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Four Layers of Safety for Cycling

There is much more to learn about cycling than we were taught as kids.

1. Don't CAUSE an accident, follow the rules of road.

About half of car-bike collisions are caused by the cyclist. A bicycle is a vehicle and should be driven according to the standard rules of the road. This means drive on the right (not the left or the sidewalk), stop for red lights and stop signs, and use lights at night. The reflectors on your bike help, but are not sufficient either for your safety or to comply with the law.

2. Prevent motorist mistakes.

Be alert for potential accident situations and be assertive to stop a collision before it happens. For example, sometimes you have to use enough of the lane to discourage someone from passing where passing is not safe.

3. Drive defensively to escape hazards.

In case you can't prevent another driver's mistake, plan an "escape route" to avoid a crash. Don't "hug the curb"; leave a safety zone at the edge of the road. Learn and practice emergency maneuvers, just in case.

4. Use safety equipment to reduce injury

A helmet and gloves will not prevent an accident but they may reduce injuries if one occurs. Don't neglect your last line of defense.

Ohio Bicycle Traffic Law Reforms

The Ohio Bicycle Federation urges the Ohio Legislature to amend portions of the Ohio Revised Code that affect cyclists. These reforms will improve bicycling safety and eliminate discrepancies between Ohio traffic laws and the best practices of experienced cyclists, as described in *Ohio Bicycling Street Smarts* and as taught in the *Effective Cycling* and *BikeEd* programs. **Experienced cyclists have one-fifth the accident rate of the average.**

Many people who lack cycling experience believe that a cyclist on the road is in great danger of being hit from behind by passing traffic. However, accident statistics show that the greatest danger actually comes from turning and crossing traffic. Bicycle accidents are caused by the same driving mistakes as auto accidents. Erroneous ideas about danger lead to serious errors on the road as well as mistakes in traffic laws.

If you have questions about bicycle safety, please seek expert information from a *BikeEd* instructor. You can find a list of the certified instructors in Ohio on the Ohio Bicycle Federation website, www.ohiobike.org/Cycling_info.html. One instructor is from the Columbus area: Gordon Renkes, grenkes@pop3.gcfm.org, phone (days) 614-292-3977.

If you have questions about these reforms, please contact Fred Oswald, a *BikeEd* instructor from Cleveland: fred.oswald@nasa.gov, 216-433-3957 (days), 440-888-5829 (evenings).

Priority Reforms

- (1) Limit dangerous local ordinances
- (2) Revise side of the road rules

Other Important Reforms

- (1) Clarify penalties for bicycle infractions. Allow course for violators.
- (2) Exception for continuous turn signal requirement
- (3) Clarification of "Stopping or Slow Speed Rule"
- (4) Allow bicycles on some freeway shoulders
- (5) Relief for no-passing zones
- (6) Rationalize safety equipment requirements
- (7) Clarify titles of traffic laws
- (8) Clarify "upon the seat" requirement

Please see inside for details

Priority Reform #1: Problems created by local ordinances.

As required by §4511.06, motor vehicle traffic laws are generally uniform throughout the state. A driver traveling from city to city need not learn a new set of laws for each community. Local authorities have only limited powers to enact local ordinances.

Unfortunately, uniformity does not exist for bicycle traffic laws in Ohio. Although the Uniform Vehicle Code allows local authorities power only to regulate bicycle parking, and to require registration, inspection and a “frame number”, Ohio gives local authorities *carte blanche*. The result is a crazy quilt of inconsistent and sometimes dangerous regulations (see Appendix 1) that require even expert cyclists to imitate the mistakes of beginners. Part of the reason for this problem is the misguided attitude that bicycles are toys for children, rather than real vehicles for transportation.

Some local governments ban bicycles, particularly from arterial roads. This is done in the mistaken belief that cyclists operating on busy roads are in great danger from motor vehicle traffic passing from behind. However, accident statistics show that such accidents are very rare. In contrast, sidewalks and segregated bicycle paths have a much higher accident rate, about 2-9 times that of the adjacent roadway, depending on road conditions.

