mph and are powered (at least in part) by electric drive trains. E-micromobility devices can serve a wide range of user needs, from commuting to freight delivery. This report classifies e-micromobility devices by three categories:

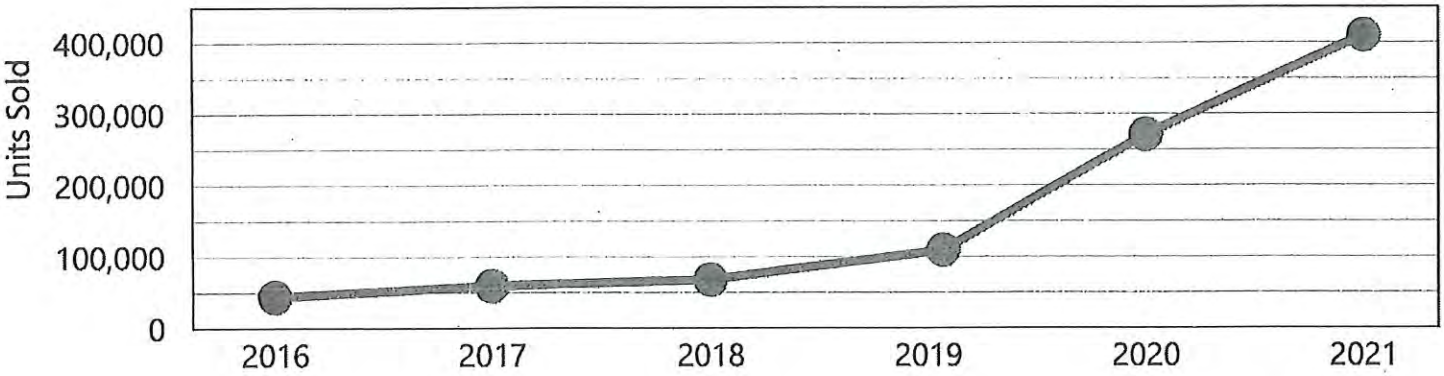


E-micromobility devices can be privately owned or rented through sharing programs. Although they can take many forms, shared programs are typically a fleet of e-micromobility devices available for public use and accessible within the right-of-way.

E-Micromobility Today & Tomorrow

The e- micromobility industry has grown and evolved dramatically over the past ten years. In 2021, the US e-bike market was valued at $800 million, and economists expect it to grow to $1.62 billion by 2027. In 2021, it was reported that over 400,000 e-bikes were sold in the United States (see Figure 1). That figure likely represents roughly one third of all units sold in the United States. The remainder of sales not represented in this data are through online independent bicycle dealers, third party online sales, or direct-to-consumer sales (Mordor Intelligence, n.d.). On 2021 unit sales alone, e-bikes outsold electric cars (Boudway, 2021). These trends suggest a large market for e-bikes as they shift from a novelty or recreational vehicle to a viable and reliable mode for regular travel.

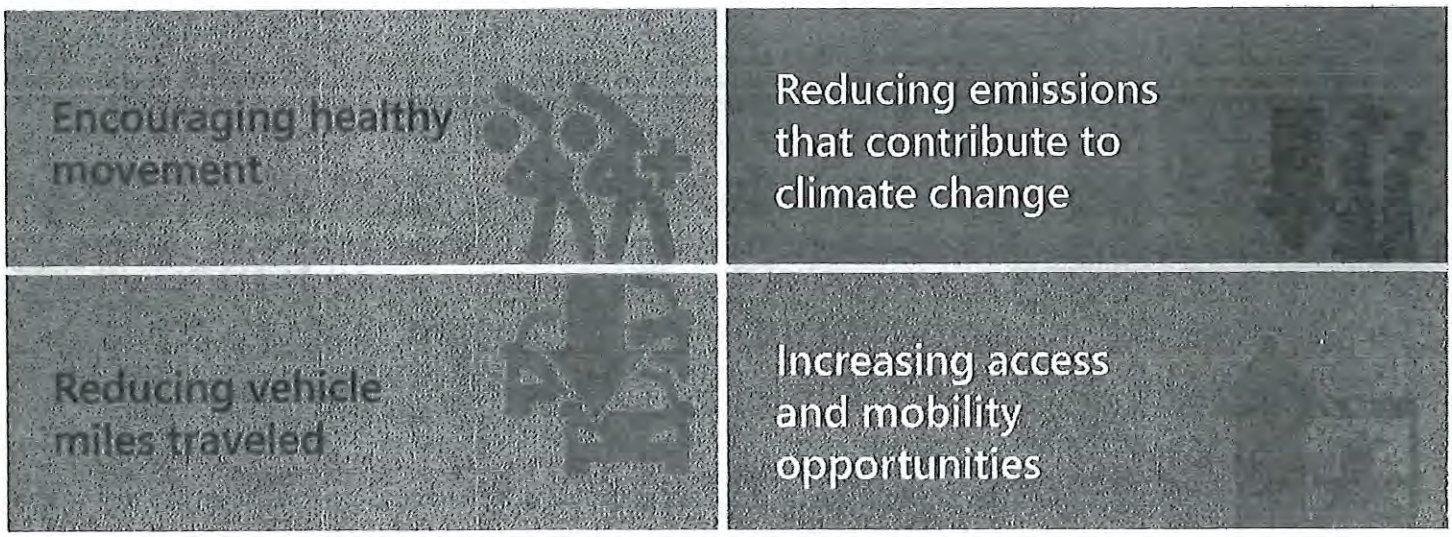
Figure 1. Recent Growth of E-Bike Use



Source: NPD Group, 2022

Benefits

E-micromobility can offer numerous benefits to individuals and communities by:



Overcoming Barriers to Adoption

While e-micromobility use is increasing rapidly, it still faces many barriers. The major barriers are related to safe infrastructure, education and awareness, cost, data, equity, and administration and policy.

Infrastructure

The largest barrier to e-micromobility (and all forms of micromobility) is the lack of safe and connected infrastructure, including travel lanes and facilities; secure parking; charging facilities; and integration into the broader transportation system.

How Oregon Can Prepare

- Revisit current standards and guidelines for allocating right of way for different road users.
- Increase secure parking by setting minimum standards for new private developments and by developing secure public parking facilities near transit hubs.
- Promote charging access by developing public charging at mobility and delivery hubs and alongside electric car charging installations where applicable.
- Promote coordination and integration between shared e-micromobility systems and transit agencies.

Cost

Purchasing or renting an e-micromobility device can cost less than a personal vehicle, but costs are often high enough that they remain a barrier for many consumers. Rebates, financing, and other financial incentives can make e-micromobility more accessible.

How Oregon Can Prepare

- Create a rebate or similar purchase incentive for e-micromobility devices that is graduated based on vehicle cost and household income.
- Create a purchase incentive for businesses that buy e-cargo bikes and trikes for delivering goods or services.
- Consider offering a comprehensive suite of incentives for residents with lower incomes who replace an older car with an e-micromobility device, transit ridership, or membership to combined services such as e-bike share, transit and car share.
- Help ensure that shared e-micromobility companies provide reduced subscription rates for historically underserved customers, and that they promote those plans in culturally competent ways that go beyond system apps.

Education & Awareness

Many people do not know or have misgivings about the availability and capabilities of e-micromobility devices. Some consumers may think of these devices are a fun weekend ride but do not see them as viable options for everyday travel.

How Oregon Can Prepare

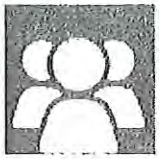
- Support brand-neutral and culturally-competent opportunities for outreach, engagement, education, safety, and test rides. This should be based on feedback from communities directly to properly prioritize their needs.
- Fund and promote e-micromobility device lending libraries.

Data

To evaluate and improve e-micromobility services, government agencies and system operators need to access and use the rich data generated by shared e-micromobility systems. In using this data, agencies and operators must protect system users' privacy.

How Oregon Can Prepare

- Ensure that shared e-micromobility providers share key data (and do so utilizing open source standards) with local governments, agencies, and regulators.
- Establish, publish, and follow clear standards to ensure that all users' personally identifiable information is protected.



Equity

E-micromobility has the potential to expand equitable mobility access for historically underserved communities. But the barriers to expanding use of this technology are generally even greater for these community members. To ensure equitable access to e-micromobility, agency and operator interventions must be intentional and targeted.

How Oregon Can Prepare

- Take a "targeted universalism" approach by designing programs and policies around those with the greatest barriers to e-micromobility access.
- Design incentives for operating shared e-micromobility systems to align with equity outcomes by setting clearly-defined program goals, targeting data collection, and evaluating programs with transparency.
- Include micromobility in universal basic mobility programs.
- Implement system designs that do not create access barriers, such as those related to age, mobility limitations, smartphone and credit card requirements, or language.

Administrative & Policy Issues

E-micromobility is a new and rapidly evolving transportation mode. Legal and regulatory definitions vary widely, and this inconsistency creates confusion and uncertainty among consumers. Small and mid-sized cities often lack the resources, information, and expertise necessary to plan, coordinate, launch, and manage successful and equitable shared e-micromobility programs at scale. Funding shared e-micromobility systems is also a major challenge.

How Oregon Can Prepare

- Clarify vehicle definitions and categories, and consider joining other states in adopting the three-class classification system for e-bikes.
- Develop a clear definition and approach for commercial electric cargo bicycles that is flexible enough to allow the use of specialty vehicles (e.g., form factors, configurations, and motor capabilities), such as e-trikes.
- Pursue and leverage federal funding for shared e-micromobility programs through existing programs, and advocate for dedicated funding streams.
- Work with a non-profit operator such as Cascadia Mobility to help communities such as Corvallis, Gresham, Bend, Eugene, and Salem develop and implement coordinated shared e-micromobility equipment, operations, and financial plans.
- Use pilot programs to create and test zero-emission delivery zones

Introduction

Transportation accounts for about 40% of Oregon's greenhouse gas emissions. The state has set aggressive science-based goals to reduce greenhouse gas pollution. By 2050, Oregon aims to reduce emissions to 80% below 1990 levels. Reaching these critical goals will require significant changes to the transportation sector.[1]

Oregon is already rapidly electrifying its transportation network. Agencies and communities statewide are encouraging travelers to choose modes other than single-occupancy internal combustion vehicles and working to prioritize zero-emission modes like bicycling and walking.

More than ever before, Oregonians are using electric micromobility vehicles to get around. These e-micromobility devices include electric bicycles (e-bikes), electric scooters (e-scooters), electric skateboards, and other small devices powered in full or in part by electricity.

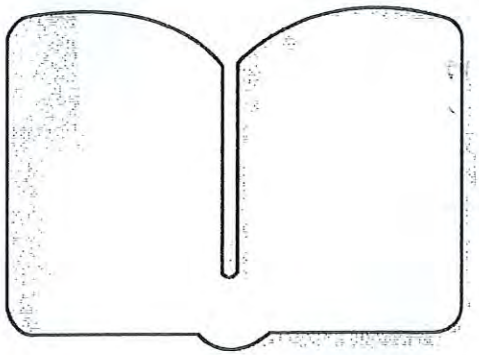
People use e-micromobility to commute, exercise, meet up with friends, reach transit connections, and even to move goods and freight. **With such diverse uses, e-micromobility devices will play an important and growing role in serving communities' transportation needs.**

More e-micromobility use can help the State's efforts to reduce emissions from transportation and improve community health, economic activity, and roadway congestion. **This report provides actionable strategies and best practices to facilitate the growth of e-micromobility.**

This report extends ODOT's work on the 2021 Transportation Electrification Infrastructure Needs Analysis (TEINA) project, which reported on electric vehicle charging infrastructure needs for light-duty, medium-duty, and heavy-duty vehicles in Oregon through 2035. The TEINA report found that although some public charging would help e-micromobility users, further analysis was needed to identify additional strategies for expanding the use of this mode.

Report Structure

This document is divided into four major sections:



1. **Overview of e-micromobility and its definitions**
2. **Current e-micromobility landscapes, both in the US and abroad**
3. **E-micromobility in Oregon, including challenges and barriers**
4. **Best practices, recommendations, and strategies to accelerate e-micromobility adoption statewide**

[1] *Oregon's climate goals, originally established in 2007 by House Bill 3543, were updated by Governor Brown through Executive Order 20-04 and include greenhouse gas emissions reduction of 45% below 1990 levels by 2035 and 80% below 1990 levels by 2050.*

Centering Equity

The recommendations in this report center equity and use a targeted universalism approach. Targeted universalism takes a broad goal—such as access to e-micromobility—and focuses interventions in communities with the greatest barriers to achieving intended outcomes. (For more on targeted universalism, visit https://belonging.berkeley.edu/sites/default/files/targeted_universalism_primer.pdf?file=1&force=1.)

Equality and equity have distinct meanings. **Equality** applies the same treatment to all people. **Equity** recognizes that people come with different histories and circumstances and treats them accordingly.

Consider Figure 2. Here, four people receive a standard-size bicycle that is equal: all residents get the same bicycle. But differences in age, mobility, and body size mean that not everyone benefits in the same way. When the same concept is applied equitably, everyone receives the bike that they need.

In Oregon, some neighborhoods do not have safe bicycle facilities due to a history of redlining, public disinvestment and a focus on a single mode. Targeted investment in these kinds of communities can help ensure e-micromobility access in Oregon is both safe and equitable.

Centering equity in transportation also means listening to the people most impacted by transportation inequities. This project held listening sessions with diverse e-micromobility stakeholders in Oregon and used those conversations to inform the report's findings and recommendations.

Figure 2. Visualizing Equality and Equity

Graphic inspired by Robert Wood Johnson Foundation, 2017.

Overview of E-Micromobility

Definitions

Agencies and government bodies have yet to agree on a single definition for micromobility or e-micromobility. For example:

- The Society of Automotive Engineers defines an e-micromobility device as "a wheeled vehicle that must be fully or partially powered by an electric motor, have a curb weight of less than or equal to 500 lbs. and have a maximum speed of equal to or less than 30 mph/48 kph" (SAE International, 2019).
- The Federal Highway Administration (FHWA) defines micromobility more broadly as "any small, low-speed, human- or electric-powered transportation device, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters), and other small, lightweight, wheeled conveyances" (Price, Blackshear, Blount, Jr., & Sandt, 2021).
- Oregon DOT has its own vehicle taxonomy, illustrated in the reference card at https://www.oregon.gov/odot/forms/dmv/6619.pdf.

This report uses the term e-micromobility but focuses primarily on e-bikes and e-scooters, which are the most common vehicles used today. This approach should be reviewed and updated often, as innovation and new technology in these vehicles moves swiftly.

A Brief History

Electric bikes first exploded in popularity in China in the late 1990s. The population of e-bikes and e-bike users grew from near zero to hundreds of millions due to technology and policy developments (Cherry C., 2013).

The bikes brought many advantages, but they also brought familiar challenges, such as safety concerns and sidewalk clutter. Some Chinese cities responded to the boom and its problems—which were especially apparent with delivery services—with bans and aggressive enforcement. New York responded similarly when its e-bike population grew exponentially (Singer, 2018). In Europe, e-bikes were also gaining ground: by 2020, the majority of all bicycles sold in the Netherlands were e-bikes.

In many cities, shared scooter services soon followed, often with few regulations. Complaints about safety, sidewalk clutter, and conflicts with pedestrians spurred local governments to set stronger regulations and enforcement practices for these shared services. Despite the challenges and friction, the demand for e-micromobility continues to grow. Even partial bans and use restrictions have not overshadowed the mode's versatility and value.

Today, lithium-ion batteries and GPS technology have made e-micromobility vehicles stronger and more appealing than ever. External factors, such as the COVID-19 pandemic and human-caused climate change have further fueled the e-micromobility industry's expansion.

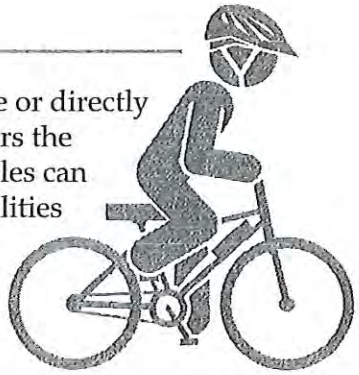
Figure 3. A corral for e-micromobility vehicles helps keep vehicles out of the pedestrian walking area.

Such exponential growth and potential for change has made policymakers and government officials take a closer look at these devices and their potential. Many communities have created policies and strategies that better integrate e-micromobility devices into the streetscape (see Figure 3).

Device Dictionary

To understand the potential benefits of the many e-micromobility devices available, it's helpful to review major types and their specifications.

Electric Bikes



An electric bicycle, or e-bike, has an electric motor that provides pedaling assistance or directly propels the vehicle and rider. Typically, a removable and rechargeable battery powers the motor. E-bikes are different from electric motorcycles and mopeds because the bicycles can always be pedaled by the rider—even off-road e-bikes with speed and power capabilities exceeding those of electric mopeds.

A **low-speed electric bicycle** has a federal definition, according to 15 *United States Code* § 2085: "a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 horsepower), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph." The federal definition permits e-bikes to be powered by the motor alone (called a *throttle-assist*) or by a combination of motor and human power (called a *pedal-assist*). The federal definition only applies to the manufacturing and the first sale of an e-bike and is regulated by the Consumer Product Safety Commission (CPSC).

At the state and local levels, e-bikes are defined and regulated by code and vary between states. In 2014, 28 states did not regulate e-bike use or had problematic definitions for devices (MacArthur & Kobel, 2014).

As of September 2022, 39 states—not including Oregon—have adopted a three-class classification system for e-bikes based on power and speed capabilities (see Figure 4) (People for Bikes, n.d.) (Seaward, 2022).

Figure 4. Power and Speed Capabilities of E-Bikes by Class

Class of E-Bikes	Pedal Assist	Throttle	Top Assisted Speed
Class 1 Pedal-assist only, with no throttle, and a maximum motor-assisted speed of 20 mph. The motor engages only when the rider is pedaling and otherwise offers no assistance.	Yes	No	
Class 2 Both pedal-assist and throttle-assist with a maximum motor-assisted speed of 20 mph. The motor engages when the rider uses either the pedals or the throttle and stops assisting at 20 mph.	Yes	Yes	
Class 3 Pedal-assist only, has a speedometer but no throttle and a maximum motor-assisted speed of 28 mph. The motor engages only when the rider uses the pedals and stops assisting at 28 mph.	Yes	No	

Oregon's definition of an electric bicycle is similar to the federal one. According to *Oregon Revised Statues* § 801.258, an electric bicycle is a vehicle with no more than three wheels that is equipped with a motor not exceeding 1,000 watts and designed with a maximum speed of 20 mph. The *Oregon Vehicle Code* considers e-bikes as bicycles, and people can ride them on any roadway, lane, or path approved for bicycles. However, there are some exceptions: many park agencies, including Oregon State Parks, treat e-bikes as motorized vehicles and prohibit them from many areas in which bicycles are allowed.

Some e-bikes are capable of hauling cargo. People can use them for personal tasks, like picking up groceries or taking children to school. And businesses can use them instead of standard vans to deliver goods or services.

Electric freight bikes built specifically for hauling are called **cargo e-bikes and e-trikes**. These bikes and trikes are becoming more common, but many states' laws do not account for their use. Some e-cargo bikes have three or more wheels and are powered by motors that provide up to 1,000 watts, but many state laws limit e-bike electric motor power to no more than 750 watts. Cargo e-bikes often need more wattage to account for the extra weight of the cargo. States that set lower e-bike wattage and vehicle size limits may create technology constraints and legal issues for cargo e-bikes. This is not an issue in Oregon, where an e-bike can be powered by a motor that provides up to 1,000 watts.

Electric Scooters

There is no formal, widely-accepted definition of an electric scooter, or e-scooter, among state governments. The Society of Automotive Engineers has produced one taxonomy (SAE International Publishes Industry's First Standard for Classification and Definition of Powered Micromobility Vehicles, 2019). Typically, **an e-scooter** is a battery-powered two-wheeled vehicle with handlebars and a floorboard that can be stood upon while riding (see Figure 5). Different manufacturers include different features like suspension systems, turn signals, and seats.

Likewise, e-scooter laws vary, depending on whether the state defines an e-scooter as a motorized vehicle or a mobility device. California uses the definition referenced above and has some of the most comprehensive e-scooter laws in the country, including a requirement for an operating license (Fang, Weinstein Agrawal, & Hooper, 2019).

According to *Oregon Revised Statues* § 801.348, and electric scooter or "motor assisted scooter" meets the following criteria: (1) has no more than four wheels, (2) has a foot support or seat, (3) is human or motor powered, (4) has a maximum speed of 24 miles per hour, and (5) has a maximum power output of 1,000 watts.[2]

Figure 5. A Typical E-Scooter

The *Oregon Vehicle Code* also regulates e-scooters. These devices cannot be operated on sidewalks, riders must be 16 or older, and riders must wear helmets.

