4.1 Basic Propositions

The 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

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 Paki 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.

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.
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.

In the Kona region of Hawaii, the grassroots 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.
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.

**Legal Restrictions on Sidewalk Usage**

- Unless prohibited (by signage), bicycles may be driven on sidewalk at speed of 10 mph 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).

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*“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 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/%7Eopeapea/BikeLaws.htm

**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 1998.1 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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1 Pedestrian and Bicycle Information Center, “Fact Sheets: Bicycling by the Numbers” at 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.
Bicycling Events and Eco-Tourism

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.