

# OHIO DEPARTMENT OF TRANSPORTATION'S CYCLING SMARTER GUIDE



Created by the ODOT Bicycle and  
Pedestrian Program

Office of Statewide Planning



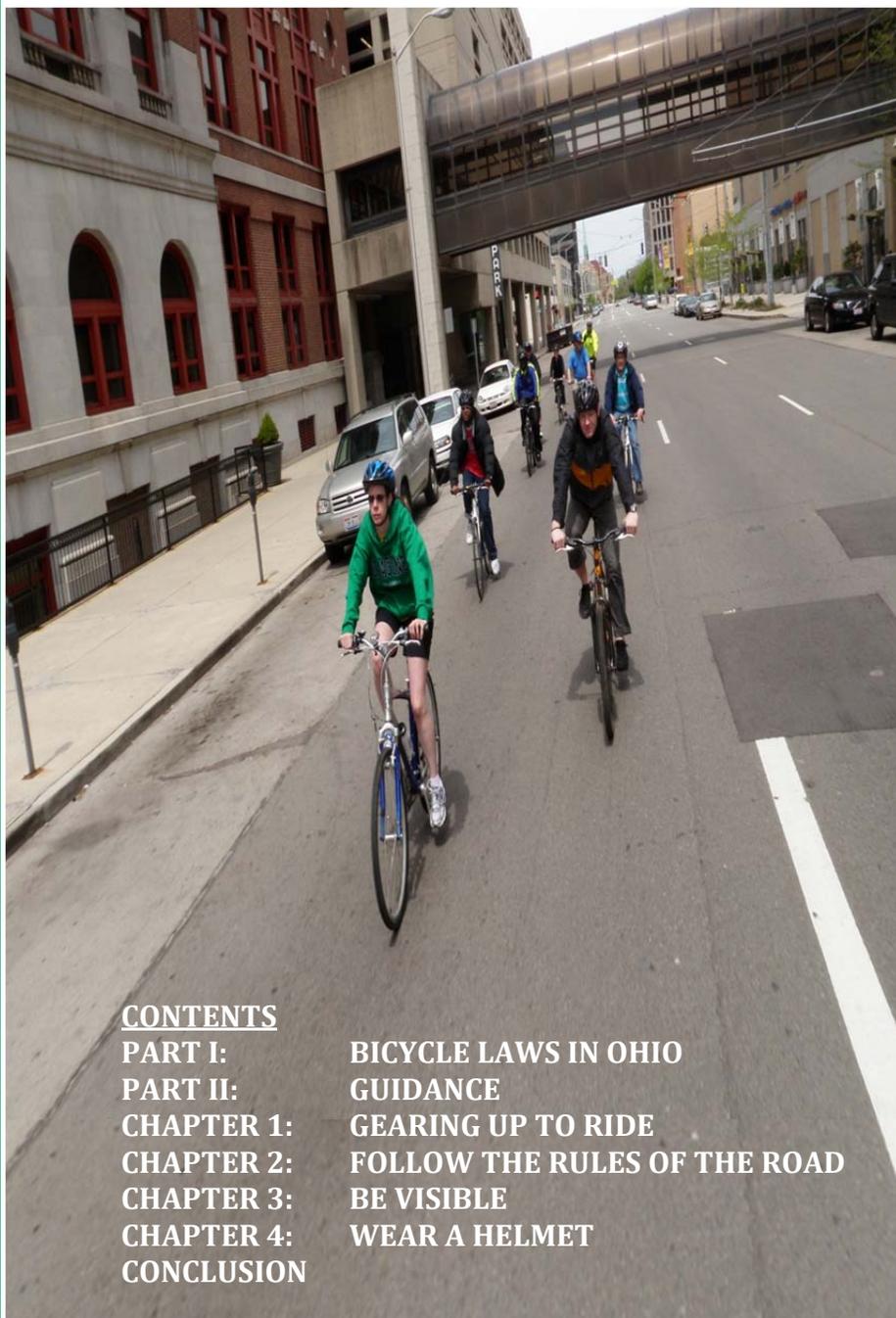
## INTRODUCTION

This copy of the Ohio Department of Transportation's (ODOT's) Cycling Smarter Guide was developed by the ODOT Bicycle and Pedestrian Program and will be used by ODOT as a replacement for the "Ohio Bicycling Street Smarts" publication. The previous publication entitled *Ohio Bicycling Street Smarts: Riding Confidently, Legally, and Safely* was developed by John S. Allen and published by Rubel BikeMaps. The printing and distribution of this previous edition was made possible through the Transportation Enhancement Program. ODOT's Cycling Smarter Guide is a new guide developed under the ODOT's Division of Statewide Planning and whose printing is made possible through Share the Road License Plate Fees per Ohio Revised Code 4503.521.

This guide is divided into two parts. The first contains excerpts from the Ohio Revised Code pertaining to bicycle law. The second contains practical advice and illustrations that give readers an understanding of how to safely and legally ride on public roads. Portions of the content for the second part of the guide were developed from materials available from the League of American Bicyclists, Oak Knoll School, the American Association of State Highway and Transportation Officials (AASHTO) and National Highway Traffic Safety Administration (NHTSA). This guide is designed for riders old enough to use city streets for commuting, such as travel to and from work and/or to and from local amenities like the library or grocery store.

This guide is to aid in your knowledge of existing techniques that can be applied to riding on the road to help reduce the risk and conflicts between all users of the roadway. Users of this guide assume full responsibility for their own actions and safety. ODOT encourages you to learn as much about the rules of the road as you can. Take a cycling course from a trained and experienced instructor from your local advocacy organization or police force.

