WHAT EVERY MICHIGAN BICYCLIST MUST KNOW



What Every Michigan Bicyclist Must Know

is your guide to bicycling safely and enjoyably on Michigan roads and trails. Although it includes information about many Michigan traffic laws, it is not a legal document or a substitute for the Michigan Vehicle Code (MVC), the Michigan Uniform Traffic Code (UTC), or local ordinances.

What Every Michigan Bicyclist Must Know is published by the League of Michigan Bicyclists (LMB). To request additional copies of this booklet call (517) 334-9100, email wembmk@LMB.org, or visit LMB.org/wembmk.

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JOIN LMB & SUPPORT CYCLING



Your support of LMB is a great investment in making Michigan bicycling better. Members play a vital role in supporting the production of educational materials like this booklet and programs such as our Bike and Ped Safety Education for law enforcement. Please join the movement at www.LMB.org/join.



ABOUT LMB

There's nothing else like riding a bicycle.

When you ride, you experience the simple and pure pleasure of human-powered propulsion. You get outside and get around in a way that's uniquely fast, fun, and friendly. Distractions fall away, leaving space for quiet enjoyment in a hectic and noisy age. And whether you're on the road or on a trail, you deserve to be safe.

We work to protect everyone who uses the road, especially people who ride bikes. We protect the child learning to ride on their own, the teen savoring independence, the college student heading to class, the adult commuting to work, the enthusiast riding to unwind, the parent towing a toddler, the retiree exploring new activities.

We ride for many reasons: we crave freedom, love the environment, welcome physical challenges, need to get around, prefer being active, care about safe neighborhoods, and believe in transportation justice. Our work takes many forms: on paper and screens, in classrooms and Capitol halls, on roads and trails, in shops, yards, and windows. We assert our rights to ride safely on public roads and bring together the Michigan cycling community.

Be part of our movement making Michigan bicycling better. Let your voice join with ours to fight, protect, advocate, educate, encourage, and promote. Together, we are strong.

The League of Michigan Bicyclists (LMB) is **making Michigan bicycling better**. We promote bicycling and the safety of all bicyclists on Michigan roadways. LMB is a statewide 501(c)(3) non-profit organization.

Education

LMB develops and distributes materials like this booklet, and produces training materials for law enforcement, driver education instructors, parents, bicycle commuters, and bike safety events. LMB supports Safe Routes to School and works with others focused on advancing bicycle safety.

Advocacy

LMB is a key resource for legislators and other policymakers. Each year, LMB hosts Bicycle Advocacy Day at the State Capitol. LMB staff and volunteers regularly represent the interests of Michigan bicyclists at public hearings and committees. Learn about our victories at LMB.org.

Encouragement

LMB bicycle tours – from weekend family rides to week-long fully supported tours – show that bicycle touring is a healthy, safe, and fun way to experience Michigan. *Michigan Bicyclist Magazine* keeps members and the general public informed. LMB's annual *Ride Calendar* is a comprehensive publication of Michigan's many single and multi-day rides, tours, races, and other bicycle-related events.

LEAGUE OF MICHIGAN BICYCLISTS

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Also Available from LMB:

Bicycle Safety Quiz www.bikequiz.org

What Every Young Michigan Bicyclist Must Know, A Guide for Youth. www.LMB.org/wembmk

What Every Michigan Bicyclist Must Know and What Every Young Michigan Bicyclist Must Know were both recognized by the Governor's Traffic Safety Advisory Commission with an Outstanding Traffic Safety Achievement Award.



SAFETY EQUIPMENT



ESSENTIAL EOUIPMENT

- **1. Properly fitted helmet.** Wear it every time you ride. Wearing a helmet can reduce brain damage from impact. (*Tips For Fitting a Bike Helmet, p. 21*)
- 2. Bright-colored and/or reflective clothing to be as visible as possible.
- 3. Tire pump, tire levers, patch kit, and spare tube.
- 4. Water bottle and holder (often called a cage).
- **5.** White front headlight with red rear reflector and light. Use to increase visibility day or night. Strobe/blinking mode increases battery life.
- 6. Identification and pertinent medical information. Consider Road ID.
- 7. Cell phone in case of an emergency and to document issues.

HELPFUL EQUIPMENT

- 8. Mirror on your handlebar, helmet, or glasses to improve your overall awareness and to see trailing vehicles and riding companions.
- 9. Lock to secure your bike. (See Theft Prevention, page 14)
- 10. Reflective leg bands to increase visibility and keep pants off chain.
- 11. Shatter-resistant protective eye wear (use clear glasses for dark conditions).
- 12. Rear rack, handlebar or saddle bag to carry items.
- 13. Bell to warn others of your approach, especially on trails.
- 14. Multitool and opt. crescent wrench for repairs. (See Fixing a Flat, page 32)
- 15. Video camera to document your ride and collect evidence in case of a crash.

BEFORE YOU RIDE – ABC QUICK CHECK

A

is for Air

- ♠ Inflate tires to rated pressure listed on tire sidewall.
- Check for damage to tire tread and sidewall.
- ♠ Always replace damaged tires.

B

is for Brakes

- 5. Inspect brake pads for wear; replace if worn past wear indicators.
- Check pad adjustment; make sure they do not rub on tire or "dive" into spokes.
- Check brake lever "travel". With brakes applied, there should be at least 1" between the lever and handlebar.

G

is for Cranks, Chain, and Cassette

- & Ensure crank bolts are tight. Only lube the threads, nothing else.
- 6 Check chain for signs of wear or looseness.
- f chain skips on freewheel/cassette, you may need an adjustment or a new chain and/or freewheel/cassette.

Q

is for Quick Releases

- Mheel hubs need to be tight in the bike frame. Your hub quick release should engage at 90°.
- Hub quick releases should point to the back of the bike to ensure they don't catch on anything (releasing the wheel).
- 6 Ensure quick releases are completely closed without being obstructed by the frame or fork.
- 6 Inspect brake quick releases to ensure brake cables are re-engaged.

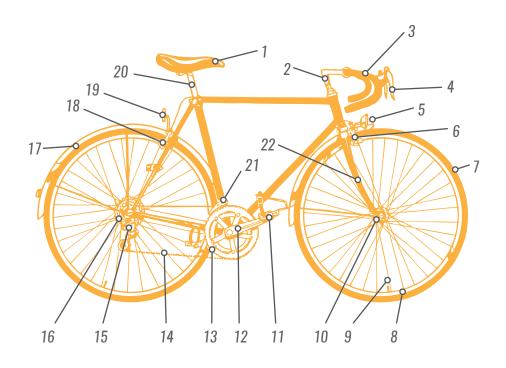


is for "Check it Over"

- hem before you ride.
- ★ Take a quick ride to ensure everything is working properly.
- he Pay extra attention to your bike during the first few miles.

If you are not comfortable making any of these adjustments, bring your bike to a local shop for a basic tune-up. See LMB.org/shops.

