

Tips for Bikeway Designation

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Introduction

As fuel prices rise, awareness increases about healthy lifestyles and being green (as in environmentally conscious) becomes expected by society, traffic engineers and transportation decision-makers will receive more requests to designate bikeways in their communities. Ironically, while promoting bicycling makes sense, it can often prove challenging.

This article is written to familiarize traffic engineers, transportation policy makers and elected officials with a number of issues that often arise in connection with planning and designating a comprehensive bikeway networks. While this article is written from a Maryland perspective, the discussion is, to some extent, applicable elsewhere. However it is important to note that it is not the purpose of this article to provide specific legal advice to those contemplating designating bikeways in their communities, whether in Maryland or elsewhere. Readers are encouraged to seek competent legal advice that is familiar with the laws of the jurisdiction(s) involved. Discussions of legal issues in this article should only be considered as being illustrative and providing a beginning point for the read to initiate discussions with their counsel.

Why Designate Bikeways?

Although the majority of roadways in Maryland are open to bicycle traffic, there are several reasons for designating specific roadways and shared use paths as bikeways. They include:

- Identification of the best or only travel alignment within a transportation corridor as a way for bicyclists.
- Alert motorists to the possible presence of bicyclists and remind the traveling public that bicyclists are legitimate roadway users.
- Encourage bicycle travel, particularly when the bikeway includes destination signing. This can benefit commuters and increase tourism.

In urban or suburban communities, there are often several routes available for bicyclists to choose from. However, sometimes the best choices for bicyclists may not be immediately

obvious, even for long time residents considering bicycle commuting for the first time. In rural areas, even if there are not a lot of route choices within a travel corridor, designation of the obvious route choice confirms that bicyclists are legitimate roadway users.

Definitions of Bikeways

There are three basic types of bikeways and confusion often results from the misapplication of descriptive language. The Manual of Uniform Traffic Control Devices (MUTCD) uses the following definitions:

Bikeway – a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Designated Bicycle Route – a system of bikeways designated by the jurisdiction having authority with appreciated directional and informational route signs, with or without specific bicycle route numbers. Bicycle routes, which might be a combination of various types of bikeways, should establish a continuous routing.

Bicycle (or Bike) Lane – a portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists.

Shared-Use Path – a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users.

Shared-use paths are often mistakenly called “trails”. Shared-use paths are legally considered to be highways in Maryland. The major difference between shared-use paths and other highways is that motor vehicles are generally prohibited from this specific type of highway. For perspective, at the opposite end of the highway spectrum are Interstate highways, which allow most motor vehicles but exclude pedestrians and bicyclists.

Laws, Regulations, Standards and Guideline Documents

There are several publications that are available to guide traffic engineers and others in bikeway design. Chapter Nine in the aforementioned MUTCD covers required and optional traffic control devices for bicycle facilities. In 1999, the American Association of State Highway and Transportation Officials (AASHTO) published the *Guide for the Development of Bicycle Facilities*, the first readily available compendium of guidance and recommendations in areas of bicycle planning, facility design, and facility operation and maintenance. In 2007, the Maryland State Highway Administration (SHA) incorporated the AASHTO Guide into its *Bicycle and Pedestrian Design Guidelines* along with more current information. Although written for traffic and design engineers, these guidelines can be of interest to others. SHA’s Bicycle and Pedestrian

Design Guidelines are available on-line at www.marylandroads.com and clicking on the tab “Business with SHA”.

Another document available on-line is the *Reference Guide to Federal and Maryland State Bicycle and Pedestrian Laws and Policies* published by the Maryland Department of Transportation. The Reference Guide ties in US and Maryland laws and policies relating to bicycling and walking as well as access to Maryland’s 20-Year Bicycle and Pedestrian Access Master Plan. It provides legal and policy rationales for bikeway designation and can be accessed under “What’s New?” at www.mdot.state.md.us/Planning/Bicycle/BikePedPlanIndex.