We also encourage cyclists to support these and other statewide education efforts by purchasing "Share the Road" license plates when you renew your license plates. This ensures bicycling education continues in Ohio. Proceeds from these plates go into a special fund that is used for the creation and distribution of bicycle safety materials such as this one. Plates can be ordered at: [http://bmv.ohio.gov/sp\\_share\\_the\\_road.stm](http://bmv.ohio.gov/sp_share_the_road.stm)



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Photo courtesy of Five Rivers Metroparks

## PART I: BICYCLE LAWS IN OHIO

**Chapter 4511 of the Ohio Revised Code** contains the laws that govern operation of vehicles on Ohio roads. Most driving laws apply to cyclists as well as motorists. There are also a few laws that apply specifically to cyclists.

This guide shows excerpts of Ohio Law as of Jan. 1, 2011. Check for any revisions to the law at <http://codes.ohio.gov/orc/4511>. Also check local ordinances for bicycle laws specific to your community. Most common laws include riding on the sidewalk and helmet usage.

### **§ 4511.01 Definitions.**

(A) "Vehicle" means every device, including a motorized bicycle, in, upon, or by which any person or property may be transported or drawn upon a highway, except that "vehicle" does not include any motorized wheelchair, any electric personal assistive mobility device, ... or any device, other than a bicycle, that is moved by human power.

(G) "Bicycle" means every device, other than a tricycle designed solely for use as a play vehicle by a child, propelled solely by human power upon which any person may ride having two tandem wheels, or one wheel in the front and two wheels in the rear, or two wheels in the front and one wheel in the rear, any of which is more than fourteen inches in diameter.

### **§ 4511.52 Bicycles.**

(A) Sections... of the Revised Code that are applicable to bicycles apply whenever a bicycle is operated upon any highway or upon any path set aside for the exclusive use of bicycles.

(B) Except [operating under the influence of alcohol or drugs], a bicycle operator who violates any section of the Revised Code... applicable to bicycles may be issued a ticket, citation, or summons by a law enforcement officer for the violation.... A person who commits any such violation while operating a bicycle shall not have any points assessed against the person's driver's license.

(C) Except [violations involving alcohol or drugs], in the case of a violation... by a bicycle operator or by a... motor vehicle operator [who] endangered the lives of bicycle riders at the time of the violation, the court... may require the bicycle operator or motor vehicle operator to take and successfully complete a bicycling skills course approved by the court in addition to or in lieu of any penalty otherwise prescribed by the Revised Code for that violation.

### **4511.07 Local traffic regulations.**

(A)(8)... [local authorities may regulate] the operation of bicycles; provided that no such regulation shall be fundamentally inconsistent with the uniform rules of the road... and that no such regulation shall prohibit the use of bicycles on any public street or highway except [on freeways]

*(B) No ordinance or regulation enacted under... this section shall be effective until signs giving notice of the local traffic regulations are posted...*

**§ 4511.25 Lanes of travel upon roadways of sufficient width.**

*(A) Upon all roadways of sufficient width, a vehicle... shall be driven upon the right half of the roadway except ...*

*(1) When overtaking and passing another vehicle ..., or when making a left turn ...;*

*(2) When an obstruction exists making it necessary to drive to the left of the center of the highway; provided, any person so doing shall yield the right of way to all vehicles traveling in the proper direction ...;*

*(3) When driving upon a roadway divided into three or more marked lanes ...;*

*(4) When driving upon a roadway designated and posted with signs for one-way traffic;*

*(5) When otherwise directed by a police officer or traffic control device.*

*(B)...any vehicle...proceeding at less than the prevailing and lawful speed of traffic... shall be driven in the right-hand lane then available for traffic, and far enough to the right to allow passing by faster vehicles if such passing is safe and reasonable, except ...:*

*(a) When overtaking and passing another vehicle ...;*

*(b) When preparing for a left turn;*

*(c) When the driver must necessarily drive in a lane other than the right-hand lane to continue on the driver's intended route.*

*(2) Nothing in ... this section requires a driver of a slower vehicle to compromise the driver's safety to allow overtaking by a faster vehicle.*

**§ 4511.55 Riding bicycles; motorcycles abreast.**

*(A) Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable obeying all traffic rules applicable to vehicles and exercising due care when passing a standing vehicle or one proceeding in the same direction.*

*(B) Persons riding bicycles or motorcycles upon a roadway shall ride not more than two abreast in a single lane, except on paths or parts of roadways set aside for the exclusive use of bicycles or motorcycles.*

*(C) This section does not require riding at the edge of the roadway when it is unreasonable or unsafe... [such as] when necessary to avoid fixed or moving objects, parked or moving vehicles, surface hazards, or if it otherwise is unsafe or impracticable to do so, including if the lane is too narrow for the bicycle and an overtaking vehicle to travel safely side by side within the lane.*

**§ 4511.27 Rules governing overtaking and passing of vehicles.**

*(A)(1) The operator of a vehicle... overtaking another vehicle... proceeding in the same direction shall,... pass to the left thereof at a safe distance, and shall not again drive to the right side of the roadway until safely clear of the overtaken vehicle...*

*(2) Except when overtaking and passing on the right is permitted, the operator of an overtaken vehicle shall give way to the right in favor of the overtaking vehicle...*

**§ 4511.36 Rules for turns at intersections.**

*The driver of a vehicle intending to turn at an intersection shall be governed by the following rules:*

*(A) Approach for a right turn and a right turn shall be made as close as practicable to the right-hand curb or edge of the roadway.*

*(B) At any intersection where traffic is permitted to move in both directions on each roadway entering the intersection, an approach for a left turn shall be made in that portion of the right half of the roadway nearest the center line thereof and by passing to the right of such center line where it enters the intersection and after entering the intersection the left turn shall be made so as to leave the intersection to the right of the center line of the roadway being entered. Whenever practicable the left turn shall be made in that portion of the intersection to the left of the center of the intersection...*

**§ 4511.39 Turn and stop signals.**

*(A) No person shall turn a vehicle... or move right or left upon a highway unless and until such person has exercised due care to ascertain that the movement can be made with reasonable safety nor without giving an appropriate signal in the manner hereinafter provided.*