Sections §4511.07 and §4511.711 encourage uninformed local governments to enact dangerous and discriminatory ordinances. These local ordinances conflict with well-established principles of traffic operation and are inconsistent with state law, thus they violate the principle of uniform traffic laws. Some of them, particularly mandatory sidewalk laws, require practices known to be dangerous.

The AASHTO *Guidelines for the Development of Bicycle Facilities* (1999 edition) specifically warns against encouraging sidewalk bicycle riding: "...Sidewalks are typically designed for pedestrian speeds and maneuverability and are not safe for higher speed bicycle use. ... At intersections, motorists are often not looking for bicyclists (who are traveling at higher speeds than pedestrians) entering the crosswalk area, particularly when motorists are making a turn. Sight distance is often impaired..."

Another problem with §4511.07 (shown below) is that the language following the present subsection (I) does not even require signs giving notice of these non-uniform and inconsistent ordinances.

Present language: 4511.07: *Sections 4511.01 to 4511.78, 4511.99, and 4513.01 to 4513.37 of the Revised Code do not prevent local authorities from carrying out the following activities with respect to streets and highways under their jurisdiction and within the reasonable exercise of the police power:*

- 6) When stopped at a traffic light where motorists may be tempted to "hook" around the cyclist to turn right on red. (Instead, the cyclist, as a courtesy, should move left to allow turning motorists to pass on the right.)
- 7) At a blind curve or other location where passing may not be safe.
- 8) When crossing oblique railroad tracks or other wheel-diverting obstacles.
- 9) When driving on a one-way street where it may be safest to drive on the left.
- 10) If there is any other safety hazard that requires riding further left.

Note: Numbers 1,2,3a, and 3b are long recognized exceptions to rule 11-1205 in the Uniform Vehicle Code. A variant of No. 4 was recently added to the UVC.

Measures To Make Ohio “Cyclist Friendly”

- Improve state traffic laws that affect bicycles.
- Continue to distribute *Ohio Bicycling Street Smarts*
- Publicize the fact that bicycles are vehicles that belong on the road, operated under standard rules.
- Train key ODOT personnel in *BikeEd* classes.
- Recommend *BikeEd* training for local engineers.
- Provide bicycle training for new police cadets.
- Add pertinent cycling questions to motor vehicle license test.
- Produce “bikes are vehicles” Public Service Announcements.
- Warn local authorities about the hazards of dangerous laws.
- Oppose local laws that limit or prohibit cycling on public roads.
- Defend lawful cyclists wrongly prosecuted.
- Require that "vehicle detectors" detect bicycles.
- Promote wide curb lanes on state highways
- Replace dangerous parallel bar sewer grates.

Please see more information on Ohio Bicycle Federation web site:
www.ohiobike.org

Effective Cycling teaches:

***Cyclists fare best when they act
and are treated as drivers of vehicles.***

Reform #8: Clarify §4511.53

An attorney in a *Cleveland Plain Dealer* article wrote that §4511.53 prohibits standing up to pedal. We believe this is not the intent of this provision. We suggest language similar to that of the Pennsylvania Code, §3504(a) that says "on or astride" the seat. We also suggest a provision for child seats.

A person operating a bicycle or motorcycle shall not ride other than upon or astride the permanent and regular seat attached thereto, nor carry any other person upon such bicycle or motorcycle other than upon a firmly attached and regular seat thereon, nor shall any person ride upon a bicycle or motorcycle other than upon such a firmly attached and regular seat. This section shall not prohibit the carrying of a child in a seat or trailer designed for carrying children and firmly attached to the bicycle.

Appendix 1 -- Examples of misguided and dangerous local laws

- “Any person operating a bicycle shall ride upon the sidewalk rather than the roadway when sidewalks are available and not congested with pedestrian traffic.”
- “No person shall ride a bicycle across or through an intersection when crossing a through street. Such intersections are to be crossed by walking the bicycle across or through the intersection.”
- “A person operating a bicycle shall yield the right of way to vehicular traffic on a roadway.”
- “Wherever a designated path for bicycles has been provided adjacent to a street, bicycle riders shall use such path and shall not use the street.”