Local jurisdictions may also add e-scooter rules. For example, Portland code prohibits scooter use on multiuse paths in its parks, such as along the Waterfront River Trail, Eastbank Esplanade, and Springwater Corridor.[3]

[2] *See Oregon Revised Statutes, 2001 c.749 §2; 2018 c.3 §1.*

[3] *See Oregon Vehicle Code, 20.12.170–Use of Certain Devices or Equipment.*

Other Electric Micromobility Devices

Advances in electric batteries over the past decade have expanded the diversity of single-rider devices in the e-micromobility industry (see Figure 6) (Pedestrian and Bicycle Information Center, n.d.). Available devices now include:

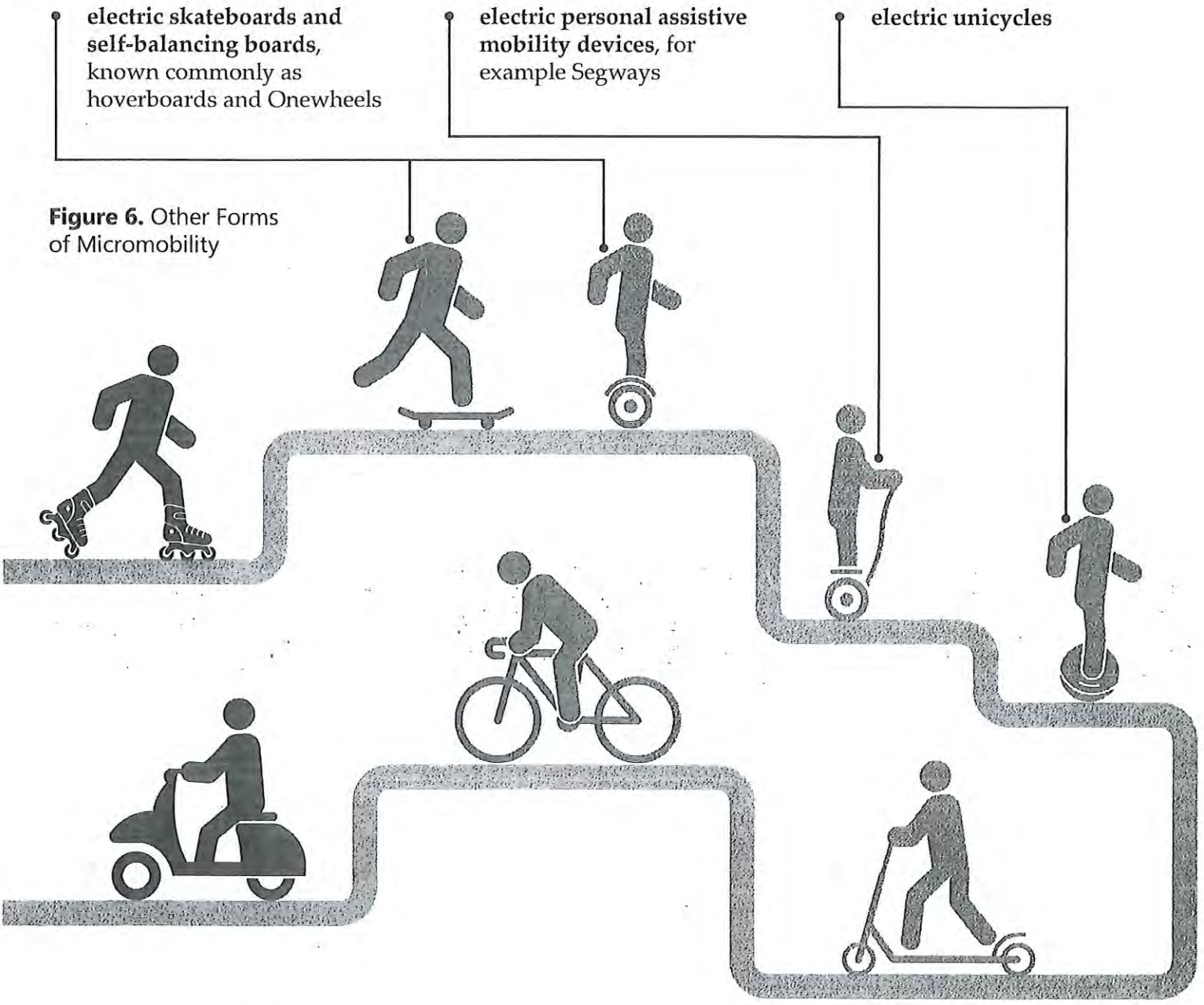


Figure 6. Other Forms of Micromobility

In a 2018 report, the Mineta Transportation Institute documented and analyzed existing personal transportation device regulations in all 50 states, 5 U.S. territories, and 101 U.S. cities. The findings reveal a murky regulatory environment, with rules often poorly defined, contradictory, or altogether absent. The laws are especially unclear for emerging low-speed vehicles (Fang, Weinstein Agrawal, & Hooper, 2019).

Oregon Revised Statutes § 801.259 considers at least some of these other e-micromobility devices to be "electric personal assistive mobility devices" (Thomas, Coon, Newton & Frost, n.d.). But Oregon law is silent on some forms of e- micromobility, such as hoverboards and Onewheels. Moving forward, Oregon will need to revise its definitions to accommodate emerging modes of e-micromobility.

Uses & Services

E- micromobility devices may be privately owned or available through shared- or rental fleet operations. Shared systems take many forms, but typically they are a fleet of devices available for public use and accessible within the right-of-way. Riders can access devices directly from a station or dock or find devices anywhere within a service area using a smartphone app. There are four main shared system types:

- **Bikeshare.**
  A well-established and often municipally-controlled mode, bikeshare is generally concentrated in denser areas, often near transit or downtown neighborhoods. Systems may include conventional bikes, e-bikes, or a mix of both. Bikeshare systems may be docked, dockless, or hybrid.

- **Shared E-Scooters.**
  Typically rented using a smartphone app, shared e-scooters are most often dockless. Vehicles may be parked within the public right-of-way instead of being left at a defined docking location. These systems are frequently branded by an operator that retains revenues but pays fees to local governments, which regulate and provide oversight.

- **E-Bike Lending Libraries.**
  At e-bike libraries, community members can borrow products without committing to purchase. Lending libraries often partner with local retailers who can provide maintenance, purchase incentives, or discounts. Libraries may be operated by retailers, traditional libraries, or nonprofit organizations.

- **Freight or Urban Delivery.**
  Commercially-owned and operated cargo e-bikes, such as the one in Figure 7, can be highly efficient urban delivery vehicles. When used in place of standard delivery vans, cargo e-bikes can dramatically reduce carbon emissions.

Figure 7. B-line uses cargo e-bikes to deliver throughout Portland.

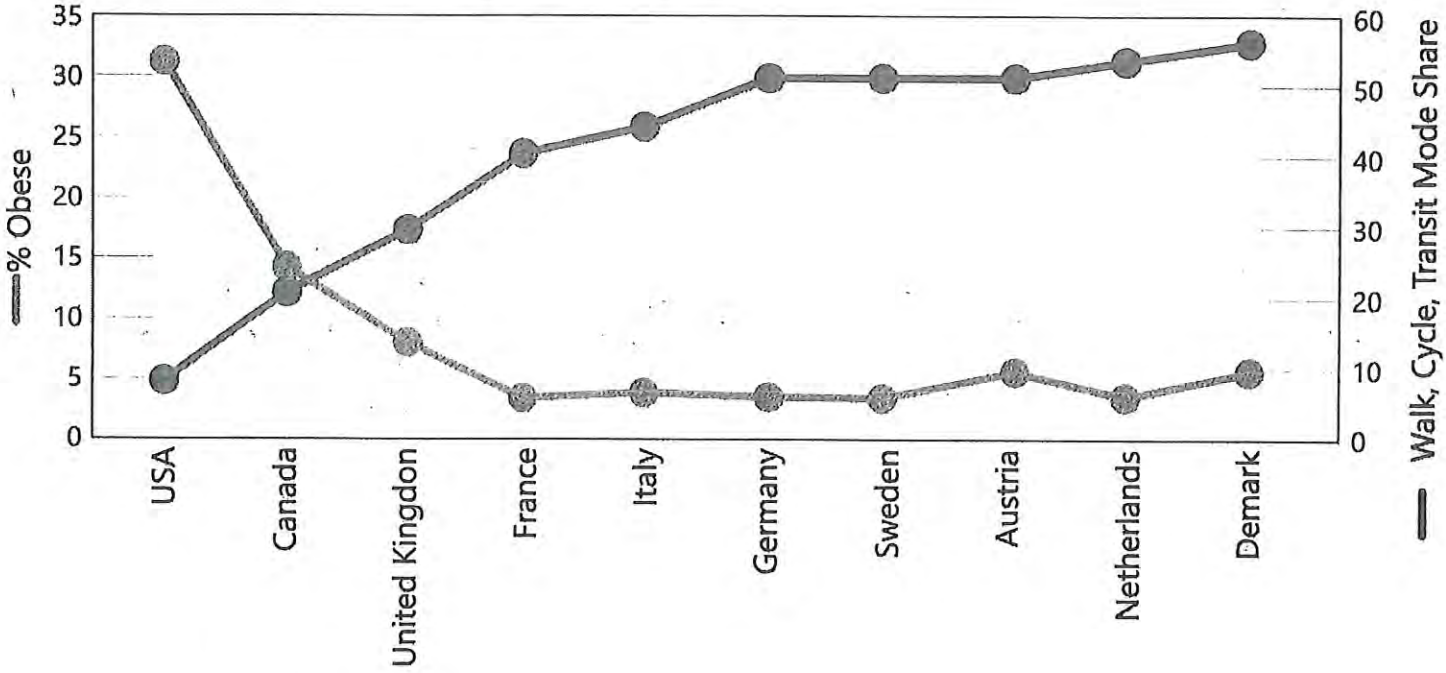
E-Micromobility Benefits

Increased e-micromobility use can benefit individuals and communities. Like other forms of active transportation, e-micromobility can improve personal health, have a positive impact on the environment and climate change, offer enhanced equity across socioeconomic groups, and reduce driving. Because the electric assist appeals to more users and can accommodate more applications (when compared to non-electric micromobility), e-micromobility has the potential to replace more car trips and have an even greater impact.

Encouraging Healthy Movement

E-biking offers many of the same health benefits as traditional biking. (The Ohio State University, n.d.). E- bikes may also improve mental health simply by getting riders to spend more time outdoors. And these benefits may be particularly important for low-income and underserved communities, which typically experience higher rates of public health problems that stem from a lack of access to nutritious food, quality healthcare, employment, and education (Steer, 2021). Figure 8 illustrates the health benefits of greater emphasis on active transportation modes.

Figure 8. Health Benefits from Shifting Modal Share



Reducing Vehicle Miles Traveled

E-micromobility has the potential to reduce automobile vehicle miles traveled (VMT). Reducing VMT reduces traffic congestion, decreases emissions, and reduces the need for car parking infrastructure. One North American survey found that 34% of e-bike owners used their devices for commuting and 29% used them for errands. The survey also found that without the e-bikes, nearly half of those commutes would have been made in private cars (MacArthur, Cherry, Harpool, & Scheppke, 2018).

Some of the top reported motivations for getting an e-bike were to overcome typical barriers to cycling, such as carrying loads, strenuousness, hills and trip distances all of which have an oversized effect on commuters not wishing to arrive sweaty to work. In this way, e-bikes expand the potential for cycling. Studies in Austria, Sweden, Denmark, and Norway point to significant decreases in VMT following e-bike deployment (Fitch, 2019).

In some cities, evidence points to shared e-scooters facilitating access to transit. Both PBOT's 2019–2020 e-scooter report and BIKETOWN's 2022 multimodal report indicate that many users combine the use of e-micromobility with other travel modes such as transit (Portland Bureau of Transportation, 2019) (Lyft, 2022). Data from Portland shows that about 40% of e-scooter users say they are driving, using taxis, and ridehailing less. Over time, users appear to be riding e-scooters more for utilitarian purposes and to access transit (Portland Bureau of Transportation, 2019). A recent review of research found that 25–40% of e-scooter trips were replacing car trips.

Reducing Emissions

E-micromobility devices produce zero tailpipe emissions. When these vehicles replace trips that would otherwise have been taken by car, they have the potential to dramatically reduce air pollution and greenhouse gas emissions (U.S. Department of Energy, 2020). For example, shifting 15% of trips from conventional single-occupancy vehicles to e-bikes would reduce Portland's carbon dioxide emissions by 12%—that's over 900 metric tons per day (McQueen M. M., 2020).

Cargo e-bikes offer even greater air quality benefits, because they replace heavier, more polluting vehicles. The BiciCarga Pilot in Bogotá, Colombia demonstrated that 16 tons of car emissions per day could be avoided by utilizing e-cargo bikes for last-mile deliveries (Newton, 2021). The Commercial Cargo Bicycle Pilot project, which began in 2019 in New York City, replaces box trucks with e-cargo bikes. The project documented a reduction of approximately 7 tons of carbon dioxide per bike per year. Each of its e-cargo bikes covers an average of 20 service miles per day, roughly the same amount that each box truck had covered (New York City Department of Transportation, 2021).

Increasing Access and Mobility Opportunities

For most people, transportation costs are generally the second greatest household expense. One Harvard University study found that commute time is the single strongest predictor of whether a person will escape poverty (Chetty & Hendren, 2015).

E-micromobility devices have the potential to advance equity because they provide faster and more affordable transportation options. Both private and shared e-micromobility options can lower costs for users and shorten travel times compared to private cars, ridehailing, and sometimes even transit. And e-micromobility generally does not require special operating licenses or certifications, which can also increase access.

Research conducted by Portland State University shows that e-bikes may increase cycling among people with mobility limitations and older people and that these vehicles may help close the bicycling gender gap. According to the study, many e-bike owners purchased an e-bike because medical conditions limited their ability to ride a conventional bike. Researchers also found that the ability to carry cargo and children on an e-bike is particularly attractive for women and that women who own e-bikes feel significantly safer riding an e-bike compared to a standard bicycle (McNeil et. al., 2018).

Due to historic redlining and other race-based policies, communities of color are far more likely to live near busy roads and suffer from higher air pollution levels. The emission-reduction benefits of e-micromobility may help improve air quality in these traditionally underserved communities (Warner, Mandy, 2020).

International & Domestic Landscape

Growth & Sales Projections

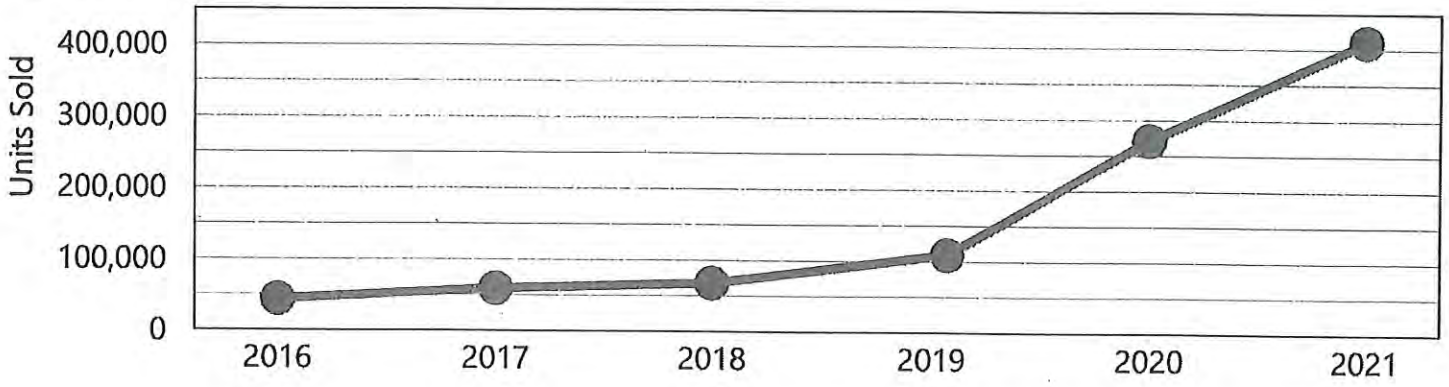
There is little data on the total number of micromobility vehicles sold and used in the United States. The best use data is collected by shared micromobility systems. As of 2021, there were 298 shared micromobility systems, including docked and dockless bike share and e-scooter systems, in North America. The largest of these shared systems has several thousand micromobility devices (North American Bikeshare Association, 2022). The North American Bikeshare Association estimates that there were 128 million unique trips on shared micromobility vehicles in 2021, nearly half of which were on shared e-scooters. E-bikes were used twice as often as their non-electric counterparts, and freight delivery services increasingly use e-micromobility devices.

Data on owning and using personal micromobility vehicles is also scant, largely because bicycles, e-bikes, and other micromobility vehicles are considered consumer products. These vehicles do not require registration, and the industry does not track sales at the state or local level.

The best data on personal ownership of e-micromobility devices is for e-bikes. The global e-bike market was valued at $27.2 billion, and economists expect it to grow to $54.4 billion by 2027 (Mordor Intelligence, n.d.). Another analysis estimates that the combined North American and European markets reached 6.4 million annual e-bike unit sales in 2021, and that in China alone, 30 million e-bike units are sold each year (Stewart & Ramchandran, 2022).

For the past few years in the United States, the conventional bicycle market has sold about 45 million units per year. In 2021, the U.S. e-bike market increased by more than 50% and likely exceeded the one-million-units-per-year mark although data is absent from online independent dealers, third party online sales and direct to consumer sales. (NPD Group, 2022). On unit sales alone that year, e-bikes outsold electric cars (Boudway, 2021). These trends suggest a large market for e-bikes as they shift from a novelty or recreational vehicle to a viable and reliable mode for regular travel. Market specialists estimate that there are likely more than 3 million e-bikes in U.S. households today (see Figure 9) (Bennett, MacArthur, Cherry, & Jones, 2022).

Figure 9. Unit Sales of E-Bikes in the United States, 2016–2021



Source: NPD Group, 2022. Bicycle Sales Market Data.

This graph is generated from data collected by independent bicycle dealers and rest of market sales, which includes sporting goods specialty, mass market, and online retailers. These data likely represent roughly one third of all units sold in the United States. The remainder of sales not represented in this data are through online independent bicycle dealers, third-party online sales, or direct-to-consumer sales.

Policies & Financial Assistance Programs

Providing funding for incentives—including rebates, tax credits, and car swap programs—is a common and effective way to accelerate e-micromobility adoption.

Purchase Incentives

Rebates and similar purchase incentives provide an incentive either at the point of purchase or after, once the purchase has been verified. Incentives may provide a flat discount or take a percentage off the total cost.

Purchase incentives can be effective in getting more people using e-bikes (Transportation Research and Education Center, 2022). While e-bikes are much less expensive than a car, prices still range from $1,000 to $5,500 and can be even higher for cargo-style e-bikes. Portland State University has reviewed e-bike incentive programs in North America and developed guidance on how to design and implement such incentives (Bennett, MacArthur, Cherry, & Jones, 2022).

As of July 2022, 65 localities in the United States offered some form of rebate toward purchasing an e-bike. Most programs were operated by electric utilities, and programs vary substantially in incentive amount and eligibility requirements. Portland State University's Transportation Research and Education Center maintains an up-to-date tracker of all domestic rebate programs (Bennett C., n.d.). Two programs are especially noteworthy due to their size and impact:

- **Denver, Colorado** administers a popular point-of-sale income-qualified rebate program that offers a maximum incentive of $1,200 for qualifying applicants and an additional $500 for e-cargo bikes.
- **The Equitable Commute Project**—a consortium of New York City-based non-governmental organizations, community development organizations, academics, and companies—is a three-year pilot program that offers a 50% e-bike discount to 5,000 qualifying essential workers with low incomes (Equitable Commute Project, n.d.). This program also tracks participants' trip data to better evaluate e- bike travel patterns for future projects.

Similar incentives are also available in many other international countries and cities, including Sweden; Paris, France; and Saanich, British Columbia (eBikesHQ, n.d.).

A tax credit is another way to incentivize e-micromobility device purchases. Tax credits can be less effective because there is a long delay between purchase and credit and because purchasers must have sufficient tax liability to benefit. However, tax credits can be designed to be fully refundable so that taxpayers without high tax liabilities still receive a refund. The proposed but not passed federal *E-Bike Act* would have created such a refundable tax credit of up to 30% or $1,500 off a new e-bike that costs less than $8,000 (117th Congress (S.2420), 2021). Although Congress did not pass this bill, it provides a useful template for future legislation.

Car Swap Programs

Car swap programs incentivize replacing a gas-powered vehicle with an e-bike. For example, California's Clean Cars for All program allows income-qualifying residents to scrap an older car and receive up to $7,500 for a cleaner car, an e-bike, bike accessories, or public transit fares. Recipients can combine these mobility options to best suit their needs (ClimateActionCenter, n.d.). Similar programs exist in a number of countries and regions including British Columbia, France, and Lithuania (eBikesHQ, n.d.) (Toll, 2021).

Infrastructure

Lack of adequate infrastructure often stands in the way of widespread adoption of e-micromobility. Innovative programs and strategies, including safe travel lanes, secure parking, and access to charging can help address these critical infrastructure gaps.

Safe Travel Lanes

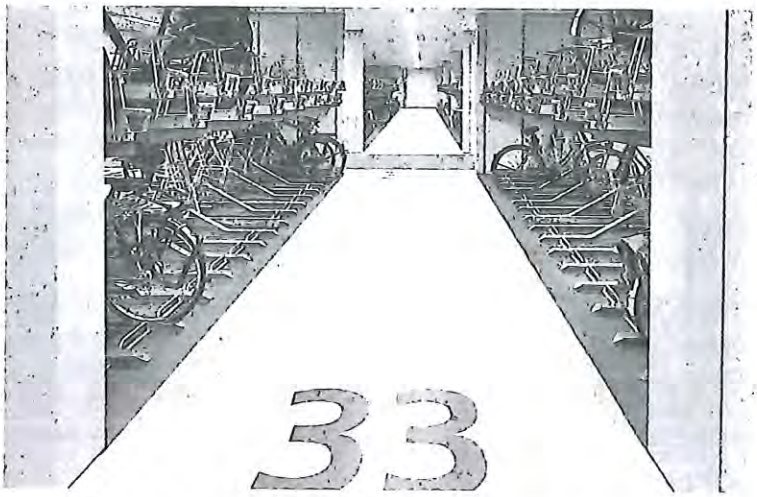
Providing defined and delineated travel areas for e-micromobility devices will help increase their adoption rate (Penney, 2021). Globally, many jurisdictions are doing just that. In fall 2021, the City of Paris announced plans to make the city 100% cyclable by 2026. To do so, the City will provide 180 kilometers of fully-separated micromobility lanes (AccessWire, 2021). The City of Milan plans to have constructed 750 kilometers of fully-separated micromobility infrastructure by the end of 2035 (Green, 2022). New York City recently added hundreds of miles of bike lanes and found that in areas in with improved micromobility infrastructure, injury rates for all road users (including drivers, pedestrians, and micromobility users) fell by 40–50% (Wolfson, 2011).

