



## *Increasing safety through traffic enforcement*

Welcome to the Law Officer's Guide for increasing safety through traffic enforcement.

This is just a placeholder slide from which to begin the training.

Slides with this background design will denote new sections. All other slides have a different background type.



## Program Goals

- Discuss the rules of the road.
- Provide data showing the importance of enforcement to reduce injuries and deaths.



This is what we hope you will learn from this training.

Additional Goals include:

- Provide you with the tools you need to enforce the traffic laws that affect bicyclists, motorists, and others who interact with bicyclists.
- Alert you to issues and real-life situations that involve bicyclists and motorists.
- Give you resources to answer questions arise in your day to day activities or when you are interested in starting a bicycle program in your department.

Note: This modern officer is modeling the uniform and equipment of a Boston Metropolitan District Commission bicycle police officer from 1907.



## Program Notes

- Not an all-encompassing course about all bicycle/motorist traffic laws.
- Focuses on the most important rules: those relating to vehicle operation and safety
- Emphasizes the need for equitable bicyclist and motorist enforcement

It is important to note that this course is not meant to be an all encompassing review of every bicyclist/motorist situation a law enforcement officer may face.

This course stresses the laws and data pertaining to reducing crashes and saving lives.

The course also stresses the need for Sharing the Road, and that motorist and bicyclist behavior are both important towards promoting a safe and efficient transportation system.

## Relationship to US Gov't National Strategies

4



“help law enforcement officers enforce bicycle-safety traffic laws aimed at bicyclists and motorists.”



“A nation of travelers with new opportunities to walk or ride a bicycle as part of their everyday life.”

Efforts to promote multi-modal transportation and to give law enforcement officers tools to enforce traffic laws are both endorsed by the federal government and have institution support.

Both the US Department of Transportation and National Highway Traffic Safety Administration are interested in encouraging safe bicycling, and police enforcement plays a big part in keeping bicycling a safe form of transportation.



## Comprehensive Bicycle Planning

5

- **Engineering** of roads and paths
- **Education** of bicyclists and motorists
- **Encouragement** of bicyclists' rights and responsibilities, and of safe and lawful bicycling
- and **Enforcement**

This slide is intended to show that enforcement is an important part in encouraging a safe transportation system., but not the only part. Comprehensive Bicycle Planning and promotion includes Enforcement as an essential element.

Engineering refers to how roads and paths are actually built - how wide is the travel lane, is there a bike lane or a sidewalk, what kind of traffic lights and signs are present?

Education encompasses detailed efforts to positively influence the behavior of bicyclists and motorists, in order to make the transportation system safer and more efficient.

Encouragement refers to events and other outreach efforts to inform the public about bicycling and the traffic laws, and to safe bicycling as a legitimate and desirable activity.

Enforcement is a vital piece in ensuring a safe and efficient transportation system.

## Section Two: Crash Data and Statistics

6

84 million bicyclists in  
the country

- 37% under age 16
- Many infrequent riders
- Most ride for recreation or fitness
- Also - commuters, touring, utilitarian, package delivery



Statistics Source: G. B. Rogers,  
Bicycle and Bicycle Helmet Use  
Patterns in the United States in 1998.  
*Journal of Safety Research*, 31:3,  
2000.

The next few slides provide an overview of each section of the presentation.

In Section Two, we will see that bicyclists are also involved in a large number of crashes and hospital visits, many of which are preventable.

Bicyclists are everywhere throughout the transportation system.

Whether you are patrolling on a bicycle, in a cruiser, or on foot, you are very likely to encounter one of the millions of cyclists in the US. Some of these cyclists are on organized rides, some are on vacation, and others are simply using their bike to get from point A to point B.

## Section Three: Traffic Laws

7

### Bicyclists Follow the Same Traffic Laws as Other Vehicles



Many people do not know bicyclists should the same traffic laws.

Section Three of this presentation - the law section - will detail the important traffic safety laws affecting bicycling.

There are two basic categories in the traffic law: drivers and pedestrians. Bicyclists are considered drivers, not pedestrians, except that a person riding a bike on the sidewalk follows pedestrian rules and a person walking a bike is a pedestrian. (Pedestrians also include wheelchair users, and, in most states, skaters and push-scooter users.)

There are many different types of vehicles and other travelers on the road, and all behave in slightly different ways, but the main traffic rules are the same for all: you can go when you have the right of way, you have to yield or stop when it you don't. Cars, trucks, buses, farm tractors, pedestrians, motorcycles, mopeds, and bicycles are all using the road, and all need to behave safely.

## Section Four: Laws in Action

8

### Do Motorists Respect Bicyclists?

- Do motorists understand cyclists' rights and respect them?
- Are traffic laws regularly enforced when it comes to bicycle safety?



Section Four (“Laws in Action”) will detail real life situations and interactions between motorists and cyclists. It will address nuances in the law and the specific laws and situations that you will encounter as a law enforcement officer.

With cell phones, harried lifestyles, and short attention spans, motorists oftentimes aren't concentrating on watching the road.

**Instructor's note:** You may want to limit the discussion from this slide and the next to a few minutes, so that you have time for other slides. You could also have students answer the questions on a piece of paper and discuss the answers later at the end of the Laws in Action section.



## Section Four: Laws in Action

### Do Bicyclists Act Like Drivers of Vehicles?

9

- Do bicyclists know how to drive on the road and respect other road users?
- Are traffic laws regularly enforced for bicyclists?



Bicyclist behavior will also receive a close look in Section Four - the Laws in Action.

Even some adult bicyclists, who are typically licensed motorists, act as if they do not know the rules.

Young bicyclists are rarely taught the rules of the road, and even older cyclists often act as if the driving rules they know do not apply to them. Educational programs for both groups of cyclist that actually teach driving skills exist but are as yet uncommon.

## Section Five: Enforcement

### Why be Aware of Bicyclists?

### Why Enforce the Traffic Laws?

- All road users should be respectful of others' rights.
- Many people are unaware of the law.
- Most bicycle crashes are caused by unlawful behavior.



Section Five will look at the important of traffic law enforcement.

Enforcement prevents tragedies. Which would you rather do, make a traffic stop, or fill out a fatal crash report?

Enforcement basically boils down to safety. Enforcement will increase awareness and help create a safer transportation system.

Enforcement can function as education or re-education, if cyclists and motorists are unclear as to the rules.

When cyclists and motorists obey the traffic laws, crashes are much less likely to occur. But, when cyclists and motorists violate traffic laws, bad things can happen. Having to make a routine traffic stop is much better than having to file a crash report.

## Section Six: Crash Investigation

11

- Determine the cause of the crash
- Help prevent future crashes



Section 6 will provide an overview on investigating bicycle crashes.

As will be shown later in the data section, data on bicycle/motor vehicle crashes is incomplete. Comprehensive crash investigations will make it less likely that crashes happen in similar circumstances in the future. For example, if a police officer determines a sewer grate caused the cyclist to fall, the public works department can then adjust the grate to prevent future crashes. Or perhaps a pattern of crashes at an intersection will cause engineers to re-evaluate the design.

Crash investigations will also help educators and law enforcement, by helping to narrow the focus onto the most important situations and infractions.

**Instructors Note:** There are also two optional sections (Bicycle Driver Training and Working with Your Community) that are designed to provide law enforcement officers with ideas and material that may be suitable for community outreach and education of the general public.



## Remember These Points!

### Key Violations: Cyclists

- Operating against the flow of traffic
- Failure to yield when entering roadway or at a stop or yield sign
- Failure to obey traffic signals
- Failure to yield when moving across the road or turning left
- Riding at night without required equipment
- Riding on sidewalk unsafely or where prohibited

These next two slides are the crux of what we ask officers to remember about the presentation in terms of enforcement. We will review these key points throughout the presentation.

The reasons why these are the most important infraction will become clear throughout the presentation.

***Instructor's Note:*** Please distribute the completed list of statutes at this time. Officers may want to have this while on duty for reference.



## Remember These Points!

### Key Violations: Motorists

- Failure to yield
  - when entering roadway
  - at a stop or yield sign
  - when turning left
- Unsafe passing
- Improper right turn (immediately in front of a cyclist)
- Driving too fast for conditions
- Opening a car door into traffic

These are the motorist infractions that most often lead to car-bike crashes. Much of the presentation will focus on why these infractions create unsafe situations.



## Be Aware of Bicyclists

- Observe how cyclists and motorists behave
- Are both bicyclists and motorists respecting all road users, including pedestrians?



We hope this course will get you thinking about bicyclists throughout the transportation system.

The intent of this slide is to encourage officers to notice bicyclists, and bicyclist-motorist interactions while on patrol. Note that the cyclists and motorists in this image are stopped at a red signal following the law. This is what we would like to see in this type of situation.



## *Increasing safety through traffic enforcement*



This section will explain the data and statistics that drive the logic behind traffic laws and public safety on the roadway.

## The Bicyclist Injury Problem in the U.S.

16

- 500,000 emergency room visits,  
10% involve motor vehicles
- 25,000 hospitalizations,  
30% involve motor vehicles
- 700 fatalities,



Emergency Dept Data Source: CDC, WISQARS,

Fatalities Data Source: *Traffic Safety Facts* 2002. NHTSA, U.S. DOT.

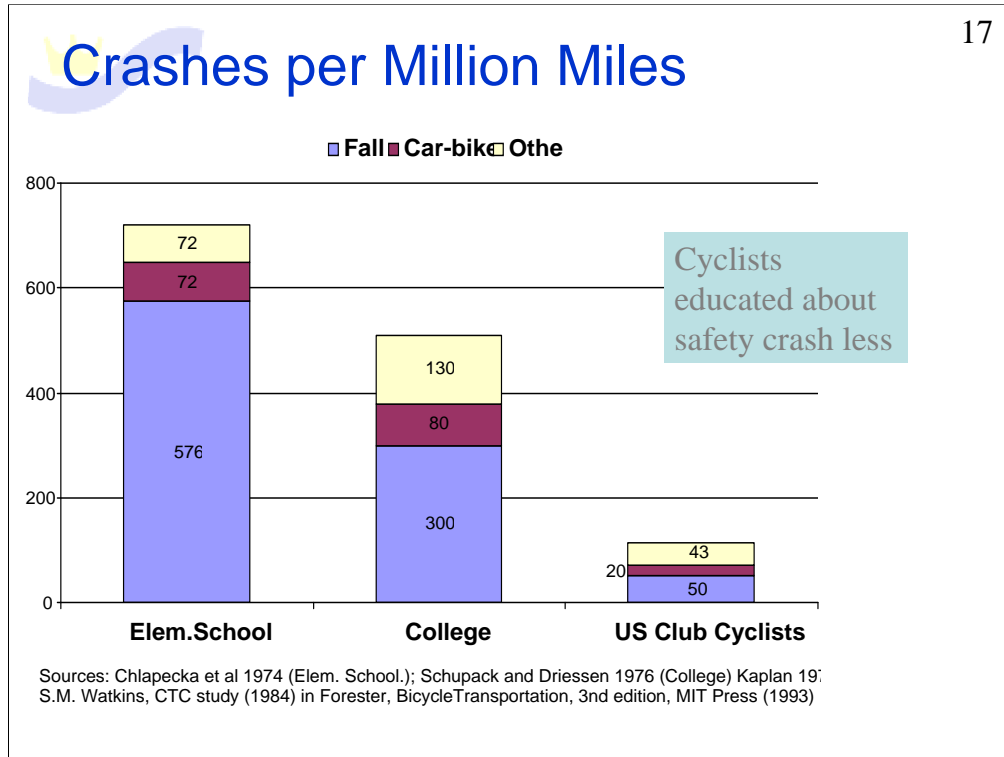
80% involve motor vehicles

What happens when bicyclists and motorists operate dangerously?  
Crashes, injuries, and fatalities.