ANATOMY OF A BIKE



- 1 Saddle/Seat
- 2 Stem
- 3 Handlebars
- 4 Brake/Shift Levers
- 5 Headlight/Reflector
- 6 Front Brake
- 7 Tire
- 8 Rim
- 0 /11///
- 9 Spoke
- 10 Front Wheel Hub
- 11 Pedals

- 12 Crank Arm
- 13 Chain Ring
- 14 Chain
- 15 Rear Derailleur
- 16 Cassette/Freewheel & Rear Wheel Hub
- 17 Fender
- 18 Rear Brake
- 19 Reflector/Rear Light
- 20 Seat Post
- 21 Front Derailleur
- 22 Fork

RULES OF THE ROAD

Bicyclists' Rights and Responsibilities

When riding a bicycle on Michigan roads, you should generally follow the same rules as motorists. Bicyclists can be cited for violating traffic laws (See page 24). All road users are safer and happier when we show respect and consideration for one another on the roads.

Dangerous Behavior for Bicyclists

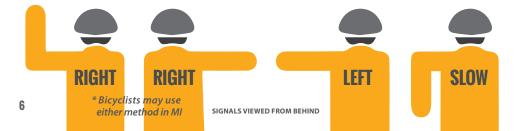
- & Riding against the direction of traffic (except in contra-flow bike lane)
- 5. Failing to yield when required
- & Riding at night in dark clothing and/or without lighting
- Riding unpredictably (weaving in and out of travel lane)
- 6 Hugging the curb (riding too far to the right) or riding on sidewalks
- Riding while distracted or intoxicated

Dangerous Behavior for Motorists

- 5. Failure to yield to a bicyclist when required
- Squeezing a cyclist by passing too close (less than 3 feet)
- Turning immediately in front of a bicyclist
- 5 Driving too fast for conditions
- ♣ Opening vehicle door into a bicyclist's path
- Driving while distracted (such as texting) or intoxicated
- & Blasting horn or harassing bicyclists in other ways

HAND SIGNALS

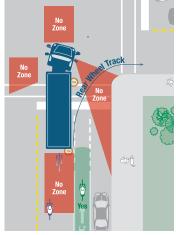
- & Signal your intentions clearly, 50-100 ft before change in direction.
- Signal right turns with an extended right arm OR upturned left arm.
- signal left turns by extending your left arm straight out to the left.
- Signal stopping or slowing by extending your left arm straight down with your palm facing rearward.
- ★ If riding in a group, point to and call out hazards to other bicyclists.



COMMERCIAL VEHICLES

With large vehicles like trucks and buses, bicyclists should assume, if you're on their side of the road, that you are in a blind spot. Blind spots are often alongside, close behind, or in front of large vehicles where the driver may not see you. To avoid blind spots, stay out of the "No Zone" (pictured right), use extra caution, watch for their turn signals, and remember that if you can't see the driver in the mirrors they can't see you.

Never pass a truck or bus on the right side, even if there is a bike lane and even if the vehicle is stopped.



Graphic by City of Chicago and Active Transportation Alliance.

DANGERS OF SIDEWALK RIDING

Sidewalk riding is very dangerous — you are invisible to drivers!

Motorists are looking in the road and not for sidewalk traffic moving greater than walking speed such as bicyclists. They often don't see bicyclists there, especially at driveways and intersections.

Sidewalks themselves pose dangers to bicyclists. Poor maintenance, uneven surfaces, gaps, and pedestrians make sidewalks difficult and dangerous for bicycles to navigate.

Bicyclists are not required to use sidewalks or side paths. If you must ride on a sidewalk (and local ordinance does not prohibit it):

- Yield to pedestrians and walk bikes in crowded areas.
- & Provide an audible warning with a bell or call out "passing on your left".
- Match for distracted motorists/pedestrians; never assume they see you.
- & Ride with the direction of traffic (on the right side of the road).
- nde at a cautious speed. Stop and yield at intersections like a pedestrian.

LMB recommends children under 10 ride on sidewalks, as they may not have the cognitive development needed to safely ride in the street. Use extra caution at driveways and intersections, as if on the road.

ROAD AND LANE PLACEMENT

Motorists who don't follow the rules of the road endanger bicyclists. They often don't see cyclists, or don't understand the road hazards and conditions that bicyclists face. Motorists also often misjudge the speed of bicyclists. Help protect yourself by riding predictably and defensively, following all traffic laws.

First Come, First Served

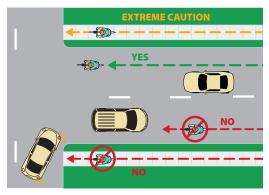
Just like other vehicles, bikes have a right to space on the road. Other vehicles must yield space to bikes that occupy space first, just as bicycles must yield space to motor vehicles that occupy space first. This rule applies both between intersections and at intersections. Like motor vehicles, bicyclists must also yield when changing lanes.

Yield to Crossing Traffic

Drivers entering the roadway from driveways and alleys must yield to traffic on the roadway to be entered or crossed. Yielding means looking until you see that no traffic is so close as to be a danger.

Direction of Travel

Always ride in the direction of traffic. Never ride against traffic (except in a contra-flow bike lane). You may ride with traffic in the far left lane on one-way streets when preparing to make a left turn.



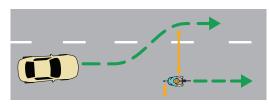
Sidewalk Riding

Sidewalk riding is more dangerous than riding on the road, and in some cases illegal. Drivers often won't notice you. If you do, be extra alert when crossing driveways and intersections, and always yield to pedestrians.

Lane Positioning to Avoid Hazards and Squeezing

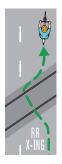
Stay to the right, but don't hug the curb. By riding away from the curb in the right wheel track of vehicles, ~24 inches from the edge, you avoid de-

bris and hazards, discourage drivers from squeezing you by passing too closely in the same lane and encourage them to give you sufficient clearance.



Speed Positioning and Passing

The slowest vehicle should be in the right-most position and the fastest on the left. That puts parked drivers at the curb, slower drivers next to them, and fast drivers next to them. This is why caution should ALWAYS be used when passing slow or stopped traffic on the right, such as in a bike lane or on a shoulder. Motorists are not expecting to be passed on the right. Passing on the right means passing in a blind spot. Always watch a vehicle's front right wheel to see if it may make a sudden move to the right.



Crossing Railroad Tracks

Many railroad tracks cross roads diagonally. To prevent catching your tire in the track, especially under wet conditions, always cross at a 90° angle. Be cautious and make sure the lane is clear.

Riding Two Abreast (Side-by-Side)

Riding two abreast is legal in Michigan. Single up when it is safe for others to pass. You may **never** ride more than two abreast.

Intersection Positioning

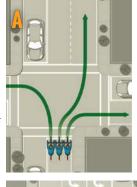
At intersections, follow the rules of the road as any other driver would. Position yourself according to the road layout and your destination:

One Lane: When approaching an intersection with one lane, position yourself in the lane with respect to your destination direction. (A)

Multi-Lane: When coming up to an intersection with multiple lanes, place yourself in the rightmost lane that is traveling in the direction you're going. (B)

Multiple Left Turn Lanes: When turning left on a road with multiple left turn lanes, select the rightmost lane that serves your destination. (C)

One-Way Streets with Two or More Lanes: When you make a left turn from a one-way street onto another one-way street, it's easiest to turn from the left-most lane. (D)









BICYCLE ROAD MARKINGS & SIGNS

Bike lanes and bike-related road markings continue to spring up across the state. Each city must comply with MUTCD (Manual on Uniform Traffic Control Devices) standards for facilities such as bike lanes. However, not all communities will choose to use all of these markings and signs.

Ouick Guide



Bike lanes with solid lines

These are for bikes only. Drivers should not cross into them unless they're turning or parking on the other side, and yield to bikes first.