Secure Parking

In December 2021, The European Commission proposed mandatory micromobility parking in all new and renovated non-residential developments (Delrive, 2021).

The Netherlands has certified micromobility parking infrastructure based on 30 individual requirements since 1999. Requirements include ease of access (with specific requirements for children and people with limited mobility); security; durability; and pricing (Oldaker, 2020). Utrecht has the largest dedicated micromobility parking facility in the world (see Figure 10). With 12,500 spaces, the facility is accessible 24/7 via a standardized public transit card and hosts a public bikeshare station (City of Utrecht, n.d.). The City expects demand for this parking facility to exceed its availability by 2025 and is already planning additional infrastructure.

Figure 10. Utrecht Bicycle Facility



Some American jurisdictions provide secure bike parking, including Oregon's TriMet, which provides bike lockers, and Go By Bike in Portland, which is the largest valet bike parking program in North America. However, facility supply continues to lag. Several startups have taken notice and launched parking services. For example, Oonee launched in New York City in 2018 and offers a modular parking system in various sizes plus optional electrical charging ports. The company has expanded to areas throughout the New York City region and has partnerships with local governments, transit agencies, nonprofits, and architecture firms (Oonee, n.d.).

Charging Access

Privately owned e-micromobility devices can generally be charged overnight at home if space and infrastructure allows. Shared devices usually have charging facilities or systems built into their design. Providing public charging for e-micromobility devices can help encourage and promote their use, especially for longer trips. Public charging also helps serve users, such as people living in apartments, who have difficulty charging at home. For example, Oregon has begun adding 110 outlets for e-micromobility device charging at West Coast Electric Highway car charging locations.

The UK and Europe also have service providers that offer public charging stations for e-micromobility:

Bike-Energy has been operating since 2011 and offers stations throughout Europe that allow any type of e-bike to be charged with the purchase of an appropriate adaptor. The company leases charging stations to businesses, communities, and local governments. They offer two station sizes, which can accommodate two to eight e-bikes. (Bike Energy, n.d.).

Bosch has initiated a pilot program in and around Switzerland with proprietary charging stations for all e-bikes that have Bosch mid-drive motor systems. Each station provides a secure locker for the battery during the charging process at no cost (Bosch, n.d.).

Gemeente Utrecht

The City of Utrecht in the Netherlands provides stops for recreational cyclists at tourist attractions and restaurants that include parking facilities, e-bike charging, information, and basic repair tools (Steer, 2021).

Education & Awareness

Increased education and awareness of e-micromobility as a viable transportation option can help accelerate the mode's adoption and make travelers feel comfortable and confident using the technology.

E-bike lending libraries are an effective education strategy because they give community members an opportunity to test devices before purchasing. Organizations and municipalities across the US have started e-bike lending libraries.

The Colorado Energy Office launched the Can Do Colorado e-Bike Program at affordable housing developments throughout the Denver metropolitan area in spring 2021 (Colorado Energy Office, n.d.). The program now lends 181 e-bikes and 50 e-bikeshare memberships. In exchange for their membership, program participants must download an app to log rides that are then used to study e bike travel patterns (NREL, n.d.).

The City of Santa Monica partnered with Safe Routes to School to offer parents of children enrolled in eligible schools the use of e-cargo bikes for one week at no cost (The Bike Center, n.d.).

Local Motion in Burlington, Vermont, operates several e-bike lending libraries throughout the state, including one that travels to different rural communities. Local Motion offers free e-bike purchase consultations to help consumers take advantage of state and local utility rebates (Local Motion, n.d.).

Oregon's E-Micromobility Landscape

Oregon is an micromobility leader, and Portland ranks in the top 25 U.S. cities with the most bicycle commuters (Geier, 2021). This section describes the current state of e-micromobility in Oregon, focusing on different use models (personal, shared, and freight), key stakeholders, infrastructure, and current challenges to accelerating adoption.

Personally-Owned E-Micromobility

Many retailers in Oregon offer e-micromobility devices for private purchase. Some retailers exclusively sell e-micromobility products; others also offer non-electric micromobility devices. Although no state-wide incentive is available, utilities and economic development organizations throughout Oregon offer rebates for people purchasing e-micromobility devices:

- **Ashland Electric** offers a post-purchase rebate of up to $300 for an e-bike and up to $600 for an e-cargo bike (City of Ashland OR, n.d.).
- **Pacific Power** and **Corvallis-Benton County Economic Development Office** offer a limited number of income-qualified, point-of-sale rebates of up to $1,200 toward the purchase of an e-bike (City of Corvallis OR, n.d.).
- **Eugene Water & Electric Board** administers a post-purchase rebate of up to $300 for the purchase of an e-bike (Eugene Water & Electric Board, n.d.).

Shared E-Micromobility

Oregon has service providers that own, manage, and maintain shared e-bike and e-scooter fleets. **BIKETOWN** operates 1,500 e-bikes and over 180 stations in Portland and has plans to increase this number soon. **Cascadia Mobility** helps Oregon cities outside the Portland metropolitan area launch and operate equitable shared-mobility programs at scale. The organization currently operates **PeaceHealth Rides** in Eugene, which operates a fleet of non-electric bikes, and is working with the City to develop an e-scooter program.

Oregon also has had shared e-scooter programs, including ones operating in Portland, Albany, Tualatin, Bend, Milwaukie, and Eugene. However, many of these programs are no longer operational.

Data

Because e-micromobility services often rely on GPS and smartphones, localities now have new opportunities to access and understand e-micromobility travel data. Many cities in Oregon and around the world use open-source data sharing standards, like the Global Bikeshare Feed Specification and the Mobility Data Specification, to collect this micromobility travel data. ODOT's Shared Mobility Data Primer identifies key data sources and opportunities that Oregon communities can use to make data-driven decisions about where and how to deploy shared e-micromobility (Trillium Solutions, Inc., 2020).

Lending Libraries

Oregon does not currently have any e-bike lending libraries, but some retail locations offer e-micromobility test rides and rentals. Some retailers will put the cost of the rental toward a purchase (E-Bike Rentals, n.d.). The Portland nonprofit Forth has proposed creating e-bike lending libraries and was recently funded to launch such a program for houseless residents at the Bybee Lakes Hope Center in Portland (Maus, 2022).

Freight

Oregon has two freight companies that use e-cargo bikes to make deliveries. **B-line** has used e-cargo bikes to serve the Portland metropolitan area for several years. In 2021, B-line made over 41,000 deliveries and reduced VMT by more than 320,200 miles (B-Line, n.d.). **Pedalers Express** serves parts of Eugene and Springfield with electric-assisted three-wheeled cargo bikes that can transport up to 1,000 lbs (Pedalers Express, n.d.) Studies show that although they have higher labor costs and overall expenses, these operations can yield significant environmental benefits (Cherry, Azad, Rose, & MacArthur, 2019).

Other large logistics companies—including UPS and the United States Postal Service—have conducted pilot projects for three-wheeled cargo e-trikes in Oregon. Some of those vehicles are even manufactured in Oregon (Baker, 2019).

Key Oregon E-Micromobility Stakeholders

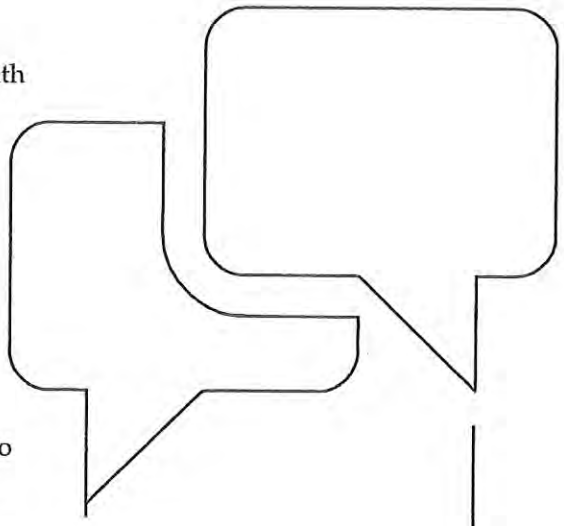
Oregon's e-micromobility landscape includes a diverse range of stakeholders, including manufacturers, retailers, operators, nonprofits, and others. Specific stakeholders include:

E-Micromobility Manufacturers	Vvolt (Beaverton) Bike Friday (Eugene) Truck Trike (Portland)
For-Profit E-Micromobility Providers	Bird B-line Lime Lyft Spin
Nonprofit E-Micromobility Providers	Cascadia Mobility[4]
Educational Organizations	Transportation Research and Education Center (TREC) at Portland State University Urbanism Next at the University of Oregon
E-Micromobility Retailers	E-Bike Store, Splendid Cycles, and Cynergy Cycles (Portland) Oregon E-Bikes (Hood River) Bend Electric Bikes (Bend)
Nonprofit Interest Groups	ABC Portland—Andando en Bicicletas y Caminando Bike About Bike Loud Black Girls Do Bike Forth Go By Bike Oregon Environmental Council The Community Cycling Center The Street Trust Electric Bikes for All coalition
Media	BikePortland

[4] *ODOT provided seed funding to Cascadia Mobility.*

Listening Sessions

In March 2022, the project team held two listening sessions with stakeholders from public agencies, academic institutions, shared service providers, freight delivery services, and non-governmental organizations. Participants discussed specific barriers to e-micromobility in Oregon today and policies and projects that can help overcome those barriers in the future.



The first listening session focused on freight and shared services. The second session focused on personal use cases and invited perspectives, insights, and expertise from key stakeholders in the personal e-micromobility space. In both sessions, participants called for updated infrastructure plans to accommodate new needs and underscored the importance of state-level rebates.

There were several key takeaways from the listening sessions:

- Setting a comprehensive and standard definition for e-bikes is an ongoing challenge because a patchwork of laws and polices makes it difficult for the industry to grow within a specific regulatory framework. This places the burden of research on the consumer to find out what can be legally used and where.
- Inadequate funding access constrains e-micromobility adoption and use.
- Bikeshare systems that include e-bikes provide better and more equitable service to individuals with certain physical disabilities.
- Hubs and corrals are most effective when integrated into both the e-micromobility system and into the larger transportation network.
- Opportunities to test drive various e-micromobility devices before purchase will accelerate the adoption curve.
- Available and reliable secure parking is a prerequisite to any e-micromobility purchase.

Expansion & Adoption Challenges

Oregon faces significant challenges to promoting the further use of e-micromobility. Such challenges relate to infrastructure, education and awareness, cost, data, and administration issues.

Infrastructure

By far the largest barrier to e-micromobility is the lack of safe and connected infrastructure.

Right-of-Way Allocation

The Oregon Bicycle and Pedestrian Design Guide and ODOT's Highway Design Manual specify that bike lanes and multiuse paths must be at least 4 feet and 10 feet wide, respectively. Neither document mentions e-micromobility devices (Oregon Department of Transportation, 2011) (Oregon Department of Transportation , 2023). Because they are often wider than standard bicycles, e-cargo bikes have trouble operating within these standards.

Standards may not allow for safe passing opportunities.

In areas with limited space, the wider footprints and faster speeds associated with some e-micromobility devices can also cause safety and operational conflicts with other modes. Since e-cargo bikes can be as wide as 4 feet, Oregon's minimum width standards for bike lanes and multiuse paths may not allow for safe passing opportunities.

Secure Parking

Publicly-accessible secure parking for e-micromobility devices is not uniformly available. Because many e-micromobility devices have larger footprints than their non-electric equivalents, storage can be challenging for renters or people with limited physical space. Because such devices are often more expensive and may have removable batteries, concerns about theft may be even greater than with conventional bikes or scooters.

For public shared systems, a lack of dedicated parking can lead to sidewalk clutter and access issues, particularly for those with mobility challenges. Portland State University research found that compliance with e-scooter parking rules was much higher on blocks with designated parking areas and that providing space for these vehicles can solve many of the complaints related to sidewalk accessibility (Hemphill, et al., 2022).

In private homes, apartments, and workplaces, bicycle parking areas may need design changes to accommodate e-micromobility devices. For example, facilities may need additional electrical outlets for charging and more ground racks (rather than vertical hanging racks) for heavier e-bikes. Affordable housing may lack elevators or secure bike parking, which forces e-bike users to carry bikes upstairs (Forth, 2018).

Charging Access

Privately-owned e-micromobility devices can generally be charged overnight at home, or their batteries can be removed for charging. Shared systems usually have charging facilities built into their design. But not everyone can easily charge their device at home. People who make longer trips or use their e-bikes more frequently may also need access to public charging.

Transportation System Integration

Most shared e-micromobility systems are not well integrated with public transit. This is both from an infrastructure perspective (lack of shared micromobility hubs along transit corridors) and from a stand point of fare integration, making it overly complex to transfer from one mode to another.

Cost

Cost—both real and perceived—remains a significant barrier for many consumers particularly where there is a lack of incentives or rebates. Depending on their size, purpose, and capabilities, e-micromobility devices can range from $1,000 to $10,000 or more. Although significantly cheaper than an automobile, they are generally more expensive to purchase than a comparable non-electric bike or scooter.

Education & Awareness

Many people remain unaware of the availability and capabilities of e-micromobility devices. Others hold misperceptions. For example, consumers may think these devices are just for a fun weekend recreational ride and not a viable option for everyday utilitarian travel. The fast pace at which this industry has developed and the lack of standardization throughout it has further contributed to this barrier.

Data

Data collection and use limits the expansion of shared e-micromobility systems in two different ways. First, to evaluate and improve services, government agencies and system operators need the ability to monitor e-micromobility use through data. However, for such a large volume of data to be useful, agencies and providers need that data to be readily accessible, efficiently archived, and easily filtered and examined for important trends and characteristics.

Researchers and operators have several available data sources:

- **MITRE** provides links to datasets, dashboards, and reports containing raw data on e-scooter use characteristics and community survey results (MITRE Corporation, n.d.).
- **Portland State University** maintains several web-accessible databases that track important e-micromobility characteristics (Portland State University, 2022), (Seaward, 2022), (Bennett C. a., n.d.)
- **Ride Report** in Portland offers cities data-driven program management, compliance, and invoicing of shared mobility programs. More than 70 cities worldwide use this database including The City of Portland. (Ride Report, n.d.).

The second data challenge is that users must feel confident that their privacy is protected. Shared systems outline their data policies in their terms and conditions, which are typically similar to transit system data policies. Generally, cities that collect data disaggregate their data or have a third party like Ride Report or Populus house the data. Disaggregation or external housing ensures that trip data is not linked to any specific individual. Nevertheless, concerns about privacy may be a barrier, particularly for undocumented riders or people with heightened privacy concerns (Golub, Serritella, Satterfield, & Singh, 2018).

Equity

There are valid concerns that e-micromobility may not be expanding access equitably. Most research on bikeshare finds that users are more likely to be men, identify as white, be young, and have higher-incomes. Most e-scooter research has similar findings, though there is some limited evidence that e-scooters might better serve people with low incomes than bikeshare (Dill & McNeil, 2021), (Wang, et al., 2002).

Most of the challenges and barriers to expanding use of e-micromobility are even greater for historically underserved communities, communities of color, and those with mobility limitations. These communities also face unique barriers.

While generally cheaper than cars, private e-bikes remain out of reach for many residents with low or middle incomes. The average e-bike costs about $2,600, whereas most current incentive programs only provide $200–$600 in assistance, if they are available at all. According to researchers at Portland State University, only 25% of financial assistance programs provide additional support for people with low incomes (Allen, 2022).

Typically, users access shared services through smartphone apps. Because they are generally only offered in English and require a credit card and data plan to function, these apps create additional barriers. Ironically, many apps advertise low-income and cash payment options in the app itself, which keeps the services underutilized by those who would benefit the most. In 2019, the Portland Bureau of Transportation (PBOT) found that nearly 60% of respondents with low incomes did not know about available payment plans and only 38% were aware of a cash payment option (Portland Bureau of Transportation, 2019).

Shared micromobility providers tend to place hubs, corrals, and devices in high demand areas and areas with existing bicycle infrastructure, where demand and ridership is higher. This is understandable, since they typically operate without public subsidy and struggle for profitability. However, these areas are typically affluent neighborhoods, and central core areas. Such placement limits access for historically underserved or marginalized communities and reinforces inequities caused by past planning, zoning, and infrastructure investment decisions.

As noted earlier, e-bikes may increase cycling among women and those with mobility challenges. However, particularly for shared micromobility systems, younger people and people with disabilities may face greater barriers to access. In order to comply with Oregon's vehicle code, these systems must prohibit use of e-scooters by youth under 16. Very few systems have requirements for adaptive vehicles so they are searching for models that expand adaptive vehicles to be more inclusive for all riders.

Administrative & Policy Issues

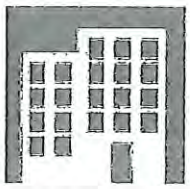
E-micromobility is a new and rapidly evolving mode of transportation. Small and mid-sized cities often lack the resources, information, and expertise necessary to plan, coordinate, launch, and manage successful and equitable shared e-micromobility programs at scale. Communication and coordination with traditional transit agencies is also challenging. When transit agencies are not involved or interested in funding, planning, or integrating shared e-micromobility programs, system outcomes are less ideal.

For-profit system operators may not see enough economic opportunity in smaller communities. Even if they do, the communities may not be well equipped to effectively negotiate contracts. Even larger cities have struggled to negotiate and manage effective working relationships with for-profit operators.

Funding for shared e-micromobility systems is also a major challenge. There is no single clear federal funding stream for this mode of transportation. Systems depend on a hodgepodge of state and federal funding programs for planning, equipment, and operations, each of which comes with its own restrictions and timelines. Most of these funding sources require e-micromobility systems to compete or partner with other transportation needs and modes. Such competitive funding programs also make it difficult to efficiently plan for long term operations.

Best Practices & Recommendations

This section presents best practices, recommendations, and strategies that will enhance existing e-micromobility use, mitigate its challenges, and accelerate its adoption in Oregon.



Infrastructure

Right-of-Way Allocation

Research shows that the presence of bike lanes correlates with lower rates of e-scooter riders on sidewalks and that simply prohibiting sidewalk riding is not effective (Currans, Ewing, & Iroz-Elardo, 2022). In addition to continuing investments in bicycle and pedestrian infrastructure, Oregon should revisit current standards and guidelines for allocating available right-of-way width for different road users, including e-micromobility. In doing so, it will be important to consider the surrounding urban context and the trip purposes being served.

Secure Parking

Transit corridors should prioritize secure parking facilities for privately owned e-micromobility devices. Areas with adequate electrical infrastructure, such as housing developments and shopping centers, should consider infrastructure that supports storage and charging needs. Minimum parking standards for e-micromobility vehicles tied to building and occupancy permits can help support growing e-micromobility demand. Secure parking will be especially important for those who live in apartments and those with lower incomes and fewer transportation options.

Transportation System Integration

To foster a multimodal transportation system, e-micromobility should be integrated with local and regional transit services. Research shows that shared e-micromobility systems can provide more travel options to individuals using transit and provide first-and-last-mile connections to transit. Key integration strategies include the following:

- Maximizing the number of in-service vehicles within the system.
- Siting shared-service mobility hubs and secure parking facilities with transit in mind.
- Integrating shared systems with transit trip planning and payment. Ideally, riders should be able to transfer between transit and e-micromobility with a single ticket or app.
- Well-funded and coordinated low-income programs for both transit and e-micromobility.

Purposeful collaboration between local entities responsible for e-micromobility oversight and infrastructure and transit agencies will enhance the accessibility and value of this integrated system. This might include investing public transit funding to support improvements that increase transit network access.

Charging Access

Oregon should consider and evaluate public e-micromobility charging pilot programs in areas with access to dense e-micromobility infrastructure—especially those integrated with delivery or mobility hubs. Results from evaluations should inform future efforts. The state should also ensure that new bicycle parking facilities have adequate electrical charging access for e-micromobility devices.

Oregon should also continue to install 110v outlets for e-micromobility users at electric vehicle charging stations, where appropriate. Locations near bicycle facilities, tourist destinations, or areas with dense e-micromobility infrastructure and use should be top priorities.

Cost

Rebates, financing assistance, and other financial incentives can make e-micromobility more accessible. However, these incentives must be carefully designed and account for the wide range of device prices. When designing and tracking an incentive program, government agencies and municipalities should use Portland State University's Transportation Research and Education Center's extensive research on e-micromobility incentives (Portland State University, 2022).

Oregon should create an e-bike incentive program with graduated incentives based on bike type, bike cost, and household income such as those in Colorado. A similar incentive could be given to businesses that use e-cargo bikes for delivering goods or services. Oregon should also consider offering a more comprehensive suite of incentives (like the California car swap programs) for residents with low incomes who replace older model cars.

Shared systems should also provide reduced subscription rates for people in designated underserved communities (ITS Joint Program Office, 2021).

Education & Awareness

Places where community members can test different e-micromobility devices without pressure to purchase can help people better understand and feel more comfortable with e-micromobility as a viable alternative mode of travel. Oregon should support such opportunities, including brand-neutral and culturally competent outreach, education, and test ride opportunities; e-micromobility lending libraries; and similar strategies in partnership with trusted community partners. Major employment sites and affordable housing developments are ideal locations for these programs. These approaches will be even more effective if paired with financial incentives.

E-micromobility lending libraries can help potential users determine which device best meets their unique transportation needs. Lending library surveys in Vermont and Australia (both of which also offer financial incentives) showed that 17% and 39%, respectively, of users purchased an e-bike within 12 months of using the program (Bliss, 2021).

Data

Regulating agencies should collect key data from shared systems, including trip level data using open-source standards; permit infraction data; and crash and injury data. For crash and injury data, it's important that local hospitals follow Center for Disease Control and Prevention (CDC) guidance to collect injury data related to e-micromobility accidents. Regulators should ensure data is used to assess system performance and improvement and to promote equitable access. Finally, regulators should ensure that users' personally identifiable information is protected.

