

# CHAPTER 4

## PLAN OBJECTIVES AND RECOMMENDED ACTIONS

### 4.1 BASIC PROPOSITIONS

**T**he bases for developing the plan's objectives and recommendations stem from a series of propositions first established in the 1994 Plan. These propositions set forth HDOT's standpoints relative to bicycle transportation.

#### **Proposition 1: Bicycles belong on Hawaii's roadways.**

The bicycle is officially recognized by law, through Chapter 291C, Hawaii Revised Statutes (HRS), Statewide Traffic Code:

"Traffic laws apply to persons riding bicycles. Every person riding a bicycle upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this chapter, except as to special regulations in this part and except as to those provisions of this chapter which by their nature can have no application."

#### **Proposition 2: The basis for the bikeway system is the existing roadway system.**

A shared roadway system provides greater safety for the bicyclist than sidewalks and, in some cases, bike path facilities because of increased visibility and room for maneuvering. Appropriately designed shared roadway facilities do not measurably impact the service for motor vehicles on the roadway. Experience in many areas has shown the compatibility of the two modes of transportation.

#### **Proposition 3: The bicycle is a viable mode of transportation.**

The development of any new facility should be based on the needs and interests of the affected community, as well as the overall transportation policy goals and objectives of State and County governments. The ultimate objective should be to increase recognition and use of the bicycle as a viable transportation mode that belongs in the mix of transportation alternatives.

#### **Proposition 4: Hawaii's bikeway system must provide for the broadest mix of bicycle riders.**

Bikeway planning should seek to accommodate a broad mix of bicyclists taking into consideration that bicyclists differ greatly in their range of skills. According to the *Guide for the Development of Bicycle Facilities* (AASHTO, 1999):

"Planners and engineers should recognize that the choice of highway design will affect the level of use, the types of user that can be expected to use any given road, and the level of access and mobility that is afforded to bicyclists."

**Proposition 5: A program of support must be provided in planning for bicycle transportation facilities.**



A program for developing bicycle facilities alone is insufficient. There is serious need for support activities that create an environment suitable for a bicycle transportation system. These activities include, but are not limited to the following program areas:

- Facility maintenance
- Bicycle safety and education
- Public awareness of bicyclists
- Enforcement of traffic law violations by bicyclists and motorists
- Encouraging bicycle ridership

Bicycling on  
Waianuenu Avenue.  
Hilo, Hawaii.

## **4.2 STATE BICYCLE PLAN GOAL**

The overall goal of *Bike Plan Hawaii* is:

**TO ESTABLISH BICYCLING AS A SAFE AND CONVENIENT MODE OF TRANSPORTATION FOR RESIDENTS AND VISITORS THROUGHOUT THE STATE.**

## **4.3 OBJECTIVES AND RECOMMENDED ACTIONS**

To realize the overall goal of the plan, *Bike Plan Hawaii* identifies five tactical areas (objectives) in which improvements can be made. The objectives are easily remembered as the 5 “E”s:

- Engineering and Planning
- Education
- Enforcement
- Economics
- Encouragement

For each, the plan contains a set of recommended actions that would help to realize the objective. Some of the actions are already standard practice in the day-to-day activities of HDOT. Others may entail new initiatives or programs, either on an ongoing or ad hoc basis. And still others may call for HDOT to serve as a catalyst for other agencies or groups to take appropriate action. The recommended actions are neither mandates nor firm commitments. Rather, they provide a menu of facilitative actions that should be implemented as resources of manpower and funds allow.

### 4.3.1 ENGINEERING AND PLANNING OBJECTIVE

#### Objective:

#### PLAN AND DESIGN NEW AND IMPROVED TRANSPORTATION FACILITIES TO ACCOMMODATE AND ENCOURAGE USE BY BICYCLISTS OF ALL SKILL LEVELS.

According to the *National Bicycling and Walking Study* (FHWA, 1994):

“The key may lie in first working to create safer, more friendly environments, both physical and social, for bicyclists and those that walk. Then once people are drawn to greater use of these modes, their numbers may reinforce their greater safety on the roadway as they become more fully accepted as legitimate users of the transportation system.”