Buffered Bike Lanes

Similar to a regular bike lane, but also includes a marked buffer between the bike lane and adjacent travel lanes. A buffered bike lane is restricted to bicycle traffic, except in instances when motorists need to turn, enter, or leave the roadway.



Bike symbols

A bike symbol that is not in a bike lane highlights a designated bike route. Drivers can drive on them as normal, but the bike symbols are a reminder to use extra caution – expect and look for bikes.

Bike Lanes

A bicycle lane is a portion of a street adjacent to the travel lane that is reserved for bicyclists. Bicycle lanes are typically on the right side of the road and are designated with pavement markings with arrows that direct bicyclists in the direction of travel. Bike lane signs are typically also placed alongside the road. A bicyclist should always travel in the same direction as



other traffic when using a bike lane, unless the pavement markings in a bike lane indicate you may travel against traffic (a contra-flow bike lane.)

Drivers are not permitted to park or drive in a bike lane. However, when making a right turn, they must yield to any bicycle traffic and cross through the bike lane prior to making the turn. A properly designed intersection will always place the straight thru bicycle traffic to the left of a right turn lane. As a bike lane approaches an intersection or bus stop, the white lines may be dashed to indicate a shared space between thru bicyclists and turning motorists.

Bicyclists are not required to ride in the bike lane in Michigan, as they may be in the "door zone" of parked cars, or they may be blocked by parked cars, debris, or snow and ice. Whenever a bicyclist enters or exits a bike lane, they should be sure to look behind them, signal, and yield to vehicles already in adjacent travel lanes.

Green Bike Lanes

Green bike lanes are pavement markings often used to highlight locations where motorists merge across or turn across a bike lane. To draw attention and increase



safety at these locations, bike lanes are colored green to alert motorists of the potential presence of bicyclists.



Advisory Bike Lanes

An advisory bike lane is similar to a regular bike lane, but is used on low volume streets that are narrow. They are marked with a solid white line on the right (next to parked cars) and a dotted line to the left. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic. So that motor vehicle drivers can safely



meet an oncoming motorist, they are allowed to merge into advisory bike lanes. Bicyclists should be more prepared for a motorist to enter the advisory bike lane than they would a typical bike lane.

Buffered Bike Lanes

A buffered bike lane is similar to a regular bike lane, but also includes a marked buffer between the bike lane and adjacent travel lanes. Its purpose is to provide extra clearance for bicyclists and increase safety. The buffer is placed between the bike lane and travel lane, and may be marked with white chevrons or



crosshatching to indicate that no vehicles are allowed to travel there. A buffered bike lane is restricted to bicycle traffic, except in instances when motorists need to turn, enter, or leave the roadway. Whenever motorists must cross a bike lane to prepare for a turn, they must yield if a bicyclist is approaching and let them pass. A buffer next to on-street parking may indicate a "door zone."

Separated Bike Lanes (AKA cycletracks)

A protected bikeway is an exclusive area for bicyclists that is physically separated from motor vehicle traffic. Protected bikeways may be one-way or two-way and will be marked appropriately. Protected bikeways may be located within street corridors and separated from traffic lanes by parked cars, curbs,



medians, bollards or flexible traffic posts, planters, or other vertical features. This design provides a space within the public right of way for bicyclists and provides additional comfort and separation from motor vehicles lanes.

As bicyclists in a protected bikeway approach an intersection, they should use caution and assume turning or merging vehicles do not see them due to their position in the public right-of-way.

Shared Lane Markings

Shared lane markings or "sharrows" (derived from "shared" and "arrows") are pavement markings used to mark a designated bike route. Placed in the travel lane, they



encourage bicyclists to ride in a safe position outside of the door zone (where driver's side doors of parked cars open). There are regular shared lane markings and green shared lane markings; they both mean the same thing. Motor vehicles are permitted to drive in travel lanes where shared lane markings are present. Bicyclists may be traveling in the same lane so motorists must travel behind them until



it is safe to pass (they must give the bicyclist at least three feet). Shared lane markings include a bicycle symbol and a double chevron indicating the direction of travel. They do not designate any part of the roadway as exclusive to either motorists or bicyclists. Rather, the symbols highlight the fact that the travel lane is shared.

Bike Boulevard

A bike boulevard is a lower-volume, lower-speed street that has been optimized for bike traffic. The purpose of a bike boulevard is to provide bicyclists, especially those who are not comfortable riding on busy streets, a safer and more relaxing place to ride. It provides safe crossings at major streets and



encourages motorists to travel at slow speeds, while reducing the frequency of stop signs. This environment is created through a variety of traffic calming and design elements such as speed humps, roundabouts, curb extensions, medians, and traffic signals. Many of the changes, especially the intersection treatments, improve safety for pedestrians and motorists, too. Bike boulevards are designated with pavement markings that include a large bicycle symbol with the text "BLVD."

Bike Box

A bike box is a type of advanced stop bar that is used at some signalized intersections. The bike box includes two elements, 1) an advanced stop line for motorists to wait behind, and 2) a marked space, often painted green, for bicyclists to wait in. When the traffic signal is red, motorists must wait behind the



bike box and behind the stop line. Bicyclists are allowed to ride to the front of the traffic queue into the bike box and wait for a green signal. When the traffic signal turns green, motorists must yield to bicyclists before proceeding or making a turn. The boxes allow bicyclists to wait at the front of traffic queues so they are more visible to motorists, and should be combined with "No Right Turn on Red." They improve safety of bicyclists at intersections.

Bike-Related Road Signs

In locations where bicyclists are likely to be present, road signs may be used to encourage motorists to stay alert for bicycle riders using the travel lane, or to respect painted markings designating a bike lane. "Bikes May Use Full Lane" is generally preferred over "Share the Road" signs, particularly in areas where bicyclists need to center themselves in the travel lane to prevent unsafe passing (such as roundabouts, below). In addition, a safe-passing sign standard, "Motorists Must Give Bikes 3 Ft. Clearance," is under consideration by the Federal Highway Administration.







Shoulders and Rumble Strips

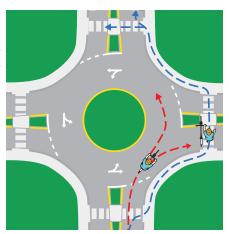
Shoulders run parallel to the roadway travel lanes and are designed for the accommodation of stopped vehicles and for emergency use. Bicyclists may legally ride on shoulders, although they are not required to do so. While shoulders are often the safest place to ride, especially on roads with high speeds or traffic volumes, it is important to note that shoulders may not be as well maintained as the lanes of travel or may be too narrow for safe riding.

Some shoulders incorporate rumble strips, which are a countermeasure for mitigating run-off-the-road crashes. Rumble strips can be hazardous for bicycles. Use caution when entering or exiting the shoulder around rumble strips. Shoulders with rumble strips should have gaps allowing bicyclists to maneuver in and out of the travel lane.

Bicyclists should yield to traffic in adjacent travel lanes when navigating intersections from shoulders.

Roundahouts

Bicyclists can use roundabouts either as a pedestrian or in the same manner as a motorized vehicle. When using them similar to a motorist, bicyclists should center themselves in the travel lane (take the lane) in order to make themselves more visible to motorists and to prevent unsafe passing.