Equity

A recent study found that 62% of micromobility programs have at least one equity requirement (Brown, Howell, & Creger, 2021). While more research is needed to fully evaluate the effectiveness of these requirements, the National Institute for Transportation and Communities report identifies several key approaches:

- Linking operational incentives to desired equity outcomes.
- Dedicating staff time and resources to manage shared micromobility programs.
- Matching each program requirement with targeted data collection.
- Conducting transparent evaluations.
- Defining program goals and agreeing on a shared definition of equity.
- Moving toward a model of community empowerment.

Surveys of residents in traditionally underserved neighborhoods have found that the top three changes that would increase bikeshare use according to residents were: (1) discounted bike share memberships; (2) free transfers between public transit and bikeshare; and (3) more membership options with shorter terms (McNeil, Dill, MacArthur, Broach, & Howland, 2017).

Including micromobility in universal basic mobility programs may also increase access and mobility options for low-income communities. These programs provide financial resources to people with low incomes to use on transportation services. Researchers at Portland State University evaluated a small pilot program for affordable housing residents in Portland and found interest in using financial resources for bikeshare and e-scooter share, particularly in neighborhoods where regular transit service was less frequent (Tan, McNeil, MacArthur, & Rodgers, 2021).

Local governments should work with system operators to implement systems that have been designed to overcome the specific barriers faced largely by historically underserved communities. Key access barriers of this nature include age, mobility limitations, smartphone and credit card requirements, and English-only apps.

To truly advance equitable mobility, cities must pair program-specific efforts with broader efforts. Even the most accessible shared micromobility programs cannot fully compensate for missing infrastructure, unsafe streets, or inadequate services.

Administrative & Policy Issues

Administration & Funding

Communities could consider partnering with a single entity for all shared e-micromobility services in their jurisdiction. Single operator systems typically enhance coordination, operational efficiency, and transparency. Ideally, operational management activities should be separated from equipment acquisition. The system operator could contract with more than one vendor, if necessary, but that operator should coordinate overall operations. This approach also helps to ensure communities have a choice of equipment providers and can sustain consistent long-term operations even if equipment vendors need to change.

The system operator could be for profit, or a transit agency; however, there are significant advantages to having a system operator that is a nonprofit organization. Nonprofit operators ensure better mission alignment with the local community and other partners, such as transit systems. They provide greater financial transparency and ensure that all profits are reinvested in communities. These operators can also increase access to grant and sponsorship revenue streams. A nonprofit operator across several communities can share resources and information, optimizing long term programmatic and financial outcomes, regardless of the various business models or modes offered by equipment providers. Over the past year, ODOT provided seed funding to research, design, and launch just such a nonprofit system operator - Cascadia Mobility. Cascadia Mobility was designed to serve all Oregon communities, and is currently operating programs in the Eugene area. Initially incubated by Forth Mobility, Cascadia Mobility will be a fully independent nonprofit by January 2023.

Oregon should continue its work to help bring shared e-micromobility services to communities not typically prioritized by for profit systems. Oregon should also pursue and leverage federal funding, including the new programs being created through the Infrastructure Investment and Jobs Act and the Inflation Reduction Act, to help its communities support shared e-micromobility systems. The state should also advocate for the creation of dedicated funding streams for e-micromobility.

Vehicle Definitions

When e-bike definitions and laws governing their use differ by state and locality, it creates confusion for riders, retailers, suppliers, and regulators. Rules should be clear and consistent, so that people know when and how they can ride these devices. Clear definitions and operation rules will reduce confusion and ultimately help increase adoption. Oregon should consider joining the majority of the other states and adopting the three-class definitions for e-bikes.

Future legislation should accommodate cargo e-bikes' unique power, torque, and dimensional requirements. Freight operators have the best understanding of these devices' complicated and diverse landscape and should be directly involved in setting appropriate definitions and requirements for these vehicles.

Zero-Emission Zones

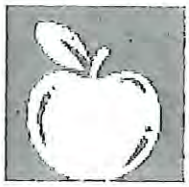
In zero-emission zones, vehicles with no emissions (like bicycles and e-bikes) and pedestrians have either exclusive or prioritized access to roadways and parking. General zero-emission zones apply to all vehicle types, but zero-emission delivery zones focus specifically on first- and last-mile freight deliveries and pickups.

Oregon should consider establishing and operating zero-emission delivery zones because they can reduce congestion and emissions. Pilot programs should vary in size and scope to accommodate different communities' needs.

Next Steps

E-micromobility is an important mode of transportation with a very small carbon footprint. It can improve personal mobility, health, and quality of life across all socioeconomic classes. It has seen significant growth over the past two decades and has great future potential. But substantial barriers remain.

It will take focused attention to overcome these barriers and maintain Oregon's leadership in the transportation industry. In addition to the short-term measures below, Oregon should regularly revisit its approach to this fast-moving mobility sector to ensure equitable access and maximum benefits for all Oregonians now and in the future.

Barrier	Key Recommendations
 **Infrastructure**	• Revisit current standards and guidelines for allocating right of way for different road users. • Increase secure parking through minimum standards for new private developments and by developing secure public parking facilities near transit hubs. • Promote charging access by developing public charging at mobility and delivery hubs and in conjunction with electric car charging installations where appropriate. • Promote coordination and integration between shared e-micromobility systems and transit agencies.
 **Cost**	• Create a rebate or similar purchase incentive that is graduated based on vehicle cost and household income for consumers to purchase e-micromobility devices. • Create a purchase incentive for businesses that acquire e-cargo bikes for delivering goods or services. • Consider offering a comprehensive suite of incentives for lower-income residents who replace older cars with a combination of e-micromobility, transit, or eligible cleaner vehicles. • Ensure that shared e-micromobility systems provide reduced subscription rates for historically underserved customers and promote those plans in culturally competent ways beyond system apps.
 **Education and Awareness**	• Support brand-neutral and culturally competent outreach, education, safety, and test ride opportunities. • Fund and promote lending libraries for e-micromobility devices.

Barrier	Key Recommendations
 **Data**	• Ensure shared e-micromobility system providers are sharing key data using open source standards and in useful forms with local governments and regulators. • Establish, publish, and follow clear standards to ensure that users' personally identifiable information is protected.
 **Equity**	• Take a targeted universalism approach by designing programs and policies around communities with the greatest barriers to accessing e-micromobility. • Link operational incentives for shared e-micromobility systems to desired equity outcomes, with clearly defined program goals, targeted data collection, and transparent evaluations. • Include micromobility in universal basic mobility programs. • Implement specific system designs to overcome barriers to access, such as age, mobility limitations, smartphone and credit card requirements, and English-only apps.
 **Administrative and Policy Issues**	• Clarify vehicle definitions and categorizations, and consider joining other states in adopting the three-class definitions for e-bikes. • Develop a clear definition and approach for commercial electric cargo bicycles that is flexible enough to allow the use of specialty vehicles (e.g., form factors, configurations, and motor capabilities), such as e-trikes. • Pursue and leverage federal funding for shared e-micromobility programs through existing programs, and advocate for the creation of dedicated funding streams. • Work with a non-profit operator to help smaller communities such as Corvallis, Bend, Eugene, and Salem develop and implement coordinated shared micromobility equipment, operations, and financial plans. • Use pilot programs to establish and test zero-emission delivery zones.

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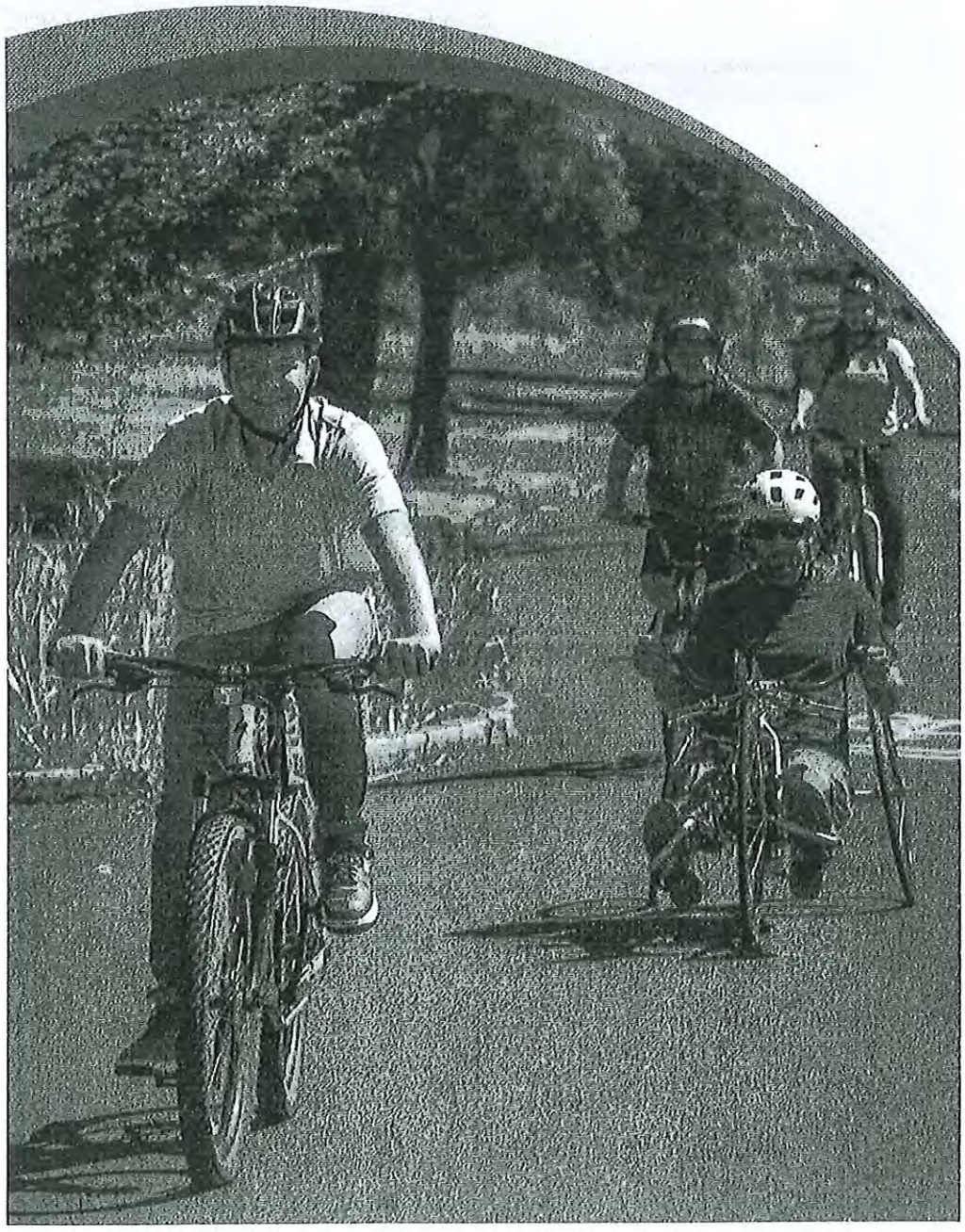
5th Edition

OREGON BICYCLING MANUAL

OREGON PEDESTRIAN & BICYCLE PROGRAM



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Visit us at our web site: *www.oregonwalkbike.org*

Questions? Comments? Concerns? Contact AskODOT!

1-888-ASK-ODOT (275-6368)
Ask.ODOT@odot.state.or.us

This manual provides guidance for people bicycling and driving on roads in Oregon. This manual summarizes Oregon State laws, also called Oregon Revised Statutes (ORS). Cities and counties may have their own rules that provide additional guidance beyond state laws, though they will not conflict with state laws. State and local laws take precedence over the information in this manual. Complete Oregon Vehicle Code and statutes relating to bicycling are found at *https://www.oregonlegislature.gov/bills_laws/pages/ors.aspx*. Most of the statutes relating to bicycling are found in Chapter 814 of the *Oregon Revised Statutes.*

The online version of this manual, in English or Spanish, is available for download or order at: *www.oregonwalkbike.org* under *"Publications."* Additional copies of this manual are also available at your local DMV office. For parents and others teaching children safe riding habits, ODOT publishes a variety of booklets and activity sheets for children that can be downloaded or ordered online at: *www.oregonwalkbike.org* under *"Publications."*

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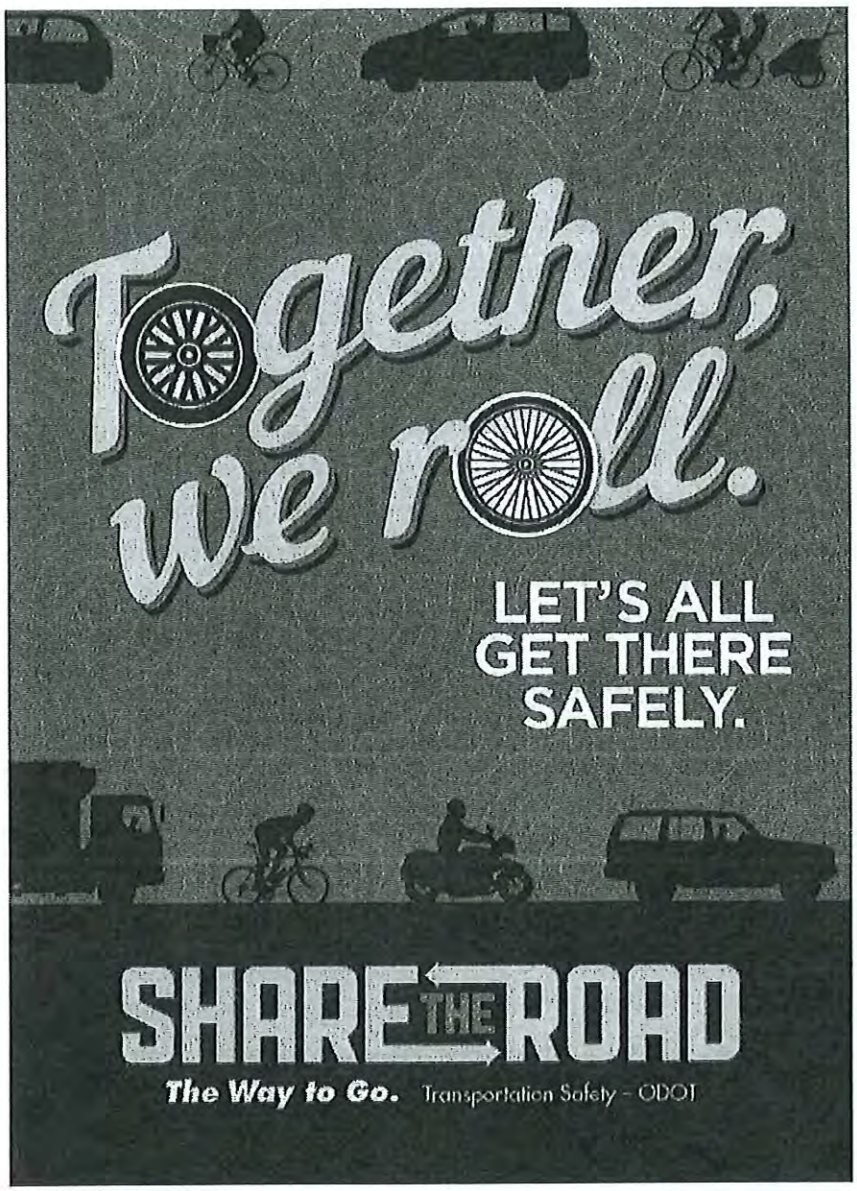
Together, we roll.
LET'S ALL GET THERE SAFELY.
SHARE THE ROAD
The Way to Go. Transportation Safety - ODOT

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Bicycling in Oregon

People ride a bicycle for many reasons. People depend on bicycles for physical and mental health, community connectedness and reliable transportation. Bicycling in Oregon takes place in quiet neighborhoods, on busy streets, along scenic travel destinations, through high and low elevations and everywhere in between.

You have a right to ride your bicycle on Oregon's roads, streets and highways. In Oregon, a bicycle is legally considered to be a vehicle. When riding your bicycle on a road, you have the same rights and duties as people who are driving cars. With a few exceptions, the rules of the road for people driving apply to you. Consult the ***Oregon Driver Manual*** to become familiar with these rules.

Whether you are just learning to ride a bicycle, celebrating hundreds of road miles, or want a quick review on the rules of the road, this manual is for you. Having information about your rights and responsibilities while bicycling in Oregon is an essential tool.

How Oregon Law Defines a "Bicycle"

Oregon law defines a "bicycle" as a vehicle which is designed to be operated on the ground on no more than three wheels. The wheels must measure at least 14" in diameter. The vehicle must have a seat for the rider and be propelled exclusively by human power.

A bicycle is a human-powered vehicle.

E-Bikes and E-Scooters

"Electric assist bicycles" - also called "e-bikes" - are bicycles that are operated by pedaling, but get an extra boost from an electric motor. Electric assist bicycles are considered a bicycle in the Oregon Vehicle Code, but there are a few different rules that apply to electric assist and e-bikes. The minimum age to operate an e-bike is 16. People riding e-bikes may ride in bicycle lanes and on paths, but not on sidewalks. If there is

not a bicycle lane, you can ride an e-bike or e-scooter in the lane with traffic. Cities, counties, and land owners often have their own rules about where e-bikes are allowed (especially in parks and on trails). Check the rules for your area before purchasing or using an e-bike.

Electric scooters, or "e-scooters", are subject to the same rules as e-bikes, except people of all ages must wear a helmet while riding an e-scooter and travel at a max speed of 15 miles per hour.

Information on pocket bikes, mini-motorbikes, motor-assisted scooters, mopeds, segways and similar motorized vehicles that do not qualify as e-bikes is available at: ***www.oregonwalkbike.org*** under *"Oregon Laws and Regulations."*

Skateboards, Non-Motorized Scooters, and Skates

Skateboards, non-motorized scooters and skates are allowed in bicycle lanes in Oregon. Skateboards, non-motorized scooters and skates can be used on sidewalks in Oregon unless prohibited by local rules. When riding on the sidewalk, be considerate of people who are walking and let people know when you are approaching to pass them.

Mobility Devices

People who use mobility devices such as wheelchairs or motor assisted scooters are also allowed to use bicycle lanes and paths under Oregon law. These devices may move slower than bicycles, so be considerate when sharing the bicycle lane and passing.

Getting Started

Start with a bicycle in good working condition that is the right size for you. Adjust the bike seat and handlebars for greatest comfort. Your local bicycle shop, friend who rides, or online video tutorials can help guide you through the process to select a bicycle that works for you and the type of riding you want to do.

Plan Accordingly

Plan your route ahead of time. If you are trying a new way of traveling to/from work or school, consider trying it out on the weekend when there is no pressure. This way you can see how long it takes and what supplies you need. If you are commuting to work, consider leaving some basic supplies (shoes, etc.) at work so that you don't have to carry as much with you. Remember to bring water and flat changing supplies just in case you need them.

Secure luggage racks, panniers, saddle bags and other accessories before you ride. Make sure that your pant legs and/or shoelaces will not get caught in your chain. Fenders will keep you dry and clean and make riding in wet weather more enjoyable.

Weather and Road Conditions

Use your favorite app or tune into weather reports before you travel. Dress appropriately for the weather. Visit ***tripcheck.com*** to get real-time traffic information from ODOT TripCheck.

The "ABC Quick Check"

Before every ride, perform an ABC Quick Check to ensure your bicycle is in good working condition:

- **A**ir
  - » Tubes should be inflated with the right amount of air. Look for markings on the side of the tire indicating target pounds-force per square inch or PSI to inflate your tires up to.
  - » Inspect tires to ensure they are in good condition without punctures, holes, or sharp debris.
- **B**rakes
  - » Front and rear brakes should be in good condition and responsive enough to bring you to a stop in wet and dry conditions.
  - » The brake levers should be easy to reach. Try to push your bicycle forward and make sure that when you squeeze the levers, your bicycle stops.
- **C**ranks and Chain
  - » Ensure cranks and chain are clean and moving smoothly, not loose or stuck.
  - » Turn the pedals to check for smooth chain movement and noises.
- **Quick** Release
  - » If your bicycle has "quick release" wheels or seat, the quick release should be tightened with the lever pushed in flat. When you push the lever down, it should be pushed hard enough that it leaves a temporary impression on your hand.
- **Check** it Over
  - » Take a slow, short test ride to feel and listen for any issues.

Adapted from the League of American Bicyclists https://bikeleague.org/content/basic-bike-check

Bicycling with kids demands more attention and communication.

Bicycling with Kids

Bicycling with kids can be a fun way to spend time together, get exercise, and get to school or other destinations. Riding with kids, especially small ones using their own bicycles, demands more attention and communication. Remember the ABC Quick Check for kids' bikes too and plan out where to ride. There are routes and paths that make family and group riding easier. For more information on bicycling with babies, with toddlers, and when pregnant, check out the Portland Family Biking Guide: ***https://tinyurl.com/familybiking***

Bicycling with Cargo

Bicycles can help transport your everyday items and larger hauls. The key is having the right gear for the size and weight of what you're carrying. Carrying cargo impacts your balance and ability to start, stop, and steer; so take time to practice and adjust to the load. Keep the load balanced, secure and out of the way of your steering, pedaling, and any moving parts of your bicycle. There are a variety of bags, racks, trailers, straps and baskets available for sale or rent at bicycle shops and other retailers that can help you carry groceries and other cargo on any bike. Specialized cargo bicycles and cargo e-bicycles can help you carry multiple kids or larger, heavier loads.

Plan ahead and remember to share the road (or path) when riding with others.

Bicycling with Groups

You and a companion may ride side by side on the road if you don't impede the flow of other traffic. If other traffic doesn't have enough room to pass you safely, transition to riding single file. On rural roads, breaking into smaller groups can make it easier for vehicles to pass. It can be helpful to plan ahead and decide with your friend who will ride ahead and who will ride behind when you transition to single file riding. When riding as a group, everyone is considered to be a separate "vehicle." This means that if you come to a stop sign or an intersection with a 4-way stop, each person riding must stop or yield separately. This might mean that the group has to pause or slow down to meet back up. The person in the front should communicate to the other riders if there are obstacles to avoid in front of them.

