

# KITSAP COUNTY BICYCLE FACILITIES PLAN



KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS  
MAY 2001

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## PREFACE

Kitsap County, located within the Puget Lowlands between the Olympic mountain range to the west and Seattle to the east, has long been valued for its wooded hillsides and pastoral valleys. Over the past decade it has become one of the fastest growing counties in Washington. In 1992, as a response to development pressure and rapid urbanization, Kitsap County adopted Resolution 137-1992 with the express desire to “maintain and enhance” the scenic character of the County, reinforcing the goal of the Kitsap County Open Space Plan to protect and enhance environmentally sensitive areas and make a commitment to expand a system of trails, paths and bicycle facilities.

Subsequently, a planning project was undertaken in order to establish an overall concept for a county-wide Greenway system that could satisfy the goals expressed in the resolution and to develop a specific work plan for the application of federal funding via the Intermodal Surface Transportation Efficiency Act (ISTEA). The Kitsap County Greenways Plan received funding in the spring of 1993 and was completed in 1996. The primary mission of the Plan was to develop a process and a plan that addressed a range of linear elements such as non-motorized transportation corridors, recreational trails, scenic resources and wildlife corridors. These linear elements of the Greenways system link together a variety of destinations such as parks, schools, places of employment, shopping areas and transit facilities as well as provide access to a variety of scenic, edu-

cational, and interpretive resources. These connecting links consist of both built facilities, such as commuter and recreational bike routes, pedestrian trails and equestrian trails, and undeveloped corridors for the protection of significant natural and scenic resources.

This Bicycle Facilities Plan addresses the transportation component of the 1996 Greenways Plan and was initiated by the County, through the Department of Public Works (KCPW), in Fall 2000 to plan for a comprehensive system of bicycle facilities and to strengthen bicycling as a viable, safe, attractive alternative form of transportation. This plan will guide decisions about non-motorized planning and development in Kitsap County over the next twenty years. The Kitsap County Open Space Plan, adopted in June 2000, addresses the recreation and natural resource components of the Greenways Plan, including bicycle trails through parks and open space corridors. Together, the Open Space Plan and Bicycle Facilities Plan provide for an interconnected countywide system of bicycle routes for both recreation and transportation purposes.

*When I see an adult on a bicycle, I do not despair for the future of the human race.*

*H. G. Wells*



# EXECUTIVE SUMMARY

## Vision

The 20 year vision of the Bicycle Facilities Plan for Kitsap County is broad and comprehensive, both in scale and in content. The Plan envisions a county-wide network of interconnected destinations and safe routes for alternative modes of non-motorized transportation — places to walk and bicycle; it envisions providing both environmental as well as socioeconomic benefits on a local and regional level — developing both a sense of community and a sense of regionalism; and it envisions improving the experience for those who visit Kitsap County, and improving the quality of life for those who live in Kitsap County.

## Primary Areas of Concern

### Transportation

The Bicycle Facilities Plan seeks to provide a comprehensive system of non-motorized transportation facilities, linking highly used destinations, transportation nodes and population centers. These facilities are typically located within public road rights-of-way. Recommendations for these facilities take the form of routing, design standards, priorities for implementation and financing.

### Recreation

The Bicycle Facilities Plan also strives to provide for recreational activities through linear links, creating connections to and between recreation facilities, and through linear opportunities, designing bikeways, pedestrian, and multi-use trails which provide recreation while serving non-motorized transportation goals.



## Organization

Parts II and III of this report provide an overview of the existing features and resources as well as previous planning efforts in relation to transportation and linear recreation. The final section, Part IV presents recommendations for the development and alignments of basic components within the Bicycle Facilities Plan. These recommendations include:

- Goals and Policies
- Recommended Routes
- Design Standards and Guidelines
- Project Listings
- Capital Improvements

## Goals and Policies

Through adoption of the Bicycle Facilities Plan, recommended Goals and Policies would be incorporated into the Kitsap County Comprehensive Plan. These recommended goals and policies support the implementation of each of the Bicycle Facilities Plan components, and provide for non-motorized transportation facilities.