NIGHT RIDING

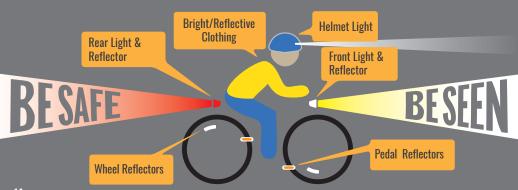
You can never be too visible on a bicycle. Besides using bright lights, you are more visible and safer when you wear bright and reflective clothing.

- & Always wear proper safety gear, especially a helmet.
- The law requires you to have a white front light and red rear reflector. For extra visibility, LMB strongly recommends adding one or more red rear lights to your bike or person.
- & When possible, wear brightly colored, high-visibility, reflective clothing.

BAD WEATHER RIDING

We all get caught in bad weather at some point. In addition to having the proper clothing and safety gear, be aware of the following when riding in bad weather:

- Bad weather conditions makes it more difficult for drivers to see you. Use front and rear lights and wear high-visibility, reflective clothing to improve your visibility.
- Wet weather makes your "grip" on the road less stable. Be extra careful, especially when making turns.
- Wet weather affects your stopping distance. Lightly apply your brakes to wipe moisture off your rims before applying them fully to stop.
- A Roadways tend to be slickest when it first starts to rain because of the oil dropped from cars mixing with the rain.
- Snow and ice create traction problems. Reducing tire pressure helps. Fat tires, knobby mountain bike or studded tires are best for winter riding.
- Be extra cautious when riding in the rain or snow, especially when riding up or down steep hills. Bridges, painted surfaces, utility covers, and other metal or wood surfaces in the roadway or trail are slippery when wet.



RULES FOR PATHS & TRAILS

GUIDELINES FOR MULTI-USE TRAILS AND PATHS

Paths and trails are often shared by users of all ages and abilities, including bicyclists, walkers, joggers, roller-bladers, pets, and parents pushing strollers. The variety of users and their speeds can pose unique challenges.

- & Be courteous.
- & Ride to the right.
- & Ride single-file when other users are present.
- Always yield to slower path users.
- When stopping for a rest or emergency, move completely off the trail.
- Avoid wearing headphones so you are aware of faster users approaching from behind.
- Control your speed, slow down, and use caution when approaching or overtaking other path users.
- & Before passing others, say "on your left," or ring your bike bell.
- 5 Don't spook children or animals; always yield to them.
- 6 Obey all traffic signs and signals at road crossings.
- ♦ Use proper lights if riding before daylight or after dusk.
- 6 Point to trail hazards and call out to riders behind you: "Gravel", "Glass" etc.
- & Use traffic hand signals when appropriate.
- & Ride e-bikes on trails only where allowed (see p. 30).

For more information on Michigan bike trails, visit www.michigantrails.org

GUIDELINES FOR MOUNTAIN BIKING TRAILS

Know your equipment and abilities. Carry food, water, and gear for changing weather conditions. Ride e-bikes only on trails where explicitly allowed.

- * Ride only on open trails Respect closures, don't trespass, and obtain authorization if required. Check online for trail usage guidelines.
- **Leave no trace** Be sensitive to the environment; stay on existing trails and pack out what you take in (wrappers, litter, etc.).
- **Control your bicycle** Pay attention! Anticipate problems and keep your speed under control. Avoid muddy trails.
- Bicyclists always yield Make your approach known and be courteous. Always yield to uphill users. When stopping for a rest or emergency, move completely off the trail.
- Never spook animals Animals startle easily and can create danger for you and others. Always yield when approaching a horse and ask the rider how to proceed.
- **Don't ride on muddy trails** You will leave ruts and destroy the trail for others.

For more information on mountain biking in Michigan, visit www.mmba.org

DEALING WITH ROAD RAGE

If a motorist makes you feel threatened or attempts to harm you (including throwing something at you or passing you fast and close):

At the Scene

- Never assault your assailant, either physically, verbally, or with hand gestures. This will escalate the situation.
- ♠ Note the license plate number and, if possible, a description of the driver.
- If you have a phone or helmet camera, try to take a photo/video of the license plate, car and/or driver.
- ♣ If the driver stops and attempts to prolong the situation call 911 immediately.
- Don't trade information with the other party; let the police gather any pertinent information.

Afterward

- Report the incident to your local police department and request a report. If you were not actually injured, police may not be willing or able to file a criminal complaint, but they are required to file a report and should follow up by warning the offending driver.
- ★ If the offender is a commercial driver, inform his or her employer.
- Contact your attorney. A lawyer may help press local law enforcement and prosecutors to bring criminal charges, or help you file a civil claim.

THEFT PREVENTION

Any lock can be broken, given enough time and the right tools, but there are ways to reduce theft risk.

Precautions

- If possible, take your bike indoors with you. Your next best option is locking it where you can still see it. Otherwise, lock your bike in a highly visible, well-lit area as close to your destination as possible.
- Always lock your bike, even if you are only going to be gone for a minute. Stealing an unlocked or improperly locked bike only takes a few seconds.
- Never lock only your bike's front wheel; thieves can still detach the frame and take it.
- ★ Lock your frame and wheels to something solid and permanent. A thief can lift a bike over and off a sign post.
- ★ Take anything removable unlocked wheels, seats, computers, lights, bike bags, etc. with you. If you can remove it, so can a thief.

Locks & Cables

- U-locks tend to be the strongest type of lock. Cable locks are only a minor deterrent to a bike thief. If you can, remove your front wheel and U-lock it to the rear wheel and the frame so that you fill the "U" of your U-lock.
- You can add cables, locking quick-releases, and/ or seatpost bolts to secure your wheels and seat.
- ★ Lock your bike to a bike rack, when available.
- Don't lock your bike to fire hydrants, police and emergency call boxes, traffic-signal poles, handicap ramps, and bus or loading zone posts. Also avoid trees and never block public right-of-way on sidewalks.

In Case of Theft

- File a police report at the local police station, with details of the theft, including your bike's serial number. Request a case number.
- 6 Cite the case and serial numbers whenever you communicate with the police.
- 6 Follow up by phone periodically to see if your bike has been recovered.
- If you have purchased "scheduled item" insurance on your bike, contact your insurance agent. Otherwise, you must weigh the cost/benefit of filing a homeowner's insurance claim.
- & Create a Google Alert with your bike's description to receive emails if your bike is posted on sites like Craigslist, EBay, or Facebook Marketplace.

Serial Numbers & Registration

Even if the police recover your stolen bike, you may not get it back without proof of ownership. Ask your bike shop to show you your bike's serial number on the frame and on the sales paperwork. Keep the info in a secure place. Some communities and online registries will register serial numbers to help you recover your stolen bike. It's good to keep a photo of your bike on file.

LOCK UP SMART

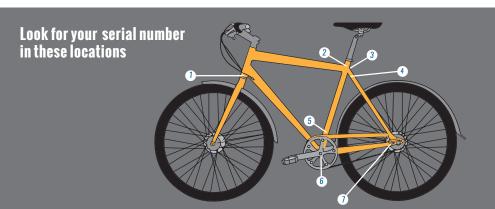


Lock the front wheel and the frame. Use a cable to secure the rear wheel.

Method 2



Lock the quick release front wheel alongside the frame and rear wheel.