Bicycles and Transit

You can link bicycle trips with transit to go even further. Many transit providers in Oregon have bike racks on the front of their buses so you can take your bicycle with you, but keep in mind that these racks usually only fit two or three bicycles. You can also bring most bicycles on Amtrak Cascades trains. Check for price and availability when you book your ticket. Some bus stops and transit centers also offer secure bicycle parking so you can leave your bicycle safely secured at the station. Many transit providers cannot accommodate cargo bikes, adult tricycles, tandems, or bicycles with trailers on buses and trains. Check with your local transit provider.

People driving buses often have to pull across or into bicycle lanes at bus stops. The bus driver should yield to people in the bicycle lane before pulling over to the stop. If a bus is stopped in the bicycle lane, you can move into the traffic lane to the left to pass the bus when there is a gap in traffic. If there is a bus pullout, you can ride past the bus in the bicycle lane. When the bus is leaving a stop and turns on its blinker, vehicles (including bicycles) should yield to the bus.

Most buses in Oregon have racks that can fit two or three bicycles.

Required Safety Equipment

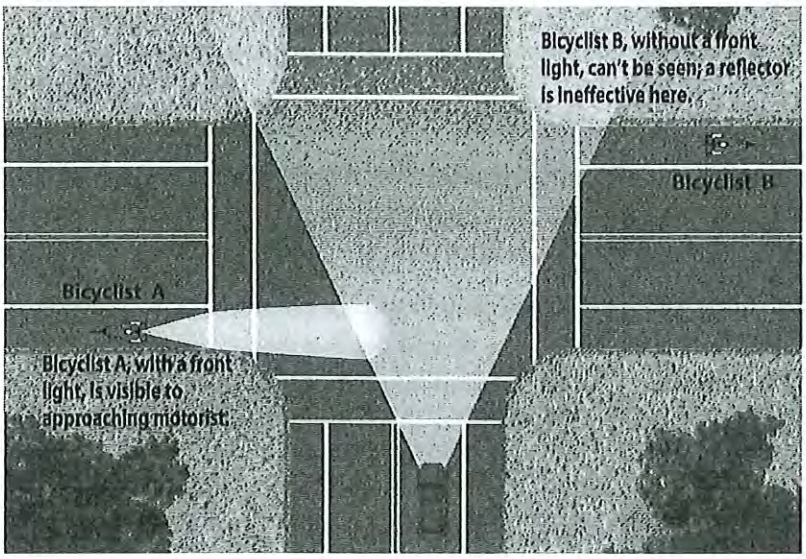
Helmets

Oregon law requires all bicycle riders under the age of sixteen to wear an approved helmet while riding on a public path or roadway. However, it is recommended that all people wear a helmet when riding bicycles to help prevent or lessen the severity of a potential head or brain injury. Even very careful riders can fall or be involved in a crash.

When you buy a new helmet look for the label or sticker indicating it meets the federal Consumer Product Safety Commission (CPSC) safety standard. Bicycle helmets that meet the CPSC standard will provide protection against head injury for their useful life (usually 3-5 years) when used properly. Helmets should be handled and stored with care. Be sure not to drop it when not in use. If you crash or fall, inspect your helmet; if there are signs of damage, replace it, because it may no longer protect you. Proper and comfortable helmet fit is important too. For a detailed brochure on how to fit a helmet visit: *www.oregon.gov/ODOT/Safety/Documents/PerfectlyFitted.pdf*

Headlights and Taillights

Lights are required by law when riding after dark. Just like a car must have headlights and taillights, you or your bicycle must have a white light on the front that is visible at least 500 feet away, and a red light or reflector visible at least 600 feet to the rear. Front white reflectors are not visible to motorists entering from a side street and do not meet legal lighting requirements. A red light on the back of your bicycle is more visible than reflectors. Using these items in night and daylight hours, especially in overcast, rainy or foggy weather can help you be more visible. More powerful lights will make you even more visible to others and help



Effectiveness of bike lights.

you to see road hazards, but should be pointed down slightly to avoid blinding other riders. Keep extra batteries or a charger for longer rides.

Additional Safety Equipment

You can also wear lights and reflective gear on your helmet, chest, back, arms, and legs. Wearing bright and light colored clothes like neon yellow and lime green can help make you more visible to other road users by keeping you from blending in with the roadway and surroundings that are usually dark.

Wearing reflective gear.

Bicycle bells can be a great communication tool. You can use your bell when passing people biking or walking. Slow down when passing so you don't startle people who may not be able to hear your bell. Most often, they will then expect you to pass them on the left.

Mirrors can help increase awareness of your surroundings. Use the mirror only as an aid – look over your shoulder to make sure adjacent lanes are clear before turning or changing lanes.

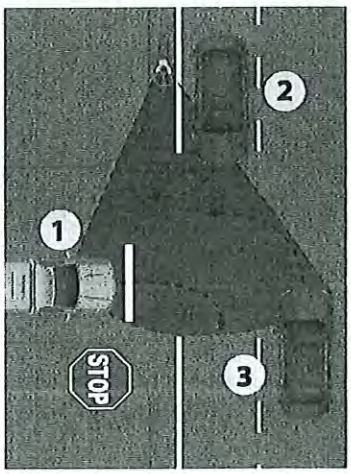
A sturdy bicycle lock will help keep your bicycle safe if you need to leave it unattended. You should securely lock your bicycle even when leaving it for a very short amount of time. For the best security, use a U-lock, folding lock, or a heavy chain lock to secure the triangle shaped part of the bicycle frame and front or back wheel to a bicycle rack. Cable locks can provide additional security for quick release wheels and seats, but are easy to cut and less secure.

Defensive Riding Strategies

Bicycling safely and responsibly means you can have more fun, feel more comfortable and get where you need to go. Even when you follow all the rules, things can go wrong and crashes can happen, with or without other vehicles involved. You can continue to maximize your safety by using defensive riding strategies. Being familiar with your riding environment, bicycle equipment and traffic safety rules can help increase your comfort when riding.

If you are new to bicycling, practice riding while looking ahead, to the sides and over your shoulder (this is needed to check for traffic before turning). Practice in an area away from cars.

Keep an eye on the road ahead. Avoid running over potholes, gravel, broken glass, drainage grates, puddles you can't see through, large tree branches or other unsafe road conditions. If the object must be avoided and you are unable to quickly stop ahead of it, first look over your shoulder to scan where there may be cars or other people bicycling and walking before moving away from your path. If necessary, use a hand signal before moving over. Report unsafe road conditions to local authorities as soon as possible.



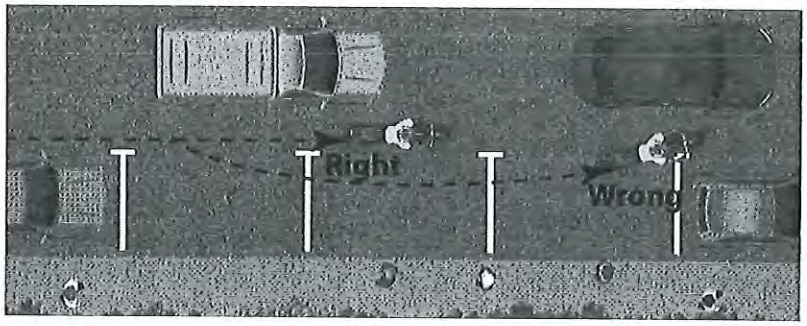
Scan the road around you.

Avoid distractions and using devices that could impact your ability to notice critical cues on the road, listen for vehicles, or maintain control of your bicycle. Distracted driving laws apply when you're riding a bicycle.

Never ride while under the influence of alcohol or drugs. Driving under the Influence of Intoxicants (DUII) laws apply when you're riding a bicycle.

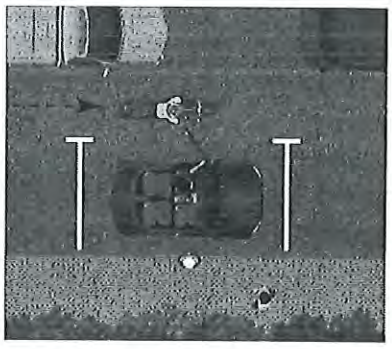
Ride cautiously and expect something might happen ahead. People driving and using their phones, or waiting at stop signs, driveways and parking spaces may suddenly pull out in front of you because they aren't looking, are distracted and make errors. Also look out for cars that may turn right, and cars across the street that may turn left in front of you.

Be prepared to stop suddenly or to take other evasive action. A great strategy is to simply have a finger or two sitting on your brakes at all times in case you need them.



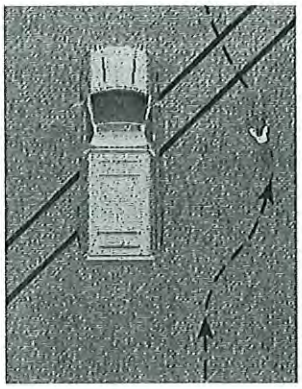
Don't weave in and out of parked cars.

Ride far enough away from parked cars that you don't risk being hit by an opening car door. Ride in a straight line and don't weave in and out of parked cars – you may disappear from motorists' sight and get squeezed when you need to merge back into traffic. In general, remember that people driving cars cannot know when you might weave in or out. When you ride in a straight line, you are more predictable and motorists can drive around you safely.



Avoid open car doors.

Cross railroad tracks carefully. Watch for uneven pavement and grooves that could catch a wheel. Keep control of your bicycle. One way is to rise up from your bike seat and bend your arms and legs so your body acts like a shock absorber. If the tracks cross the road at a sharp angle, change your course so you cross them at closer to a right angle. Avoid swerving suddenly; this can cause you to fall or to veer into traffic.



Crossing railroad tracks.

Enter the roadway cautiously, always yield to oncoming traffic. It is dangerous to alternate between the sidewalk and road, by hopping the curb or using driveway cuts. If you ride on the sidewalk, people driving cars may not see you, and may not have time to react and give you space if you suddenly enter the road.

At intersections, stay on the road. Don't ride in the crosswalk and suddenly swerve into the road again. A driver may lose sight of you, turn the corner and hit you.

Darting out onto the road can put you in the path of a moving car.

Rules of the Road

Now that you and your bicycle are properly equipped and you have learned some defensive riding skills, learning and following the rules of the road will help make your ride even more safe, fun and less stressful. You have the right to ride on the road in Oregon. Here are the most important things to keep in mind when you decide to ride with traffic.

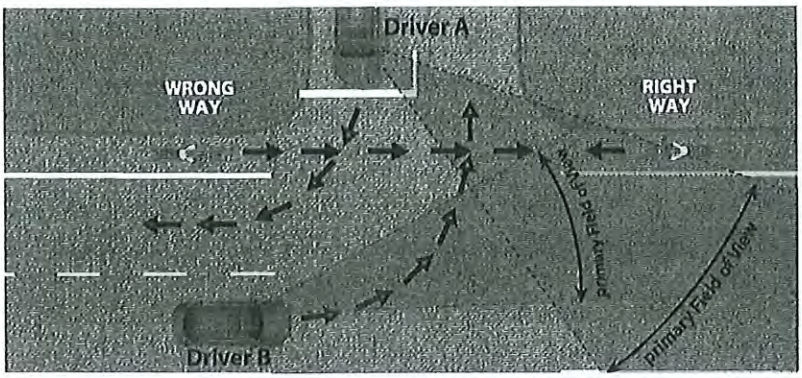
Ride with Traffic

Ride in a straight line in the same direction as the traffic next to you. People driving look for possible conflicts with traffic when they enter a road, turn, or change lanes. If you are riding in the same direction as traffic, people driving will more likely see and yield to you.

When riding in a bicycle lane, you should ride in the same direction as the arrow painted on the pavement in the bicycle lane. Most bicycle lanes are marked as one-way in the same direction as the closest traffic lane. The rare exceptions are:

- some one-way streets where a "contraflow" bicycle lane is specifically designed and marked to allow people on bicycles to ride in the opposite direction from cars, and
- where a specially designed and marked two-way bicycle lane is provided on one side of the street.

Riding in the road against traffic is against the law. Some people ride against traffic because they think that looking at on-coming traffic will help prevent crashes or being hit from behind. However, people bicycling are rarely hit from behind and wrong-way riding actually puts you at higher risk for a crash. Riding against traffic makes it difficult to see signs and traffic signals that could be critical for making decisions or avoiding conflicts. You also risk a head-on collision with people riding or driving in the right direction who may not have time or space to safely move around you.



Hazards of wrong-way riding: Driver A is looking for traffic on the left; Driver B is looking for traffic ahead; in both cases, a wrong-way bicyclist is not in the driver's main field of vision.

Ride to the Right or Take the Lane?

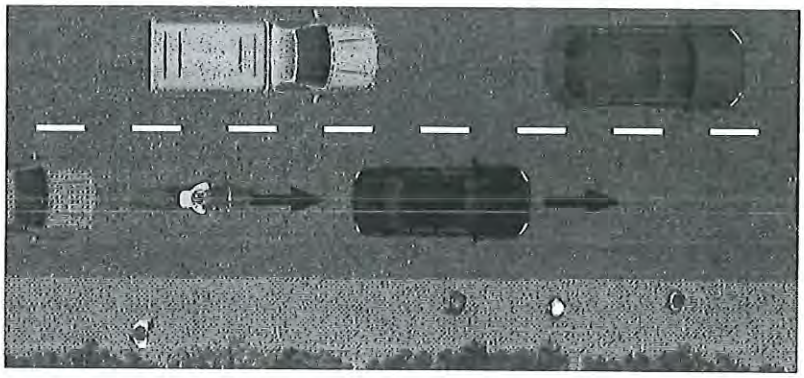
In most traffic and road conditions, the rules of the road require you to ride on the right side of the road. In some conditions it is best to ride closer to the center and "take the lane." In Oregon, if there is a bicycle lane on a street you are required to ride in it, except:

- When avoiding hazards
- When avoiding parked cars
- When a lane is too narrow for a bicycle and vehicle to travel safely side by side
- When making a left turn
- To avoid conflicts with right-turning cars.
- On a one-way street, you may ride on the left as long as you are riding with traffic.

Avoid road hazards.

When there is no bicycle lane, it is generally best to ride on the right side of the road, but this doesn't mean that you have to be right up against the curb or edge of the road. Riding too close to the curb or edge of the road can be dangerous if you hit the curb or hit the roadway edge and lose your balance, causing you to fall.

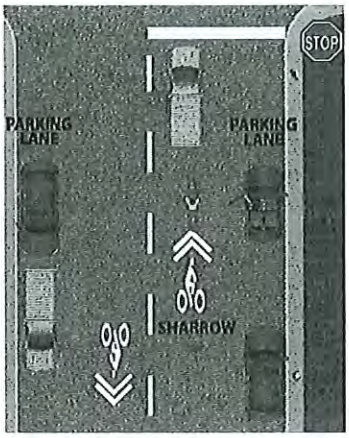
If there is no bicycle lane or shoulder and the vehicle travel lane is narrow, you should ride closer to the center of the traffic lane. Many times this means riding in the lane about where a passenger in a car would be sitting (slightly to the right of center). This will discourage people driving from passing you when there isn't room. If you're traveling at the same speed as traffic, positioning yourself closer to the center of a narrow lane will keep you out of people's blind spots and reduce conflicts with right-turning traffic.



Occupy more of the travel lane if it is narrow or if traffic is moving slowly.

On some streets a shared lane marking or "sharrow" is painted on the road to indicate that the lane is shared with people driving and people riding bicycles. The sharrow symbol also indicates to the person riding a bicycle where they should be positioned – usually in the center of the lane or just right of center. This makes you more visible to people driving and also helps you to avoid parked cars opening doors.

Passing Other Vehicles



Sharrows indicate where to ride.

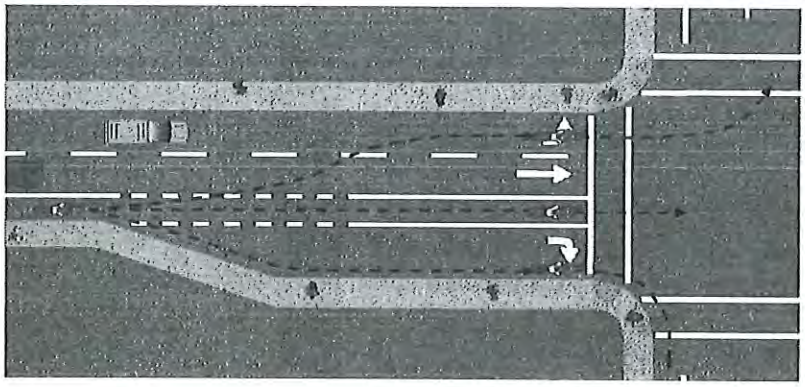
If you need to pass, pull into another lane only if it is clear and without conflicts ahead. If a car ahead of you is signaling a right turn, check to see if your left side is clear, shift over to pass, then move back into your original position. People riding bicycles are legally allowed to pass on the right if there is a bicycle lane, but people driving often forget to look before turning right, so it is best to ride defensively. Do not pass on the right unless the person driving slows down or stops and communicates they see you. Ride at a reasonable speed, and scan carefully for turning vehicles.

Navigating Intersections

Most crashes with motor vehicles happen at road intersections and driveways, where people bicycling and driving cross paths. To avoid these crashes, ride with traffic and in a predictable manner. When you approach an intersection with several lanes, choose one that serves the direction you want to go in or the one with the arrow pointing where you want to go. If there is a straight through bicycle lane, use it only if you're going straight ahead. You may get cut off by turning cars if you're in the wrong lane.

If you can't make it across traffic to the correct lane, use the crosswalk.

At some intersections and busy driveways, green paint is used in the bicycle lane to indicate areas where people driving are likely to drive across the bicycle lane to turn or move into a turn lane. These markings remind people driving that this is a possible conflict zone and to watch for people bicycling. However, this green paint should also be a reminder for you while bicycling to be especially alert for potential conflicts.



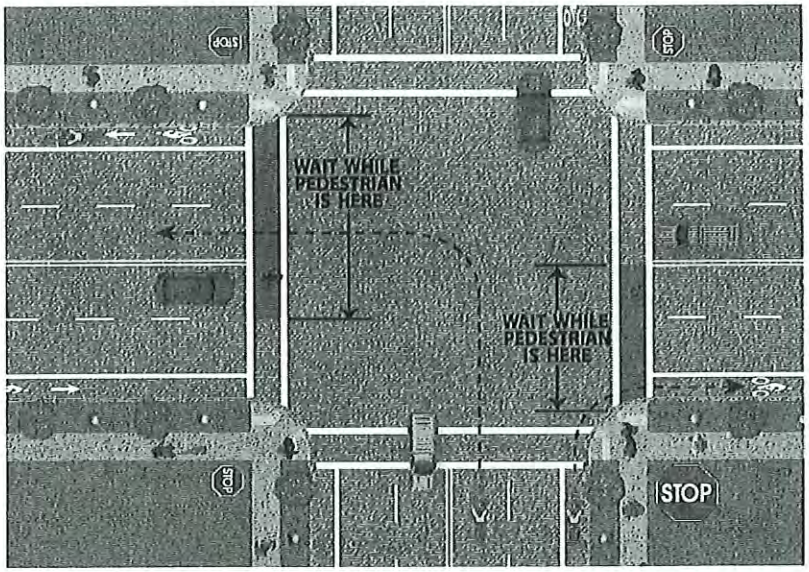
Choose the correct lane.

Crosswalks

You are legally allowed to ride your bicycle in a crosswalk, but you must slow down when approaching the intersection and enter the crosswalk at the speed of a person walking. This allows people driving enough time to see that you intend to cross and stop for you. Proceed slowly and yield to people walking.

When riding, you must stop for pedestrians at crosswalks. **A crosswalk exists at any public road intersection, whether marked or unmarked.** If a person is crossing in a crosswalk, as a vehicle you must stop and wait until the pedestrian has cleared your lane and the next lane before you may proceed. Do not pass stopped cars or other people on bicycles at a crosswalk or intersection – they may be stopped to let a person cross.

If you want to make a turn at a signal and a person is crossing the intersection, you must stop and wait until the person has cleared your lane and six feet of the next lane before turning.



At an intersection, you must wait until a crossing pedestrian has cleared your lane and the next lane.

Roundabouts

Roundabouts are intersections that are designed to allow vehicles to continuously flow through the intersection, but at safer slower speeds. Bicycle lanes are usually not striped through roundabouts, so you will have to decide if you want to move into the traffic lane and ride through the intersection as a vehicle or move onto the sidewalk and navigate the intersection as a pedestrian. There are usually bicycle ramps from the bicycle lane to the sidewalk at the approach to roundabouts to allow you to ride onto the sidewalk.

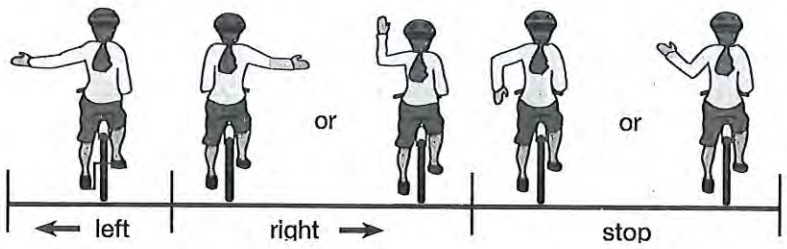
For more information on bicycling through roundabouts, visit: ***tinyurl.com/roundaboutbike.***

Turning

Hand Signals

Signal before making a turn to warn traffic behind you. To signal a left turn, look behind you, then hold your left arm out. To signal a right turn, either hold your right arm out, or hold your left arm up, with a bent elbow. You don't have to keep your arm up or extended

through the turn – you may need both hands on the handlebars to steer your bicycle. Whenever stopping it is good to use the stop hand signal.