*When required, a signal of intention to turn or move right or left shall be given continuously during not less than the last one hundred feet traveled by the vehicle ... before turning, except that in the case of a person operating a bicycle, the signal shall be made not less than one time but is not required to be continuous. A bicycle operator is not required to make a signal if the bicycle is in a designated turn lane, and a signal shall not be given when the operator's hands are needed for the safe operation of the bicycle....*

**§ 4511.40 Hand and arm signals.**

*(A) [Hand signals shall be given with the left hand and arm as follows:]*

*(1) Left turn, hand and arm extended horizontally;*

*(2) Right turn, hand and arm extended upward;*

*(3) Stop or decrease speed, hand and arm extended downward.*

*(B) ... a person operating a bicycle may give a right turn signal by extending the right hand and arm horizontally and to the right side of the bicycle.*

**§ 4511.56 Bicycle signal devices.**

*(A) Every bicycle when in use [between sunset and sunrise and when visibility is less than 1000 feet] shall be equipped with the following:*

*(1) A lamp on the front ... that shall emit a white light visible from a distance of at least five hundred feet to the front and three hundred feet to the sides. A generator-powered lamp... may be used to meet this requirement.;*

*(2) A red reflector on the rear that shall be visible from all distances from one hundred feet to six hundred feet to the rear...;*

(3) A lamp emitting either flashing or steady red light visible from a distance of five hundred feet to the rear... If the red lamp performs as a reflector... a separate reflector is not required.

(B) Additional lamps and reflectors may be used... except that red lamps or reflectors shall not be used on the front and white lamps and reflectors shall not be used on the rear of the bicycle.

(D) Every bicycle shall be equipped with an adequate brake....

**§ 4511.711 Driving upon sidewalk area.**

No person shall drive any vehicle, other than a bicycle, upon a sidewalk or sidewalk area except upon a permanent or duly authorized temporary driveway... no local authority may require that bicycles be operated on sidewalks.

**§ 4511.22 Slow speed.**

(A) No person shall stop or operate a vehicle... at such an unreasonably slow speed as to impede or block the normal and reasonable movement of traffic, except when stopping or reduced speed is necessary for safe operation or to comply with law.

(C) In a case involving a violation of this section, the trier of fact, in determining whether the vehicle was being operated at an unreasonably slow speed, shall consider the capabilities of the vehicle and its operator.

**§ 4511.31 Establishing hazardous zones.**

(B) [Prohibition of passing] does not apply when all of the following apply:

(1) The slower vehicle is proceeding at less than half the speed of the speed limit applicable to that location.

(2) The faster vehicle is capable of overtaking and passing the slower vehicle without exceeding the speed limit.

(3) There is sufficient clear sight distance to the left of the center or center line of the roadway to meet the overtaking and passing provisions of... the Revised Code, considering the speed of the slower vehicle.

**§ 4511.21 Speed limits - assured clear distance.**

(A) No person shall operate a motor vehicle ... at a speed greater or less than is reasonable or proper,... and no person shall drive any motor vehicle... at a greater speed than will permit the person to bring it to a stop within the assured clear distance ahead.

**§ 4511.132 Operation at intersections with malfunctioning traffic control signal lights.**

(A)The driver of a vehicle... who approaches an intersection where traffic is controlled by traffic control signals shall do all of the following, if the signal facing the driver either exhibits no colored lights or colored lighted arrows or exhibits a combination of such lights or arrows that fails to clearly indicate the assignment of right-of-way:

(1) Stop at a clearly marked stop line, but if none, stop before entering the crosswalk on the near side of the intersection, or, if none, stop before entering the intersection;

(2) Yield the right-of-way to all vehicles... in the intersection or approaching on an intersecting road, if the vehicles... will constitute an immediate hazard during the time the driver is moving across or within the intersection or junction of roadways;

(3) Exercise ordinary care while proceeding through the intersection.

**§ 4511.051 Freeways - prohibited acts.**

(A) No person, unless otherwise directed by a police officer, shall:

(2) Occupy any space within the limits of the right-of-way of a freeway, with... a bicycle,

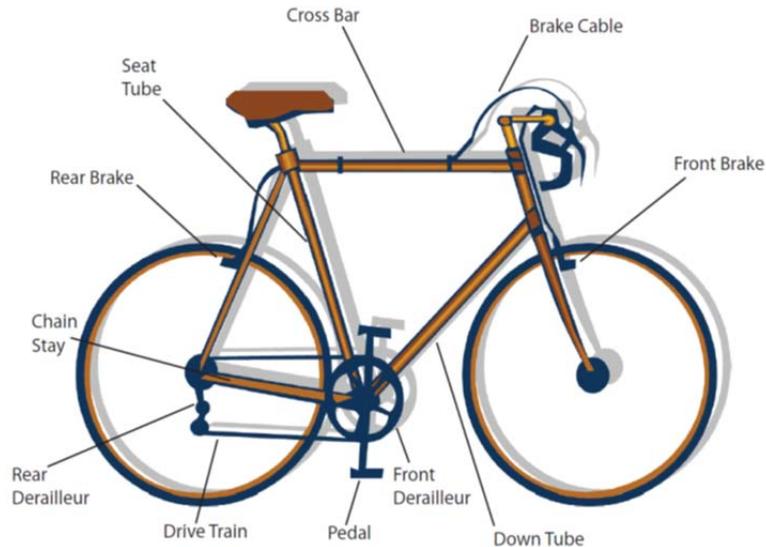
**§ 4511.54 Prohibition against attaching bicycles and sleds to vehicles.**

(A) No person riding upon any bicycle... shall attach the same or himself to any... vehicle while it is moving upon a roadway.