DEALING WITH DOGS

Dogs can sense fear, so try to remain calm if you encounter an angry canine. You will feel more confident, and the dog likely will sense this too. Dogs tend to be territorial. Once you leave "their" territory, they will usually lose interest.

- Don't try to outrun the dog unless you are a very strong rider. If you can't completely outrun it, the dog may catch your wheel and knock you down.
- Mhile on the bike, don't try any maneuvers beyond your handling skills.
- 5 In a loud, firm voice say, "No!", "Bad dog!" or "Go Home!"
- Carry pepper spray. Practice reaching and using it while riding. Protect your eyes from "blowback" by not aiming it into the wind. Don't carry or use anything illegal in Michigan.
- Carry an "English Bobby"-style or dog-training whistle; they can often stop charging dogs in their tracks and send them home.
- ₲ Just stop. If you do, the dog may also stop and let you ride slowly away.
- & Get off your bike quickly; if the dog attacks, use your bike as a barrier.
- Once you are out of danger, file an incident report with the local police. Consider sending a polite complaint letter to the owners, with copies to the police and local animal authority.

BRIDGE AND STATE PARK INFO

Bicycling on Major Michigan Bridges

- Ambassador Bridge Detroit: Bicyclists are prohibited.
- **Blue Water Bridge** *Port Huron:* Riders will be transported with their bicycles at the convenience of the Authority. Phone: 810-984-3131.
- International Bridge Sault Ste Marie: Bicyclists can ride across to Canada. There is a toll. You need your passport or acceptable ID.
- Mackinac Bridge *St. Ignace/Mackinaw City:* Riders will be transported with their bicycles at the convenience of the Bridge Authority. Upon arriving at the bridge (toll plaza on north end, pay phone on south end), call them at 906-643-7600. Groups of 10+ should contact the Bridge Authority at least 24 hours prior to arrival. Phone: 906-643-7600.
- Some ferry services also carry bicycles. Visit LMB.org/ferries

State Parks

- Mhen visiting a state park by bicycle, there is no entry fee.
- When arriving at a state park by bicycle, you are always guaranteed space by DNR to camp, even if the campground is full. You will be required to pay the appropriate camping fee for the space used.

WHAT IF THERE'S A CRASH?

Bicycle crashes do happen, but many crashes actually don't involve vehicles or other people. Often, bicyclists lose control on a bad surface or hit a fixed object. If you are involved in a crash, don't ignore even a minor injury. Some injuries may not be apparent until later on due to the adrenaline rush from the crash. Here are some tips if you are in a crash involving another vehicle or person:

At the Scene

- If you're hurt, don't move unless you're sure you won't add to your injuries.
- If you're not hurt, call 911 for medical help for the injured.
- Apply immediate first aid to anyone injured.
- & Keep a level head so you can ask questions and take notes.
- & Get the following information:
 - **Drivers:** Name, address, phone, license number, plate number, vehicle model and year, insurance company, and policy number.
 - **Mitnesses:** Names and phone numbers.
 - **Modern School** Market States and badge numbers. If a police report is filed get the number.
- & Use your phone to take photos/video of the scene and to take notes.

Protecting Your Rights

- 5. Do not admit anything. Simply state the facts.
- ♣ Do not say you're "OK." You may not know until later. If asked, simply say something like, "I will know more after I visit my doctor."
- & If asked about your bicycle, say, "I will have to have a professional check it for damage and get a repair estimate."
- Insist that the investigating officer record your account of the crash for his/her crash report.

Afterward

- & While it is fresh in your memory, write down exactly what happened.
- & Call your own insurance provider.
- & Keep a copy of all medical bills and papers regarding the crash.
- ★ Keep any damaged clothes or equipment (including your bike) as they may help your case if you end up in court.
- have a mechanic make sure your bicycle is in safe working order.
- & Contact an attorney, especially if there is any dispute of fault.

GUIDE TO BUYING A BICYCLE



Buying the right bicycle requires a little homework. The payoff will be a trusted friend that will deliver many years of fun, help you stay healthy, and reduce pollution – all while transporting you comfortably and safely. Answer these questions and you'll be ready to start shopping!

What type of riding will you do?

The major categories of bicycles are mountain bikes, hybrids (subcategories: comfort and city bikes), road bikes, touring bikes, e-bikes, recumbents, trikes, and tandems. Start your search by asking yourself: what types of surfaces do I expect to ride on, what distances do I want to ride, and at what speed do I want to travel?

What surfaces will you ride on?

- Paved roads and bike trails/paths Road, touring, hybrids and recumbent bikes with "slick" tires work well on hard, smooth surfaces. Mountain bikes with larger knobby tires can also be used on smooth surfaces, but they will make you work harder to travel at the same speeds.
- Gravel roads, dirt trails, and wilderness terrain The straight handlebars and wide, knobby tires of a mountain bike make it easy to navigate almost any surface. Fat tire bikes are another alternative.

What distances will you ride?

- Short rides (2-3 miles) City cruisers; comfort bikes; hybrid bikes; mountain bikes.
- Moderate distances (up to 10 miles) Comfort bikes; road and touring bikes; recumbents.
- Longer distances (30 or more miles a day) Road bikes; touring bikes; recumbents.

What speed will you ride?

- * Relaxed cruising Cruisers; comfort bikes; hybrids.
- Moving quickly, but not racing Road bikes; touring bikes; mountain bikes with smoother tires; recumbents.
- ★ High speed or racing Road bikes; recumbents.

New or Used?

Buying a used bike is like buying a used car – you can get a good deal or a lemon. Whether you buy the bike from a store or from a private seller, think about how the bike handles when you ride it. Note how the bike responds when you go around corners, over obstacles, brake hard, downhill or uphill. Sit in the saddle and stand on the pedals. Are you too stretched out or too cramped? Is the bike responsive, sluggish, or twitchy? Is it heavy? Are the brakes and shifters easy to use? Everything on the bike should work perfectly. Shifting should not skip, the brakes should not screech and should stop when you want without flinging you over the bars. The wheels should turn evenly and be balanced. All of the quick-release levers should be firmly hand-tightened with everything clean and well-lubed.

What size bike will you need?

Do you have proper clearance (at least 1" over the top tube for a road bike; 2-3" for a mountain bike or hybrid) when you straddle your bike with both feet flat on the floor? Do you feel cramped or stretched out when you're riding? Bikes are not T-shirts. If you're buying for a child, don't buy a bike that's too big and expect them to be safe while "growing into it." It should fit the rider now, not later. If it is too small or too big, they will have trouble controlling it and be much less safe. Quality children's bikes have both great resale value and "hand-me-down" potential. Poorly built bikes tend to wear out quickly.

Where do you plan to buy your bike?

Your best bet is a bike shop where you feel welcome and comfortable. Bike shops are the best source of ongoing advice, proper equipment, and analysis of your particular needs. They are also knowledgeable about local conditions and know the best places to ride in your area.

You may have to visit several shops to find the right shop and the right bike. Ask yourself:

- 5. Do they make me feel welcome and comfortable?
- Do they answer questions and explain things well?
- 5 Do they ask about what kind of riding I want to do?
- 5 Do they spend time with me choosing a bike with the right fit?
- ⋄ Do they have a place to go for test rides?
- 5 Do they explain the warranties and check-ups I can expect?
- 5. Do they clearly show me how to operate new technology?