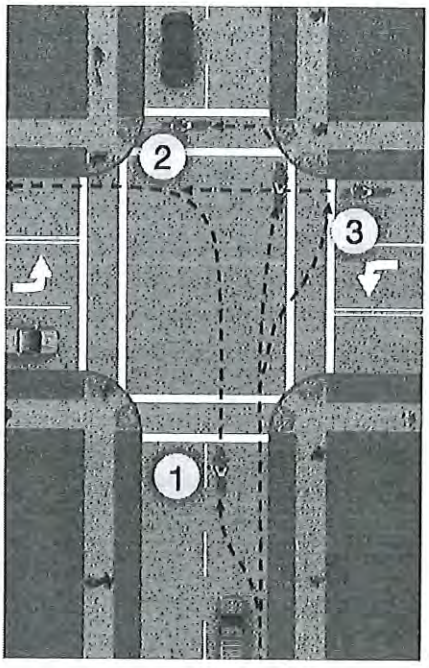
Bicyclist hand signals.

Left Turns

There are several ways to make a left turn on a bicycle:

As a Vehicle

As you approach the intersection, look over your left shoulder for traffic and, when clear, signal your turn, move over to the left side of the lane on a two-lane road (1), or into the left lane or the center turn lane when available. You should be positioned so cars going straight through can't pass you on the left. Yield to on-coming cars before turning. If you are riding in a bicycle lane, or on a road with several lanes, you need to look and signal each time you change lanes. Unless you



How to make a left turn.

are making a two-stage left turn as described in the next section, never make a left turn from the right side of the road, even if you are in a bicycle lane.

"Box-style" or Two-Stage Left (see also Bicycle Boxes,)
Proceed straight through the intersection on the right. Then stop, and either cross as a pedestrian in the crosswalk (2), or make a 90 degree left turn and proceed as if you were coming from the right (3). If there is a signal, wait for the green or WALK signal before crossing. Yield to people crossing in the crosswalk.

Avoiding Blind Spots and the Right Hook

A "right hook" crash occurs when a person driving turns right across the path of a person riding a bicycle straight past a driveway or through an intersection. While it is legal to pass a line of stopped cars on streets with a bicycle lane, it is advisable to stop behind the first vehicle, particularly if it's a large truck, with limited ability to see smaller vehicles around them. On streets without bicycle lanes, people bicycling should take the lane at intersections and proceed through the intersection as any other vehicle.

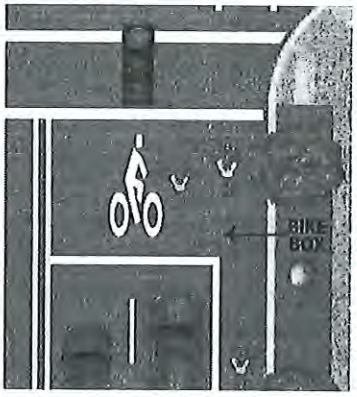
It is advisable to stop behind large trucks with limited peripheral visibility.

Using Bicycle Boxes

Bicycle boxes are a painted traffic control device used at some intersections with signals to provide an area for people riding bicycles to wait for a green light in front of any cars that are also waiting. Bicycle boxes help make people on bicycles more visible at intersections and also can help reduce traffic delays. There are two styles of bicycle boxes in use in Oregon.

Right Hook Style

This bicycle box is placed between the crosswalk and a stop bar—a thick solid white line indicating where motor vehicles should stop. Bicycle boxes, usually painted green, indicate that people riding bicycles have priority by allowing them to go to the head of the line and, once the light turns green, to get through the intersection before cars proceed.



Right Hook Style Bike boxes place people bicycling at the head of the line.

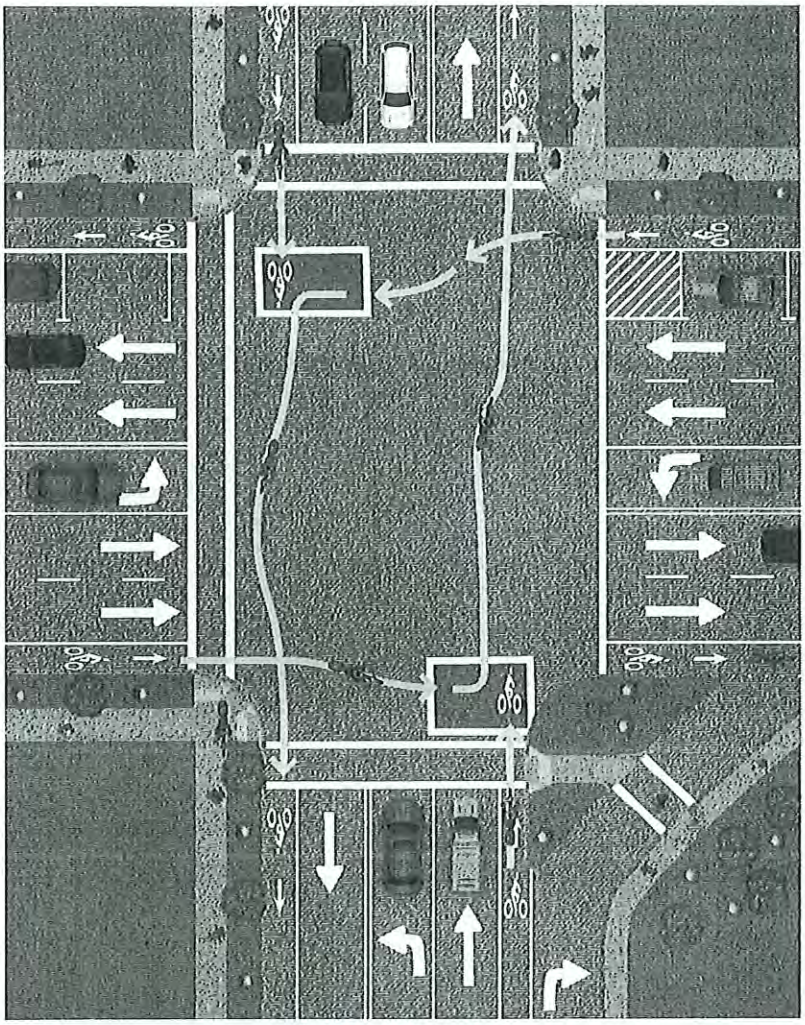
When a traffic signal is yellow or red, enter the bicycle box from the approaching bicycle lane. Stop before the crosswalk. (Not all bicycle boxes or approaching bicycle lanes are painted green.)

When the light is green, proceed as normal. Be aware of turning vehicles.

Left Turn Bicycle Box

A left turn bicycle box is provided when a two-stage left turn is required or encouraged. This style of bicycle box commonly accompanies a bicycle lane that is separated from the motor vehicle travel lane by a physical barrier, preventing people bicycling from moving into the left turn lane.

When the signal is green, proceed across the intersection to the bicycle box and then turn 90-degrees. Wait for the light to turn green and proceed.



Left Turn Bike Box is provided when a two stage left turn is required.

Obeying Traffic Signals and Signs

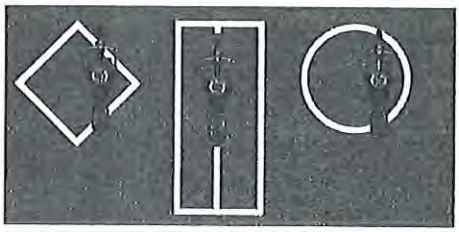
Traffic Signals

You must come to a complete stop at solid red lights at intersections. When approaching an intersection with a solid yellow light, it is the law to stop at the yellow light if you are not already in the intersection. Rushing through a yellow light may not leave enough time for a person riding a bicycle to get through the intersection before the light turns green for oncoming traffic, which can cause a crash.

Useful tip: Shift into an easier or lower gear before stopping at an intersection. This will help you pedal more easily when you start again.

Many traffic signals are triggered by electrically charged wires buried under the pavement. When a vehicle goes over them, the metal disrupts the current, which sends a signal to a traffic signal control box. A computer directs the signal to change at the appropriate time. Most bicycles contain enough metal to trigger the signal, but you should know where the most sensitive spots are. Look for cut lines in the pavement, filled with tar. Depending on the shape, the most sensitive spots are:

- Diamonds: just inside one of the points.
- Rectangles: up front, in the middle.
- Circles: about 1/4 of the way in.



How to trigger loop detectors.

Bicycle detector stencil.

At some intersections, the best place to wait to trigger the signal on your bike is marked with a small white bicycle stencil. Stay in the detection zone until you get a green light. If the signal fails to detect you, go to the sidewalk and press the pedestrian button. You are permitted to proceed with caution through the intersection on red if the signal fails to detect you after one full cycle of the signal.

Bicycle Signals

Bike signals.

Bicycle signals are used at some intersections with bicycle-only movements or where separating bicycle and motor vehicle movements through the intersection is needed to improve safety. Bicycle signals operate just like a regular green/yellow/red traffic signal. People bicycling must stop when a bicycle signal turns yellow or red, and may go when the bicycle signal turns green. Bicycle signals always have a sign saying "BICYCLE/BIKE SIGNAL" and the lights may have special bicycle-shaped lenses to make it clear that the signal applies to bicycles but not motor vehicles.

Stop Signs and Flashing Red Signals

In Oregon, people riding bicycles are allowed to treat stop signs and flashing red lights as YIELD signs. This means you can proceed through the intersection or make a right or left turn at intersections controlled by stop signs or flashing red lights without coming to a complete stop. When proceeding through an intersection, a person riding a bicycle must yield right of way to other lawful traffic, yield to pedestrians, and exercise care to avoid a crash. If a police officer or flagger is present, you must obey any instructions they give.

School Bus Safety Lights and Public Transit Buses

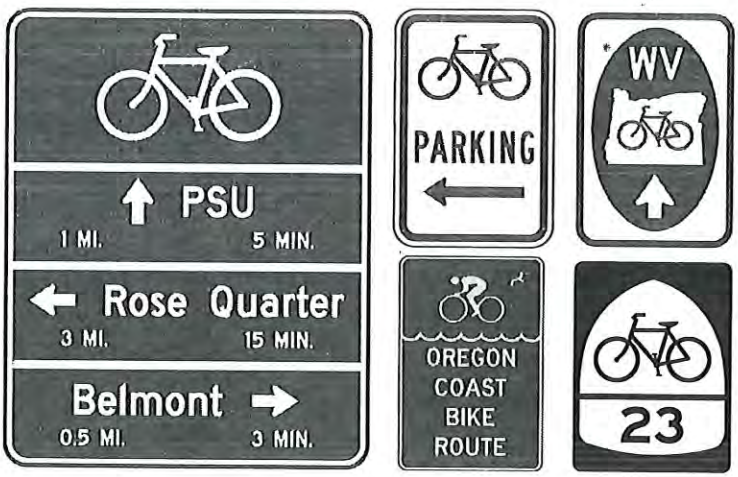
A person on a bicycle, just like the operator of any other vehicle, is required by law to stop and stay stopped for a school bus that is operating red bus safety lights. It is the expectation that traffic in all directions stop and remain stopped until the bus driver turns the flashing bus lights off.

Yield to public transit buses reentering traffic. Use caution when trying to pass a bus. The driver may not see you.

Signs

Oregon's traffic signs follow the national standards. You are responsible for observing all official highway signs and markings.

Wayfinding and guide signs are typically green with white lettering and share information that might be useful to people bicycling. These signs are used to identify officially designated bicycle routes and to guide people bicycling along the best routes to nearby destinations.



Regulatory signs are rectangular with black words or symbols on a white background and share information about traffic laws. They may be posted alone, with other traffic signs, or with traffic signals.

The Bicycle STOP Sign – Stop. Yield right of way to traffic (including pedestrians) in the crossing.

The Bicycle YIELD Sign – Reduce speed and, if needed for safety, stop as you would for a stop sign. Yield right of way to traffic (including pedestrians) in the crossing.

Push Button Before Entering Tunnel – Push the button to activate the warning beacon(s) before entering the tunnel. The flashing beacon alerts motorists to the presence of people bicycling in the tunnel. A similar sign exists to activate warning beacons before entering a narrow bridge.

Bikes Cross on Walk Signal Only – Placed at some signalized pedestrian crossings; people bicycling are to use the pedestrian crossing.

Push Button for Bike Crossing – Used at locations where push buttons are accessible from the bikeway; people bicycling must push button to get a green signal.

Sidewalk Users Walk Bikes – Used where sidewalk width or other conditions could make bicycle riding hazardous.

Warning signs are diamond shaped with black words or symbols on a yellow or orange background. They are used to alert you to possible hazards or a change in road conditions ahead. The following are examples of yellow warning signs.

Bike Lane Ends – Used where the bike lane abruptly terminates and the rider must merge with the through lane of traffic.

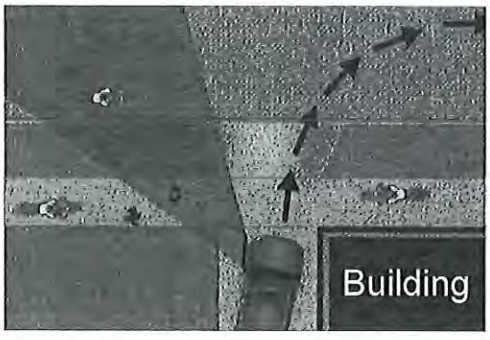
Bicycle Railroad Crossing – Used where path of people bicycling crosses railroad tracks at an angle which may create the potential to deflect a bicycle wheel.

Low Clearance – Warns people bicycling of clearances less than 8'-0" between the bike path and the structure.

Riding on Sidewalks

When people don't feel comfortable riding in a bicycle lane or close to fast-moving vehicles, the sidewalk may appear to be the safest or most convenient place to ride. Sidewalks can be shared by multiple users, but they are not designed for people biking. Before riding on the sidewalk, consider the surrounding conditions. If you do ride on a sidewalk, try to ride in the same direction as traffic next to you, and adjust your riding habits for the safety of all sidewalk users by following these guidelines:

Slow down at driveways and street crossings. People driving are looking for people walking nearby,

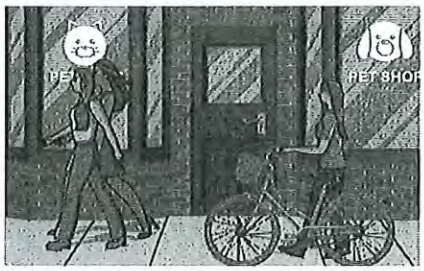


Motorist crossing a sidewalk may not see you on a bicycle.

not fast moving bikes approaching from farther away. If you go too fast, drivers may not see you. If you crash, you may be found at fault if you were going too fast.

Yield to people walking on sidewalks. Sidewalks are for people walking, not bicycling. Be courteous and ride cautiously. When passing a person walking, slow down, give an audible warning, and wait for the person to move over. A bicycle bell works best. If you must say something, make your intentions clear. For example, "passing on your left." Keep in mind, a person may be hearing impaired or wearing headphones.

Walk your bike in downtown areas. They are busy with people walking out of doorways, stopping to talk to each other or window shopping. Some cities ban bicycle riding on their downtown sidewalks.



Walk your bike on downtown sidewalks.

Riding in Separated Bicycle Lanes

Separated bicycle lanes are bicycle lanes that are separated from traffic by a vertical barrier like a curb or planter, not just painted stripes. When riding in a separated bicycle lane, you have the same rights and responsibilities as riding in a bicycle lane. This type of bicycle lane should feel more comfortable because you have more separation from other traffic. However, because of the vertical barriers you will need to be sure to ride straight and plan ahead for your turns.

Riding on Paths

Paths are wider than sidewalks and designed to be shared by people walking and bicycling. They are often very comfortable places to ride because they are separated from traffic, but you should still ride cautiously and follow the rules of the road. Ride on the right and yield to slower traffic. Because paths are shared spaces, traveling at a slower speed makes it safer for everyone. There are often streets

near paths for faster riders. When crossing a driveway or street, slow down and be sure drivers see you. Ride more slowly and alertly at night, when it's harder to see the surface and edges of the path. People walking, jogging, skating, or other people riding bikes may come up from behind or in front of you. Bike bells can work well for communicating with other path users, but keep in mind that many people may be listening to devices and so, they may not always hear your voice or your bell.

Riding Through Construction Zones

Riding a bicycle through a construction work zone can be intimidating.

Pre-trip planning can help make the trip a bit less stressful and safer. It may be possible to identify a alternate route around the work zone.

However, if you must ride through a work zone, do the following:

- Obey the rules of the road as you would in a motor vehicle.
- Obey construction signs and look for bicycle-specific warning and detour signs.
- Follow detour signing for bicycle routes, where applicable.
- Follow detour signing for motor vehicles if sharing the road.
- Stay out of the work area – do not ride behind the cones, barricades or barrier, unless instructed to do so.
- Walk your bicycle across rough, uneven, or gravel surfaces.
- Watch for steel plates in the roadway – they can be slippery!
- Obey directions given by flaggers - they may have specific instructions for people biking.
- Be alert, be visible, be patient.
- Report any unsafe incidents to a flagger, police officer or other official on site, if necessary.
- For emergencies, find a safe space to pull over and call 9-1-1.

Riding on Interstate Freeways

Pedestrians and people riding bicycles are banned on the following segments of interstate freeway:

PORTLAND AREA

I-84: from I-5 (MP 0) to:
122nd Street (MP 10.25) Eastbound
Sandy Blvd (MP 15.14) Westbound
US 26: East of the Jefferson Street Interchange (MP 73.35)
I-5: from Beaverton-Tigard Highway Interchange, MP 292.20 to Delta Park Interchange, MP 306.70
I-205: North of the Oregon 43, MP 8.82
I-405: Whole length
US 30: From I-405, MP 0 to 23rd Street, MP 1.99

MEDFORD AREA

I-5: Barnet Road (South Medford) Interchange, MP 27.58 to the Crater Lake Highway (North Medford) Interchange, MP 30.29.

What to Do in Case of a Crash

Check for injuries first. If someone is injured, call 911 for help right away. Administer first aid if you are trained. After the injured have been helped and removed from harm's way, begin gathering information.

If someone has been struck by a car, ask the driver for name and address, vehicle registration number, driver's license number, and insurance policy company and number. Oregon law requires motor vehicle owners to carry insurance that covers injuries to people bicycling and pedestrians, and to have proof of insurance.

Don't discuss fault immediately after the collision. Be careful not to make statements at the scene of the crash, but do get information about witnesses if there are any.

Get information from witnesses. Ask witnesses, including passengers, their names and addresses. Do not depend on others to take witness names and phone numbers.

Give your name and address. Travelers should carry identification and medical insurance information, especially when you cycle alone.

Document the crash through photographs or video, if possible. Write down what you think happened as soon as possible. Document your injuries and property damage as well. Save all receipts, medical included, and repair estimates. Contact your insurance company if you have coverage on your bicycle or if you have an automobile insurance policy. You may also want to contact an attorney.

In case of property damage over $2,500 or injury to a person, fill out a DMV traffic accident report within 72 hours: *www.odot.state.or.us/forms/dmv/32.pdf.*

Report Road Concerns

Ask ODOT
(888) 275-6368
Ask.ODOT@odot.state.or.us
https://www.oregon.gov/odot/Pages/Ask-ODOT.aspx
https://highway.odot.state.or.us/cf/comments/comments.cfm

Stay Connected

Bicycle and Pedestrian Advisory Committees

Public bicycle and pedestrian advisory committees (BPACs) meet regularly to provide public agencies advice on how to improve conditions for walking and bicycling. The Oregon Bicycle and Pedestrian Advisory Committee (OBPAC) is a governor appointed committee that advises ODOT on pedestrian and bicycle issues. Many communities also have local bicycle or transportation advisory committees that you can get involved in. Advisory committee meetings are open to the public, so you can attend and provide comments even if you are not a member of the committee. Learn more about OBPAC and local BPACs at *www.oregonwalkbike.org* in the "Get Involved" section.

Other ODOT Active Transportation Resources

Get There Oregon

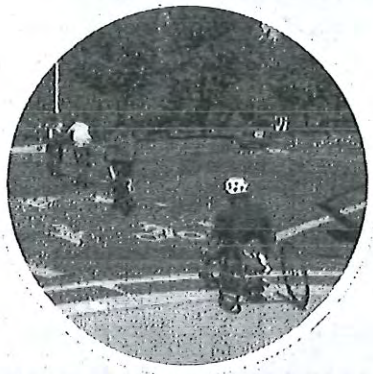
Learn bicycling routes, locate bike share stations, and join a bike pool with help from ODOT's Transportation Options program! Get There and its partners help commuters and other travelers plan routes, log trips to track miles, carbon emissions, calories burned and more. Learn more at *https://getthereoregon.org/*

Oregon Safe Routes to School

Oregon Safe Routes to School helps create safe, convenient, and fun opportunities for children to walk, bike and roll to and from school. See this website for the latest resources and information about Safe Routes to School: *www.oregonsaferoutes.org/*

The Driver's Field Guide to Sharing Oregon's Roads

Learn the rules of the road and safe driving habits for sharing the road with people riding bikes with these ODOT resources: *www.oregon.gov/ODOT/Safety/Documents/DriversGuideToBikes.pdf*
www.oregonfriendlydriver.org



Together We Roll.
Look Out for Each Other.

ODOT Pedestrian and Bicycle Program
ODOT Transportation Safety Division

Oregon Department of Transportation

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Hood River – 12/2026 printed

Chapter 10.48BICYCLES, SKATEBOARDS, ROLLER-SKATES AND IN-LINE SKATES

Sections:

*For statutory provisions on bicycle operation, see ORS 487.750 et seq.; for provisions on bicycle equipment, see ORS 483.547 and 483.549.

Legislative History: Ord. 1280 (1970); Ord. 1739 (1997)

10.48.010Equipment requirements.

Bicycles, skateboards, roller-skates, and in-line skates operated upon the streets and the operator of such equipment shall be equipped as required by state law, including lights and reflectors. In addition, a bicycle shall be equipped with a brake capable of sliding at least one tire when applied on dry, level, clean pavement. No person shall use a siren or whistle when operating a bicycle, skateboard, roller-skates, or in-line skates. (Ord. 1739, 1997; Ord. 1280, 1970)

10.48.020Operating rules.