Note: A sidepath bicycle route adjacent to a street is nearly as dangerous for bicycle travel as a sidewalk. The accident rate on sidewalks and sidepaths is about 2-9 times the rate for cycling on roads, following standard traffic law.

Appendix 2 – When bicycles should not be operated “as near to the right side of the roadway as practicable.”

- 1) When overtaking and passing another vehicle proceeding in the same direction.
- 2) When preparing for a left turn.
- 3a) When reasonably necessary to avoid hazards at the side of the road.
- 3b) In a ‘substandard width lane’ that is too narrow for a bicycle and another vehicle to travel safely side by side within the lane.
- 4) To avoid conflicts with right-turning traffic.
- 5) When a cyclist at the edge of the road would not be adequately visible.

(H) Regulating the operation of bicycles and requiring the registration and licensing of bicycles, including the requirement of a registration fee;

Present language: 4511.711: *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.*

Nothing in this section shall be construed as prohibiting local authorities from regulating the operation of bicycles within their respective jurisdictions.

Revision to 4511.07(H), adding a new division (I) and renumbering the existing division (I) as (J), and modifying the language following new division (J).

(H) Regulating the operation of bicycles; provided, no such regulation shall be fundamentally inconsistent with the uniform rules of the road prescribed in this chapter; provided further, no such regulation shall prohibit use of bicycles on any public highways, except as provided in Section 4511.051(B);

(The clause below should be added only if politically absolutely necessary.)

without first performing a publicly available professional engineering study to show that such regulation is required for safety considerations and also without first providing a reasonably safe and efficient alternate route, which route shall be clearly marked with signs;

(I) Requiring the registration and licensing of bicycles, including the requirement of a registration fee, for residents of the jurisdiction;

(J) Regulating the use of certain streets by vehicles, streetcars or trackless trolleys.

No ordinance or regulation enacted under division (D), (E), (F), (G), (H), or (J) of this section shall be effective until signs giving notice of the local traffic regulations are posted upon or at the entrance to the highway or part of the highway affected, as may be most appropriate.

Revision to §4511.711

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. Nothing in this section shall be construed as prohibiting local authorities from regulating or

prohibiting operation of bicycles on sidewalks within their respective jurisdictions, but no such regulation may require that bicycles be operated on sidewalks.

Priority Reform #2: Revise §4511.55(A) and §4511.25(B)

Present language: 4511.55(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."

Present language: 4511.25(B) "Upon all roadways any vehicle or trackless trolley 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 or trackless trolley proceeding in the same direction or when preparing for a left turn."

§4511.55(A) is contrary to safe operation of bicycles because it encourages, and is often misinterpreted to mean riding "as close as POSSIBLE" to the road edge. Although the usual position of bicycles is near the right edge of the road, there are situations where this is unsafe and unreasonable. This language encourages the beginning cyclist's mistake of "hugging the curb". Riding too close to the curb encourages motorists to attempt to pass, even where passing is not safe. It contributes to mistakes where motorists turn in front of cyclists, the so-called "right hook". It tends to force cyclists to ride too close to parked cars, exposing them to risk of being "doored", and to ride over and through hazards rather than around them. It also leads to novice cyclists making left turns from the right edge by swerving in front of traffic, as in a "shooting gallery".

Since 1979, the Uniform Vehicle Code has recognized several exceptions to UVC §11-1205 (on which 4511.55(A) is based) to accommodate conditions where edge of the road cycling is unsafe. However, there are several other situations not yet recognized in the UVC. (See Appendix 2 below.)

§4511.55(A) confuses police, courts and the public. For example, in the appeal of *City of Trotwood v. Selz (10/20/00, unreported)*, *Second App. Dist. Case No. CA 18207*, the prosecutor asserted in his brief that a cyclist must always ride at the extreme edge of a road although this may be unsafe. As another example, an attorney writing for the *Cleveland Plain Dealer*, misquoted this law as requiring riding "as close as possible" to the curb.

§4511.55(A) largely duplicates 4511.25(B). Before the 1975 ORC revision, bicycles were classified as devices rather than vehicles. The bicycle "near to the right" language was intended to be similar to the rules for horse drawn buggies and farm implements.