Bikeway Selection Factors

SHA’s *Bicycle and Pedestrian Design Guidelines* provides detailed help with bikeway selection. Many decision makers may not have ridden a bicycle since they obtained a driver’s license. This lack of having a recent “handlebar perspective” may complicate decision-making regarding bikeway designation. If a decision maker doesn’t personally feel safe riding a bicycle along roadways under consideration for bikeway designation, they may feel uncomfortable encouraging others to ride along those roadways. Furthermore, under such conditions some traffic engineers may feel that bikeway designations may open them and their agencies to liability suits in the event someone gets injured on the designated bikeways.

Additionally, when designing a bikeway network overlaid on an existing roadway network, physical and financial constraints may prevent the creation of an ideal bikeway. Also, political considerations, such as resistance to the removal of on-street parking, or adjacent property owners’ opposition may pose challenges to bikeway creation.

The AASHTO Guide offers eight criteria to consider when contemplating the establishment of designated bike routes. They are:

- a. The route provides through and direct travel in bicycle-demand corridors.
- b. The route connects discontinuous segments of shared use paths, bike lanes and /or other bike routes.
- c. An effort has been made to adjust traffic control devices (e.g. stop signs, signals) to give greater priority to bicyclists on the route, as opposed to alternative streets. This could include the placement of bicycle-sensitive detectors where bicyclists are expected to stop.
- d. Street parking has been removed or restricted in areas of critical width to provide improved safety.
- e. A smooth surface has been provided (e.g. adjust utility covers to grade, install bicycle-safe drainage grates, fill potholes, etc).

- f. Maintenance of the route will be sufficient to prevent accumulation of debris (e.g. regular street sweeping).
- g. Wider curb lanes are provided compared to parallel roads.
- h. Shoulder or curb lane widths generally meet or exceed width requirements included under *Shared Roadways*, page 17.

Sometimes the best choice or only choice for bikeway designation may be a roadway that does not meet all, or even most of these criteria. However, less than desirable roadway characteristics can sometimes be mitigated. For example, if a narrow curb lane cannot be widened for a short distance, a SHARE THE ROAD assembly could be installed to inform motorists that bicyclists might be operating farther to the left and possibly occupying part of the motor vehicle lane. Drainage grates of the type that can snag bicycle wheels can be improved by welding cross pieces of metal atop the grates if it is impractical to replace the grates. The more of these criteria that are met, the better bicyclists will be served by the facility. Engineering judgment is often needed to determine the best way to accommodate bicyclists in an imperfect world.

Novice and Child Bicyclists Accommodations

Another challenge that many bikeway planners face is determining who their audience is. There is a common assumption that most bicyclists are children and adults lacking in skill to handle complicated traffic situations. This assumption may prevent the selection of certain roadways as designated bikeways on the grounds that this audience doesn't have sufficient judgment or cycling skills to ride safely there. If a community lacks wide, low volume roadways or opportunities to install a network of shared use paths deemed suitable for child riders and novice adults, it can be easy to conclude that a bikeway network is impossible to create. However, bikeway planners need to consider that there are existing competent bicyclists who could benefit from bikeway designation and that inexperienced bicyclists have the potential to become competent road bicyclists with maturity and training.

The engineering features of bikeways shown in publications like the MUTCD, the AASHTO Guide, and the SHA Bicycle and Pedestrian Design Guidelines cannot be expected to accommodate novice and child bicyclists by themselves. These engineering design criteria require a certain level of competence from bicycle riders such as obeying traffic control devices, and being aware of how to avoid dangerous situations (e.g. awareness of potential for collisions at intersections), choosing equipment that is appropriate to their size, skills and conditions of use and being able to safely operate and control that equipment.

Bikeway designation should not be seen as a guarantee against injury. Parents and guardians must judge and set limits to where child bicyclists may and may not ride. Adult bicyclists also need to ensure that they understand how to ride in a competent manner and avoid, to the extent possible, traffic and other conditions with which they feel uncomfortable. The duty of determining whether a bicycle facility is suitable for an individual bicyclist to use rests on the bicyclist not on the traffic engineer.