#### Recommended Actions:

- Design roadway projects with adequate space for bicyclists.
- Expand and improve each island’s network of safe, convenient, and integrated bikeways for both utilitarian and recreational travel.
- Adopt nationally recognized design guidelines and standards for bicycle facilities.
- Develop innovative design solutions when warranted by unusual or unique environmental conditions.
- Formulate and adopt policies and practices that maintain bikeways in a smooth, clean, and safe condition.
- Reconfigure HDOT’s bicycle facilities inventory to include shoulders and wide curb lanes that meet AASHTO guidelines.
- Inspect roadways after repair work has been completed to ensure that repairs meet standards for compaction, smoothness, and durability.

### To Designate (or Not to Designate) Bikeways

The question of whether or not to use pavement markings, stencils, and/or signs to designate bikeways as bicycle facilities is an issue that affects not only design, but also the way HDOT distinguishes “existing” and “proposed” bicycle facilities. At present, only designated bikeways are considered bicycle facilities and included in the inventory of existing facilities. Roadways that are bike-friendly, and might otherwise meet AASHTO guidelines for bicycling accommodations are excluded from the inventory if not signed or marked. Instead, those roadway segments are listed as proposed bicycle facilities. An estimated 391 miles are affected in this way—possibly more.

Group B/C bicyclists prefer designated facilities for bicycle use. Therefore, when bike lanes or shoulders are provided to serve group B/C riders, some designation should be provided. In addition, signs and markings can be beneficial to traffic operations by legitimizing the presence of bicycles in the eyes of motorists and potential bicyclists, and “advertising” bicycle use. Combined with destination information, bike route signs can make the bikeway system distinctive and orient visitors who are unfamiliar with an area.

In other cases, however, it may be more appropriate *not* to designate the facility for bicycle use, even though road improvements meet AASHTO guidelines. Entire street systems (e.g., minor residential streets) are fully adequate for safe and efficient bicycle travel, and signing and striping for bicycle use would be unnecessary. Also, if the routes are not along high-demand bicycle corridors, it would be inappropriate to designate bikeways regardless of roadway conditions and signs would only add to the roadside clutter many communities find objectionable.

- Encourage counties to develop land use plans and establish zoning and subdivision regulations and site plan review procedures that promote bicycling through compact settlement patterns and require new developments to accommodate bicycles.
- Continue to integrate bicycle facilities with other modes of transportation; for example, by providing protected parking at major transit hubs and park-and-ride lots.
- Coordinate the planning, design, and construction of bicycle facilities with other implementing agencies.
- Given the similarity of needs shared by bicyclists and pedestrians, and the interconnections between bicycle and pedestrian facilities, future updates of *Bike Plan Hawaii* should be expanded to include pedestrian issues and facilities.



While motorists wait in a traffic queue on Pahi Avenue, Kapahulu, Oahu, pedestrians and bicyclists on the adjacent path are able to travel unimpeded.

#### 4.3.2 EDUCATION OBJECTIVE

##### Objective:

##### **EXPAND THE RANGE OF EDUCATION ACTIVITIES TO REDUCE BICYCLE CRASHES AND INCREASE RIDERSHIP.**

Comprehensive public information and education programs are often used to raise community awareness and improve bicyclists' riding and traffic skills, as well as motorists' attitudes toward bicyclists. Ensuring that both bicyclists and motorists understand and practice the fundamental "rules of the road" is one way of accomplishing this goal. For a safer bicycling experience, public education programs should address effective riding principles and the use of safety equipment. Children who are offered bicycling education through the school system benefit by learning a life skill—not only in terms of bicycling as a specific activity, but also better awareness of road dynamics in general.