## PART II: GUIDANCE

### CHAPTER 1: GEARING UP TO RIDE

Whether you have a new bike or one that you have dusted off from your garage, it is important to make sure your bike is in good working order prior to your commute. The ABC Check is a simple and easy way to remember to check the most essential working components of your bicycle: the tires, the brakes, and the gears. Below is an illustration of some of the basic components of a bicycle.



#### Air

Inflate your tires to the rated pressure as listed on the sidewall of the tire. Use a pressure gauge to insure proper pressure. Even though it's a bit more expensive than a smaller bike pump, it really is worth the investment. Remember to check for damage to tire tread and sidewall. Find a local bike co-op or bike shop to help you replace your tires if damaged.

#### Brakes

Inspect your pads for wear and replace them if there is less than ¼" of pad left. Check to make sure they are not rubbing on your tires or diving into the spokes.

#### Chain

Inspect your chain for wear and ensure that the 12 links measure no more than 12 1/8 inches. If your chain skips on the cassette, you might need a new one. If needed, take your bike to a local bike co-op or bike shop for assistance.

#### Bicycle Commuting Checklist

Below are some of the items to consider bringing with you. This list is not extensive and was developed for commuting situations where access to aid is nearby, alternative transportation such as transit is available, and trips do not exceed over an hour. Over time, you will develop your own list of preferred items specific to your commuting trip.

- Helmet
- Bright colored clothing or safety vest
- Water (in bottles or hydration pack)
- Eye protection (sunglasses or clear lenses)
- Street map and bus pass
- Lock
- Cycling multi-tool (with Allen wrenches)
- Backpack, messenger (sling) bag, or saddle (underseat) bag
- Headlight and taillight (with blinking option)
- Bell
- Mirror (for handlebar or helmet)
- Clothing options for variable weather including raingear and a windbreaker
- Leg straps for pants
- Sunscreen and lip balm
- Change of clothing
- Gloves

The information for this Chapter was provided by the League of American Bicyclists. We encourage the reader to visit the League of American Bicyclists website to learn more at [www.bikeleague.org](http://www.bikeleague.org).

## CHAPTER 2: FOLLOW THE RULES OF THE ROAD

The most important rule to remember when riding on public roads is that a bicyclist must ride with traffic and obey the same laws as motorists. The safest way to interact with traffic is to be a part of it, go with the flow of traffic, and be as predictable as possible. Remember – it is illegal in Ohio to ride your bicycle on limited access freeways so be sure to stay on local roads preferably with low speeds, low volume, and low truck traffic. Also remember that in most instances it is illegal to ride your bicycle on the sidewalk. Consult your local City laws for more detail.

It is important to be very aware of your surroundings around you. Always keep your eyes scanning the scene ahead and the activity occurring alongside and in the roadway. The key is to keep your eyes moving - you have to look up at the traffic and also down at the road for potholes and cracks. If you are able, look through the rear windows of parked cars on the streets as you pass them because drivers or passengers may be getting ready to open their door and exit just as you are passing them. If there is a lot of activity along the roadway, you should consider slowing down so that you are able to spot hazards in time.

### SIGNALLING

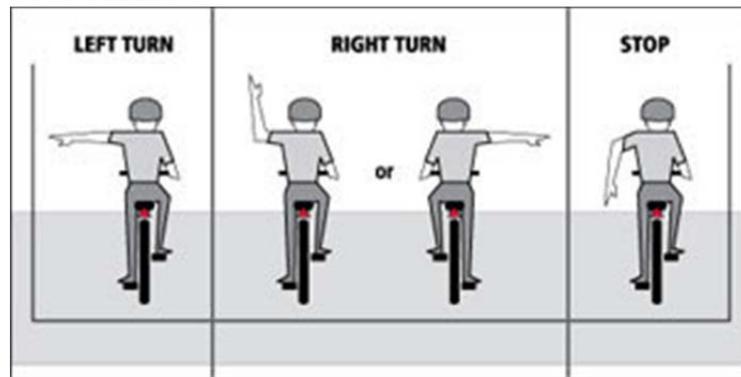


Illustration from [http://www.oakknollschool.com/bike\\_safety\\_page/](http://www.oakknollschool.com/bike_safety_page/)

Hand signals are given by bicyclists to indicate to the driver their intention, which most probably is to turn right, left, or stop. Above is an illustration of hand signals acceptable for Ohio bicyclists to utilize when riding on the road. When you are signaling, it is good practice to

look behind you and make sure the driver has seen your movements. This maneuver will take some practice but will get easier the more you do it. The key is to be able to signal, look back, and still have control of your bicycle. Signaling may be the only communication you have with the surrounding users of the roadway so get into the habit of using hand signals on all of your turning movements, no matter how simple an intersection you are traveling through or how busy a roadway you happen to be on.

### RIDING WITH TRAFFIC

Use the rightmost lane that heads in the direction that you are traveling. Riding against traffic on the wrong side of the road is illegal and increases a cyclist's risk dramatically. Motorists turning are not likely looking for traffic from where you are riding. If you are riding with traffic, a motorist can adjust their speed to accommodate you on the road. Some novice cyclists have expressed fear from being rear-ended from the cars behind them if they ride with traffic. The odds of this happening are much lower compared to riding the wrong way and being hit by a vehicle from the opposite direction that does not see you.

### RIDING IN A TRAVEL LANE

According to Ohio laws, bicyclists are to ride as far to the right side of the roadway as safely and practicably as possible. It may be hard to determine what is safe and practicable and it may be subjective based on the comfort level of the rider. The following paragraphs offer a few general rules to follow.

Ride far enough into the lane to avoid the risk from blind spots. Generally, it is a good rule to ride 3' from the curb if there are no parked cars and 3' to 4' from the door of a parked car if there is parallel on street parking. If you hug the edge of the travel lane you are riding in, the chances of you getting squeezed out by a motorist behind you increase. See Figure 1 below.