The Maryland Department of Transportation provides printed, audio, and audio-visual bicycle safety materials for both children and adults to help them become competent bicyclists. Bicycle advocacy and touring clubs also help educate bicyclists through periodic workshops and by matching novice bicyclists with experienced bicyclists on club rides. In short the traffic engineer should not be afraid to provide bike facilities consistent with applicable standards and guidelines simply because they assume some riders may not be competent to use them.

Liability Concerns

As previously mentioned, transportation and elected officials may be reluctant to create designated bikeways due to the fears of getting sued in the event someone is hurt riding a bicycle there. This fear may arise because persons responsible for bikeway designation may not be comfortable cycling themselves and worry how they would fare riding a bicycle on a particular roadway or facility. Or, they may have heard stories of other governmental organizations being sued by injured bicyclists. While it is indeed possible for a government entity to be successfully sued by an injured bicyclist, certain actions can be undertaken in connection with the designation and maintenance of bikeway facilities so as to minimize the possibility of being found liable in the event of a lawsuit. These actions can make bikeway designations and maintenance more of a reasonably manageable risk.

The most important step that transportation officials should take when concerned that bikeway designation would result in increased risk of lawsuit is to consult competent attorneys, usually their own agency lawyers or those on retainer to the jurisdiction. Attorneys can advise them not only on the relative risk of implementing a proposed course of action but can suggest ways of minimizing any confirmed risk. This consultation should occur before plan implementation. However, transportation officials should not hesitate to talk with their legal counsel at any time. The decision whether to implement bikeway projects should only follow a thorough vetting of all relevant issues, including, by way of example only, issues of risk and liability, with appropriate subject matter experts.

Historically, it appears that public agencies have been more often successfully sued over maintenance issues rather than design issues. The duty of a public entity to properly maintain those public facilities for which it is responsible by law would likely still exist, regardless of whether such facilities were designated a bikeway. Potholes not filled in a timely manner, downed regulatory and warning signs not replaced within a reasonable time period, or improper work zone procedures that are the proximate cause of an injury to a bicyclist might be fertile ground for a successful lawsuit even if the facility is not a designated bikeway.

In terms of assessing risk in connection with bikeway design and maintenance consider the following:

- Understand the difference between laws, regulations, standards and guidelines. Ensure that applicable laws, regulations and standards are observed.
- Strive to follow applicable guidelines. However if guidelines cannot be followed document reasons why the guidelines were not followed (*e.g. widened curb lanes were*

not provided between 12th and 17th Streets because historic designation forbade street widening).

- Ensure that documented reasons for guideline deviation can be retrieved years later by subsequent employees. Seek to provide mitigation measures if possible (e.g. *Bikeway Narrows warning signs*) to warn of any unusual circumstances.

In the event of lawsuit over bikeway designation, it may be helpful if the defendant agency can demonstrate that all applicable laws, regulations and standards in effect when the bikeway designation occurred were followed. Further, it may be helpful to be able to demonstrate that the then current applicable guidelines were followed (or that there was a logical reason for not observing guidelines) and whether any reasonable mitigating action was taken. Being able to demonstrate such points may help the defendant agency show that it was not negligent.

Elements of Tort Law

In order for transportation officials to better discuss tort liability concerns with their legal advisors, the following is a rudimentary overview of tort law and the four elements that must be shown to demonstrate negligence.

Webster's II New College Dictionary defines a tort as, "A wrongful act, damage, or injury done willfully, negligently, or in circumstances involving strict liability, but not involving breach of contract, for which a civil suit can be brought." In order for a defendant to be found guilty of committing a tort, the plaintiff must successfully prove that four elements; duty, breach, proximate causation and damages, were met.