Bicyclists are killed, injured, and endangered far too frequently in the US. Some of these numbers may seem low to you, but not if you know that most crashes and incidents go unreported.

The bicyclist injuries that involve motor vehicles are disproportionately the serious ones, including most fatalities. Motor vehicles can be classified as deadly weapons when operated with intent. Enforcement is important to reduce this toll.





This graph shows the results of surveys of different groups of bicyclists, with their reported crashes expressed in a crash *rate* per million miles traveled.

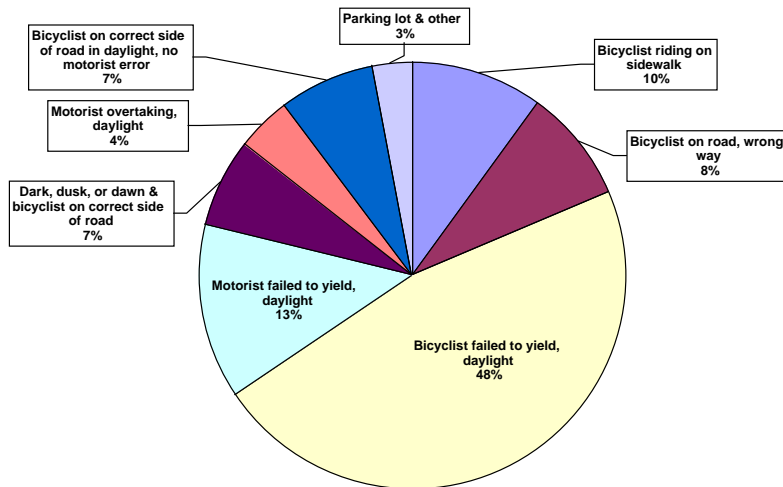
Most crashes are actually just falls, and this graph clearly show that the more experienced a cyclist is, the less likely they are to crash. This presents a strong argument for educating bicyclists, and enforcement plays a key role cooperative education.

As police officers, you are probably called mostly to bike collisions with motor vehicles, which is the red segment of this graph. Note, however, that the largest share of bicycle crashes are falls (colored in blue) or collisions with other bicyclists, pedestrians, or animals (yellow).

As you can see, inexperienced adult bicyclists (center column) have more collisions with motor vehicles than children (left column), though they don't fall on their own as much as kids. Experienced bicyclists do much better at avoiding all problems, especially motor vehicle-bike crashes. Education and experience clearly make the roads safer for everyone. And enforcement is a part of education, as we already mentioned.

# Motor Vehicle-Bike Collision, Bicyclist Under 16

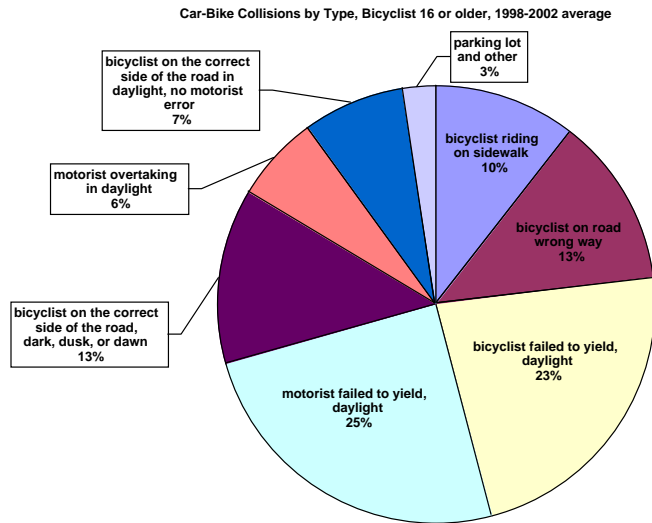
Car-Bike Collisions by Type, Bicyclist 15 or younger, 1998-2002 average



Source: Tabulations by Paul Schimek from NHTSA's 1998-2002 General Estimates System survey of police-reported crashes.

**IMPORTANT – these data do not measure *fault*** - they indicate who was doing what when the crash occurred. This slide shows car-bike collisions as reported by police for children 15 and younger. Most sections represents crashes where the bicyclist was not following the rules of the road (that is, riding on the sidewalk, riding on the road against traffic, or failing to yield when required). These together represent 65% of all car-bike collisions among children. Only in 7% of the crashes was the bicyclist operating on the roadway in the direction of traffic and did not fail to yield. In these cases, half the time it was the motorist who caused the crash by failing to yield (or, in a very few cases, failing to pass safely).

# Motor Vehicle-Bike Collision, Bicyclist 16 or Older



Source: Tabulations by Paul Schimek from NHTSA's 1998-2002 General Estimates System survey of police-reported crashes.

This pie chart shows car-bike collisions for bicyclists 16 and older. Adult car-bike crashes are much more likely than child bicyclist crashes to be caused by motorist error. The “other” crashes include many that happened at night, where the lack of required bicycle lighting equipment may have been a cause of the crash. Most car-bike crashes involve an obvious violation of the traffic rules by either the bicyclist or motorist (and sometimes both).

## Most Frequent Fatal Crashes

20

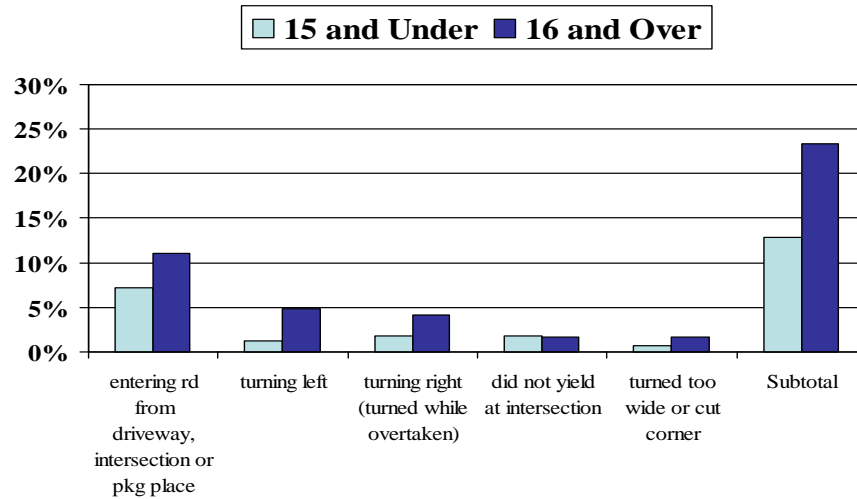
- Intersections
  - Motorist or Cyclist failure to yield
- Intoxication
- Cyclist driving the wrong way
- Cycling driving at night without proper lights and reflectors



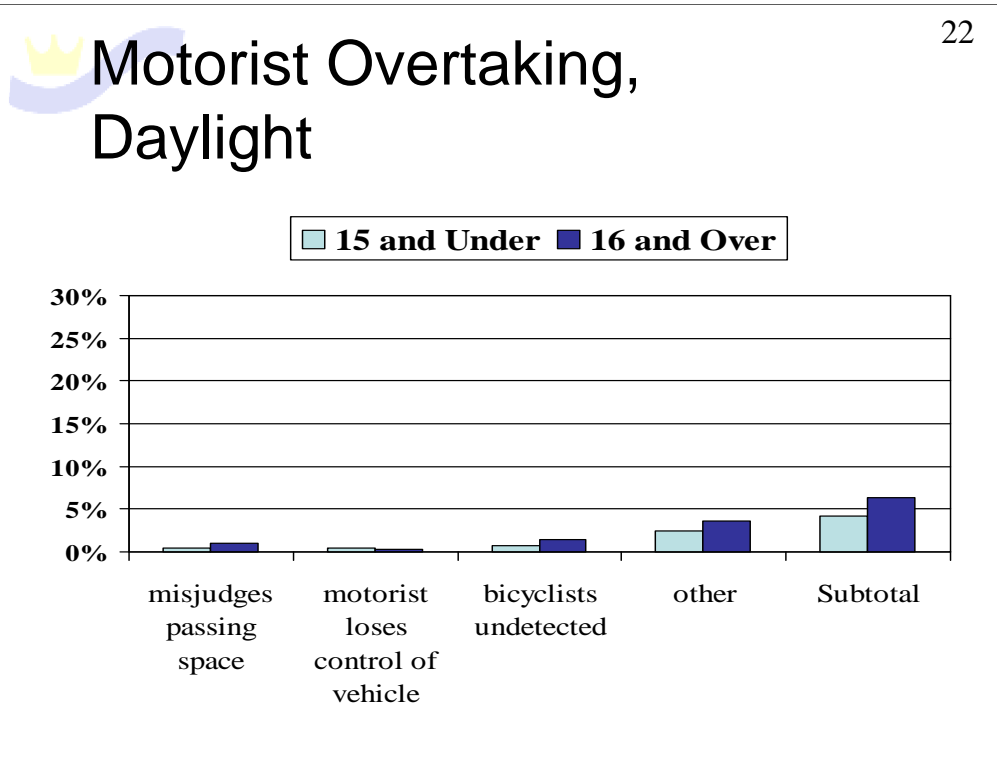
Fatal crashes are, fortunately, a tiny fraction of bicycle crashes. They tend to involve higher speeds and rural roads. A typical cause is an unlit bicyclist unseen on a dark roadway or failure to yield at intersections.



## Motorist Failed to Yield to Cyclist, Daylight



Motorist failure to yield is a much bigger problem for adult cyclists who tend to use the road more frequently than children cyclists.



Motorist overtaking is a contributor to crashes, but not nearly as frequent as it is perceived by most bicyclists.