**Recommended Actions:**

- Support bicycle education programs for children in public and private schools throughout the state.
- Support bicycle education programs for adults.
- Ensure that safety materials and curricula used in the state are consistent and address the use of bicycle safety equipment and causes of bicycle crashes. Safety education programs should also improve on-road bicycling skills and judgment, and the observance of traffic laws.
- Incorporate awareness of the needs and rights of bicyclists into the driver education program, the Hawaii drivers' manual, and the drivers' license written exam.
- Monitor and analyze bicycle crash data to find ways of improving bicycle safety.
- Continue working with educational institutions to offer extension programs on state-of-the-art bicycle facility planning and design for transportation engineers and related professionals in the public and private sectors.
- Create an on-line resource center to disseminate material on bicycle facilities, safety, and efforts by other communities to increase bicycle use. The website should be interactive with bicyclists given an opportunity to provide suggestions and submit maintenance requests, and to notify officials of hazardous bicycling conditions.
- Increase awareness among Hawaii residents about the health and fitness benefits of bicycling.

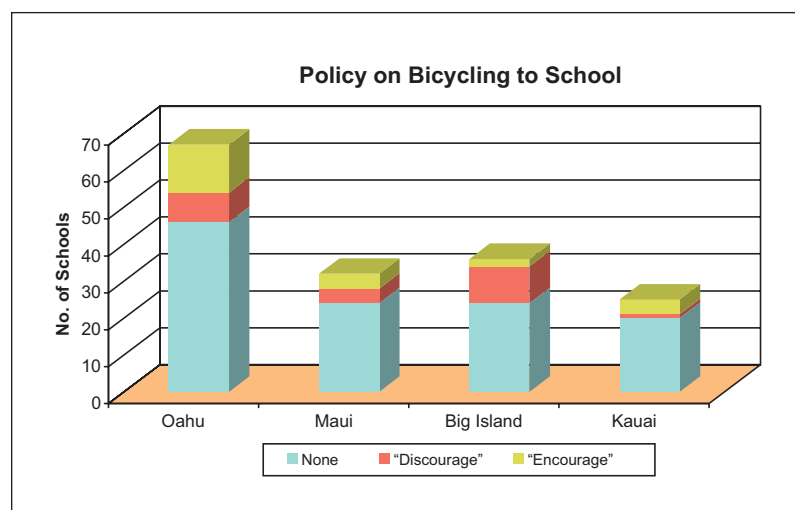


*BikeEd, a program for fourth-grade students, teaches proper bicycling techniques on actual roads.*



*Bicycle rack at Washington Middle School. Honolulu, Oahu.*

**Figure 4-1**



All public and private schools in grades K–12 (excluding those in the Honolulu PUC) were mailed a survey asking about their policy on students bicycling to and from school (see Appendix A). Among the 153 schools that responded, 105 schools or 69%, stated that they have no policy. The remaining 30% were almost evenly split between those that formally or informally encourage bicycling, and those that formally or informally discourage bicycling. Three schools in the latter group prohibit students from riding their bicycle to school.

## Safe Routes to School

Not long ago, children routinely traveled through their neighborhoods on foot or bicycle. Today's children are more likely to be chauffeured by their parents to nearly all their activities because streets are perceived to be unsafe due to traffic, crime, or both. In the case of traffic hazards, the more traffic increases, the more parents decide it is unsafe for their children to bike or walk. One way to break the cycle is a movement called "Safe Routes to School" that is focusing on getting kids back on their bikes and feet. Coalitions of parents, school administrators, local officials, neighborhood groups, and traffic engineers work together to identify hazards along heavily traveled routes to school and recommend changes.



Kealakehe Public Pathway  
Kona, Hawaii.

In the Kona region of Hawaii, the grass-roots efforts of PATH (People's Advocacy for Trails Hawaii), Kealakehe Neighborhood Watch, Kealakehe Parents Center, and other community groups, with cooperation by the state and county, led to development of the Kealakehe Public Pathway. Before the pathway was completed in 2001, the only connection between upper and lower neighborhoods and schools was a circuitous vehicular route along Palani Road to Queen Kaahumanu Highway and back up

Kealakehe Parkway. The pathway has provided a more direct route (just over a mile) for pedestrians and bicyclists by transforming a utility easement that was formerly off-limits to the general public. The project was spurred by a 1999 PATH survey which found that 93% of students went to and from school by motor vehicle—the only viable option in the eyes of many parents. Opinions have started to change. The opening day event attracted more than 450 participants. PATH and other organizations continue to promote the pathway's use by sponsoring a Walk to School Day and clean-up days as community events.