Whatever type of roadway you are using be sure to ride in a predictable, straight line where everyone can see you. There will be some instances where you will have to "take the lane" because it is safer for you to be there than the 3' or 4' from the edge of the roadway as discussed in the previous paragraphs. Always stay to the rightmost lane. If you are on a multi-lane roadway, have taken the

lane, and have a motorist that wants to pass you, they have other lanes they can enter to safely go around you.

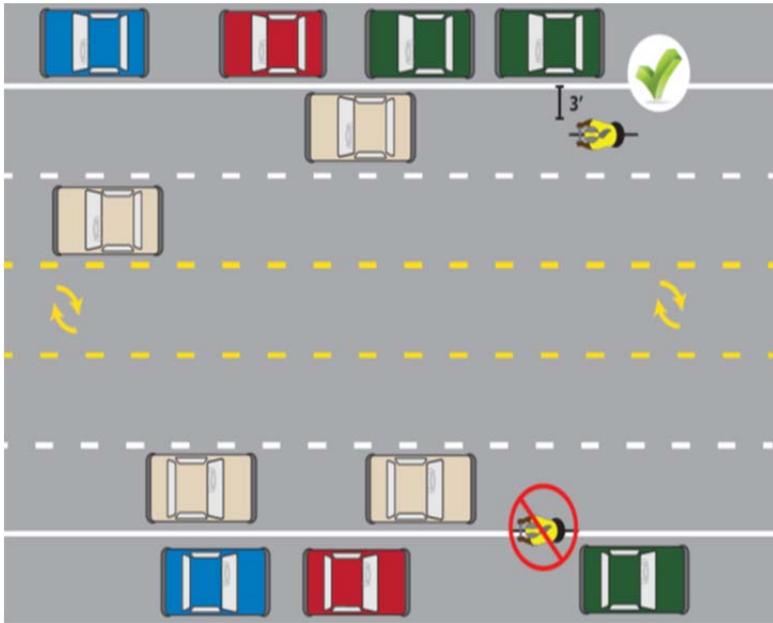


Figure 1: Proper travel lane riding techniques. Always ride WITH traffic.

If you are riding on a roadway that only has one travel lane in each direction and an impatient driver approaches from behind you wanting to pass, be courteous and remain calm. Do not pull over to the right to let them pass if it is unsafe for you or the motorist. You will most likely get squeezed off of the road and could potentially be injured. The motorist may have to slow down and wait until it is clear to pass. By remaining in your position, you are communicating to the driver that it is not safe for the motorist to pass and they should wait until it is clear.

Always be courteous. If you know you are backing up traffic and have the ability to pull to the side to let a line of cars pass, pull to the side of the road and let the traffic go by.

You should not ride on surfaces that are full of debris, heaved/missing pavement, or drainage grates that could cause you to fall. The right side of the road begins where there is a clear and usable space for you to ride in. In order to avoid potential obstacles described above, you may have to “take the lane” and ride into the center of the travel lane.

Look behind you, signal your intention, and proceed into the center of the lane until it is safe to move back over.

You are required to stop at all red lights at intersections and obey all stop signs! Remain lined up behind the cars in your current travel lane. Do not “shimmy” up to the front of the line at the intersection. This positioning is only acceptable if there is a dedicated space for the bicyclist to be in like a bike lane and/or bike box. Do not weave in between and around cars to get ahead. This is illegal and you can be fined.

### RIDING IN A SHARED LANE

In Ohio, every roadway except for a limited access freeway is considered a shared roadway and bicyclists are allowed to ride there. However, there may be markings or signs that have been installed that are commonly referred to as a shared lane, or “sharrow”. These features indicate to a motorist that bicyclists may be encountered and that they should be mindful and respectful of them. If applied properly, the pavement marking can also indicate to the bicyclist where it is the safest to ride (3’ to 4’ travel space is from the parked car or curb).

When riding in a shared use lane, the same riding techniques and rules apply as described in the other sections in this Chapter.

A typical treatment for indicating a shared use lane includes a pavement marking and a sign combination shown in the picture to the right from Hilliard, Ohio.



Hilliard, Ohio “sharrow” lane markings and Share the Road signage indicating a shared lane facility.

## RIDING IN A BIKE LANE

According to the American Association of State Highway and Transportation Officials (AASHTO), bike lanes are a portion of the roadway designated for preferential use by bicyclists. They are one way facilities that typically carry bicycle traffic in the same direction as adjacent motor vehicle traffic. By designating a place on the roadway for the bicycle user, they facilitate more predictable movements by bicyclists and motorists. They enable you to ride at your preferred speed, even when adjacent traffic speeds up or slows down. Bike lanes also encourage you to ride on roadways in a position where you are most likely to be seen by a motorist entering or exiting the roadway than they would be if you were riding on a sidewalk. Properly designed bike lanes encourage bicyclists to operate in a manner consistent with the legal and safe operation of all vehicles. Bike lanes should follow travel paths that lawfully operating bicyclists would take to travel in their intended direction within the roadway cross section. Bike lanes are not intended to accommodate all bicycle use on a roadway; bicyclists may leave a bike lane to pass other bicyclists, make left or right turns, avoid debris or hazards, or to pass busses momentarily stopped in a bicycle lane.

Most bike lanes will be placed immediately adjacent to a travel lane and vary in width from 4 feet to 6 feet. When riding in a bike lane, the same riding techniques and rules apply as described in the other sections in this Chapter. They will have signage and striping associated with it. See an example of this type of bike lane in the picture below on West Broad Street in Columbus, Ohio.



West Broad Street bike lanes in Columbus, Ohio.

Remember you may be entering and exiting the bike lane when you need to turn left or right at an intersection. It is also very important to be aware of vehicles that are turning right at intersections or into shopping centers. If there is a parked car or debris in the bike lane that would cause your ride to be unsafe, you are legally allowed to ride in the automobile lane furthest to the right.