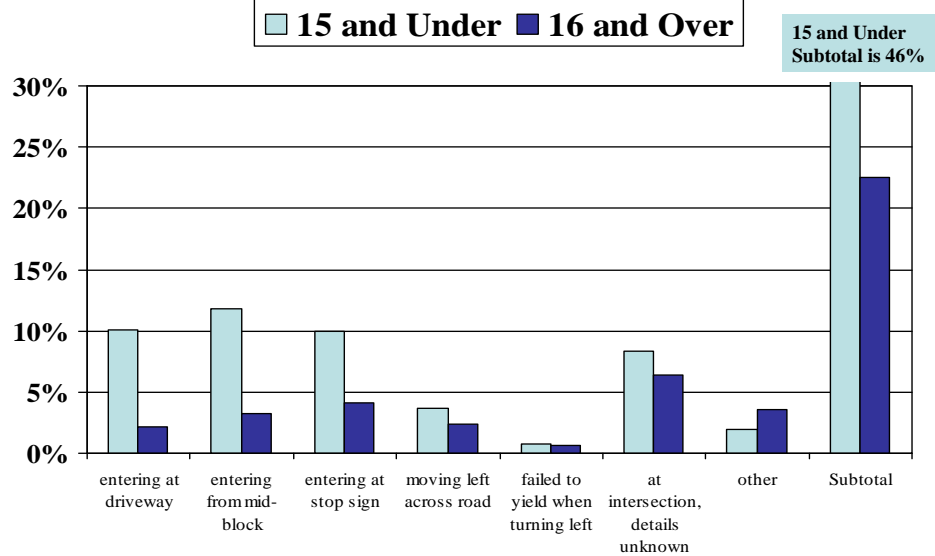
Misjudge passing space includes **moved back to the right too soon (truck, bus, or trailer)**.

Undetected includes **blinded by glare** (these are daytime collisions only).

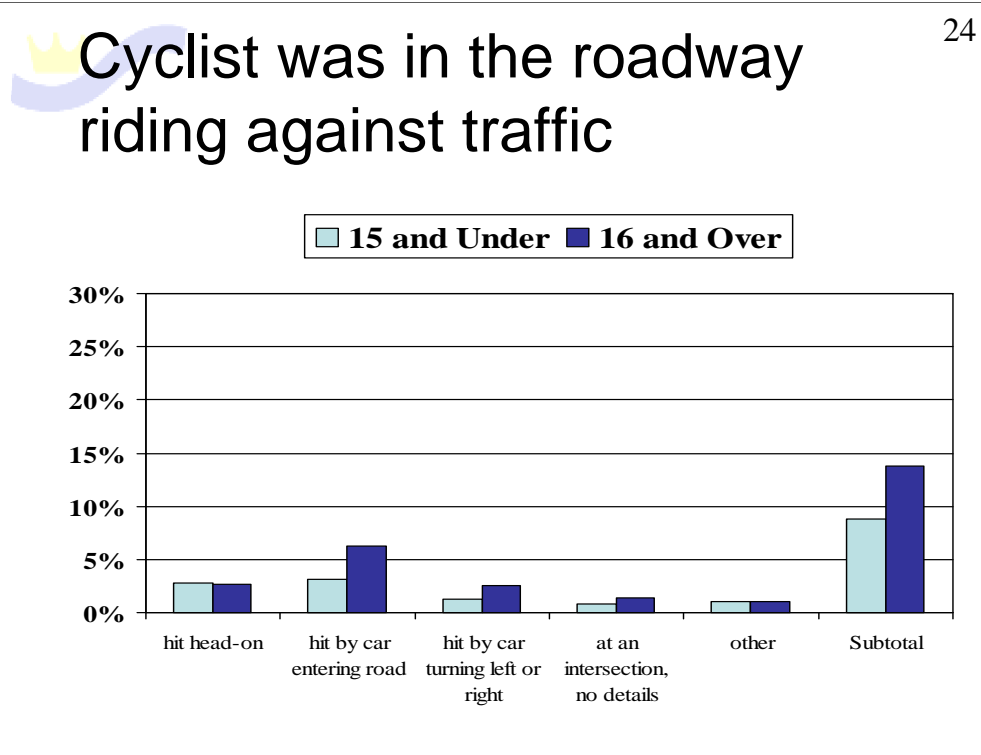
Other includes too fast for the conditions (hilly or curvy rural roads), impaired or inattentive operator



## Cyclist entering roadway or riding with traffic and did not yield



Failure to yield is by far the most common type of crash for child cyclists. Cyclists of all ages need to be educated to follow the same traffic laws as other drivers.

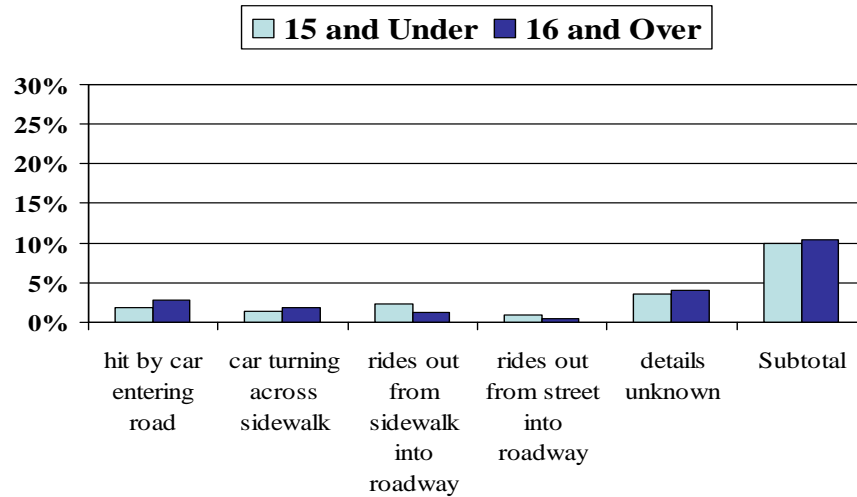


Wrong way cycling also contributes greatly to the overall crash rate and is a source of many serious crashes. As can be seen in the table, many wrong way cyclists hit cars entering the road. Videos and pictures demonstrating why this is unsafe will appear later in the presentation.



## Cyclist was riding on a crosswalk or sidewalk

25

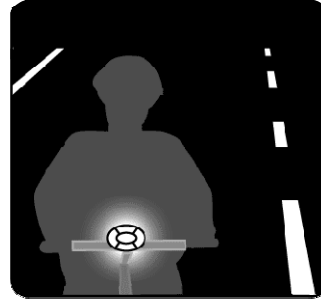


Sidewalks, contrary to popular opinion, can be dangerous for cyclists, because cars turning or entering the road are oftentimes not looking for fast moving traffic on sidewalks.



## Night Time

- 43% of all bicycle fatalities are in non-daylight hours.
- 17% of all car-bike collisions happen at night.



Source: U.S. DOT NHTSA, Fatal Accident Reporting System, 2002, and tabulations from 1998-2002.

Night time cycling without the required equipment can be particularly dangerous and is the source of crashes and fatalities. Videos and picture demonstrating the importance of night time equipment appear later in this presentation.

For cyclists age 15 and under, 6.2% of bicycle-motor vehicle crashes happen at night.

For cyclists age 16 and over, 12.6% of bicycle-motor vehicle crashes happen at night.



## The Need for Improved Data

- All the tables in the above slides add up to 89% of all motor vehicle-bicycle crashes
- The circumstances of 11% of all motor vehicle-bicycle collisions remain unknown.
- Improved crash reporting and investigation can counteract this trend.

Source: U.S. DOT NHTSA, Fatal Accident Reporting System, 2002, and tabulations from 1998-2002.

Detailed crash reports will help prevent future crashes.

Data for bicycle-motor vehicle crashes remains incomplete because oftentimes the circumstances of the crash is not reported to the National Highway Traffic Safety Administration. Improved crash investigation and reporting, covered in Section 6, will help education and enforcement efforts because bicycle and motorists educators will be able to more precisely target potential problems.



## *Increasing safety through traffic enforcement*



This section will lay out in detail the traffic laws for your state that relate to reducing crashes and increasing safety for bicycling and motorist interactions.

***Instructor's note:*** Hand out the worksheets that you have previously filled out for this section. You have two options for how to proceed with this section. First Option - You can fill out the Instructor Worksheets and keep the PowerPoint as is. Second Option - you can modify the presentation slide by slide to slide (for the slides with titles number #1 through #12) to incorporate in the laws in your specific state and give students the handouts.

The section begins with a brief overview, and will then describe the laws in your state in detail. Remember, the focus of the presentation is safety, so the section will not cover each and every law relating to bicycling.



## Bicyclists are Drivers



- The same set of traffic rules applies to all drivers of vehicles — bicyclists and motorists.
- When we say “driver” we mean bicyclist or motorist; when we say “vehicle” we mean bicycle or motor vehicle.

The most important point of the traffic law for bicycling law, as well as enforcement, is that bicycles are vehicles by design and by operation. Your state’s law either defines bicycles as vehicles, or bicyclists as vehicle operators. Problems occur when bicyclists and motorists don’t understand this, and behave in an unpredictable manner.

### **Q1. Aren’t roads built just for motor vehicles?**

A1. No. Bicyclists are allowed to use the road and are required to follow traffic law, just like other vehicle operators. Many people are confused about bicycles in traffic, and as an officer you can help people understand their responsibilities.

### **Q2. Which rules give bicyclists the same rights as other drivers?**

A2. Your state probably has a version of the following: **“UVC § 11-1202 Traffic laws apply to persons on bicycles and other human powered vehicles.** Every person propelling a vehicle by human power or riding a bicycle shall have all of the rights and all of the duties applicable to the driver of any other vehicle under chapters 10 and 11, except as to special regulations in this article and except as to those provisions which by their nature can have no application.”

In addition, in some states, the definition of vehicle includes bicycle, either explicitly or implicitly: **UVC “§ 1-215 Vehicle Defined.** Every device in, upon or by which any person or property is or may be transported or drawn upon a highway, excepting devices used exclusively upon stationary rails or tracks.” [This definition includes bicycles.]

## You Already Know Most Traffic Laws that Concern Bicyclists!

All drivers of vehicles must:

- Drive on the right side of the roadway
- Pass other traffic slowly and safely
- Yield to traffic with the right of way
- Observe traffic signs and signals
- Obey speed limits
- Et cetera!

There isn't a lot of special information that you really need to remember when it comes to watching out for bicyclists while you are on patrol, since you already know how vehicle operators are supposed to behave on the roads. But there may be a few laws that you aren't aware of or hadn't thought of as being important to bicyclists. We will now go into detail about these.



## 1. Bicycle Law

- What is the legal definition of “bicycle?”
- What section of the law covers bicycle-specific traffic laws?