*Creating safer streets  
requires the synergy of a  
three-prong strategy.*



### 4.3.3 ENFORCEMENT OBJECTIVE

#### Objective:

#### **STRENGTHEN ENFORCEMENT EFFORTS TO PREVENT ILLEGAL AND RECKLESS BEHAVIOR BY MOTORISTS AND BICYCLISTS AND SAFEGUARD THOSE USING THE BICYCLE NETWORK.**

Enforcement of Hawaii's bicycle laws and local bicycle regulations is an important element in providing a safe bicycling environment. Like any other transportation system, uniform rules and regulations define user expectations and reduce the risk of injury. Rules and regulations need to be easily accessible and taught through education and encouragement programs to ensure that bicyclists and motorists are aware of and follow the "rules of the road." In Hawaii, a bicycle is considered a vehicle when operated on a roadway. Thus, bicyclists and motorists have many of the same rights and duties, and the laws governing traffic regulation apply to both.

#### Recommended Actions:

- Cooperate with law enforcement agencies on strategies and programs to reduce traffic violations by bicyclists that are most likely to result in serious crashes with motor vehicles and pedestrians.
- Cooperate with law enforcement agencies on strategies to reduce motorist errors and aggressive behaviors.
- As needed, review and update bicycle-related traffic laws to clear ambiguities and make them consistent with the current Uniform Vehicle Code (UVC). For example, Hawaii State law currently does not require removal of glass and other debris from an accident site, whereas UVC, Section 11 states that "Any person

#### Legal Restrictions on Bike Lane Usage

- If a bike lane is provided, bikes are required to use it when traveling at less than the normal speed of traffic moving in the same direction. Bicyclists may leave the lane when executing safe passing or overtaking maneuvers, preparing to make a left turn, or to avoid debris or other hazardous conditions.
- Bicyclists must ride in the direction of vehicular traffic.
- If a bike lane is provided, mopeds are required to use it—unless prohibited by local ordinance
- Pedestrians may use a bike lane as a walkway where there is no adjacent paved sidewalk.
- Motor vehicles are prohibited from using a bike lane, except when executing a legal turn, lane change or parking maneuver, authorized emergency vehicle or government vehicle performing its duty, stalled or broken vehicle or vehicle assisting, yielding to an emergency vehicle.



*Aggressive motorists are often mentioned as a problem for bicyclists. Kalaniana'ole Highway, Oahu.*



*Wrong-way riding is illegal and unsafe. Kalaniana'ole Highway, Oahu.*

## Legal Restrictions on Sidewalk Usage

- Unless prohibited (by signage), bicycles may be driven on sidewalk at speed of 10mph or less
- Bicycle riding is prohibited on sidewalks in the business district.\* (On Oahu, bicycling is prohibited on all sidewalks in Waikiki.)
- Bicyclist are required to yield the right of way to pedestrians.
- Bicyclists must give an audible signal before overtaking or passing pedestrians (specified only in the City and County of Honolulu and Kauai County Traffic Codes).

\*"Business district" is defined as the territory contiguous to and including a highway when within any six hundred feet along such highway there are buildings in use for business or industrial purposes, including but not limited to hotels, banks, or office buildings, and public buildings which occupy at least three hundred feet of frontage on one side or three hundred feet collectively on both sides of the highway.