Duty means that the defendant owed the plaintiff a duty of care. Breach means the defendant did not honor that duty of care. Proximate causation means that the defendant's failure to honor the duty of care owed to the plaintiff directly caused plaintiff's damages. Damage means that the plaintiff suffered death or physical injury or some other type of loss, damage or injury as a result the defendant's failure to honor that duty of care. The following example may help illustrate how these elements might directly apply to a common concern that transportation officials have regarding bikeway designation.

Our City designates a roadway by an elementary school as a bikeway and an eight-year old child, Pamela Pedaler, rides her bike there after seeing the BIKE ROUTE signs. Pamela is subsequently struck from behind and seriously injured by David Driver, a motorist, who failed to see young Pamela riding in front of him. Is the City liable to Pamela and her parents for attracting Pamela to ride on this street by installing the BIKE ROUTE signs?

An attorney would likely investigate whether the City owed Pamela a duty of care by installing the BIKE ROUTE signs. For sake of discussion only, we will assume a duty was owed to all bicyclists. Did the City breach that duty? Let's assume that all applicable regulations and guidelines were followed and the bikeway was otherwise well-lighted and well-maintained. However, Pamela's attorney argues that she would not have ridden her bike on this roadway where the driver struck her from behind if not for the placement of the BIKE ROUTE signs.

To determine whether the City was negligent, it would be first necessary to answer a lot of other questions. Among those questions: Was Pamela operating her bicycle in a safe manner? Was her bicycle in safe operating condition and appropriate to her size and experience? Was the driver operating the car that struck her operating his vehicle in an unsafe manner? Was he unable to avoid hitting Pamela because he was speeding or DUI? The answers to these questions (and others) would have a bearing on determining the proximate cause of Pamela's injuries.

Were the BIKE ROUTE signs the proximate cause? The City would likely be found liable only where it was proven that "but for" the placement of the BIKE ROUTE signs, Pamela would not have been injured.** Based on the answers to the above questions, one might conclude there could be a number of other "proximate causes" of Pamela's injuries. It is also important to know that for some government agencies the doctrine of sovereign immunity might be applicable. Sovereign immunity means that an agency cannot be sued in tort, or that if sued in tort, the amount of damages is limited by law.

Consequently, when asking your attorney about liability risks it may be helpful to formulate your questions in relation to how the elements of tort law might apply. It may also be helpful to ask your attorney whether the agency(ies) or jurisdiction(s) enjoy(s) sovereign immunity, or if sovereign immunity has been waived, to what degree.

**Maryland is in the minority as a "contributory negligence" state. If the plaintiff is contributorily negligent in Maryland, the plaintiff may be barred from any recovery. The majority of other states are "comparatively negligence" states. In those states, a determination is made as to the percentage of liability of each defendant. If a determination is made in such a state that the City's placement of the BIKE ROUTE signs made them 20 % negligent, Pamela might still be able to recover a portion of her claim against the City even though she (or her parents) had been negligent.

Final Thoughts

It is advisable to seek community input in bikeway designation, particularly from bicyclists whether they are individuals or members of bicycling clubs and advocacy groups. As citizens who stand to benefit from bikeway designation, they have an interest in how their communities' bikeway network is developed. As persons with handlebar perspectives, they can provide useful insight into the needs of bicyclists.

Also, bikeway route designation can provide an opportunity to get on a bicycle and ride the routes under consideration. This is particularly helpful for those decision-makers who haven't ridden a bicycle since acquiring a driver's license because it helps to understand conditions from a bicyclist's perspective. If you are uncertain about your street skills ask experienced bicyclists, particularly local bicycle advocates, to accompany you. This will increase your knowledge and credibility as well as providing enjoyment as well.

Finally, consult with competent counsel who can advise you about managing the risks associated with designating and maintaining bikeways in your area. While the designation and maintenance of bikeways cannot be entirely risk-free, counsel can help assure your bikeway program is

planned and implemented with a realistic understanding of what those risks are and how those risks can be mitigated.

Good luck!

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