



FUNDAMENTALS OF ELECTRIC VEHICLES



SAN MATEO COUNTY SHERIFF'S OFFICE



SAFETY ISN'T EXPENSIVE,
IT'S PRICELESS.





TABLE OF CONTENTS

E-BIKE DEFINITIONS

RULES & REGULATIONS

E-SCOOTER AND E-MOTORIZED BOARDS

E-MOTOS (OHV)

E-BIKE TRENDS AND OBSERVATIONS

EDUCATIONAL OUTREACH





ELECTRIC BICYCLE » definition

An “electric bicycle” is a bicycle equipped with fully operable pedals and an electric motor of less than 750 watts CVC § 312.5(a)



CLASS I E BIKE



DESCRIPTION

- A bicycle
- Equipped with a motor that **ONLY** provides assistance when pedaling
- Ceases to provide assistance when the bicycle **REACHES 20 MPH**

CVC § 312.5(a)(1)



CLASS II E BIKE



DESCRIPTION

- A bicycle
- Equipped with a motor that **MAY** provide exclusive propelling
- Ceases to provide assistance when the bicycle **REACHES 20 MPH**

CVC § 312.5(a)(2)



CLASS III E BIKE



DESCRIPTION

- A bicycle
- Equipped with a motor that **ONLY** provides assistance when pedaling
- Ceases to provide assistance when the bicycle **REACHES 28 MPH**

CVC § 312.5(a)(3)



RULES & REGULATIONS



DRIVER'S LICENSE



NOT REQUIRED

INSURANCE



NOT REQUIRED (OPTIONAL)

LICENSE PLATES



NOT REQUIRED

STICKER



IS REQUIRED DCVC § 312.5(a)(c)

- BICYCLE CLASS
- TOP ASSISTED SPEED
- MOTOR WATTAGE

AGE RESTRICTION



- NO AGE RESTRICTION FOR CLASS I AND CLASS II E-BIKES
- MUST BE 16 TO RIDE A CLASS III E-BIKE

HELMET



- UNDER 18 - CLASS I AND CLASS II E-BIKES
- REQUIRED FOR ALL AGES - CLASS III E-BIKES

SIDEWALKS



NOT ALLOWED

BIKE PATH



- ALLOWED - CLASS I AND CLASS II E-BIKES
- NOT ALLOWED - CLASS III E-BIKES

BIKE TRAILS



CHECK YOUR LOCAL RULES TO SEE WHERE E-BIKES ARE PERMITTED

CLASS III SPECIFIC

- SPEEDOMETER REQUIRED
- PASSENGER RIDING IS PROHIBITED*





ELECTRIC SCOOTER » definition

REFERENCE CVC § 407.5

- A two-wheeled device with handlebars
- With a floorboard and/or seat
- Powered by an electric motor
- Maximum speed 15 MPH
- Can be operated on:
 - Bicycle path, trail, or bikeway
 - Roadway, if a bike lane is unavailable, with speed limits of 25 mph or less.

general information:

DRIVER'S LICENSE 
IS REQUIRED (or LEARNER'S PERMIT)

LICENSE PLATES 
NOT REQUIRED

INSURANCE 
NOT REQUIRED (RECOMMENDED)

AGE RESTRICTION 
MUST BE 16

HELMET 
UNDER 18

» regulations

State law explicitly prohibits tandem riding on electric scooters.
Cannot make direct left turns on the roadway.
State law strictly prohibits riding e-scooters on sidewalks.



ELECTRIC MOTORIZED BOARDS

»» definition REFERENCE CVC§ 313.5

- Any wheeled device
- With a floorboard not greater than 60" deep and 18" wide
- Designed to transport **ONE** person
- Electric propulsion less than 1000W
- Travels no more than 20 MPH

general information:

AGE RESTRICTION

16

MUST BE 16

»» regulations

- Driving under the influence is prohibited
- Front light required during darkness - 300'
- Rear reflector during darkness - 300'
- White/Yellow side reflectors during darkness - 200'
- Shall not ride on a highway **OVER** 35 MPH, unless Class II or IV bike lane



ELECTRIC UNICYCLE

- If a **Unicycle** has all the requirements of a motorized board, then it can also be ridden on public roads (under 35MPH), bike paths, and trails.
- If it does not meet **ALL** requirements, it is classified as an electric skateboard, **AND** electric skateboards are **PROHIBITED** CVC § 21968

“A motorized skateboard shall not be propelled on any sidewalk, roadway, or any other part of a highway or on any bikeway, bicycle path or trail, equestrian trail, or hiking or recreational trail.”