Your state’s laws may define bicycle differently from the dictionary, and your state’s laws may not even classify a bicycle as a “vehicle”. However all states do require bicycles to follow the laws for vehicles.

For the purposes of traffic enforcement, two, three, and four wheeled pedal cycles are usually considered "bicycles". Motorized bikes and electric bikes are usually separately defined.

Fun Facts: The bicycle is the most efficient land vehicle yet to be invented by mankind. The speed record for a bicyclist is more than 72 mph (110 kph)! Bicycles have been using the roads for well over a century, before motor vehicles were ever invented. The League of American Wheelmen were responsible for convincing congress to get roads paved at the turn of the 20th century.

**Note to instructor** - you may want to fill in these slides (1 through 12) in addition to filling out the attached worksheets that can be used to list the important violations, as well as the important laws in detail.



## 2. Same Roads

- On which roads can bicycles be legally excluded?

As drivers of vehicles, bicyclists generally have a right to use the same roads that other drivers may use. One exception is a “controlled-access” or “limited-access” facility. The rules for these facilities (sometimes located in the chapter on highways, not the chapter on vehicles) may either prohibit bicycles outright, or else give highway authorities the discretion to prohibit bicyclists (as in UVC 11- 313). Several states permit bicyclists to use rural sections of limited-access highways.

If there is a house, business, school, etc. on a road, a bicyclist will usually have legal have access to it. Occasionally, local municipalities may post “No Bicycles” signage that is contrary to state law —such signs should be removed. Some states allow municipalities to regulate access. Generally, a feeling that a road might be dangerous for bicyclists may not in fact be supported by statistics, and, moreover, is not sufficient justification for denying bicyclist rights. Roadway design improvements may, however, be a better solution.



### 3. Direction, Lane Positioning and Merging

#### Q1. Why is wrong-way riding dangerous?

A1. As we saw in the collision statistics, wrong way riding is the single largest cause of car-bike collisions. It puts the bicyclist in a place where no vehicle is expected.

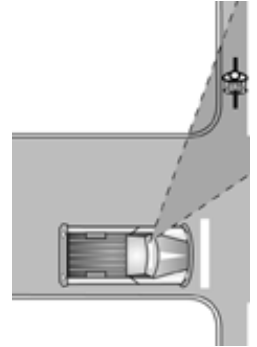
#### Q2. Why do some cyclists ride against traffic?

A2. People ride facing traffic because it is what pedestrians do and what many bicyclists were told to do, or because it is convenient not to have to cross the street, or because they are afraid of being struck from behind so they want to see what's coming at them.

Where should a bicyclist be positioned for normal travel?

- What is the law for staying to the right side of the right lane?

- What are the legal reasons that a bicyclist should be expected to leave the right side of the right lane?



Graphics compliments of Oregon DOT Bicyclist's Manual

#### Q3. What is the basic rule on keeping to the right?

A3. **UVC § 11- 301(a) Drive on right side of roadway--exceptions** Upon all roadways of sufficient width a vehicle shall be driven upon the right half of the roadway, except as follows: 1. When overtaking and passing another vehicle proceeding in the same direction under the rules governing such movement; 2. When an obstruction exists making it necessary to drive to the left of the center of the highway; provided any person driving to the left of the center of the highway shall yield the right of way to all vehicles traveling in the proper direction upon the unobstructed portion of the highway within such distance as to constitute an immediate hazard; 3. Upon a roadway divided into three marked lanes for traffic under the rules applicable thereon; or 4. Upon a roadway restricted to one-way traffic.

#### Q4. What is the slow vehicle rule?

A4. **UVC § 11- 301(b) Drive on right side of roadway--exceptions.** Upon all roadways any vehicle proceeding at less than the normal speed of traffic at the time and place and under the conditions then existing shall be driven in the right-hand lane then available for traffic, or as close as practicable to the right-hand curb or edge of the roadway, except when overtaking and passing another vehicle proceeding in the same direction or when preparing for a left turn at an intersection or into a private road, alley, or driveway. The intent of this subsection is to facilitate the overtaking of slowly moving vehicles by faster moving vehicles.

#### Q5. When are bicyclists required to use the shoulder?

A5. Where bicyclists are permitted on Interstate-type highways, they are required to use the shoulder. A very few states require shoulder use on other roads.

#### Q6. Can a cyclist lawfully pass between lines of stopped traffic?

A6. Yes, provided that he or she follows the rules on passing (a safe distance to the left, or on the right only when safe). See the slide on Overtaking.



## 4. Turning

- Where should a bicyclist be positioned for:
  - **Right turns**
  - **Left turns**
  - **Continuing straight ahead?**

### **Q1. What is the UVC text of the statute for turning?**

#### **A1. UVC § 11- 601 Required position and method of turning**

The driver of a vehicle intending to turn shall do so as follows:

(a) Right turns - Both the 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) Left turns - The driver of a vehicle intending to turn left shall approach the turn in the extreme left lane lawfully available to traffic moving in the direction of travel of such vehicle. Whenever practicable, the left turn shall be made to the left of the center of the intersection so as to leave the intersection or other location in the extreme left lane lawfully available to traffic.

(c) The state highway commission and local authorities in their respective jurisdictions may cause official traffic-control devices to be placed and thereby require and direct that a different course from that specified in this section be traveled by turning vehicles, and when such devices are so placed no driver shall turn a vehicle other than as directed and required by such devices.



## 5. Signaling

- Bicycles have no automatic turn signals; cyclists use hand signals.
- Right hand, right turn signal is best understood.
- Continuous signaling is not safe. Both hands are often needed to control the vehicle.

### **Q1. My state requires cyclists to signal a right turn with the left arm.**

A1. This is an example of one of “those provisions which by their nature can have no application” to bicycles (UVC § 11-1202). Since a bicycle has no enclosed cab, the cyclist’s right arm can be seen by other drivers. Hardly anyone these days uses hand signals except bicyclists, so no one remembers what a left arm raised upward means (it looks like a wave). There is no misunderstanding the meaning of the right arm pointing right.

### **Q2. My state requires cyclists to make a turn signal continuously.**

A2. Another example of a provision which by its nature has no application to bicycles. The continuous signaling rule was added when automatic turn signals were adopted (which bicycles do not have).

### **Q3. How do cyclists signal a stop?**

A3. The hand signal is: arm down and hand open. The cessation of pedaling is a visual cue that the bicyclist is slowing. Also, drivers can see the brake lights of motorists ahead of the bicyclist when approaching a cue of stopped traffic.

### **Q4. Shouldn’t bicycles have automatic turn signals?**

A4. No. They aren’t needed because hand signals are visible and the cyclist’s road position communicates his or her intentions. Also, fitting them to a bicycle would be difficult.



## 6. Safe Passing on the Left

- What are the rules for motorists passing other vehicles, including bicycles?

### **Q1. What is the rule on being overtaken?**

A1. “b) Except when overtaking and passing on the right is permitted, the driver of an overtaken vehicle shall give way to the right in favor of the overtaking vehicle on audible signal and shall not increase the speed of the vehicle until completely passed by the overtaking vehicle.” UVC § 11- 303

One of the major fears cyclists cite is that of a motor vehicle hitting them while passing. As noted in the statistics section, motorist overtaking crashes are relative infrequent, but they still frequently affect motorist behavior. Motorists frequently don't understand how much they need to slow down and how much space they need to give cyclists when passing. Motorists passing dangerously may also contribute to bicyclists driving too far to the right.

If there is not enough room to pass safely, all vehicles are required to wait. This is a very common violation that significantly hinders cyclists' safety. Motorists may need to be reminded that they are not entitled to travel as fast as they wish or even as fast as the speed limit permits.



## 7. Safe Passing on the Right

- Under what circumstances are bicyclists permitted to pass on the right?

The UVC allows passing on the right (11-304) as long there is “sufficient width for two or more lines vehicles.” The UVC defines bicycles as vehicles. You should also check to see if your state explicitly allows passing on the right specifically for bicycles – this provision would generally be in the bicycle law section of the state statute.

Massachusetts State Law Chapter 85, Section 11B, for example, reads in part, “(1) the bicycle operator may keep to the right when passing a motor vehicle which is moving in the travel lane of the way.”

Many cyclists try to pass other traffic on the right. It is sometimes dangerous because most drivers don't expect overtaking vehicles to be so far to the right and motorists have blind spots immediately to the right of their vehicles.



## 8. Sidewalk Bicycling

38

10% of bicycle-motor vehicle crashes happen to bicyclists driving on sidewalks, paths, or in crosswalks

- Are bicyclists permitted to drive on the sidewalk?
- What are the rules for bicycles driving on sidewalks, paths, and trails

State and local laws may permit it. Generally prohibited in business districts.

### **Q1. Is it okay for children to ride on sidewalks?**

A1. Sidewalks may be suitable for young children riding at walking speed, although they too may be better off on the roadway in quiet residential areas. Some communities permit only children under 13 to ride on sidewalks.

### **Q2. How do I know what the laws are in this case?**

A2. Check both state laws and municipal ordinances.

Bicycle driving is often prohibited from busy sidewalks for safety reasons.

**Q3. Is sidewalk riding safe?** A3. You may be surprised at the somewhat high crash rates for cyclists driving on sidewalks and paths. Many cyclists think that sidewalks are safer places to be, but because sidewalks are designed for pedestrians — and slow moving traffic — sidewalks can be dangerous places to be on a bike. Intersections of sidewalks and roads can be particularly confusing for all vehicle operators. Similarly, sidepaths (bike paths adjacent to roads) are often dangerous too, and cyclists should never be forced to use them.

All vehicles using the sidewalk (traveling on it or simply crossing it) need to yield to pedestrians. When a bicyclist is walking a bike, they are legally considered pedestrians.

Younger or inexperienced cyclists sometimes prefer to drive off of the road, and will need to take special care to drive slowly and safely.

## 9. Lights at Night and Equipment

- What are the requirements for nighttime equipment for bicyclists?
- What are the braking and other equipment requirements?

39

43% of **fatal bicycle-motor vehicle** crashes occur at night, most of them probably involve bicyclists without proper lighting equipment.

All vehicles are required to have lights. A front white light and a rear red light (or reflector) are the absolute minimum for safe nighttime driving. A white headlight is required in all states, and a red light or reflector is required in most states. Also note that not all CPSC reflector systems comply with state laws.

Unfortunately, unlike the automobile industry, bicycle manufacturers do not offer many “street legal” bicycles that come with the proper lighting equipment, and most cyclists simply aren’t aware of the need to purchase the required light/s for night driving. So you will probably see this violation frequently.