(A) Every bicycle when in use at the times specified in section 4513.03 of the Revised Code shall be equipped with the following:

(1) A lamp mounted on the front of either the bicycle or the operator 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, which emits light only when the bicycle is moving, may be used to meet this requirement;

(2) A red reflector on the rear ~~{deletions}~~ that shall be visible from all distances from one hundred feet to six hundred feet to the rear when directly in front of lawful lower beams of head lamps on a motor vehicle;

(3) A lamp emitting either flashing or steady red light visible from a distance of five hundred feet to the rear shall be used in addition to the red reflector. If the red light performs as a reflector such that it is visible as specified in (2) above, it shall satisfy the requirement for the reflector.

(B) Additional lights and reflectors may be used in addition to those required under part (A) above except that red lights and reflectors shall not be used on the front of the bicycle nor shall white or colorless lights or reflectors be used on the rear of the bicycle.

(C) Every bicycle shall be equipped with an adequate brake or brakes which will enable its driver to stop the bicycle within 15 feet from a speed of 10 miles per hour on dry, level, clean pavement.

(D) A bicycle may be equipped with a device capable of giving an audible signal, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

Reform #7: Clarify titles:

The traffic laws contain many provisions that apply to pedestrians, trackless trolleys and other non-vehicles, and to vehicles that are not motor vehicles. Rename the "Ohio Motor Vehicle Laws" to "Ohio Traffic Laws". Rename Title XLV "Motor Vehicles--Aeronautics--Watercraft" to "Vehicles--Aeronautics--Watercraft". Rename Chapter 4511 "Traffic Laws—Operation of Motor Vehicles" to "Traffic Laws—Operation of Vehicles"

(3) The department publishes a notice authorizing bicycle access to the shoulder of the freeway. The notice shall constitute approval for use of bicycles on the specified portion of the freeway.

Reform #5: New paragraph for §4511.31, “Hazardous zones” (no-passing zones)

This revision offers relief to anyone traveling behind cyclists, horse-drawn buggies, farm vehicles, etc. on two-lane roads too narrow for within-lane passing. Nearly every motorist will pass a bicycle in this situation. This subsection makes such passing legal under specified circumstances. (You may wish to modify the criteria for the speed of the slower vehicle.)

(B) This section does not apply when (1) the slower vehicle is proceeding at less than half the speed of the speed limit at that point, and (2) the faster vehicle is capable of overtaking at the speed limit, and (3) there is sufficient clear sight distance of the left-hand lane to meet the standard overtaking limitations of Section 4511.29, considering the speed of the slower vehicle.

Reform #6: Revise §4511.56

Front reflectors and wheel reflectors, as required by the CPSC for new bicycles, provide almost no safety benefit. Wheel reflectors do provide an impressive display when a cyclist is approaching a road from the side. However, then the cyclist has the duty to yield to traffic so visibility is not needed. In contrast, a motorist on a side street must be able to see any cyclist he is required to yield to. Reflectors are useless here because the bicycle is outside the headlight beams. A bicycle headlight that illuminates to the front and sides, although not required by the CPSC, is vital for safety. A bell is not needed by anyone capable of voicing a warning. Indeed, using a bell in an emergency can be dangerous because the operator may need to take a hand off the controls and look away from where he is going.

Generator powered headlights, helmet-mounted headlights, additional lights and reflectors and flashing (LED) taillights should be authorized except that red should not be used on the front, nor white on the back.

The requirement in (C) for an "adequate brake" is ambiguous. Some police departments prefer an objective standard. We suggest using the language of the Uniform Vehicle Code §12-706.

We recommend the following as a replacement for §4511.56
4511.56 SAFETY EQUIPMENT ON BICYCLE

The appropriate purpose of both 4511.55(A) and 4511.25(B) is to facilitate safe passing of slower vehicles by faster vehicles. It is not always necessary or safe for a cyclist to ride at the extreme edge of the road. Instead a cyclist should ride only far enough to the right to allow passing by faster vehicles but then only if such passing is safe and reasonable.

Our proposed revisions for §4511.55(A) and 4511.25(B) are based on Pennsylvania Code, §3301(b) and §3505(c) and on the UVC §11-1205(a)(3).