### Sources:

Hawaii Revised Statutes, Chapter 291C [Statewide Traffic Code]; Chapter 293 Bicycles  
Kauai County Code, Title VI, Motor Vehicle and Traffic Regulations; Chapter 16, Traffic Code  
City and County of Honolulu, 1990 Traffic Code (1997 Edition)

Hawaii County Code, Chapter 24, Vehicles and Traffic

Note: Maui County does not have a traffic code or ordinances related to bicycle use in general. Existing ordinances relate specifically to bicycle tour operations.

Hawaii Statutes are interpreted for the layperson at  
[www.flex.com/%7Eoapea/BikeLaws.htm](http://www.flex.com/%7Eoapea/BikeLaws.htm)

removing a wrecked or damaged vehicle from a highway shall remove any glass or other injurious substance dropped upon the highway from such a vehicle."

- Review, modernize, and streamline the bicycle registration system to improve accuracy in accounting for bicycles. For example, separate bicycle and mopeds in the registration and recordkeeping process.
- Publicize the requirements of bicycle registration and the importance of licensing fees to encourage registration by the bicycling public.
- Cooperate with law enforcement agencies in identifying strategies to reduce crime on bicycle corridors.

### 4.3.4 ECONOMICS OBJECTIVE

#### Objective:

#### **INCREASE AWARENESS ABOUT THE ECONOMIC BENEFITS OF INCREASED BICYCLE USE.**

Bicycling is not typically associated with economic development; yet, as a popular outdoor activity, there are natural linkages between bicycling and tourism, Hawaii's main industry. According to the Bureau of Transportation Statistics, approximately 1 in 5 American adults (41.3 million) reported using a bicycle at least once during a 30-day period between August and October, 2000. The Bicycle Market Research Institute estimated the total value of the overall U.S. bicycle market to be \$5.6 billion in 1998.<sup>1</sup> Estimating the size of the bicycle tourism market is difficult; however, a visit to the League of American Bicyclists' website lists dozens of bicycle touring companies and major bicycling events. States, such as Wisconsin, Vermont, Maine, and New York, are making

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<sup>1</sup> Pedestrian and Bicycle Information Center, "Fact Sheets: Bicycling by the Numbers" at [www.bicyclinginfo.org/insight/fact\\_sheets/](http://www.bicyclinginfo.org/insight/fact_sheets/)



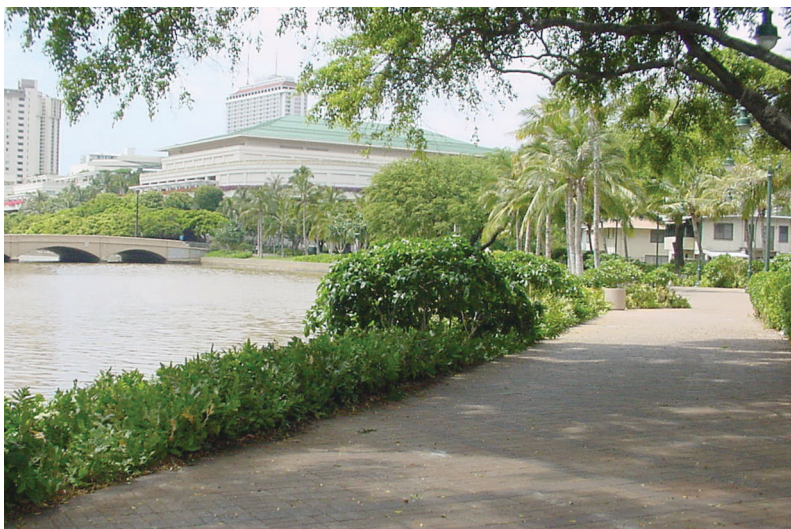
concerted efforts to market bicycle tourism and educate their citizens about the economic benefits of such campaigns. Hawaii has exceptionally attractive venues for bicycle tours, events, and competitions. The full potential of these events has yet to be realized.