**Q1. What braking systems are required on bicycles?** A1. Most states require bicycles to have a working braking system. “Track” bicycles do not have brakes because they are designed to be used on bicycle racetracks (also called velodromes), not on public roads. These bicycles cannot be stopped quickly enough to be safely used on the street. They do have a kind of braking system, just as children's tricycles have -- in that the rider can slow down by resisting the forward motion, since the chain is connected directly to the rear wheel. But if the pedals get turning too fast for the rider to keep up, the ability to brake is lost. Some bicycles (generally children's bicycles) have no hand brakes but only a “coaster” brakes which operate by pedaling backward. Such bicycles can be identified as having brakes because they have a brake arm extending forward from the left side of the rear hub to a clip on the frame.



## 10. Helmets

- Are children required to wear helmets while on a bicycle?

0% of crashes are caused by lack of a helmet. 40

About 75% of permanent disabilities and 50% of fatalities may have been avoided with proper helmet use.



Helmets do not prevent crashes, but can lower injury and death rates significantly when crashes do occur. Some states require children to wear helmets. Adults are not required to wear them. Many novice cyclists will not be aware of how to properly fit a helmet.

**Q1. Who is required to wear a bike helmet?** A1. About 20 states require minor cyclists to wear a bicycle helmet when operating a bicycle. The cutoff age varies from 11 to 17. No states require adults to wear bicycle helmets. Helmets can reduce the severity of injuries in the event of a fall or collision. They do not of course prevent crashes. A helmet is only effective if it is properly adjusted. The helmet must be level and tight. A loose helmet will slide off in the event of a fall and will likely be of no benefit. Because head injuries are one of the leading causes of serious injuries and fatalities among bicyclists, wearing a properly fitted helmet is important to reduce the risk of injury.

Many police departments have special programs that emphasize helmet use. However, just telling cyclists to wear a helmet won't stop them from being hit if they are riding at night without lights, or are driving on the wrong side of the road. So always include safe driving reminders if any helmet promotion program.

**Q2. What do helmets do?** A2. Helmets are always needed, because contact with the ground can happen in driveways, bike paths, and sidewalks and on roads. A good fit is always needed.





## 11. DUI

- Motor vehicle operators are prohibited from operating their vehicles while intoxicated.
- Are bicyclists also prohibited from operating their vehicles while intoxicated?

41

31% of **fatal** bicycle-motor vehicle crashes involve intoxication.

All states prohibit operating a motor vehicle while intoxicated. Some states also prohibit operation of a bicycle while intoxicated. The levels of illegal intoxication vary from state to state.

## 12. Aggressive Driving & Assault

- What are the laws regarding the use of a motor vehicle as a weapon, either intentionally or unintentionally?
- Are there special Aggressive Driving laws?

Road Rage - lawful, responsible bicyclists are frequently victims due to lack of public awareness about cyclists rights.

In some states, harassment statutes could apply to motorists harassing bicyclists; and 3rd degree assault and 3rd degree battery could be applicable.

Motorists often forget that their vehicles are extremely dangerous, and sometimes the drivers even knowingly use their vehicles to threaten or assault bicyclists. Aggressive motorists may also cause many cyclists to drive unsafely (for example, too close to the right edge of the road or on the sidewalk).

Bicyclists are sometimes victims of inconsiderate motorists (or their passengers) who threaten or attempt to frighten the bicyclist by shouting, deliberately following or passing closely, or throwing objects. These actions could meet the legal definition of harassment, assault, or battery, depending on the laws in your state. One statutory definition of harassment is the attempt or threat to touch a person with intent to alarm without good cause. One definition of assault involves the “apprehension of imminent physical injury.” In addition to more obvious cases, battery includes, in one definition, someone who “*negligently* causes physical injury to another person by means of a deadly weapon” (emphasis added). A motor vehicle can be a deadly weapon.



## Other Bicycle Safety Laws: Local Ordinances

- In most states, local governments may:
  - establish bicycle registration
  - regulate sidewalk bicycling
- Generally, local ordinances may not contradict or supersede state law.
- Bicycle messenger registration

### **Q1. Can local ordinances restrict bicyclists in a way that contradicts state law?**

A1. Usually not. Most states have rules specifying that the traffic laws are uniform across the state. Some specifically allow local governments to regulate bicycle operation.

### **Q2. What can local governments regulate with regard to bicycling?**

A2. This varies by state. Here are the relevant powers in the current version of the UVC: “Regulating the parking of bicycles and adult tricycles and requiring the registration and inspection of same, including the requirement of a registration fee, the requirement that a bicycle and adult tricycle must have a frame number before being licensed, and a prohibition on altering or removing any such frame number.” § 15-102(a) 8

### **Q3. What about bicycle messengers?**

A3. Some big cities (New York, San Francisco, Boston) have local ordinances requiring bicycle messengers to register, to display number plates, and to carry insurance. The best way to insure the safe operation of bicycles operated by messengers is to enforce the traffic rules in the same way as described herein for all other vehicle drivers.



## Other Bicycle Safety Laws: Manner of Riding

- No more riders than the bicycle is designed to carry.
- At least one hand on the handlebar.
- Carry articles safely
- Laws vary by state.
- Enforcing them might help prevent falls - the most frequent type of crash.

**Q1. What are the statutes that apply here?**

A1.

### **UVC § 11-1203 Riding on bicycles**

No bicycle shall be used to carry more persons at one time than the number for which it is designed or equipped, except that an adult rider may carry a child securely attached to adult rider in a back pack or sling.

### **UVC § 11-1207 Carrying articles**

No person operating a bicycle shall carry any package, bundle or article which prevents the use of both hands in the control and operation of the bicycle. A person operating a bicycle shall keep at least one hand on the handlebars at all times.

## Other Bicycle Safety Laws Equipment & Racing Permits

- Bells
- Bike racing



**Q1. Why are bells not essential?** A1. A few states require bells on bicycles. Bells are not essential equipment because bicyclists can use their voice to give an audible warning in every circumstance where a bell would be effective. Some states prohibit bicyclists from using whistles and sirens. These are reserved for official use.

**Q2. Are bike races legal?** A2. Competitive bike races on public road will most likely require an event permit or approval from the police department. For competitive races that follow a looped course, it is best to shut down the roads, so motorists will not unknowingly pull out in front of cyclists travelling at high speeds.



## *Increasing safety through traffic enforcement*



This section will detail real life situations on the roadway, and explain the nuances of the law and special cases that law enforcement officers will encounter when observing motorist/cyclist interactions.

This slide shows a motorist making a right turn, with a cyclist to the right of the car. This is a common type of crash.

**Note to instructor.** the organization of the slides in the section follow the same order as the previous section, “The Bicycle Laws”. The slide titles in this section have numbers that correspond to the numbers in the previous section.

## Same Roads: Bike Path / Road Intersections



This first series of slides will examine the nuances of the “Same Roads” concept.

Crossings of multiuse paths/trails with standard roads can be dangerous. A full traffic signal or large signalized crosswalk is the safest. Also, it is very important that the sightlines are good so that all users can see cross traffic. At unsignalized intersections, a crosswalk means you do have the right of way, while a stop sign means you don't have the right of way. Bicyclists should be reminded that they need to obey any traffic signs or signals on paths and trails, and motorists should respect crosswalks and bikepath signals.

Bicyclists walking with their bicycles are considered to be pedestrians and must operate according to the laws for pedestrians. There are two "gray areas" where the rules overlap:

1. Cyclists walking with their bicycles for a short distance, as when on a hill that is too steep to climb, should still be regulated as drivers of vehicles. This rule is commonly glossed over as unimportant.
2. Bicyclists riding their bicycles on pedestrian facilities should be regulated as pedestrians. Several states have explicitly adopted this rule, which is important for safety - in such places as crosswalks.

## Same Roads: Mandatory Sidepath Rule

*“Whenever a path for bicycles has been provided adjacent to a roadway, bicycle riders shall use such path and not the roadway.”*

- The sidepath rule should be discouraged



Here's a motorist cutting in front of a bicyclist who is using a sidepath. The motorist was probably not expecting fast moving traffic on what looks like a sidewalk. This is why sidepath and sidewalk bicycling can be dangerous.

### **Q1. What is a sidepath?**

A1. A bike path located immediately adjacent to a roadway, but physically separated from it by a divider.

### **Q2. Why are sidepaths dangerous?**

A2. Riding on sidepaths is similar to riding on sidewalks. There is an increased risk of car-bike collisions at intersections and driveways. For these reasons, this type of bicycle facility is increasingly disfavored. Experienced cyclists often avoid these kinds of paths in favor of riding on the roadway.

### **Q3. Why do some communities install such paths?**

A3. Some people feel they increase bicycle safety. The crash statistics do not support this view because turning conflicts are much more likely the source of collisions than overtaking conflicts. Furthermore, there are many studies of sidepaths that show a higher crash rate compared to riding on the roadway.

### **Q4. Is this rule in the UVC?**

A4. No. It was added to the UVC in 1944 and deleted from it in 1976.



## Same Roads: Bicycle Lanes

- *bicycle lane* - a portion of the *roadway* indicated by pavement markings
- A bicycle lane does not prevent bicyclists from:
  - avoiding hazards
  - overtaking
  - left turns



In the video, the cyclist must merge out of the bike lane to avoid the truck. This is an instance where a cyclist is required to leave the lane. Additionally, your state may have laws against motor vehicles parking in bike lanes.

Notes: this video has audio, but it is not essential if your presentation system does not have speakers. The audio points out there may be situations where cyclists will need to merge out of bike lanes.

This cyclist is not wearing a helmet. The main intent of this video was to show that bike lanes may be blocked and cyclists may need to merge.

The photo is meant as a replacement if the video does not work. It depicts a car merging into a bike lane, with a cyclist going the wrong way in the bike lane. Motor vehicles using bike lanes should be ticketed, as should wrong way cyclists.

### **Q1. Isn't a bike lane designed to keep cyclists off the road?**

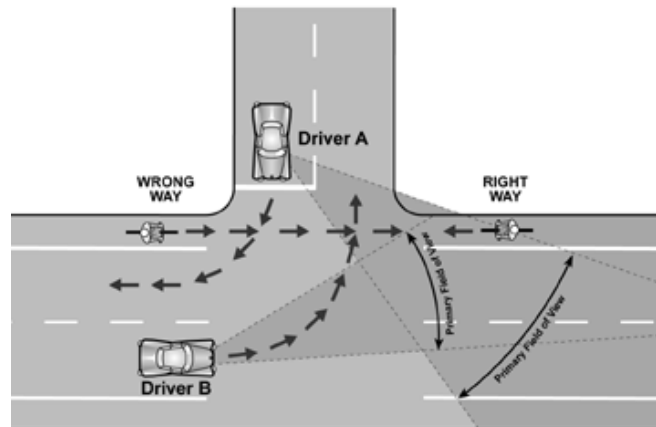
A1. No. Bike lanes are a part of the road that cyclists can use, in addition to the rest of the road. Just as buses are not required to use bus lanes, cyclists are not required to use bike lanes. However, AL, CA, HI, MD, and NY require bike lane use, but all of these except AL provide many exceptions. Two other states, PA and OR permit bike lanes to be mandatory if specifically designated.