Revision to §4511.55(A), (split into two subsections):

(A) Every person operating a bicycle upon a roadway shall obey all traffic rules applicable to vehicles, except those provisions, which by their nature can have no application.

(B) A bicycle operated at less than the prevailing speed of traffic shall be operated in accordance with the provisions of §4511.25(B) except when reasonably necessary to avoid conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards, or a lane that is too narrow for a bicycle and another vehicle to travel safely side by side within the lane, or when it is otherwise unsafe or impracticable to do so.

Revision to §4511.25 (B):

(B) Upon all roadways any vehicle, or trackless trolley proceeding at less than the prevalent and lawful 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, and far enough to the right to allow passing by faster vehicles if such passing is safe and reasonable, except under any of the situations listed below.

- 1. When overtaking and passing another vehicle or trackless trolley proceeding in the same direction.***
- 2. When preparing for a left turn at an intersection or into a private road or driveway.***
- 3. When the operator must necessarily drive in a lane other than the right-hand lane to continue on such operator's intended route.***

Provided, nothing in this subsection shall require the operator of a slower vehicle to compromise such operator's safety to allow overtaking.

Other Important Reforms

The Ohio Bicycle Federation urges the Ohio Legislature to amend portions of the Ohio Revised Code that pertain to bicycles. Above we present two priority reforms. Below are slightly less important measures to improve bicycle safety, increase traffic efficiency, eliminate confusion and remove some useless equipment requirements.

Reform #1 Clarification of penalties for bicycle infractions. Allow cycling skills course for violators.

Infractions committed by a person operating a bicycle should not result in “points” being assessed against that person's motor vehicle operator's license. Certain traffic violators should be offered the opportunity for education as an alternative to traffic fines.

Proposed new subsections (A) and (B) for §4511.52

(A) Violations of traffic laws by bicycle operators shall be ticketed using the same procedure as motor vehicle operators, except that any violation committed while operating a bicycle shall not affect the status of any motor vehicle operator license. When a citation is issued to a cyclist, the fact that the violator was operating a bicycle shall be clearly indicated on the citation.

(B) In the case of violations of traffic law by bicycle operators or that involve motorists endangering cyclists, the court may permit demonstration of successful completion of a court approved cycling skills course in lieu of or in addition to a fine or other penalty.

Reform #2, Exception for continuous turn signal requirement

§4511.39 includes the following sentence: *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 or trackless trolley before turning.*

There are situations where giving a turn signal can interfere with safe operation of a bicycle, for example, when the hand is needed for steering or to operate the brakes. We recommend the following, partially based on UVC §11-1209(b), which requires a continuous signal only for vehicles equipped with automatic turn signals: (new language underlined):

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 or trackless trolley before

turning, except that on a bicycle, the signal need not be continuous and should not be given when the hands are needed for safe operation of the bicycle and no signal need be given when the bicycle is in a designated turning lane.

Reform #3: Clarification of §4511.22(A), “Stopping or Slow Speed Rule”

Consider a local “Impeding Traffic” case: *City of Trotwood v. Selz* (2/7/00, unreported), *Montgomery County District Court One, Case NO. 99-TRD-4409*. The prosecutor alleged that if a bicycle could not be driven at the speed limit (45 mph), the cyclist must get off the road. The language below will help prevent such misrepresentation.

4511.22(A) No person shall stop or operate a vehicle, trackless trolley, or street car 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. An unreasonably slow speed is defined with respect to the capabilities of the vehicle and operator.

Reform #4: Exceptions for exclusion of bicycles from freeway shoulders

Ohio law currently bans cyclists from freeways, regardless of the hardship that this causes where there is no reasonable alternative route and regardless whether there is any safety hazard. The following would allow the DOT to approve using the shoulder in limited cases. The language here is based on Pennsylvania Code §3511.

Proposed new subsection (C) for §4511.051

(C) Notwithstanding subsection (B) above, the Department of Transportation may authorize bicycle operation on the shoulder of designated portions of freeways under the following conditions:

(1) A written request for review of the freeway route based on the potential unavailability of a reasonable alternate route is made to the department.

(2) The department determines that no reasonable alternate route exists.