Vehicles that travel in the lane immediately next to the bike lane will typically produce a strong enough wind zone to clear two feet of the bike lane of debris. Try to occupy that space if the bike lane has not been regularly swept. Be careful of drain grates, utility lids, potholes and unevenness in the pavement.

Many times in a bike lane you will be sharing the space with busses. This means a bus will be stopping at designated bus stops and they will temporarily pull into the bike lane, coming to a complete stop. If you are riding behind a bus, be aware of the stops and starts that they will be making, be courteous to the driver, communicate with them through eye contact and hand signaling, and safely pass them on the left. Remember to use your hand signal when returning to the bike lane.



Correct bus positioning at a bus stop on Vassar Street in Boston, Massachusetts. Photo courtesy of <http://www.truewheelers.org/>

On larger roadways, you may find yourself riding in a bike lane that has intersections with right turn only lanes. This configuration is seen in the picture below from Hilliard, Ohio. If you are planning to ride straight through this type of intersection, you should be positioned in between the through travel lane and the dedicated right turn only lane. The dashed lines upon your approach may seem confusing but maintain your position in the bike lane. These lines serve as visual cues telling the motorist this is the area where they move over into that lane to turn right. This area creates a potential point of conflict between you and the motorist. The motorist may not realize or understand the pavement marking cues and try to pass you on your left. This is commonly known as a “hook” move. Use extreme caution and be aware of the other motorists around you.



*Bike lane in Hilliard, Ohio showing the markings at an intersection with a dedicated right turn lane.*

## RIDING THROUGH AN INTERSECTION

Negotiating intersections is an important bike riding skill for cyclists to master. Riders can utilize a range of techniques that comes only with practice. Proper planning and positioning helps cyclists develop confidence to make right and left hand turns or ride through intersections.

When you are approaching an intersection, begin to move to the correct lane position depending on which way you’ll be going. If you are planning to turn left, right, or ride straight through, think of navigating the intersection as if you were a car. If you are riding in a lane furthest to the right, you will have to change lanes if you are going to turn left. If turning right or riding straight through, you may be positioned in the correct place. It will just depend on what type of intersection you encounter. For ease of illustration purposes, the figures shown under the right turn, left turn, and straight through sections represent turning scenarios if you are riding in a bike lane. The same turning rules would apply if you were riding in a travel lane, shared lane, etc.

## MAKING RIGHT TURNS

When you are planning to turn right, stay in the furthest right lane you are currently traveling in. If you are traveling in a bike lane and there is a right turn only lane, you will need to position yourself over to that lane in between the dashed lines. The following steps and Figure 2 will provide guidance on how to accomplish this:

- Step 1:** Physically turn your head to the right to make sure there is a space for you to move into the lane and that there is not a car coming too fast behind you. Do not let a driver try to pull around you. Put your right arm straight out at a 90 degree angle indicating to drivers that you are about to merge over. Take the lane.
- Step 2:** Slowly merge into the lane and continue riding through the intersection.
- Step 3:** Look for pedestrians, look to make sure the lane is clear, and signal again that you are turning right. This time your arm signal is indicating your intent to turn right at the intersection.
- Step 4:** Turn right.

Be sure to check both streets for pedestrians crossing, whether there is a marked crosswalk there or not. Remember that you are considered a vehicle and pedestrians have the right of way so you must yield to them. This means you may have to come to a full and complete stop in order to allow them enough time to pass.

Also be sure to look and make sure drivers turning left from the opposite direction have seen you, especially if you see them trying to turn into the same lane you are about to occupy. Eye contact and proper signaling are essential in these types of situations.

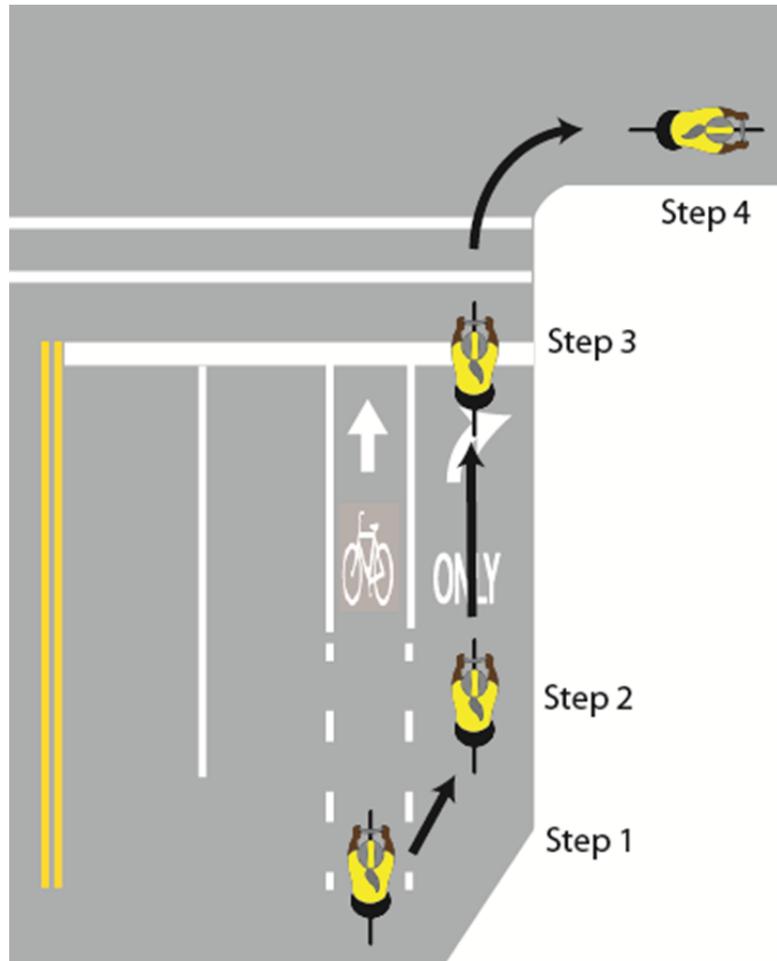


Figure 2: Steps for Turning Right

## MAKING LEFT TURNS

You are most likely traveling in the furthest right position of the roadway and are going to need to turn left at the next intersection. The lane you currently are traveling in may be a dedicated bike lane, a shared lane, or a regular automobile lane. Make sure you have given yourself enough distance from the intersection to allow for crossing over the necessary lanes to reach the left turn lane. This distance will depend on the number of lanes, the volume of traffic, the speed limit of the road, and how fast you are traveling. The following steps correspond to the steps illustrated in Figure 3 and will assist you in crossing two lanes of traffic in order to safely reach the left turn lane.