**Recommended Actions:**

- Identify opportunities for bicycle travel that highlight the islands' diverse scenic beauty and provide access to Hawaii's tourism destinations.
- Participate in efforts to establish a scenic byways program. (Hawaii is unable to qualify for funds under TEA-21's National Scenic Byways program without a program to formally designate scenic byways).
- Consider the needs of visitors when designing bicycle facilities, such as signs or markers that facilitate way-finding.
- Work with the Hawaii Tourism Authority and other appropriate entities to develop materials that promote the state as a destination for bicycling and publicize bicycle touring networks.
- Disseminate information about the individual and societal cost-savings that can occur when bicycle trips replace motor vehicle trips.
- Support and encourage bicycle events that attract visitors and encourage residents to ride their bicycles for transportation, recreation, and fitness.



*Bike shops—retail, rental, repair—are on the business end of bicycling. Many of them also serve the bicycling community by providing useful information and news of community events.*



*The Ala Wai Promenade—with a view of the Hawaii Convention Center—is an amenity for visitors and residents. Honolulu, Oahu.*

## Bicycling Events and Eco-Tourism

*Queen Kaahumanu Highway is heavily used for athletic training. Kona Coast, Hawaii.*



*Bike tour vans at staging area. Paia, Maui*

The Ironman Triathlon, held annually since 1978, demonstrates the potentially significant economic impact of a successful event. The event averages 1,400 participants, of which 95% are from out of state. The State Department of Business, Economic Development, and Tourism estimates that the combined spending of participants, family, friends, and media boosts the economy with \$25.4 million in sales and \$9.2 million in additional household income—as well as \$1.6 million in State and local tax revenues.

To the extent that once-a-year events become longer term activities, the economy is more likely to respond by creating long-lasting employment. Such is the case with downhill bicycle touring on Maui, an 18-year old industry that attracts an estimated 250–450 bicyclists a day.

Bicycle tourism has a natural fit with ecotourism, whose growing popularity is seen in the United Nations General Assembly's designation of 2002 as the International Year of Ecotourism. As the tourism marketplace becomes more sophisticated, there are opportunities to cultivate niche markets. In ecotourism, a primary motivation is the opportunity to observe and appreciate the natural environment and related cultural assets. Bicycling allows people to experience the out-of-doors up close and personal. Adventure tourism is another, closely related market segment which emphasizes physical exercise and challenging situations in natural environments. Hawaii has the potential to generate more business by working to become a bicycle-friendly vacation destination.

### 4.3.5 ENCOURAGEMENT OBJECTIVE

#### Objective:

#### **INCREASE BICYCLE TRIPS BY PROMOTING THE PERSONAL AND COMMUNITY BENEFITS OF THIS TRAVEL MODE.**

Heighten awareness of bicycling activities and benefits through publicity, including attractive brochures and maps to inform citizens and to encourage their support in implementing the bicycle plan. Programs and initiatives to encourage bicycling are also an important element of creating a bicycle-friendly community. One way to promote and encourage bicycling is to provide assistance in the form of maps, brochures, and/or travel guides that make bicycling more approachable and enjoyable for novice and advanced bicyclists alike. Another effective technique is to highlight the various benefits bicycling provides.

**Recommended Actions:**

- Sponsor statewide promotions and events, and encourage local activities aimed at increasing awareness of bicycling opportunities.
- Distribute bicycle maps and guides—published or on-line—that inform the public of bicycle facilities and programs.
- Support the establishment of bicycle advisory committees in all counties.
- Coordinate and encourage the involvement of bicycle advocates, citizens, and local officials in implementing projects and achieving the objectives of this plan.
- Develop, implement, and promote bicycle commuter incentive programs.
- Encourage employers to support bicycle commuting.
- Continue to support transportation conferences, such as the Hawaii Traffic Safety Forum, that provide opportunities to promote and exchange ideas and information on bicycling in Hawaii and elsewhere.
- Cooperate with the Department of Health to facilitate bicycling as a fitness pursuit, as well as a transportation choice.

*HDOT produced full-page ads and public service announcements for radio and TV in 2001-02 to raise awareness of bicycling safety.*



*The Department of Education's Safe Communities and Youth Activities Program and local businesses sponsored a poster contest on helmet safety in the Hawaii Kai area.*



Every bicycle on the road means one less car!  
Please treat bicyclists with respect and courtesy.