In addition to observing all other applicable provisions of the ordinance codified in this title and state law, an operator of a bicycle, skateboard, roller-skates, or in-line skates upon a street shall.

A.Not ride upon a sidewalk within a commercial zone or industrial zone;

B.Not ride on signed City owned property;

C.Yield the right-of-way to pedestrians on sidewalks;

D.On a two-way street, ride to the extreme right except when preparing for a left turn; on a one-way street, ride to the extreme curbside of the traffic lane and with the direction of travel designated for that lane; if the curb lane is designated for "left-turn" or "right-turn" only, and the operator is not intending to turn, ride in the through lane;

E.Not carry a package, bundle or article which prohibits the operator from having full control and unhindered vision;

F.Not ride abreast of another person using a bicycle, skateboard, roller-skates, or in-line skates, or in any manner other than single file, except in designated locations;

G.Not operate in a careless or reckless manner which endangers or would be likely to endanger the person, another or any property; racing or trick riding shall be included in this offense;

H.Not leave a bicycle, skateboard, roller-skates, or in-line skates, except in a bicycle rack or other authorized location; if no rack authorized location is provided, the person shall leave the bicycle, skateboard, roller-skates, or in-line skates so as not to obstruct any roadway, sidewalk, driveway or building entrance; nor shall the person leave a bicycle, in violation of the provisions relating to the parking of motor vehicles. (Ord. 1739, 1997; Ord. 1280, 1970)

10.48.030Impoundment – Authorized when – Notice – Fees – Disposal.

A.It is unlawful to leave a bicycle, skateboard, roller-skates or in-line skates on public or private property without the consent of the person in charge or the owner thereof.

B.Such equipment left on public property for a period in excess of twenty-four hours may be impounded by the police department.

Hood River

C.In addition to any citation issued, a bicycle parked in violation of this title may be immediately impounded by the police department.

D.If equipment impounded under this title is licensed or other means of determining its ownership exists, the police shall make reasonable efforts to notify the owner. An impounding fee in an amount set by council resolution shall be charged to the owner. No impounding fee shall be charged to the owner of stolen equipment which has been impounded.

E.Equipment impounded under this title which remains unclaimed shall be disposed of in accordance with the city's procedures for disposal of abandoned or lost personal property. (Ord. 1739, 1997; Ord. 1280, 1970)

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Hood River 12/2026 ~ printed

Hood River

Hood River Police Department Public Safety Announcement

E-Bike Education and Enforcement Awareness

Over the past several years, Hood River has experienced a noticeable increase in micromobility transportation, such as electric bicycles (e-bikes). A substantial number of these users are juveniles. While e-bikes provide a convenient and environmentally friendly transportation option, their popularity has also raised safety concerns and confusion regarding applicable laws.

With the new school year beginning, we anticipate increased e-bike use by juveniles. The Hood River Police Department is committed to promoting both safety and compliance with Oregon law. We will begin with an educational outreach period to inform students, parents, residents, and visitors about e-bike regulations. Following this effort, officers will begin enforcing state laws where violations occur.

Specifically, the Department will enforce ORS 814.512, which prohibits operating an e-bike under the age of 16. Violations are classified as a Class D violation and carry a fine of up to $115.00. Enforcement applies on all public premises, roadways, highways, and city streets.

Parents and Guardians are encouraged to help ensure compliance and reinforce safe riding practices at home.

Oregon E-Bike Regulations & Safety Guidelines

1. **Classification of E-Bikes**
   - *Class 1:* Motor assists only when pedaling; ceases at 20 MPH.
   - *Class 2:* Motor may propel without pedaling; ceases at 20 MPH.
   - *Class 3:* Motor assists only when pedaling; ceases at 28 MPH and must include a speedometer.
2. **Age Requirements**
   - Riders must be **16 years or older** to operate any e-bike.
3. **Helmet Use**

Bend

An e-bike, or electric bicycle, is a motorized bicycle with a rechargeable electric battery. E-bikes are growing in popularity as a convenient and environmentally friendly mode of transportation.

Understanding and adhering to local laws and safety guidelines is crucial for a positive e-biking experience for yourself and others in our community. This overview provides essential tips for e-bike riders in and around Bend, covering everything from legal requirements and helmet use to traffic rules and community etiquette. By following these guidelines, you can ensure a safe, enjoyable, and respectful e-biking experience.

E-Biking Tips

Here are some general tips and considerations for e-bike riders in and around Bend:

Know the Laws

- E-bikes are not permitted on sidewalks.
- You must be 16 to ride electric bikes (as well as Segways, electric, and gas scooters). Mopeds require a driver's license and registration.
- Passengers are only allowed if the bike is built and safely equipped for them.

Helmet Use

- Helmets are required for bike riders under 16 and recommended for **all** riders at all times. Helmets are a crucial safety measure, especially at higher speeds.

Follow Traffic Rules

- Obey traffic signals, signs, and rules, just like any other road user. This includes using designated bike lanes when available. E-bikes can ride in the bike lane and the crosswalk; you **cannot** ride electric bikes on the sidewalk. As we have many roundabouts in Bend, please watch **how to ride a bike through a roundabout** and how to use **roundabout crosswalks by bicycle**. Thank you Commute Options!

Be Visible

- Ensure your e-bike has proper lighting, especially if you plan to ride in low-light conditions. Wear bright and reflective clothing to enhance visibility.
- Be mindful of pedestrians, especially in crowded areas. Slow down, verbally/audibly notify other users when you pass, and give pedestrians the right of way when needed.

Respect Pedestrians

Bend

- Be mindful of pedestrians, especially in crowded areas. Slow down, verbally/audibly notify other users when you pass, and give pedestrians the right of way when needed.

Regular Maintenance

- Regularly check your e-bike for maintenance issues. Ensure that brakes, lights, and the electric motor are in good working condition.

Secure Your E-Bike

- To prevent theft, invest in a good lock to secure your e-bike when not in use.

Stay Informed

- Keep yourself updated on any changes in local e-bike regulations or safety guidelines. Joining local cycling groups or forums, such as Bend Bikes, Commute Options, Bend Trail Alliance and Bicycle and Pedestrian Advisory Committee can be a great way to stay informed.

Respect Nature Trails

- The US Forest Service has banned the use of e-bikes on all USFS trails in Oregon, where motorized use is prohibited.
- Oregon State Parks also do not allow e-bikes.
- Visit Bend Trail Alliance for information for trail description and whether a trail is legal for e-bikes.

Community Etiquette

- Be a responsible e-biker. Respect other road users, be courteous, and promote positive interactions to help build a supportive community.

Bend

E-biking in Bend is becoming increasingly popular, from speedy e-commuters on their way to work to e-mountain bikes rallying along motor-friendly dirt roads and e-bike specific trails. Many people have an absolute blast on them because they're fast, efficient, and easy to ride. And they open up the world of biking to many people.

If you love to ride e-bikes or are looking to try one out on your next vacation to beautiful Bend, Oregon, then you definitely need to know the rules and laws around e-bikes in the area, especially on our trails.

RULES FOR RIDING E-BIKES IN TOWN

- You must be 16 to ride electric bikes (as well as Segways, electric, and gas scooters). Mopeds require a driver's license and registration.
- Electric bikes can ride in the bike lane and the crosswalk. You cannot ride electric bikes on the sidewalk. Before you ride electric bikes on trails or paths, see below.
- Electric-assist bikes cannot be capable of going faster than 20 MPH on level ground.
- Passengers are only allowed if the bike is built and safely equipped for them.
- Lights are required on all e-bikes when visibility is limited.
- Helmets are required for bike riders under 16.

THE FACTS ABOUT THE LEGALITY OF E-BIKES AND WHERE YOU CAN AND CANNOT RIDE THEM IN THE BEND AREA.

How does Oregon define an e-bike?

A pedal assist e-bike is a motorized vehicle when on dirt trails. This is the federal law definition. By Oregon state law definition, it is not a bicycle when it is not on the roadway. So in Oregon, a pedal assist e-bike is not a bicycle when you're on trails (off the roadway). This is an important distinction and helps clarify why e-bike laws are a little different here.

Where can I ride my e-bike around Bend?

Bend

E-bikes are a fantastic way to cruise around Bend and see the sights! But there are a few rules to note. Riding e-bikes on sidewalks is not allowed. You must stick to bike lanes or on the road with cars. And like any other cyclist, you must follow the rules of the road when riding an e-bike.

What about my mountain e-bike? Are there e-bike trails in Bend, Oregon?

As of December 2025, class 1 pedal-assist e-bikes are now allowed on select singletrack trails in the Deschutes National Forest around Bend. This is the first time e-bikes have been allowed on specific mountain bike trails. **Please note that class 1 e-bikes are still considered motorized by the Forest Service, and so they are not allowed on trails during the annual wildlife closure from December 1–March 31.**

What exactly is a class 1 e-bike? It's a pedal-assist bike that provides support only while you're pedaling, stops assisting at 20 mph, and uses a motor with 750 watts or less. The goal is to stay within the range of typical human-powered riding, just with a bit of extra help when you need it.

Around 160 miles of trail are now available to class 1 riders, mostly in sections of Phil's, Wanoga/Tyler's, Sunriver, and the Peterson Ridge system in Sisters. Here are a few examples of trails now rideable to Class 1 pedal-assist e-bikes:

- Ben's Trail
- Phil's Trail
- COD
- Voodoo
- Lower Whoops
- Funner & Tiddlywinks
- Catch and Release (Wanoga & Sunriver areas)
- Peterson Ridge Trails (Sisters)

For more information about these updates, including a complete list of trails and maps, visit the Central Oregon Trail Alliance.

Beyond Bend

Class 1 e-bikes are also allowed at the East Hills Trail Complex in Madras, about an hour north of Bend. Here you'll find a fantastic flowy singletrack trail system with tons of options for beginner and intermediate riders. Plus, a few more challenging rides mixed in.

Oregon

"Stop as Yield" rule change for cyclists starts Jan. 1, 2020

On January 1, 2020, new rules go into effect in Oregon that will allow people riding bicycles to yield at stop signs or flashing red beacons instead of stopping completely, under certain conditions. People riding bicycles must still completely stop at a solid red traffic signal.

The new rules were created in part due to the physical effort required to stop and start a bicycle. Oregon, Idaho, Delaware and Arkansas have enacted laws recognizing this difference and specifying the conditions under which a cyclist may slow and yield instead of coming to a complete stop.

The new Oregon law requires that people riding bicycles approaching a stop sign or flashing red light slow to a reasonable speed, yield to anyone already in the intersection, and not approach others in the intersection so closely it would create a hazard. People riding bicycles must stop for pedestrians in crosswalks, make every effort to avoid an accident, and follow the directions of a police officer or flagger.

The full details of the new law are found in Oregon Senate Bill 998 enacted this past August. This updates Oregon Revised Statute 811.260 and 811.265. Violations to the rule are considered improper entry to an intersection – a Class D traffic violation subject with fines of $115, or $225 if in a work zone or school zone.

Oregon printed 2-1-26

BICYCLES

814.400 Application of vehicle laws to bicycles. (1) Every person riding a bicycle upon a public way is subject to the provisions applicable to and has the same rights and duties as the driver of any other vehicle concerning operating on highways, vehicle equipment and abandoned vehicles, except:

(a) Those provisions which by their very nature can have no application.

(b) When otherwise specifically provided under the vehicle code.

(2) Subject to the provisions of subsection (1) of this section:

(a) A bicycle is a vehicle for purposes of the vehicle code; and

(b) When the term "vehicle" is used the term shall be deemed to be applicable to bicycles.

(3) The provisions of the vehicle code relating to the operation of bicycles do not relieve a bicyclist or motorist from the duty to exercise due care. [1983 c.338 §697; 1985 c.16 §335]

814.405 Status of electric assisted bicycle. An electric assisted bicycle shall be considered a bicycle, rather than a motor vehicle, for purposes of the Oregon Vehicle Code, except when otherwise specifically provided by statute. [1997 c.400 §4]

→ **814.410 Unsafe operation of bicycle on sidewalk; penalty.** (1) A person commits the offense of unsafe operation of a bicycle on a sidewalk if the person does any of the following:

(a) Operates the bicycle so as to suddenly leave a curb or other place of safety and move into the path of a vehicle that is so close as to constitute an immediate hazard.

(b) Operates a bicycle upon a sidewalk and does not give an audible warning before overtaking and passing a pedestrian and does not yield the right of way to all pedestrians on the sidewalk.

(c) Operates a bicycle on a sidewalk in a careless manner that endangers or would be likely to endanger any person or property.

(d) Operates the bicycle at a speed greater than an ordinary walk when approaching or entering a crosswalk, approaching or crossing a driveway or crossing a curb cut or pedestrian ramp and a motor vehicle is approaching the crosswalk, driveway, curb cut or pedestrian ramp. This paragraph does not require reduced speeds for bicycles at places on sidewalks or other pedestrian ways other than places where the path for pedestrians or bicycle traffic approaches or crosses that for motor vehicle traffic.

(e) Operates an electric assisted bicycle on a sidewalk.

(2) Except as otherwise specifically provided by law, a bicyclist on a sidewalk or in a crosswalk has the same rights and duties as a pedestrian on a sidewalk or in a crosswalk.

(3) The offense described in this section, unsafe operation of a bicycle on a sidewalk, is a Class D traffic violation. [1983 c.338 §699; 1985 c.16 §337; 1997 c.400 §7; 2005 c.316 §2]

814.414 Improper entry into intersection controlled by stop sign; penalty. (1) A person operating a bicycle who is approaching an intersection where traffic is controlled by a stop sign may, without violating ORS 811.265, do any of the following without stopping if the person slows the bicycle to a safe speed:

(a) Proceed through the intersection.

(b) Make a right or left turn into a two-way street.

(c) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) A person commits the offense of improper entry into an intersection where traffic is controlled by a stop sign if the person does any of the following while proceeding as described in subsection (1) of this section:

(a) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard;

(b) Disobeys the directions of a police officer or flagger, as defined in ORS 811.230;

(c) Fails to exercise care to avoid an accident; or

(d) Fails to yield the right of way to a pedestrian in an intersection or crosswalk under ORS 811.028.

(3) The offense described in this section, improper entry into an intersection where traffic is controlled by a stop sign, is a Class D traffic violation. [2019 c.683 §2]

814.416 Improper entry into intersection controlled by flashing red signal; penalty. (1) A person operating a bicycle who is approaching an intersection where traffic is controlled by a flashing red signal may, without violating ORS 811.265, do any of the following without stopping if the person slows the bicycle to a safe speed:

(a) Proceed through the intersection.

(b) Make a right or left turn into a two-way street.

(c) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) A person commits the offense of improper entry into an intersection where traffic is controlled by a flashing red signal if the person does any of the following while proceeding as described in subsection (1) of this section:

(a) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard;

(b) Disobeys the directions of a police officer;

(c) Fails to exercise care to avoid an accident; or

(d) Fails to yield the right of way to a pedestrian in an intersection or crosswalk under ORS 811.028.

(3) The offense described in this section, improper entry into an intersection where traffic is controlled by a flashing red signal, is a Class D traffic violation. [2019 c.683 §3]

814.420 Failure to use bicycle lane or path; exceptions; penalty. (1) Except as provided in subsections (2) and (3) of this section, a person commits the offense of failure to use a bicycle lane or path if the person operates a bicycle on any portion of a roadway that is not a bicycle lane or bicycle path when a bicycle lane or bicycle path is adjacent to or near the roadway.

(2) A person is not required to comply with this section unless the state or local authority with jurisdiction over the roadway finds, after public hearing, that the bicycle lane or bicycle path is suitable for safe bicycle use at reasonable rates of speed.

(3) A person is not in violation of the offense under this section if the person is able to safely move out of the bicycle lane or path for the purpose of:

(a) Overtaking and passing another bicycle, a vehicle or a pedestrian that is in the bicycle lane or path and passage cannot safely be made in the lane or path.

(b) Preparing to execute a left turn at an intersection or into a private road or driveway.

(c) Avoiding debris or other hazardous conditions.

(d) Preparing to execute a right turn where a right turn is authorized.

(e) Continuing straight at an intersection where the bicycle lane or path is to the right of a lane from which a motor vehicle must turn right.

(4) The offense described in this section, failure to use a bicycle lane or path, is a Class D traffic violation. [1983 c.338 §700; 1985 c.16 §338; 2005 c.316 §3]

814.430 Improper use of lanes; exceptions; penalty. (1) A person commits the offense of improper use of lanes by a bicycle if the person is operating a bicycle on a roadway at less than the normal speed of traffic using the roadway at that time and place under the existing conditions and the person does not ride as close as practicable to the right curb or edge of the roadway.

(2) A person is not in violation of the offense under this section if the person is not operating a bicycle as close as practicable to the right curb or edge of the roadway under any of the following circumstances:

(a) When overtaking and passing another bicycle or vehicle that is proceeding in the same direction.

(b) When preparing to execute a left turn.

(c) When reasonably necessary to avoid hazardous conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, bicycles, pedestrians,

animals, surface hazards or other conditions that make continued operation along the right curb or edge unsafe or to avoid unsafe operation in a lane on the roadway that is too narrow for a bicycle and vehicle to travel safely side by side. Nothing in this paragraph excuses the operator of a bicycle from the requirements under ORS 811.425 or from the penalties for failure to comply with those requirements.

(d) When operating within a city as near as practicable to the left curb or edge of a roadway that is designated to allow traffic to move in only one direction along the roadway. A bicycle that is operated under this paragraph is subject to the same requirements and exceptions when operating along the left curb or edge as are applicable when a bicycle is operating along the right curb or edge of the roadway.

(e) When operating a bicycle alongside not more than one other bicycle as long as the bicycles are both being operated within a single lane and in a manner that does not impede the normal and reasonable movement of traffic.

(f) When operating on a bicycle lane or bicycle path.

(3) The offense described in this section, improper use of lanes by a bicycle, is a Class D traffic violation. [1983 c.338 §701; 1985 c.16 §339]

814.440 Failure to signal turn; exceptions; penalty. (1) A person commits the offense of failure to signal for a bicycle turn if the person does any of the following:

(a) Stops a bicycle the person is operating without giving the appropriate hand and arm signal continuously for at least 100 feet before executing the stop.

(b) Executes a turn on a bicycle the person is operating without giving the appropriate hand and arm signal for the turn for at least 100 feet before executing the turn.

(c) Executes a turn on a bicycle the person is operating after having been stopped without giving, while stopped, the appropriate hand and arm signal for the turn.

(2) A person is not in violation of the offense under this section if the person is operating a bicycle and does not give the appropriate signal continuously for a stop or turn because circumstances require that both hands be used to safely control or operate the bicycle.

(3) The appropriate hand and arm signals for indicating turns and stops under this section are those provided for other vehicles under ORS 811.395 and 811.400.

(4) The offense described under this section, failure to signal for a bicycle turn, is a Class D traffic violation. [1983 c.338 §703; 1985 c.16 §341]

814.450 Unlawful load on bicycle; penalty. (1) A person commits the offense of having an unlawful load on a bicycle if the person is operating a bicycle and the person carries a package, bundle or article which prevents the person from keeping at least one hand upon the handlebar and having full control at all times.

(2) The offense described in this section, unlawful load on a bicycle, is a Class D traffic violation. [1983 c.338 §704]

814.460 Unlawful passengers on bicycle; penalty. (1) A person commits the offense of unlawful passengers on a bicycle if the person operates a bicycle and carries more persons on the bicycle than the number for which it is designed or safely equipped.

(2) The offense described in this section, unlawful passengers on a bicycle, is a Class D traffic violation. [1983 c.338 §705]

814.470 Failure to use bicycle seat; penalty. (1) A person commits the offense of failure to use a bicycle seat if the person is operating a bicycle and the person rides other than upon or astride a permanent and regular seat attached to the bicycle.

(2) The offense described in this section, failure to use a bicycle seat, is a Class D traffic violation. [1983 c.338 §706; 2003 c.341 §13; 2015 c.138 §26]

814.480 Nonmotorized vehicle clinging to another vehicle; penalty. (1) A person commits the offense of nonmotorized vehicle clinging to another vehicle if the person is riding upon or operating a bicycle, coaster, roller skates, sled or toy vehicle and the person clings to another vehicle upon a roadway or attaches that which the person is riding or operating to any other vehicle upon a roadway.

(2) The offense described in this section, nonmotorized vehicle clinging to another vehicle, is a Class D traffic violation. [1983 c.338 §707]

814.484 Meaning of "bicycle" and "operating or riding on a highway." (1) For purposes of ORS 814.485, 814.486, 815.052 and 815.281, "bicycle" has the meaning given in ORS 801.150 except that:

(a) It also includes vehicles that meet the criteria specified in ORS 801.150 (1) to (4) but that have wheels that are 14 inches or less in diameter.

(b) It does not include tricycles designed to be ridden by children.

(2) For purposes of the offenses defined in ORS 814.485, 814.486 and 815.281 (2), a person shall not be considered to be operating or riding on a bicycle on a highway or on premises open to the public if the person is operating or riding on a three-wheeled nonmotorized vehicle on a beach while it is closed to motor vehicle traffic. [1993 c.408 §§3a,3b; 2015 c.138 §28]

814.485 Failure to wear protective headgear; penalty. (1) A person commits the offense of failure of a bicycle operator or rider to wear protective headgear if the person is under 16 years of age, operates or rides on a bicycle on a highway or on premises open to the public and is not wearing protective headgear of a type approved under ORS 815.052.

(2) Exemptions from this section are as provided in ORS 814.487.