### **Q2. Are motorists ever permitted in bike lanes?**

A2. Yes. Motorists must merge into bike lanes in advance of making a right turn. They may also move through bike lanes to enter and exit on-street parking. Some communities allow parking in bike lanes at some times of the day.

## Drive with Traffic: Wrong Way Riders

52



Graphics compliments of Oregon DOT  
Bicyclist's Manual

These next two slides illustrate the importance of driving with traffic.

### Q1. Why is wrong-way riding dangerous?

A1. As we saw in the collision statistics, wrong way riding is a major cause of car-bike collisions. It puts the bicyclist in a place where no vehicle is expected. As mentioned in the video, wrong-way riders also cannot see traffic signs and signals, and risk head-on collisions with lawful cyclists. The video also shows that it much safe for motorists to stop at the stop line.

### Q2. Why do some cyclists ride against traffic?

A2. People ride facing traffic because it is what pedestrians do and what many bicyclists were told to do, or because it is convenient not to have to cross the street, or because they are afraid of being struck from behind so they want to see what's coming at them.

**Notes:** this video has audio, but it is not essential if your presentation system does not have speakers. The audio points out that wrong way cyclists cannot see traffic lights or signals, and motorists are usually not looking in the direction from which a wrong way cyclist will approach. Also note that in the video, the driver stops past the stop sign - making it more likely he would hit a cyclist or pedestrian in the crosswalk.

The graphic is meant as a replacement if the video does not work. It depicts the sight-lines for motorists, and shows how motorists won't expect cyclists coming from the wrong direction.

## Lane Positioning: Far Right Rule

- *“Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable exercising due care when passing a standing vehicle or one proceeding in the same direction.”*
- Unnecessary because of slow vehicles keep to right rule.
- Added to Uniform Vehicle Code in 1944 and since adopted by 41 states. But UVC now lists many exceptions, as do most states.
- Does not supersede rules on intersection positioning and passing, and permits bicyclists to be a safe distance from hazards at the right edge, including car doors.

### **Q1. Why is this rule unnecessary?**

A1. The slow vehicle rule already requires cyclists to keep right to facilitate passing. See Position on Roadway. The overtaking rule already requires cyclists to move right when being overtaken. See Overtaking.

### **Q2. Why do states have it?**

A2. Not all states do, and most have added explicit exceptions.

### **Q3. Should this rule be enforced?**

A3. Not if it is interpreted as contradicting the basic traffic laws (intersection, speed, and overtaking rules) or requiring cyclists to keep unsafely far to the right.

## Lane Positioning: The Door Zone



**Too  
Close**

**Enough  
Room**



Here's another reason why cyclists may not be able to stay to the far right.

### **Q1. Isn't safer for bicyclists to stay out of the way, close to parked cars?**

A1. Getting "doored" is a frequent cause of bicycle crashes in places with on-street parking. Bicyclists should always ride at least a door's width away from cars. Some cyclists are afraid to ride further out into the travel lane because they believe that they are required to ride all the way to the right, and because they are intimidated by other traffic, but cyclists are much more likely to be involved in a crash with a car door than with an overtaking car. They are never required to ride further to the right than is safe.

### **Q2. Is it lawful for motorists to open a door into traffic?**

A2. No. Most states have a version of this rule:

**"UVC § 11-1105 Opening and closing vehicle doors.** No person shall open any door on a motor vehicle unless and until it is reasonably safe to do so and can be done without interfering with the movement of other traffic, nor shall any person leave a door open on a side of a vehicle adjacent to moving traffic for a period of time longer than necessary to load or unload passengers."

Whether this rule exists or not, motorists who open doors unsafely can be held negligent in civil cases.

**Notes:** this video has audio, but it is not essential if your presentation system does not have speakers. The audio reiterates why it is important for cyclists to stay out of the door zone.

The photos also show why it's best to stay out of the door zone.

## Lane Positioning: Narrow Lanes



### Q1. What is wrong with hugging the curb in a narrow lane?

A1. The cyclist who stays to the right in a lane that is too narrow for a car and bike to share side by side (top figure) is often brushed too closely, or even forced off the road. There is insufficient room for the cyclist to avoid hazards on the right edge of the lane, such as holes, sand, or drain grates.

### Q2. Is it lawful to “block traffic”?

A2. The cyclist is part of the traffic flow, and may at times cause momentary delay to other users. Causing delay is by itself not unlawful. Motorists frequently cause delay to other motorists. Causing **unnecessary** delay is unlawful under the slow vehicle rule (see Position on the Roadway). Motorists may become hostile to cyclists because they believe that cyclists are “in the way.”

### Q3. In what other cases is it advisable for a cyclist to take the center of a lane?

A3. When riding at the same speed as other traffic (in congestion or down hill); when approaching a place with heavy right turns and no turn lane; or when safe passing requires motorists to use the opposite side of the road and sight distance ahead is limited.

This video shows that it can be safer to merge out into the middle of the lane than stay near the edge. It is also legal to do so. In this picture, the cyclist is riding safely outside the door zone and the motorist is driving safely behind. This is a good example of proper and safe vehicle operation.

**Notes:** this video has audio. The audio points out that it can be safer to merge to the middle of the lane to avoid hazards near the curb, such as a grate. Also note that when the second cyclist merges, the car behind him merges to the next lane over to pass. The photo is meant as a replacement if the video does not work. It shows the proper positioning of a cyclist in a narrow lane - safely outside the door zone - with the cars behind also in proper position.



## Lane Positioning: Impeding Traffic

- Impeding traffic rule: may apply to **motor** vehicles only.
- Does not prohibit use of roadway at bicycle speeds.
- Mountain roads: use turnout where there is a line of vehicles.

### **Q1. What is an impeding traffic statute?**

A1. Here is the California version: “No person shall drive upon a highway at such a slow speed as to impede or block the normal and reasonable movement of traffic unless the reduced speed is necessary for safe operation, because of a grade, or in compliance with law.” CVC 22400. (a)

### **Q2. Why doesn't this law apply to bicycles?**

A2. It does not either because “the reduced speed” is normal bicycle operating speed or because the statute specifically applies to motor vehicles. When it is ambiguous, courts have said that it does not apply to bicycles using the road at ordinary bicycle speed.

### **Q3. What if there is a long line of traffic behind the cyclist?**

A3. In those very rare circumstances where there is no opportunity to pass for a long time, a courteous cyclist might pull off the road if there is a place to do so. California is one of the few states that requires this (for all slow-moving vehicles): “On a two-lane highway where passing is unsafe because of traffic in the opposite direction or other conditions, a slow-moving vehicle, including a passenger vehicle, behind which five or more vehicles are formed in line, shall turn off the roadway at the nearest place designated as a turnout by signs erected by the authority having jurisdiction over the highway, or wherever sufficient area for a safe turnout exists, in order to permit the vehicles following it to proceed. As used in this section a slow-moving vehicle is one which is proceeding at a rate of speed less than the normal flow of traffic at the particular time and place.” CVC 21656

## Lane Positioning: Bicycling Side by Side

- “Move right when being overtaken” means bicyclists must single up if they are side-by-side.
- Single-file bicycling.
- Side-by-side bicycling facilitates communication: for directions, training, etc.

### **Q1. What is the rule on being overtaken?**

A1. “b) Except when overtaking and passing on the right is permitted, the driver of an overtaken vehicle shall give way to the right in favor of the overtaking vehicle on audible signal and shall not increase the speed of the vehicle until completely passed by the overtaking vehicle.” UVC § 11- 303

### **Q2. My state law says “no more than two abreast unless impeding traffic.”**

A2. UVC § 11-1206 says, “Persons riding two abreast shall not impede the normal and reasonable movement of traffic and, on a laned roadway, shall ride within a single lane.” Some circumstances where it is reasonable to ride side by side include:

- on a shoulder wide enough for two cyclists;
- on a lightly traveled road with good sight lines (not near hills or curves)
- where the right lane on a multi-lane road is too narrow for a car and bicycle to share side-by-side. A single cyclist will take up the whole lane, so two side-by-side takes up no more room
- where there is a large group of cyclists it is reasonable for the group to occupy an entire lane of a road with more than one lane in each direction.



## Lane Positioning: Group Riding

Side-by-side  
bicyclists are  
compact and  
easier to pass



[www.pedbikeimages.org](http://www.pedbikeimages.org) / Dan Burden

Single-file  
bicyclists take  
up more space  
over a longer  
distance



[www.pedbikeimages.org](http://www.pedbikeimages.org) / Dan Burden

Groups of bicyclists may be safer when they “mass up,” because it will be easier for a car to pass a group of bunched cyclists than a long line of cyclist going single. A long line of single files cyclists may cause a motorist to merge back into the lane to avoid oncoming traffic, thereby putting the cyclist at risk.

Eight states have no rule concerning the number of riders abreast. Fifteen other states prohibit bicycling *more than* two abreast, but permit riding two abreast. Twenty states permit riding two abreast unless traffic is impeded. New York permits riding two abreast except when a cyclist is being overtaken. The remaining six states require cyclists to ride single file, but all but three of these provide an exception for when no other traffic is affected.

### **The UVC reads (§ 11-1206) on riding two abreast:**

Persons riding bicycles upon a roadway shall not ride more than two abreast except on paths or parts of roadways set aside for the exclusive use of bicycles. Persons riding two abreast shall not impede the normal and reasonable movement of traffic and, on a laned roadway, shall ride within a single lane.



## Intersections: Failed to Yield When Turning



The next four slides examine intersections, and help explain how crashes happen at them. Intersections are where the vast majority of crashes occur.

This is a major motor vehicle infraction. Left hooks, right hooks, and lane changing into a cyclist are the main culprits.

This video illustrates that motorists should respect cyclist's right of way because failure to do so may result in crashes and fatalities.

The photo shows the motorist in the picture failed to yield on a left turn. The cyclist is going straight through an intersection, and the motorist is trying to make a left turn right through him! There is no excuse for this violation, and the motorist should be cited.

**Notes:** this video has audio. The audio says that motorist should respect the right of way, and that failure to yield is a common source of crashes. Only experienced cyclist, such as the one in the video, can avoid a crash by utilizing an emergency turn.

The photo is meant as a replacement if the video does not work. It shows the proper positioning of a cyclist in a narrow lane - safely outside the door zone - with the cars behind also in proper position.

## Intersections: Entering the Roadway



In this video, the cyclist is approaching an intersection where he is protected by a stop sign – but the motorist does not stop. In this video, the cyclist is traveling on a main arterial road, and the motorist is entering from a side street.