A list of LMB member shops can be found at www.LMB.org/shops

PROPER BIKE FIT

Correct bike fit can be a highly technical process. However, the following guidelines are a good starting point. Check with your local bike shop for a more precise fit.

Frame Size

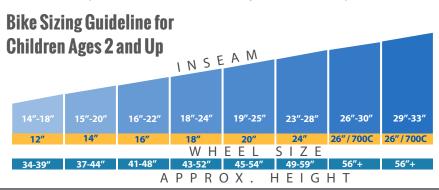
Stand over the top tube. If it's horizontal, there should be 1-2" of clearance between the frame and your crotch. If it's sloping, there should be at least 2" of clearance, and more for performance mountain bikes.

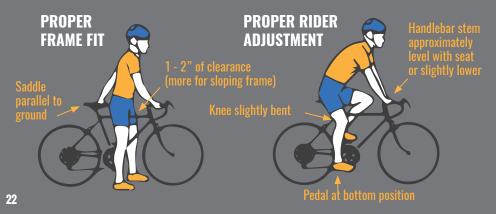
Saddle Angle

The angle of the saddle should be close to horizontal or pointing a few degrees down in front. Start with it parallel to the ground and then adjust. If you feel pressure on the nose/front of the saddle, tilt it down. If you feel like you are falling forward or find yourself pushing back, or have too much pressure on the hands, tilt the saddle up.

Saddle Height

The most efficient seat height is when your knees are slightly bent at the bottom of the pedal stroke with the ball of your foot on the pedal.





TIPS FOR FITTING A BIKE HELMET

EYES



HELMET POSITION

Your helmet should sit level on your head and low on your forehead — one or two finger widths above your eyebrows.

EARS



SIDE STRAPS

Adjust the slider on both side straps to form a V-shape under and slightly in front of each ear.

MOUTH



FINAL FIT

Does your helmet fit right? Open your mouth wide... big yawn! The helmet should pull down on the head.

All new bicycle helmets sold in the United States today must be tested and meet the uniform safety standard issued by the U.S. Consumer Product Safety Commission (CPSC). Look for a certification label inside the helmet. Replace any helmet that is involved in a crash, damaged, or has been outgrown. Some experts recommend replacing a helmet every 3-5 years.

New helmet technologies such as MIPS and WaveCel attempt to reduce concussions in a crash. There is evidence MIPS reduces rotational forces on the brain, but effectiveness in preventing concussions is still under study.

MICHIGAN COMPILED LAW (MCL) ON BIKES

1. What is the definition of a bicycle?

MCL 257.4 defines "bicycle" as:

"...a device propelled by human power upon which a person may ride, having either 2 or 3 wheels in a tandem or tricycle arrangement, all of which are over 14" in diameter."

2. Where do Michigan laws apply to bicyclists?

MCL 257.656(3) states:

"The regulations applicable to bicycles ... shall apply when a bicycle is operated upon a highway or upon a path set aside for the exclusive use of bicycles, subject to those exceptions stated in sections 656 to 662."

3. Is a bicycle considered a vehicle in Michigan?

No. MCL 257.79 defines a "vehicle" as:

"every device in, upon, or by which any person or property is or may be transported or drawn upon a highway, except devices exclusively moved by human power..."

4. Does a bicyclist have to obey the same traffic laws as a motorist?

Yes, with exceptions. MCL 257.657 states:

"Each person riding a bicycle...upon a roadway has all of the rights and is subject to all of the duties applicable to the driver of a vehicle by this chapter, except as to special regulations in this article and except as to the provisions of this chapter which by their nature do not have application."

5. Does a bicyclist have to signal their turns?

Yes. MCL 257.648 states:

- **(4)** "When a person is operating a bicycle and signal is given by means of the hand and arm, the operator shall signal as follows:
 - (a) Left turn...extend...hand and arm horizontally.
 - (b) Right turn...extend...left hand and arm upward or...right hand and arm horizontally.
 - (c) Stop or decrease speed...extend...hand and arm downward."

6. Does a bicyclist have to ride with the direction of traffic?

Yes. <u>MCL 257.634 (1)</u> states:

"Upon each roadway of sufficient width, the driver of a vehicle shall drive the vehicle upon the right half of the roadway..."

Since bicyclists have all the rights and are subject to all the duties applicable to the driver of a vehicle according to <u>MCL 257.657</u> they must generally ride in the right half of the roadway. On one-way roads or roads with two-way cycle tracks, bicyclists can ride on the left side of the road. See <u>MCL 257.660a(e)</u> below.

7. Where in the right half of the roadway must a bicyclist ride?

MCL 257.660a states:

"A person operating a bicycle upon a highway or street at less than the existing speed of traffic shall ride as close as practicable to the right-hand curb or edge of the roadway except as follows:

- (a) When overtaking and passing another bicycle or any other vehicle proceeding in the same direction.
- **(b)** When preparing to turn left.
- (c) When conditions make the right-hand edge of the roadway unsafe or reasonably unusable by bicycles, including, but not limited to, surface hazards, an uneven roadway surface, drain openings, debris, parked or moving vehicles or bicycles, pedestrians, animals, or other obstacles, or if the lane is too narrow to permit a vehicle to safely overtake and pass a bicycle.
- (d) When operating a bicycle in a lane in which the traffic is turning right but the individual intends to go straight through the intersection.
- (e) When operating a bicycle upon a 1-way highway or street that has 2 or more marked traffic lanes, in which case the individual may ride as near the left-hand curb or edge of that roadway as practicable."

8. Can a bicyclist be given a ticket for impeding traffic if they are traveling on a roadway and obeying all rules of the road?

No. Bicyclists are considered traffic based on <u>MCL 257.69</u> and have the same rights and responsibilities applicable to the driver of a vehicle according to <u>MCL 257.657</u>. The spirit of the impeding traffic statute, <u>M57.676b</u>, is intended to refer to stationary objects such as a vehicle parked across the roadway with the intention of obstructing traffic. Some bicyclists have been warned or even cited with violating <u>MCL 257.676b</u>. Multiple Michigan judges, however, have ruled that the statute does not apply to bicyclists lawfully traveling on a public roadway.

<u>MCL 257.69</u> states: ... "traffic means pedestrians, ridden or herded animals, vehicles, street cars and other conveyances either singly or together while using any highway for purposes of travel."

9. May bicyclists ride two abreast?

Yes, bicyclists are allowed to ride two abreast or side-by-side on roads; <u>MCL 257.660b</u> states:

"Two or more individuals operating bicycles upon a highway or street shall not ride more than 2 abreast except upon a path or portion of the highway or street set aside for the use of bicycles."

10. Is it legal to ride between lanes?

No. <u>MCL 257.660(4)</u> does not allow passing "between lines of traffic." Bicyclists may only pass on the right if there is a dedicated bicycle facility.

11. Must a bicyclist ride on the sidewalk? Is it legal? What about crosswalks?

State law does not require bicyclists to ride on the sidewalk. LMB does not generally recommend it because of safety hazards to the bicyclist and pedestrians. State law also does not prohibit sidewalk riding, but does allow it to be regulated locally through ordinance and posted signs. <u>MCL 257.660c</u> states:

- (1) "An individual operating a bicycle upon a sidewalk or a pedestrian crosswalk shall yield the right-of-way to pedestrians and shall give an audible signal before overtaking and passing a pedestrian.
- (2) An individual shall not operate a bicycle upon a sidewalk or a pedestrian crosswalk if that operation is prohibited by an official traffic control device.
- (3) An individual lawfully operating a bicycle upon a sidewalk or a pedestrian crosswalk has all of the rights and responsibilities applicable to a pedestrian using that sidewalk or crosswalk."