(3) The offense described in this section, failure of a bicycle operator or rider to wear protective headgear, is a specific fine traffic violation. The presumptive fine for failure of a bicycle operator or rider to wear protective headgear is $25. [1993 c.408 §2; 1995 c.581 §1; 2011 c.597 §103]

814.486 Endangering bicycle operator or passenger; penalty. (1) A person commits the offense of endangering a bicycle operator or passenger if:

(a) The person is operating a bicycle on a highway or on premises open to the public and the person carries another person on the bicycle who is under 16 years of age and is not wearing protective headgear of a type approved under ORS 815.052; or

(b) The person is the parent, legal guardian or person with legal responsibility for the safety and welfare of a child under 16 years of age and the child operates or rides on a bicycle on a highway or on premises open to the public without wearing protective headgear of a type approved under ORS 815.052.

(2) Exemptions from this section are as provided in ORS 814.487.

(3) The offense described in this section, endangering a bicycle operator or passenger, is a specific fine traffic violation. The presumptive fine for endangering a bicycle operator or passenger is $25. [1993 c.408 §3; 1995 c.581 §2; 2011 c.597 §104]

814.487 Exemptions from protective headgear requirements. A person is exempt from the requirements under ORS 814.485 and 814.486 to wear protective headgear, if wearing the headgear would violate a religious belief or practice of the person. [1995 c.581 §4]

814.488 Citations; exemption from requirement to pay fine. (1) If a child in violation of ORS 814.485 is 11 years of age or younger, any citation issued shall be issued to the parent, legal guardian or person with legal responsibility for the safety and welfare of the child for violation of ORS 814.486, rather than to the child for violation of ORS 814.485.

(2) If a child in violation of ORS 814.485 is at least 12 years of age and is under 16 years of age, a citation may be issued to the child for violation of ORS 814.485 or to the parent, legal guardian or person with legal responsibility for the safety and welfare of the child for violation of ORS 814.486, but not to both.

(3) The first time a person is convicted of an offense described in ORS 814.485 or 814.486, the person shall not be required to pay a fine if the person proves to the satisfaction of the court that the person has protective headgear of a type approved under ORS 815.052. [1993 c.408 §§3c,7]

814.489 Use of evidence of lack of protective headgear on bicyclist. Evidence of violation of ORS 814.485 or 814.486 and evidence of lack of protective headgear

shall not be admissible, applicable or effective to reduce the amount of damages or to constitute a defense to an action for damages brought by or on behalf of an injured bicyclist or bicycle passenger or the survivors of a deceased bicyclist or passenger if the bicyclist or passenger was injured or killed as a result in whole or in part of the fault of another. [1993 c.408 §8]

MOTORIZED WHEELCHAIRS

814.500 Rights and duties of person riding motorized wheelchair on bicycle lane or path. Every person riding a motorized wheelchair on a bicycle lane or path is subject to the provisions applicable to and has the same rights and duties as the driver of a bicycle when operating on a bicycle lane or path, except:

(1) When those provisions which by their very nature can have no application.

(2) When otherwise specifically provided under the vehicle code. [1991 c.417 §3]

MOTOR ASSISTED SCOOTERS

814.510 Application of vehicle laws to motor assisted scooters. An operator of a motor assisted scooter upon a public way is subject to the provisions applicable to, and has the same rights and duties as the operator of, any other vehicle operating on highways except:

(1) Those provisions that by their very nature can have no application.

(2) When otherwise specifically provided under the vehicle code. [2001 c.749 §4]

814.512 Unlawful operation of motor assisted scooter; penalty. (1) A person operating a motor assisted scooter commits the offense of unlawful operation of a motor assisted scooter if:

(a) The person is under 16 years of age; or

(b) The person operates a motor assisted scooter at a rate of speed exceeding 15 miles per hour.

(2) The offense described in this section, unlawful operation of a motor assisted scooter, is a Class D traffic violation. [2001 c.749 §5]

814.514 Failure of operator of motor assisted scooter to use bicycle lane or path; exception; penalty. (1) Except as provided in subsection (2) of this section, a person commits the offense of failure of a motor assisted scooter operator to use a bicycle lane or bicycle path if the person operates a motor assisted scooter on any portion of a roadway that is not a bicycle lane or bicycle path when a bicycle lane or bicycle path is adjacent to or near the roadway.

(2) A person is not subject to this section if the operation of a motor assisted scooter on a bicycle lane or bicycle path is prohibited by local ordinance.

(3) The offense described in this section, failure of a motor assisted scooter operator to use a bicycle lane or bicycle path, is a Class D traffic violation. [2001 c.749 §6]

814.516 Prohibition on operation of motor assisted scooters in state parks. The State Parks and Recreation Department may restrict or prohibit the operation of a motor assisted scooter on a bicycle lane or bicycle path in a state park except that the department may not restrict or prohibit the operation of a motor assisted scooter on a bicycle lane or bicycle path in a state park if the operator of the motor assisted scooter is disabled. [2001 c.749 §7]

814.518 Improper operation of motor assisted scooter on highway; exceptions; penalty. (1) A person commits the offense of improper operation of a motor assisted scooter on a highway if the person is operating a motor assisted scooter on a highway with a designated speed limit greater than 25 miles per hour.

(2) This section does not apply if:

(a) The person is operating a motor assisted scooter on a highway with a designated speed limit greater than 25 miles per hour and the person is operating the motor assisted scooter on a bicycle lane; or

(b) The person is operating a motor assisted scooter while crossing a highway with a designated speed limit greater than 25 miles per hour.

(3) The offense described in this section, improper operation of a motor assisted scooter on a highway, is a Class D traffic violation. [2001 c.749 §8]

814.520 Improper operation of motor assisted scooter in lane; exceptions; penalty. (1) A person commits the offense of improper operation of a motor assisted scooter in a lane if the person is operating a motor assisted scooter on a roadway at less than the normal speed of traffic using the roadway at that time and place under the existing conditions and the person does not ride as close as practicable to the right curb or edge of the roadway.

(2) A person is not in violation of this section if the person is not operating a motor assisted scooter as close as practicable to the right curb or edge of the roadway under any of the following circumstances:

(a) When overtaking and passing another motor assisted scooter or vehicle that is proceeding in the same direction.

(b) When preparing to execute a left turn.

(c) When reasonably necessary to avoid hazardous conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards or other conditions that make continued operation along the right curb or edge unsafe or to avoid unsafe operation in a lane on the roadway that is too narrow for a motor assisted scooter and vehicle to travel safely side by side. Nothing in this

paragraph excuses the operator of a motor assisted scooter from the requirements under ORS 811.425 or from the penalties for failure to comply with those requirements.

(d) When operating within a city as near as practicable to the left curb or edge of a roadway that is designated to allow traffic to move in only one direction along the roadway. A motor assisted scooter that is operated under this paragraph is subject to the same requirements and exceptions when operating along the left curb or edge as are applicable when a motor assisted scooter is operating along the right curb or edge of the roadway.

(e) When operating a motor assisted scooter alongside not more than one other motor assisted scooter as long as the motor assisted scooters are both being operated within a single lane and in a manner that does not impede the normal and reasonable movement of traffic.

(f) When operating on a bicycle lane or bicycle path.

(3) The offense described in this section, improper operation of a motor assisted scooter in a lane, is a Class D traffic violation. [2001 c.749 §9]

814.522 Failure to signal; exception; penalty. (1) A person commits the offense of failure to signal for a motor assisted scooter maneuver if the person is operating a motor assisted scooter and:

(a) Stops the motor assisted scooter without giving the appropriate hand and arm signal continuously for at least 100 feet before executing the stop.

(b) Executes a turn or lane change on the motor assisted scooter without giving the appropriate hand and arm signal for the turn at least 100 feet before executing the turn.

(c) Executes a turn on the motor assisted scooter after having been stopped without giving, while stopped, the appropriate hand and arm signal for the turn.

(2) A person is not in violation of this section if the person is operating a motor assisted scooter and does not give the appropriate hand and arm signal continuously for a stop, turn or lane change because circumstances require that both hands be used to safely control or operate the motor assisted scooter.

(3) The appropriate hand and arm signals for indicating stops, turns and lane changes under this section are those provided for other vehicles under ORS 811.395 and 811.400.

(4) The offense described in this section, failure to signal for a motor assisted scooter maneuver, is a Class D traffic violation. [2001 c.749 §10]

814.524 Unsafe operation of motor assisted scooter on sidewalk; penalty. (1) A person commits the offense of unsafe operation of a motor assisted scooter on a sidewalk if the person operates a motor assisted scooter on a sidewalk, except to enter

or leave adjacent property, or the person operates a motor assisted scooter on a sidewalk to enter or leave adjacent property and the person:

(a) Operates the motor assisted scooter so as to suddenly leave a curb or other place of safety and move into the path of a vehicle that is so close as to constitute an immediate hazard.

(b) Does not give an audible warning before overtaking and passing a pedestrian or does not yield the right of way to all pedestrians on the sidewalk.

(c) Operates the motor assisted scooter in a careless manner that endangers or would be likely to endanger any person or property.

(d) Operates the motor assisted scooter at a speed greater than an ordinary walk when approaching a crosswalk, approaching or entering a driveway or crossing a curb cut or pedestrian ramp and a motor vehicle is approaching the crosswalk, driveway, curb cut or pedestrian ramp.

(2) The offense described in this section, unsafe operation of a motor assisted scooter on a sidewalk, is a Class D traffic violation. [2001 c.749 §11]

814.526 Unsafe operation of motor assisted scooter on bicycle path or lane; penalty. (1) A person commits the offense of unsafe operation of a motor assisted scooter on a bicycle path or bicycle lane if the person operates a motor assisted scooter on a bicycle path or bicycle lane and does not give an audible warning before overtaking and passing a pedestrian or does not yield the right of way to all pedestrians on the bicycle path or bicycle lane.

(2) The offense described in this section, unsafe operation of a motor assisted scooter on a bicycle path or bicycle lane, is a Class D traffic violation. [2001 c.749 §12]

814.528 Operation of motor assisted scooter in crosswalk; exception; penalty. (1) A person commits the offense of operation of a motor assisted scooter in a crosswalk if the person fails to walk the motor assisted scooter in a crosswalk.

(2) This section does not apply to a person with a disability operating a motor assisted scooter in a crosswalk.

(3) The offense described in this section, operation of a motor assisted scooter in a crosswalk, is a Class D traffic violation. [2001 c.749 §13; 2007 c.70 §346]

814.530 Carrying passenger on motor assisted scooter; penalty. (1) A person commits the offense of carrying a passenger on a motor assisted scooter if the person operates a motor assisted scooter and carries another person on the motor assisted scooter.

(2) The offense described in this section, carrying a passenger on a motor assisted scooter, is a Class D traffic violation. [2001 c.749 §14]

814.532 Operating motor assisted scooter with unlawful load; penalty. (1) A person commits the offense of operating a motor assisted scooter with an unlawful load if the person is operating a motor assisted scooter and the person carries a package, bundle or article that prevents the person from having full control of the vehicle at all times.

(2) The offense described in this section, operating a motor assisted scooter with an unlawful load, is a Class D traffic violation. [2001 c.749 §15; 2018 c.3 §2]

814.534 Failure of motor assisted scooter operator to wear protective headgear; exception; penalty. (1) A person commits the offense of failure of a motor assisted scooter operator to wear protective headgear if the person operates a motor assisted scooter on a highway or on premises open to the public and is not wearing protective headgear of a type approved under ORS 815.052.

(2) A person is exempt from the protective headgear requirement of subsection (1) of this section if wearing the headgear would violate a religious belief or practice of the person.

(3) The first time a person is convicted of an offense under this section, the person may not be required to pay a fine if the person proves to the satisfaction of the court that the person has protective headgear of a type approved under ORS 815.052.

(4) The offense described in this section, failure of a motor assisted scooter operator to wear protective headgear, is a specific fine traffic violation. The presumptive fine for failure of a motor assisted scooter operator to wear protective headgear is $25. [2001 c.749 §16; 2011 c.597 §105]

814.536 Endangering motor assisted scooter operator; penalty. (1) A person commits the offense of endangering a motor assisted scooter operator if the person is the parent, legal guardian or person with legal responsibility for the safety and welfare of a child under 16 years of age and authorizes or knowingly permits the child to operate a motor assisted scooter in violation of ORS 814.512 (1)(a).

(2) The offense described in this section, endangering a motor assisted scooter operator, is a specific fine traffic violation. The presumptive fine for endangering a motor assisted scooter operator is $25. [2001 c.749 §17; 2011 c.597 §106]

2-23-17

City Council Meeting
3 ¼ minutes

Since last spring I began noticing a ~~fast~~ very rapid increase of the use of "Micromobility Devices" — such as electric bikes, scooters, skateboards, self balancing electric personal assistive mobility devices such as Segways, electric unicycles

* Refer to the Report

This is good. There are many benefits to both individuals and communities — such as

1 — Encouraging healthy movement + exercise
2 — Being outdoors
3 — Reducing vehicle miles traveled
4 — Reducing emissions that contribute to climate chang
5 — Increasing access + mobility opportunities.

In addition to the benefits I and others have noted a very rapid increase of * users/riders — both young and old who are not following the rules of the road — traffic safety both in the downtown corridor ..... — And out to the city limits.

Since last spring I have studied the ~~OR~~ both ~~to~~ OR + local ordinances and some other localities. ~~States~~ I've attended 4 Traffic Safety Commission meeting to share information * my concerns. Many members have expressed support ~~support~~ to begin the process of an ordinance in TD. regarding this issue along with joint community efforts in education + awareness. We all know we need to be realistic. + the police dept. has many higher priorities — as does our city. *

At the last meeting (2-21-26) the Police officer ? shared he had not heard of any complaints or concerns + ~~asked me to T~~ suggested ~~shared~~ share some to the department —

Since then I have made a list of #9 ** (Read them) over 100 That is low compared to the non winter months

Include in your packet

In addition, Dan Richardson, asked me to provide each councilor member with information— I did that on FRI— including Mathew— Rich + Jonathan

Nov ~~I have al~~ ~~Ive~~ I've spoken on a one on one with both the mayor + city mg ~~in Nov~~ before the Goal Setting Sessions

Dec ~~In Dec~~ Chief Neil Alaste + officer in HR— who shared about the diff. issues our middle school + what they're doing—

Feb 17 Chief Tom Worthy briefly in T.D. I ~~have~~ will provide him with the same papers

as our leaders of our community

In ending— I'd like to encourage each of you to please take the time to study this subject with a goal to help keep our children, adults, grandchildren the elderly— both residents + tourists safe— To design an ordinance for the downtown corridor + out to the city limits— Operating rules for ! ... + non electric bicycles and electric micromobility ~~in~~ for our community. Work ~ other community partners ~ education + awareness

The Goal Safety for all— No injuries or death

Respect while outdoors

Stay healthy + have fun

To help our community to be safe

And again— we need to be realistic— Work together—

I know you all are busy as is the police dept with higher priorities—

But I ask you please make this a priority

Thank you

I care— please care

(1 of 3) 1 of 3

2/23/27 – City Council meeting – 3 minutes

Judy Merrill
400 W. 11th St.
The Dalles

Per request by Police officer Kellen Mathison at the 1-21-26 Traffic + Safety Commission Meeting: to provide the police department with specific incidences relating to my concerns regarding to unsafe electric micro mobility devices and human powered bicycles and devices.

Brief description of incidences I observed between 2-1-26 and 2-14-26 in The Dalles.

#1) 10th St.
I was driving W between Trevit + Mt Hood.
An adult on bicycle, no helmet, black mask, black clothing rode towards me (going E) between my car + others who were going W – + the parked cars facing W.

2) 10th St
- I was driving W between Trevit + Mt Hood.
- A small white car was coming from the west, going east, towards me – passing me –
- An adult on a E bicycle, no helmet, dressed in yellow jacket – was riding right up to the white car's bumper –
- They both ~~past~~ passed me. I looked in my rear view mirror – The e bike passed the car on the drivers side – quickly then made a left turn –

③ 10th St
- I was driving W nearing Chenowith ball field.
- An adult on E bicycle, no helmet, dressed in all black past me on my (R) (school zone 3pm – Tues) up over the curb onto sidewalk – fast going east to Chenowith St – crossed it without stopping – barely missing a stopped car at the stop sign which was about to move onto 10th

(2) of 3

2 of 3

(4) 2nd St Downtown - (7:15 pm) Sunday
- I was driving west. There weren't any cars for several blocks in front of me.
- 2 Electric bikes in front of me - swirving back and forth between the 2 lanes - Both adults - No helmets - Dressed in black, no lights
- an electric scooter on the sidewalk (south side) going west - Kid - No helmet - no lights

(5) 2nd St Downtown
I was walking coming out of Klindt's bookstore, a Kid on a bicycle - non electric - no helmet flew past me on the sidewalk - Almost hit me. I yelled out to him to stop. He rode off the curb onto the street between two parked cars ~~into the west~~ headed west on the street.

(6) Cousins Parking lot
- I was getting out of my parked car with an elderly friend
- 2 adults - Ø helmets - dressed in black on electric bikes rode past us from the parking lot - FAST - without stopping looking or slowing down and turned - turned onto 6th St - west.

(7) Washington Street between 3 & 4th - (8:30 pm)
- I was driving north - adults dressed in black
- 2 bicyclists (non electric), no helmet, no lights came fast, not stopping out from the alley darted across the street - missing my car & another

(3) of 3

3 of 3

8) Bi Mart parking lot
I was walking in the parking lot.
2 Kids on e-Scooters, no helmet riding fast between parked cars — swirving in + out — Cirles —

9) Pendleton + 11th — corner where I live
I was home —
2 Kids — no helmets — rode manual bicycle + scooter fast down the hill — (going north of course) flew through the stop sign —
VERY common year round —
↑↑ come spring

As I shared, this is only in a 2 week period earlier this month — Feb.
The incidences will be on an increase as the weather gets better followed by the summer months + fall.

MINUTES

REGULAR TRAFFIC SAFETY COMMISSION MEETING

February 18, 2026

7:00 a.m.

Via Zoom

PRESIDING: Mike Kilkenny, Chairman

COMMISSIONERS PRESENT: Russ Brown, Jayme Reineccius, Jim Schwinof, Victor Johnson, Bob Wood and Tom Tramontina

COMMISSIONERS ABSENT: None

STAFF PRESENT: Mike Bosse – City Engineer, Todd Stephens – City Engineer, Cynthia Roe – City EIT, Arturo Dominguez – Codes Enforcement, Dan Richardson – Council Representative, and Cindy Keever – Administrative Secretary

GUESTS PRESENT: None

CALL TO ORDER

The meeting was called to order by Chairman Kilkenny at 7:00 a.m.

1. **ROLL CALL OF COMMISSION MEMBERS**

2. **PLEDGE OF ALLEGIANCE**

3. **APPROVAL OF AGENDA**

A motion to approve the January agenda was made by Brown and seconded by Schwinof. Motion approved by Kilkenny, Wood, Reineccius, Johnson and Tramontina.

4. **PRESENTATIONS/PROCLAMATIONS**

None

5. **AUDIENCE PARTICIPATION**

None

6. STAFF REPORTS

A. TRANSPORTATION DIVISION MANAGER REPORT

1) E 9th Street ADA project finishing by end of the month.
2) ADA work will begin on E 13th Street between Union Street and Court Street, in preparation for paving work later this summer or early in the fall.
3) Crews are grading alleys and patching potholes.
4) There will be a Mastic product demonstration from two different companies soon. Mastic lasts much longer than paint and may be a cost-effective alternative to paint.

B. CITY POLICE REPRESENTATIVE REPORT

1) None

C. CITY CODES ENFORCEMENT OFFICER REPORT

1) Codes Enforcement has recently seen an uptick in motorhomes and trailers parked on the street. They are addressing that issue.

2) There was a huge cleanup effort on the Walmart property on the west side of The Dalles recently. This has caused quite a bit of homeless people's activity around town.

D. CITY ENGINEERS REPORT

1) Stephens reported that the Federal Street Plaza had gone out to bid and will be opened on March 10th. Award of the contract is scheduled for April of 2026. The goal for the completion of the project is set for October 2026.

2) Bosse said the Westside Interceptor Phase II project is continuing work on 1st Street between Terminal and Webber Streets.

3) Ajax Construction was the apparent low bidder for the First Street Streetscape Project.

7. CONSENT AGENDA

It was moved by Brown and seconded by Tramontina to approve the January minutes. Kilkenny, Reiniccius, Schwinof, Wood, and Johnson voted in favor. Motion carried.

8. DISCUSSION ITEMS

A) Stephens reported that a Clear Vision Triangle assessment had been completed at the intersection of E 12th Street. Vehicles parked on the northwest side of the intersection were found to be

creating visibility issues. Stephens recommended painting the northwest curb yellow for a distance of 30 feet from the intersection to improve sight distance. Schwinof made a motion to approve the city engineer's recommendation to paint the northwest curb yellow for 30 feet to enhance visibility. Brown seconded the motion. Kilkenny, Wood, Reiniccius, Johnson and Tramontina voted in favor.

B) Johnson reported that he had spoken with Wendy Palmer of St. Mary's School. Palmer explained that the area of concern is located on the west side of Cherry Heights, near the driveway to the church property. She agreed that when parents exit the parking lot, vehicles parked along Cherry Heights could create a safety issue. The committee discussed the types of signage permitted and what would be most effective, including the possibility of installing a "No Parking" sign with specified hours. A question was raised regarding whether older students from St. Mary's could serve as crossing guards. Johnson will reach out to Palmer again for more discussion.

C) Stephens spoke to the commissioners about concerns about driver safety at the intersection of Hwy 197, Fremont Street and Columbia View Drive. The history of the vehicle accidents at this intersection was reviewed. Brown made a motion to send a letter to ODOT requesting a record of all the accidents that have occurred at this intersection. Tramontina seconded the motion. Kilkenny, Wood, Reineccius and Johnson voted in favor.

9. ROUNDS TO COLLECT AGENDA ITEMS FOR NEXT MEETING

10. ADJOURNMENT

There being no further business, meeting adjourned at 7:43a.m.

Submitted by/
Cindy Keever, Administrative Secretary
Public Works Department

SIGNED: _____
Mike Kilkenny, Chairman

ATTEST: _____
Cindy Keever, Administrative Secretary
Public Works Department