The cyclist sees the motorist's mistake and manages to avoid the collision by making a sharp right turn (even though he was planning to go straight ahead). This is an emergency maneuver that only a small number of experienced cyclists know. To make the sharpest right turn, the cyclist briefly flicks the wheel to the *left*, and then immediately turns it back to the right, and is in a steep lean and a tight turn.

**Notes:** this video has audio. The audio says that failing to yield when entering the roadway is another common source of crashes by motorists, and that violators can be ticketed, even if there is no actual collision.

The photo is meant as a replacement if the video does not work. It shows a car driver pulling out from a side street while talking on a cell phone.

## Merging, Turning, and Signaling

61

Moving across the road:

- Yield, even when moving less than a full lane.
- Yield requires looking back.
- Yielding without signaling can be safe; signaling without yielding never is.

The next three slides looking at merging, turning, and signaling in detail. They help explain some of the situations in which cyclists may need to move out into the roadway when they need to turn or merge.

### **Q1. Where is this rule in the traffic law?**

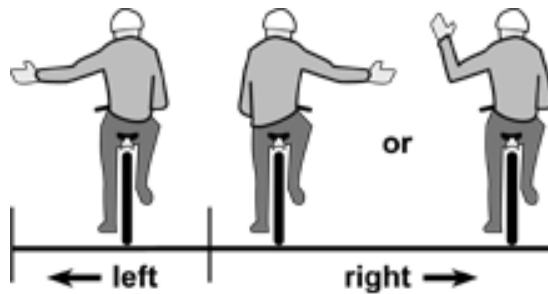
A1. “**UVC § 11- 604(a) Turning movements and required signals.** No person shall turn a vehicle *or move right or left upon a roadway* unless and until such movement can be made with reasonable safety nor without giving an appropriate signal.”

### **Q2. If a cyclist doesn't signal, how do other drivers know his intention?**

A2. If the cyclist looks back and there is no one behind, there is no one to signal to. The cyclist's turning head may be enough of a signal. It is not safe for the bicyclist to move until he sees that there is an adequate gap or that the driver makes a signal in response (most often by slowing down).

# Merging, Turning, and Signaling

62



Graphics compliments of Oregon DOT  
Bicyclist's Manual

This video illustrates the proper way to merge, turn, and signal.

## Q1. Is it okay for cyclists to be in the middle of the road?

A1. Making a normal left turn is one circumstance when cyclists are *required* to be in the middle of the road.

## Q2. Can cyclists make left turns like pedestrians?

A2. Yes. A cyclist can choose to **stop** at the far side of the intersection, turn the bicycle 90 degrees, and wait until he or she has the right of way to cross the street he was traveling on. This is only safe if a cyclist stops, and is always slower than the normal procedure.

## Q3. How do cyclists get in position for a left turn?

A3. The cyclist must start early if there are several lanes to cross. The cyclist should look back to see if it is safe to change lanes or move further into a shared single-lane.

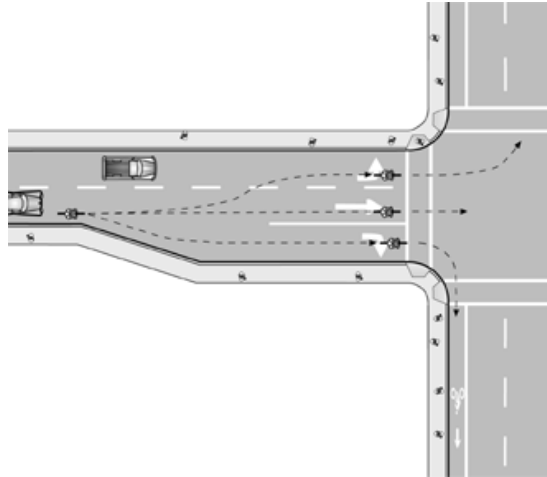
**Notes:** this video has audio. The audio says that the proper way to merge over is the signal and merge one lane at a time, and that a cyclist making a left turn may be in the middle of the road for a considerable distance.

The graphic is meant as a replacement if the video does not work. It shows the potential ways to signal for turning.



## Turn Only Lanes

- Turn lanes may only be used for the the directions indicated
- Bicyclists may need to merge left to avoid a right turn only lane



*Graphics compliments of Oregon DOT Bicyclist's Manual*

### **Q1. What should cyclists do if there are turn-only lanes?**

A1. On roads with lanes designated for right-turn only, left-turn only, or straight-only travel, cyclists must stay in the appropriate lane for the direction they will be going. If there is more than one such lane designated, cyclists usually choose the rightmost one.



## Passing: On the Left and Right

64

- Pass on the left *at a safe distance*
- Do not use the left side of the road to pass if you can't see far enough ahead
- Move right when being passed, if it is safe to do so
- Pass on the right
  - when driver ahead is intending to turn left
  - when there is enough room and it is safe

These next six slides examine the passing rules, and how they apply to motorists and bicyclists in real life situations.

### **Q1. How do overtaking rules apply to cyclists?**

A1. See the next few slides for more explanation of how these rules apply to cyclists. Passing on the right will be discussed later. Note that the rule refers to a "line," not "lane" of vehicles.

### **Q2. What is the statute on overtaking?**

#### **A2. "UVC § 11- 303 Overtaking a vehicle on the left**

The following rules shall govern the overtaking and passing of vehicles proceeding in the same direction, subject to those limitations, exceptions and special rules hereinafter stated:

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

(b) Except when overtaking and passing on the right is permitted, the driver of an overtaken vehicle shall give way to the right in favor of the overtaking vehicle on audible signal and shall not increase the speed of the vehicle until completely passed by the overtaking vehicle."

## Passing on the Right



### Q1. Why is the motorist's turn unlawful in the first sequence of the video?

A1. He has not made the approach to the turn and the turn "as close to the right curb or edge of the roadway as practicable" and he has returned to the right before it is safe to do so after overtaking, in contradiction to the rule on overtaking.

### Q2. Who is at fault in the second sequence of the video?

A2. Both the motorist and the cyclist. The motorist should have merged to the curb in preparing the turn, waiting for the cyclist in front if necessary. The cyclist should not attempt to pass on the right, because it is clearly not safe to do so when the vehicle ahead is signaling a right turn.

### Q3. How is this interaction supposed to happen?

A3. As in the third sequence of the video.

**Notes:** this video has audio. The audio points out motorists cutting off cyclists and bicycling passing on the right can cause crashes. The proper way is for the cyclist to merge to the middle while the motorist turns right.

Note: in the photo - Bicyclists may be legally allowed to overtake on the right, but it can lead to problems when there are intersections and driveways. A motorist turning right across the path of a cyclist going straight is the second most common type of motor vehicle-bike collision. Both motorists and bicyclists need to be made aware of the potential danger of this type of situation.



## Passing: Lane changes

66



Sometimes, cyclists will need to merge out into the middle of the road for reasons that may seem mysterious to motorists. Oftentimes, a cyclist will merge in order to avoid an obstruction, such as a bad grate (pictured) or debris.

**Q1. What is the cyclist's hand signal in this photo?**

A1. Unclear. He has already moved left far enough to avoid the drain grate. He should not be moving without checking back.

**Q2. Shouldn't the cyclist in the photo be keeping further to the right?**

A2. The bicyclist is probably keeping a safe distance away from the drain grate (set in light concrete). Some drain grates can have gaps that can trap a bicycle wheel.

**Q3. Is the motorist in the photo passing safely?**

A3. Yes, the motorist is giving plenty of room. There is on-coming traffic fairly close, but presumably the difference in speed between the car and the bicycle is great enough so that the motorist can wait to move back to the right once safely ahead.





## Unsafe passing



**Q1. Does my state require vehicles to pass at a finite distance?**

**A.1.** Maybe - some jurisdictions require a minimum of a three feet buffer when passing.

Unsafe passing includes: passing too closely, too fast, and merging or turning right too soon after passing.

This motorist is overtaking the cyclist closely. The higher the passing speed, the more distance is needed for safety.

## Sidewalk Bicycling



This slide examines sidewalk bicycling, and how it can be unsafe.

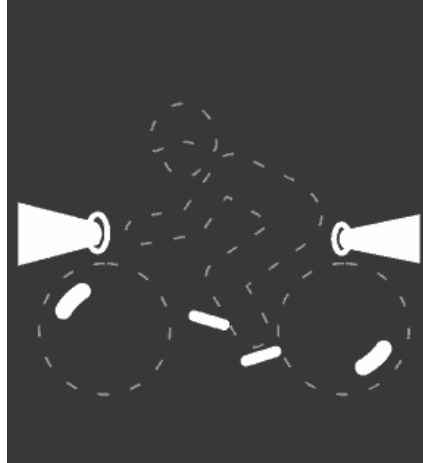
Similarly, bike paths located immediately adjacent to roadways (sometimes called “sidepaths”) have hazards similar to sidewalks. There is an increased risk of car-bike collisions at intersections and driveways. Experienced bicyclists often avoid these kinds of paths in favor of riding on the roadway.

This video illustrates how fast moving sidewalk cyclists can cause crashes and upset pedestrians.

**Notes:** this video has audio. The audio says that sidewalk bicyclists can cause conflicts with pedestrians.

The photo is meant as a replacement if the video does not work. It shows that sidewalk bicyclists can cross the paths of unsuspecting motorists if moving at faster than pedestrian speed.

## Lights at Night: Reflectors and Rear Lights



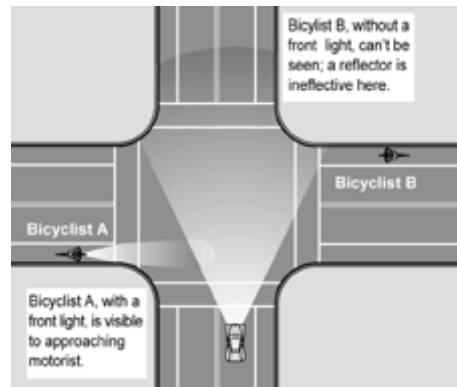
All vehicles need to have lights. Lights not only allow others to see cyclists in plenty of time to avoid crashes, but where there are no streetlights, riding at night without lights is like riding with closed eyes.

This video demonstrates why cyclists are more visible at night with reflectors and lights.

**Notes:** this video has audio - which notes that cyclists are more visible with reflectors.

The graphic is meant as a replacement if the video does not work. It shows how reflectors can help from angles where lights may not shine, as well as provide additional visibility.

## Lights at Night: Headlight v. Front Reflectors



*Graphics compliments of Oregon DOT Bicyclist's Manual*

Bicycle headlights are extremely important because they make cyclists visible to other traffic when the light beams are not pointed directly at the bicycle's reflectors.