12. Must a bicyclist ride in a bike lane or a side path?

No. MCL does not require bicyclists to use bike lanes, even if present. In 2006 <u>MCL 257.660 (3)</u> was amended to remove this requirement.

13. Is it legal to ride on a limited-access highway (expressway)?

No. MCL 257.679a(1) states:

"... nor shall a...bicycle, except as provided in this section...be permitted on a limited access highway in this state. Bicycles shall be permitted on paths constructed separately from the roadway and designated for the exclusive use of bicycles."

14. Does a bicyclist have to wear a helmet?

State law does not require bicyclists to wear helmets (with the exception of riders of a class 3 e-bike under age 18; see <u>MCL 257.662(a)(4)(b)</u>.) LMB strongly recommends helmets since they are proven to help prevent serious brain injuries.

15. Does a bicyclist have to use lights?

Yes, if riding at night. MCL 257.662 states:

(1) "A bicycle...being operated on a roadway between 1/2 hour after sunset and 1/2 hour before sunrise shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least 500 feet to the front and with a red reflector on the rear which shall be visible from all distances from 100 feet to 600 feet to the rear when directly in front of lawful lower beams of head lamps on a motor vehicle. A lamp emitting a red light visible from a distance of 500 feet to the rear may be used in addition to the red reflector."

LMB strongly recommends using a rear red light when bicycling at night. A bicyclist may only use a white light on the front. A blue light is reserved for emergency services and may not be used. A white light may not be used on the rear of a bicycle.

<u>MCL 257.662 (4) and (5)</u> make it illegal to sell a bicycle or bike pedal without pedal reflectors, or a bike without "either tires which have reflective sidewalls or with wide-angle prismatic spoke reflectors."

16. Does the law require brakes on bicycles?

Yes. MCL 257.662(2) states:

"A bicycle shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement."

17. Is it legal to park on the street? Can bicyclists park on a sidewalk?

Yes, as long as pedestrians and vehicles are not blocked. <u>MCL 257.660d</u> states:

- (1) "An individual may park a bicycle* on a sidewalk except as prohibited by an official traffic control device.
- (2) An individual shall not park a bicycle on a sidewalk in such a manner that the bicycle impedes the lawful movement of pedestrians or other traffic.
- (3) An individual may park a bicycle on a highway or street at any location where parking is allowed for motor vehicles, may park at any angle to the curb or the edge of the highway, and may park abreast of another bicycle.
- **(4)** An individual shall not park a bicycle on a highway or street in such a manner as to obstruct the movement of a legally parked motor vehicle.
- (5) Except as otherwise provided in this section, an individual parking a bicycle on a highway or street shall do so in compliance with this act and any local ordinance."
 - * Amended effective March 19, 2019 to add "or an electric skateboard equipped with handlebars" (i.e. e-scooter) to each clause.

18. Is it legal to use a cell phone or text while riding a bike?

Only if the cell phone is in hands free mode. MCL 257.661 states:

"A person operating a bicycle...shall not carry any package, bundle, or article that prevents the driver from keeping both hands upon the handlebars of the vehicle."

19. Is there a three foot passing law in Michigan? Can a driver pass bicyclists in no-passing zones?

Yes and yes. MCL <u>257.636</u> states:

- (2) The driver of a motor vehicle overtaking a bicycle proceeding in the same direction shall pass at a safe distance of at least 3 feet to the left of that bicycle or, if it is impracticable to pass the bicycle at a distance of 3 feet to the left, at a safe distance to the left of that bicycle at a safe speed, and when safely clear of the overtaken bicycle shall take up a position as near the right-hand edge of the main traveled portion of the highway as is practicable.
- (3) Notwithstanding section 640, if it is safe to do so, the driver of a vehicle overtaking a bicycle... may overtake and pass the bicycle in a no-passing zone.

At least nine Michigan communities have enacted local five-foot passing ordinances, including Ann Arbor, Dearborn, Grand Rapids, Kalamazoo, Kalamazoo Township, Muskegon, Norton Shores, Oshtemo Township, and Portage. LMB interpretation of Michigan case law is that the state 3-foot law does not preempt local 5-foot ordinances.

State law also addresses when a bicyclist is riding in the leftmost lane of a one-way street, or moving away from the right side of road to prepare to make a left turn.

MCL 257.637 states:

(3) The driver of a vehicle overtaking a bicycle proceeding in the same direction shall, when otherwise permitted by this section, pass at a distance of 3 feet to the right of that bicycle or, if it is impracticable to pass the bicycle at a distance of 3 feet to the right, at a safe distance to the right of that bicycle at a safe speed.

This law does not allow motorists to pass to the right of a bicyclist when they are riding as far to the right as practicable or taking the lane. MCL prohibits motorists from leaving the roadway onto the shoulder to pass a vehicle, including a bicyclist.

21. What other rules must a motorist obey when following a bicyclist? *MCL 257.627* states:

(1) "A person operating a vehicle on a highway shall operate that vehicle at a careful and prudent speed not greater than nor less than is reasonable and proper, having due regard to the traffic, surface, and width of the highway and of any other condition then existing. A person shall not operate a vehicle upon a highway at a speed greater than that which will permit a stop within the assured, clear distance ahead."

Motorists must have their vehicle under control when following a bicyclist to be able to react safely if the bicyclist has to make an emergency maneuver.

22. Can you be charged with a DUI while riding your bicycle?

No. Although it is dangerous to ride a bicycle while intoxicated, a bicycle is not a motor vehicle according to state law. DUI applies only to motor vehicle operators. Other laws may apply however, such as disorderly conduct.

23. What are the penalties for a bicyclist violating the Motor Vehicle Code?

MCL 257.656 states:

- (1) "A person who violates any of sections 656 to 661a is responsible for a civil infraction.
- (2) The parent of a child or the guardian of a ward shall not authorize or knowingly permit the child or ward to violate this chapter."

24. If a bicyclist is cited for a violation, does it go on their driving record?

No. The violations are civil infractions and do not go on a person's driving record. There are no points for a bicycle violation. See <u>MCL 257.732(16)(d)</u>.

25. Is it legal to carry another person on a bicycle? What about a child seat?

No, unless the seat is designed to be attached. This allows for the legal use of a child seat since it is designed to be attached to the bicycle.

MCL 257.658 states:

- (1) "A person propelling a bicycle ... shall not ride other than upon and astride a permanent and regular seat attached ...
- (2) A bicycle ... shall not be used to carry more persons at 1 time than the number for which it is designed and equipped."

26. Is it legal to grab onto another vehicle to "hitch a ride"?

No. MCL 257.659 states

"A person riding upon a bicycle ... shall not attach the same or himself to a streetcar or vehicle upon a roadway."

27. What is the definition of a roadway?

MCL 257.55 states:

"Roadway means that portion of a highway improved, designed or ordinarily used for vehicular travel."

Therefore, the gutter, shoulder, or bike lane is not considered part of the roadway.

28. Does a bicyclist have to carry a driver's license?

No, the law does not require you to carry a driver's license.