**Step 1:** Physically turn your head to the left to make sure there is a space for you to move into the lane and that there is not a car coming too fast behind you. Do not let a driver try to pull around you. Put your left arm straight out at a 90 degree angle indicating to drivers that you are about to merge over. Take the lane.

**Step 2:** Slowly merge into the lane. Take the lane.

**Step 3:** When you are nearing the point where you can enter the left turn lane, turn your head to the left again, arm signal with your left arm again, and enter into the left turn lane.

**Step 4:** If you are at a busy intersection, you will most likely need to come to a complete stop at the stop bar before turning. Look to your right and left for pedestrians entering in the crosswalk in front of you. When traffic is clear, slowly start riding into the intersection while signaling again that you are turning left. This time your arm signal is indicating your intent to turn left at the intersection.

**Step 5:** Turn left. Look out for pedestrians crossing from the other crosswalk.

If you are feeling uneasy or uncomfortable crossing the required number of lanes, consider crossing the intersection as a pedestrian. When you reach the intersection, ride to the right and dismount. Walk you and your bike to the pedestrian crossing. Wait for the pedestrian signal and safely walk you and your bike through the intersection in the designated crosswalk. You will need to walk through two legs of



## RIDING THROUGH A ROUNDABOUT

A roundabout is a one-way, circular intersection in which traffic flows around a center island. Roundabout or traffic circles have existed in other parts of the country for many years because they are proven to be safer. Within the last decade, they are becoming more popular here in Ohio.

Caution should be taken as a bicyclist traveling through a roundabout. If you enter a roundabout stay in the right lane regardless of which leg you plan to exit. The illustration shows the rider in yellow exiting at the next leg and the rider in red going straight through the intersection. The steps below are for the rider traveling straight through the intersection but the same rules apply for the rider who is exiting sooner. Remember to make eye contact with as many drivers as possible and use all appropriate hand signals when changing lanes and turning.

### Steps for the second or third leg rider (northbound bicyclist in red):

**Step 1:** Make sure there is space for you in the right most lane, signal your intention, and safely turn right.

**Step 2:** Slowly merge into the lane. Take the lane.

**Step 3:** When approaching the next leg of the intersection, be sure to watch for cars entering the roundabout. Be careful as they may not see you and may cut you off.

**Step 4:** Start slowing down. This time put your right arm straight out at a 90 degree angle indicating to drivers that you are about to turn right and are exiting the roundabout. Turn right and be sure to look out for any pedestrians crossing in the crosswalks.