**Notes:** this video has audio. The audio says that headlights make cyclists much more visible than reflectors, because headlights are visible even if the cyclists is not in the field of a motorist headlight.

The graphic is meant as a replacement if the video does not work. It shows how a bicycle headbeam will increase visibility.

## Aggressive Driving and Harassment

- Verbal
- Assault
  - With vehicle
  - Thrown object



Harassment and Aggressive Driving, while not always the source of crashes, is one of the major negatives cyclists cite when operating on the roadway. The following are examples from the Arkansas statutes.

### **5-71-208. Harassment.**

(a) A person commits the offense of harassment if, with purpose to harass, annoy, or alarm another person, without good cause, he:

(2) In a public place, directs obscene language or makes an obscene gesture to or at another person in a manner likely to provoke a violent or disorderly response;

or (3) Follows a person in or about a public place; or (4) In a public place repeatedly insults, taunts, or challenges another in a manner likely to provoke a violent or disorderly response; or (5) Engages in conduct or repeatedly commits acts that alarm or seriously annoy another person and that serve no legitimate purpose; or

**5-13-207. Assault in the third degree.**(a) A person commits assault in the third degree if he purposely creates apprehension of imminent physical injury in another person

**5-13-203. Battery in the third degree.**(a) A person commits battery in the third degree if:

(1) With the purpose of causing physical injury to another person, he causes physical injury to any person.



## *Increasing safety through traffic enforcement*

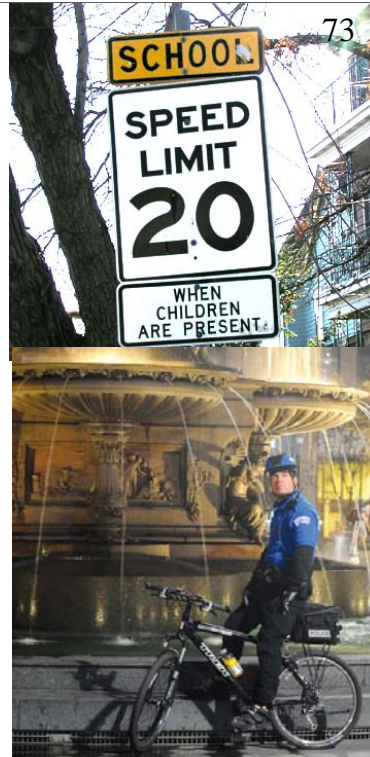


This section may largely be review for experienced police officers. Nevertheless, it will be helpful to provide an overview of implementing equitable enforcement of the traffic laws.



## Why Enforce the Traffic Law?

- Prevent Crashes
- Help traffic flow better
- Educate drivers who may be confused



Take a minute to quickly review the reasons that law enforcement officers should be aware of bicyclists. Having a few of these on the tip of your tongue when you make a bicycle-related traffic stop may help get your point across.

### **Q1. Isn't issuing violations to cyclists a way of punishing them?**

A1. A traffic stop is sometimes viewed as a punishment. In fact, it is an important opportunity to educate the public and improve safety by changing behavior. The purpose of traffic enforcement is to improve safety by increasing compliance with the traffic rules that apply to all. Because there is so little enforcement directed toward bicycling in most jurisdictions, even a small effort may have a big impact.

### **Q2. Don't people already know the rules?**

A2. Many motorists, as well as bicyclists themselves, are genuinely unaware of the rights and responsibilities of bicyclists. There is no authority other than police that can force scofflaw cyclists (or motorists) to change their ways **before** a collision occurs.

Can you think of any other reasons?

## Excuses for not enforcing bicycle/motor vehicle infractions

74

- "There are more important things to do."
- "Bicyclists should not be punished with a fine, especially children."
- "It is impossible to change road users' behavior."
- "Bicyclists are only endangering themselves when they violate traffic laws."
- "The courts will throw the tickets out."

You may hear the following excuses for ignoring bicyclist/motorist infractions:  
Have you heard any of these excuses before?  
Now we will give you some replies...





## Replies

- Injury and death prevention is very important work.
- How is this less important than enforcing expired tabs or issuing a parking ticket?
- If officers don't enforce the law, who will?
- Warnings can be sufficient, especially for children.
- Without enforcement, dangerous drivers will only get worse.

Can you think of others?



## More Replies

- Would you rather report a traffic ticket or a death?
- Unlawful bicyclists are a danger to other bicyclists, pedestrians, themselves, and even motorists.
- The courts and the public can be convinced of the need for enforcement if the community understands the danger.

More replies.



## Key Violations: Cyclists

- Operating against the flow of traffic
- Failure to yield when entering roadway or at a stop or yield sign
- Failure to obey traffic signals
- Failure to yield when moving across the road or turning left
- Riding at night without required equipment
- Riding on sidewalk unsafely or where prohibited

### **Q1. Which offenses should I focus on?**

A1. These are the bicyclist infractions connected with the largest number of car-bike crashes. Motorist infractions (some of them are the same) are on the next slide.



## Key Violations: Motorists

- Failure to yield
  - when entering roadway
  - at a stop or yield sign
  - when turning left
- Unsafe passing
- Improper right turn (immediately in front of a cyclist)
- Driving too fast for conditions
- Opening a car door into traffic

These are the motorist infractions that most often lead to car-bike crashes.



## *Increasing safety through traffic enforcement*



This section may also be review for veteran officers. It's the worst part of your job sometimes, but it may also be the most important. A crash can result in a minor bump where the worst damage is only a few jangled nerves, or a crash can be a horrendous fatality. Either way it is important that you know what to look for so that you may help prevent it from happening again.

***Instructor's Note:*** Remind the students that much more detailed information on this topic is available in the Reference Guide.



## Bicycle “Crash” Defined

“An event in which a bicyclist hits another object or falls off the bicycle.”

Note: a collision usually leads to a fall also.



A crash can be between vehicles or between a vehicle and another object or person... Crashes can occur without any contact, for example in the case of an evasive maneuver or a simple fall.



## Crashes are not accidents

Accident implies heavy doses of chance, unknown causes, and the implication that “nothing could be done to prevent them.” Crashes are unintentional, but avoidable.

One point we want to make here is that most bicycle crashes are preventable, by adherence to the traffic law, use of proper equipment, and a knowledge of crash avoidance maneuvers. And even if there is a crash, injury also can be prevented. None of these preventive actions is an accident, and failure to apply them is not an accident either. Crashes do involve an element of chance, but the idea is to improve the odds by taking the right action.



## The Crash Report: General Information

- Give equal credence to the statements of cyclists, motorists, and witnesses
- Injuries and damage
- Any suspected traffic violations
- Driver impairments?
- Location of collision and/or final resting places of all objects and individuals

When investigating a bicycle crash make note of these items first. They are pretty much the same as you would note for any crash report. As you know, it is vital that nothing be moved before locations are recorded and/or photos are taken.



## Roadway and Environmental Conditions

- Lighting: sun, glare, nighttime
- Weather conditions (wind direction and strength)
- Pavement condition
- Any physical or visual obstructions?
- Road and lane widths
- Type of facility adjacent to road (e.g. sand, paved sidewalk, car parking area, etc.)
- Roadway markings
- Traffic signs and signals (and condition)
- Any skid marks on pavement?

You probably already know all of these, but surprisingly, they are often left off of crash reports, which makes it very difficult for everyone when analyzing the incident afterwards.

**Note:** Be especially observant for confusing or missing signage or road markings, or for poor sightlines caused by overgrown vegetation, parked motor vehicles, poorly placed mailboxes, etc. Bring these types of problems to the attention of your department of public works or department of transportation immediately so that they may be corrected.



## The Bicycle and Cyclist

- Same as other vehicle reporting
- What was the cyclist doing with respect to the traffic law
  - On the sidewalk or road?
  - With or against traffic?
  - Yielding at an intersection?
  - Entering the roadway?

Very rarely does a cyclist cause a crash intentionally. If he or she is at fault, it is usually because he or she is either cycling unsafely or impaired.



## The Bicycle and Cyclist

- Advise cyclists to save all clothing and equipment involved in the crash, and to document injuries.
- Note type of bicycle (Mountain, road, commuter, loaded touring, recumbent, kids, etc.)
- Note type and condition of brakes and tires, chain, wheels, and gear selection.

Just like in other crashes, observe and preserve evidence.



## The Bicycle and Cyclist

- Safety equipment — usage and condition: lights, helmet, sunglasses, reflectors, etc.
- Cycle computer information (may include recent speeds)
- Consult a bicycle mechanic for expert analysis
- Cyclists are required to report crashes involving personal injury or property damage

More bicycle specific aspect to make note of during a crash. Some jurisdictions may require a bicycle police officer to investigate the crash.

Each of these items should be investigated. For example, a crash may have been caused by a freak piece of road debris striking a cyclist in the eye - but the presence of sunglasses would rule this out.



## The Motorist and Automobile

Just like any other crash. For the sake of review:

- Condition/usage of safety equipment: lights, brakes, tires, mirrors, windows, windshield wipers
- What was the motorist doing with respect to the traffic law?
- Is the motorist aware of traffic rules?

This will largely be review. As with bicyclists, motorists don't usually intentionally cause a cyclist to crash. If they are at fault it may have been due to inattention, confusion, or distraction. Ascertain if the motorist is aware cyclists have a right to use the road.



## The Motorist and Automobile

- Analyze a motorist's claim not to have seen the cyclist (was cyclist in full view?)
- If belligerent or otherwise impaired, do not allow to continue driving vehicle
- Motorists are required to report crashes involving personal injury or property damage

Some motorists may intentionally cause cyclists to crash, or may be impaired by drugs or alcohol - these drivers should obviously not be allowed to continue operating their vehicles until they are fully in control of their faculties.



## Injury/Damage Without Collision

If a bicyclist avoids collision, but falls as a result:

- Record same information as with a collision
- Note suspected traffic violations by any individuals involved
- Collision is not necessary for issuing citations or being found at fault

If there is a fall with injury or damage, fault may still be attributed to another driver. Bicyclists are sometimes able to avoid colliding with a motor vehicle that otherwise would have hit them, but the escape maneuver may itself cause them to fall, such as by braking too hard. If another driver's violation was the cause of the fall, then the violator should be held accountable for both the injury and the violation, just as they would be if they caused another motorist to crash.



## *Increasing safety through traffic enforcement*

These are just a few slides to review the important elements of the training, and to provides more information for law enforcements officers who want to get more involved.



 The End!



Re-iterate program goals:

- Help law enforcement officers enforce traffic laws for bicyclists and motorists.
- Discuss the rules of the road.
- Provide data showing the importance of enforcement to reduce injuries and deaths.

***Instructor's Note:*** You may want to ask for feedback to see if the training is productive. A feedback form has been included here for your review.