If involved in a law violation, however, law enforcement may detain you long enough to ascertain and verify your identity. LMB strongly recommends that all bicyclists carry a photo ID and emergency contact information when riding. Law enforcement or safety personnel may need to identify you in case of an emergency. If you have health issues of any kind, it is critical that you carry identification that identifies you and your health issues.

29. What is the definition of an electric bicycle, or e-bike? How fast can it go? Does it matter if you have to pedal?

An e-bike is defined by a seat, pedals, and an electric motor of 750 watts or less. A class 1 e-bike can be motor-assisted up to 20 miles per hour when pedaling. A class 2 e-bike can also have a throttle to engage the motor without pedaling. A class 3 e-bike can be motor-assisted up to 28 miles per hour when pedaling. <u>MCL 257.13e</u> defines an e-bike:

"Electric bicycle" means a device upon which an individual may ride that satisfies all of the following:

- (a) The device is equipped with all of the following:
 - (i) A seat or saddle for use by the rider.
 - (ii) Fully operable pedals for human propulsion.
 - (iii) An electric motor of not greater than 750 watts.
- **(b)** *The device falls within 1 of the following categories:*
 - (i) Class 1 electric bicycle. As used in this subparagraph, "class 1 electric

bicycle" means an electric bicycle that is equipped with an electric motor that provides assistance only when the rider is pedaling and that disengages or ceases to function when the electric bicycle reaches a speed of 20 miles per hour.

(ii) Class 2 electric bicycle. As used in this subparagraph, "class 2 electric bicycle" means an electric bicycle that is equipped with a motor that propels the electric bicycle to a speed of no more than 20 miles per hour, whether the rider is pedaling or not, and that disengages or ceases to function when the brakes are applied.

(iii) Class 3 electric bicycle. As used in this subparagraph, "class 3 electric bicycle" means an electric bicycle that is equipped with a motor that provides assistance only when the rider is pedaling and that disengages or ceases to function when the electric bicycle reaches a speed of 28 miles per hour."

30. Can a bicyclist ride an e-bike on trails? Does it matter what kind of surface the trail has?

If the trail is paved with asphalt or crushed rock, or a rail trail, a class 1 e-bike can usually go on it, although it depends on local regulations. *MCL* 324.72105:

- (2) "All of the following apply to ... an electric bicycle on a trail subject to this part:
 - (a) An individual may operate a class 1 electric bicycle on a linear trail that has an asphalt, crushed limestone, or similar surface, or a rail trail. A local authority or agency of this state having jurisdiction over a trail described in this subdivision may regulate or prohibit the operation of a class 1 electric bicycle on that trail.
 - **(b)** An individual may operate a class 2 or class 3 electric bicycle on a linear trail that has an asphalt, crushed limestone, or similar surface, or a rail trail if authorized by the local authority or agency of this state having jurisdiction over the trail.
 - (c) Except as otherwise provided in this subdivision, an individual shall not operate an electric bicycle on a trail that is specifically designated as nonmotorized and that has a natural surface tread that is made by clearing and grading the native soil with no added surfacing materials. A local authority or agency of this state having jurisdiction over a trail described in this subdivision may allow the operation of an electric bicycle on that trail.
- (3) Subsection (2) does not apply to the use of electric bicycles on a congressionally authorized public trail system."

31. Can a driver be ticketed if a bicycle rack on their vehicle covers up the license plate?

No. <u>MCL 257.225</u> states (as of August 14, 2018):

(2) "A registration plate shall [...] be maintained free from foreign materials that obscure or partially obscure the registration information and in a clearly legible condition. The attachment to the rear of a vehicle of a tow ball, bicycle rack, removable hitch, or any other device designed to carry an object on the rear of a vehicle, including the object being carried, does not violate this subsection."

32. Are there any laws against motorists opening their doors into bicyclists?

Yes. Many communities have adopted the Uniform Traffic Code, which includes *Administrative Rule R28.1498 Rule 498 (1)*, stating:

"A person shall not open a door of a vehicle in a manner that interferes with or impedes the flow of traffic."

A bicycle would be included under this protection, since a person on a bicycle "has all of the rights and is subject to all of the duties applicable to the driver of a vehicle" (see <u>MCL 257.657</u>) and traffic is defined (in <u>MCL 257.69</u>) as follows: "... traffic means pedestrians, ridden or herded animals, vehicles, street cars and other conveyances either singly or together using any highway for purposes of travel."

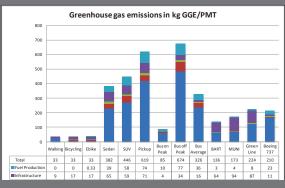
33. Can a motorist park or drive in a bike lane?

No, with some exceptions. Many communities have adopted the Uniform Traffic Code, which includes *Administrative Rule R28.1322 Rule 322*, stating:

- (1) "A person shall not operate a vehicle on or across a bicycle lane, except to enter or leave adjacent property.
- (2) A person shall not park a vehicle on a bicycle lane, except where parking is permitted by official signs.
- (3) A person who violates this rule is quilty of a misdemeanor."

A recent life-cycle analysis study on greenhouse gas emissions for e-bikes vs. other forms of transportation found e-bikes are:

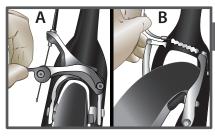
- 13 times more efficient than an SUV
- 11 times more efficient than a sedan
- 10 times more efficient than a bus, on average
- About equal in impact to a conventional bicycle or walking



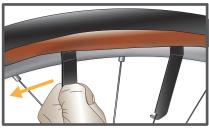
Source: Dave, Shreya (February 2010). "Life Cycle Assessment of Transportation Options for Commuters" (PDF). Massachusetts Institute of Technology. via https://en.wikipedia.org/wiki/Electric_bicycle citation 69.

FIXING A FLAT











- Spare tube
- Tire lever
- Pump or inflator
- 6" crescent wrench (if wheels are bolted on)
- Patch kit (not pictured)

RELEASE BRAKES

- A. On side-pull brakes, there is usually a tension-release lever on the side.
- B. On cantilever brakes, remove cable from arm.

REMOVE WHEEL

Unlock quick-release lever or loosen wheel nuts* and remove wheel from frame. If removing rear wheel, shift chain to smallest cog first.

UNSEAT TIRE

Use tire lever to unseat tire from rim on one side only.



REMOVE TUBE

Reach into tire and pull tube out. Generally, first pull the part of the tube that is opposite the valve stem.



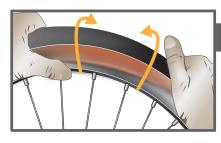
CHECK TIRE/TUBE

Run a cloth on the inside of the tire and across the tube to check for embedded objects such as glass, nails, etc. Find and patch leak in tube with patch kit if applicable.



INSTALL NEW/FIXED TUBE

Slightly inflate tube to give it shape. Put valve stem in first.



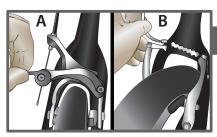
PUT TIRE BACK ON RIM

Carefully work tire back on rim, making sure not to pinch tube between rim and tire. Start with section by valve stem. Push valve stem upwards to make sure it is not caught between tire and rim.



PUMP TIRE

Use your pump or inflator to re-inflate the tire. The proper PSI will be listed on the wall of the tire.



REPLACE WHEEL

Put the wheel back into the frame. Close the quick release mechanism or tighten the nuts for the wheel. Remember to re-engage your brakes.





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