**AS A MOTORIST ARE YOU AWARE THAT:**

**Most accidents involving cars and adult bicyclists are caused by motorist error rather than bicyclist error. Bicyclists may use the full right lane.** This may occur when the road is too narrow to fully accommodate both car and bicycle.



**Bicyclists are legally considered drivers of vehicles.** They must obey traffic signs and signals, as well as be accorded the same respect as other legitimate road users.

**Bike paths are great for recreational bicyclists** but for commuters and bicyclists traveling at higher speeds, streets are safer. Respect a bicyclist's right to choose either the path or the road.

Bicyclists are ticketed for traffic violations...and are subject to fines equal to those for motorists.

**Not all bicyclists are alike.** As with car drivers, there are good and bad, experienced and inexperienced bicyclists. Your courtesy will inspire the same in others.

It is a traffic violation to open a car door unexpectedly so as to create a hazard to bicyclists. Please check your mirror before opening your door.

**The bicyclists you pass may be travelling 25 to 30 miles per hour.** When changing lanes or making a turn near a bicyclist, assess the bicyclist's speed and yield as you would to any other vehicle. If you are about to make a right-hand turn after passing a bicyclist, make sure that you have enough space, otherwise wait for the bicyclist to go through the intersection before making your turn.



**Look out for bicyclists going around obstructions in their path.** While they should look before moving farther into the lane, bicyclists sometimes swerve around potholes, sewer grates and even parked cars without glancing over their shoulder to make sure the coast is clear.

Pass a bicyclist only when it can be done safely while maintaining a "safety zone" of three feet to avoid cutting the bicyclist off. Realize that the air turbulence created by your car at high speeds can cause problems for bicyclists.

**SHARE THE ROAD**  
**SAFETY TIPS FOR BICYCLISTS**

- 1 Wear a helmet every time you ride. Even if you just ride on bike paths or for a short distance, make sure you put on your helmet before you go. You don't have to be going fast or far to risk serious head injuries.
- 2 Obey traffic laws. Your bike is a vehicle, and just like a car, you must stop for stop signs and stop lights.
- 3 Always ride with the direction of traffic. Even if you are riding a short distance, it is never safe to ride against traffic. Also, it is unlawful to ride facing traffic in Hawaii, as it is in all 50 states. "The right side is the right side."
- 4 Ride in a straight line. Don't swerve in and out of parked cars, or do anything that would surprise motorists.
- 5 Be visible. Wear light-colored clothes and a bright helmet when you ride. If you ride at night, you must have at least a white front light and a red rear reflector on your bike.

**Bike Safety Rodeo!**

Saturday, October 27, 9:30 a.m. - 12:30 p.m. at Shinners Hospital for Children  
State Farm Insurance's annual Bike Safety Rodeo is free and open to all elementary school-age children. All participants will receive goodies bags and become eligible to win a new bicycle or safety helmet. For more information, call State Farm Insurance at 523-1178.

**Bicycle Master Plan Workshops on Oahu**

- November 1, 7 p.m., JW Marriott Ihlani Resort and Spa, Conference Room
  - November 13, 6:30 p.m., Kaneohe Community and Senior Center
  - November 14, 6:30 p.m., Aiea Haina Elementary School, Cafeteria
  - November 15, 6:30 p.m., Mililani Mauka Elementary School, Cafeteria
- The Hawaii State Department of Transportation will hold a series of two-hour community workshops that will provide the public with information on Hawaii's statewide Bicycle Master Plan. Participants will help identify potential bikeways, hazardous areas for bicyclists and other important issues. For Neighbor Island workshops or more information, visit [www.state.hi.us/dot/highways/bike](http://www.state.hi.us/dot/highways/bike) or call Kimura International, Inc. at 944-8846.

**Let's share Hawaii's roads safely.**  
This message is brought to you by:  
State of Hawaii Department of Transportation  
& State Farm Insurance