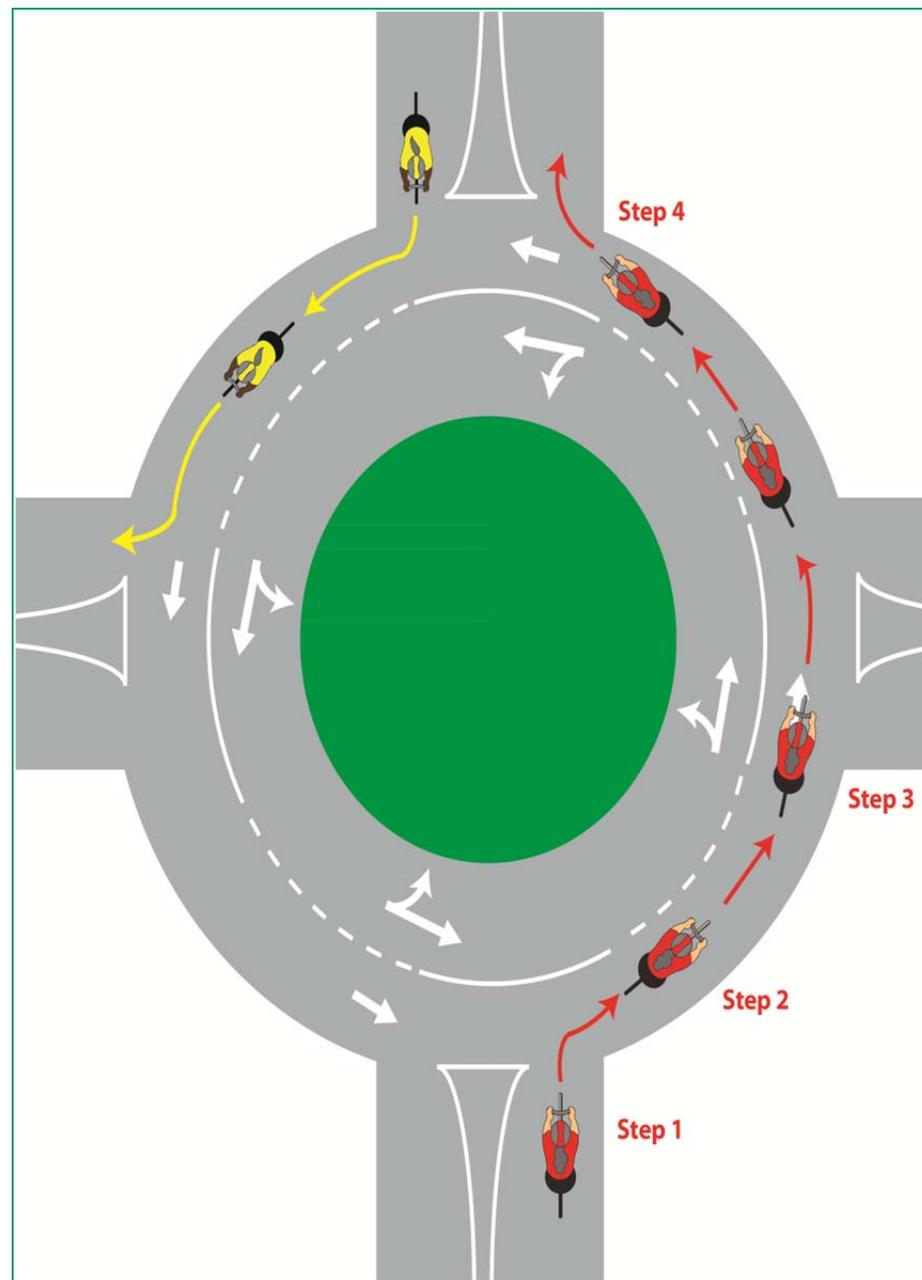


Figure 4: Steps for Roundabout Riding

## RIDING NEAR ON AND OFF-RAMPS

According to Ohio Law, bicyclists and pedestrians are not allowed on freeways. If you are on a local road crossing over an overpass that has on and off ramps for cars and trucks to enter a freeway/interstate, treat it the same way that you would treat a dedicated right turn lane. If possible, avoid riding on these types of roadways. Look for a nearby alternate route that will take you roads that do not have freeway entrances and exits. Many motorists may be more focused on getting on or off the freeway than thinking about the bicyclist that could be on the local road with them.

## CHAPTER 3: BE VISIBLE

If you are riding during the evening hours, it is imperative that you make yourself as visible to other users of the roadway as possible. This allows for two very important objectives:

- 1) It allows you to see the road or path in front of you but just as important
  - 2) It allows motorists, pedestrians, and other cyclists to see you.
- Don't forget to plan ahead if you anticipate being out after dark!

## EQUIP YOUR BICYCLE WITH PROPER LIGHTING

According to Ohio Law, you are required to have lights on your bicycle if you are riding at night or when visibility is less than 1,000 feet. You must have a white light on the front that emits at least 500 feet to the front and 300 feet to the sides. You also have to have a rear reflector on the back of the bicycle that flashes or is steady and visible from 100 to 600 feet.

When looking for a proper light, there are many options to choose from. Make sure you consider what type of riding you will be doing. If you are planning on doing more off road, unpaved riding, you may want to choose one that is waterproof or perhaps made of a stronger material. If you know you will be riding on urban streets that have streetlights, perhaps you may only need the very basic models that conform to the law. If you have more than one bike that you ride, perhaps you should consider one that has an easy, quick-release feature that would allow you to use them interchangeably. Lastly, make sure the light you choose has the correct mounting hardware and that it is compatible with your bicycle.

## WEAR BRIGHT CLOTHING

Whether it is dark or not, it is always best to wear bright colored clothing when riding to and from work. There are many department stores that sell inexpensive t-shirts and jackets in fluorescent colors. If you are planning on wearing your work clothes while riding, be sure to have bright colored accessories that you can easily attach to your person. This can include reflective vests, jackets, wristbands or leg bands. These can be purchased at a local bicycle shop or a shop that specializes in selling clothing to construction workers. Another good option to increase your visibility is adding reflective tape to your backpack or satchel and to moving parts of your bike. Don't wear long

jackets or gear that could get tangled with the spokes or the frame of the bike. Avoid jackets with hoods that will block your view when you trying to look behind you.



*Photo courtesy of Fulcrum Creatives, LLC*

## CHAPTER 4: WEAR A HELMET

According to the National Highway Traffic Safety Administration (NHTSA), a properly fitted bicycle helmet reduces the risk of head injury by as much as 85 percent and the risk of brain injury by as much as 88 percent. Bicycle helmets should be worn at all times.

You want the helmet to be comfortably touching the head all the way around, level and stable enough to resist violent shakes or hard blows and stay in place. It should be as low to the head as possible to maximize side coverage, and held level on the head with a strap comfortably snug.

The helmet should sit level on the head, with the front one finger width above the eyebrows, or if the rider uses glasses, just above the frame of the glasses. Before you start riding, it has been suggested to try slowly and carefully walking into a wall to see whether the helmet hits the wall before your nose does. If that's the case, that means you've got it on right.

Adjust the straps so that the Y of the side straps meet just below your ear, and the chin strap should be snug against the jaw so that when you open your mouth very wide you should feel the helmet pull down a little bit.

When the helmet is level on your head, adjust the rear straps, then the front straps, to locate the Y fitting where the straps meet just under your ear. You may have to slide the straps across the top of the helmet to get them even on both sides.

When you feel the straps are right, shake your head around. You should not be able to move the helmet more than an inch from the level position. Continue to adjust the straps so that this is the case. The helmet should be comfortable enough to forget that it is on your head after only a few minutes.

## CONCLUSION

Bicycling as a form of commuting has been growing steadily in Ohio cities over the past decade. The Ohio Department of Transportation recognizes bicycling as a legitimate form of transportation and encourages the safe use and development of non-motorized transportation alternatives for Ohio residents.

This guidebook provides Ohioans some basic techniques for how to increase their on road cycling skills in an attempt to improve safety and confidence in all road users. The Ohio Department of Transportation encourages all users of the roadway to Share the Road responsibly.

**Please be safe, obey all traffic laws, wear a helmet, and enjoy!**

For more information on biking in Ohio, visit the ODOT Bicycle & Pedestrian Program website:  
[www.dot.state.oh.us/bike](http://www.dot.state.oh.us/bike)



This compact booklet will give you techniques that can be applied to riding your bicycle on the road. These techniques aim to reduce the risk and conflicts between all users of the roadway, creating a safe experience for everyone.