In Motion V6

- Legal
- 800W
- 15.5 MPH

In Motion V12

- **NOT** Legal
- 2500W
- 43.5 MPH





Illegal Motorcycle »» IF ...

- Speeds exceeding 20 MPH
- More powerful than 750 watts
- Designed for use on roadways

**DON'T BE DECEIVED BY THE PEDALS
THESE ARE MOTORCYCLES!**





OFF-HIGHWAY MOTOR VEHICLE (OHV)

- NOT ALLOWED on **ANY** roadway
- Off-Highway motorcycles are classified as such by the manufacturer
- Cannot be retrofitted with aftermarket equipment to make them eligible for on-highway registration



If **REGISTERED** with a **GREENSTICKER**

- An OHV can be operated on designated public lands or private property open and accessible to the public.
- Can be on the roadway if **DUAL PURPOSE** and has the required safety components, DOT-approved tires, and the rider has a **valid motorcycle license** .

If **NOT REGISTERED** with a **GREENSTICKER**

- Must be driven on private property not accessible by the public.

***** IMPOUNDED AND/OR ISSUED A CITATION FOR VIOLATION *****





REFERENCE GUIDE

							
SUR- RON	SUR- RON	SUR- RON	TALARIA	TALARIA	SEGWAY	E RIDE PRO	E RIDE PRO
LIGHT BEE X	ULTRA BEE	STORM BEE	STING MX4	X3 (XXX)	DIRT EBIKE X260	PRO- S	PRO- SS
47 MPH	56 MPH	68 MPH	53 MPH	46 MPH	46.6 MPH	50 MPH	60 MPH
6000W	12,500W	22,500W	8000W	6000W	5000W	6000W	12,000W



E-BIKE TRENDS AND OBSERVATIONS



EDUCATIONAL OUTREACH



- Education first approach. Deputies are making regular weekly contacts with young riders operating e-bikes and e-motos
- First-time violations are typically addressed through educational enforcement, including:
 - Contacting parents or guardians
 - Requiring riders to walk their bikes home
- **April 2025** : Developed and distributed a traffic and e-bike law reference guide to patrol personnel to ensure consistent enforcement
- **May 2025** : Hosted an OTS traffic safety and e-bike presentation
- **July 2025** : Partnered with the City of San Carlos to produce an e-bike safety video, shared widely on social media
- **August 2025** : Created and distributed an e-bike safety pamphlet for the community
- **September 2025** : Presented to the San Carlos Traffic Commission on e-bike safety and regulations
- **October 2025** : Developed an online e-bike safety presentation for schools and community use; shared with school district administration for distribution to parents.
- **November 2025** : Provided briefing training to all patrol personnel on current e-bike laws and enforcement practices



EDUCATIONAL OUTREACH



- **January 2026** : Began collaborating with County officials on draft e-bike/e-micromobility device ordinances and conducted outreach at San Carlos schools and throughout the County to assess usage trends and compliance.
- **February 2026** : Assisted in a County-wide e-bike and e-moto safety forum, focusing on education and regulatory considerations.
- **March 2026** : Supported presentations to the County Board of Supervisors regarding proposed e-micromobility device ordinances.
- **March 2026** : Delivered an e-bike presentation to San Carlos Charter School parents on safe riding practices and legal requirements.
- **April 2026** : The Sheriff's Office is conducting a focused e-bike safety presentation for school students, emphasizing safe riding practices, legal obligations, and responsibilities when sharing the road.





The San Carlos Police Bureau will be introducing a new informational handout on e-micromobility device enforcement. By pairing enforcement with education, the goal is to promote safer riding behaviors, increase compliance with local and state regulations, and enhance overall safety for all roadway users.



WARNING NOTICE
E-MICROMOBILITY DEVICE VIOLATION

YOU ARE RECEIVING THIS WARNING BECAUSE:
You were observed operating an unregistered or non-compliant electric micromobility device within the City of San Carlos

IMPORTANT

WHY THIS MATTERS
Operating an unregistered or non-compliant e-conveyance:

- ✔ Creates safety risks for pedestrians and motorists
- ✔ Is subject to enforcement under state and local law
- ✔ Lacks verifiable safety standards

POSSIBLE CONSEQUENCES
Failure to comply may result in:
Citation and fines
Towing and impoundment fees
Requirement to correct violations prior to lawful operation

WHAT YOU SHOULD DO
Verify that your device qualifies as a legal e-bike
Register your vehicle if required
Ensure proper equipment and safe operation
Abide by all traffic rules



THANK YOU!
ANY QUESTIONS