### **Recommended Routes**

Recommended routes are primarily road related, consisting of regional, sub-regional and local facilities. These provide regional, sub-area and local connections and serve both non-motorized and recreational needs.

### **Design Standards & Guidelines**

Recommendations include the provision of design standards and guidelines to ensure safe and viable facilities, and which conform to federal standards set by the Department of Transportation's *Guidelines for the Development of Bicycle Facilities* (1999) and Washington State Department of Transportation's (WSDOT) *Local Agency Guidelines* (1999). These include standards for minimum dimensions, signage and striping along with guidelines for the development and maintenance of facilities.

### **Project Listings**

The Bicycle Facilities Plan is broken down into projects, assigned recommended improvements (from recommended design standards) and relative costs. Other planning projects that overlap with all or portions of the proposed project are also indicated. The projects were assigned criteria and ranked (or prioritized) within a context of high, medium, and low priorities. In addition, a list of opportunity projects was compiled. These are considered lesser priority projects and are identified as facilities that should be developed when the opportunity arises, for example, when the County is planning other improvements to the roadway.

### **Capital Improvements**

The first period of the prioritized Bicycle Facilities Plan projects is outlined in a 6 Year Capital Improvements Program. This funding Plan indicates the breakdown of funding per year for a 6 year period.

THE CONCEPT

History

The term “greenway” was first popularized by William H. Whyte in a monograph published by the Urban Land Institute in 1959. Though a relatively new term, the concept has been prevalent in America since the latter part of the nineteenth century. During that time Fredrick Law Olmsted, the “father” of American landscape architecture, created several linear park systems, known then as parkways, including the Emerald Necklace

(Olmsted Parkway) in Boston, and Riverside in Illinois. These linear parkways linked together parks and open spaces, providing pleasure drives for carriages and horseback riders (bicycles did not appear in substantial numbers until the 1890s and automobiles not until several years thereafter) and walks through pastoral, natural and sylvan landscapes.

During the post World War I era, urban sprawl had become a common phenomenon. Benton MacKaye, co-founder of the Wilderness Society in 1936 and member of the Regional Planning Association of America, disturbed by the loss of rural countryside, suggested that “dams and levees of open space be established, primarily along ridge lines, to contain and direct the outward metropolitan flow.” MacKaye proposed this idea for the Appalachian Trail, creating a levee for the entire East coast. MacKaye later expanded on the concept by creating “open ways” around cities which provided both recreation and open space



corridors, following the natural land forms. Today the concept continues to evolve, as epitomized by the Ridge Trail/Bay Trail in San Francisco and the Bay Circuit Trail in the Boston area.

The contemporary greenway movement was recognized and given national prominence in 1987 by the President's Commission on American Outdoors, which identified both the increasing popularity of bicycling, jogging and walking and the threat of increasing fragmentation of our open countryside as a result of rapid urbanization. An emphasis in the Commission's recommendations was to "establish a network of greenways across America".

In 1988, the National Trails Agenda Project was initiated for the study of current and future trail needs across America. The project proposed the development of a national system of trails, establishing an attitude towards trails that valued them as "part of the nation's physical infrastructure" and "as part of the general conduct of everyday governance."

## **Kitsap County**

For most of its history Kitsap County has remained primarily rural in character, experiencing relatively slow population growth and few demands on its resources. In recent years, the county has been subject to increasing pressure on its physical resources, resulting in diminishing open space, greater congestion on its road system and growing demands from its citizens to somehow manage the impacts of growth in a positive way.

The Kitsap County Greenways planning process, begun in 1993 and completed in 1996, affirmed that it was important to the citizenry of Kitsap County to protect scenic/visual features and sensitive natural resources, as well as provide alter-

native forms of transportation and recreation. Now in the year 2000, the County has taken a pro-active stance to insure implementation of the ideas proposed in the Greenways Plan. In addition to the development of a Bicycle Facilities Plan, the year 2000 saw the development of Open Space and Rural Policy Plans and the Endangered Species Act (ESA) listing of chinook and chum salmon, thereby taking a major step towards protecting those critical wildlife corridors identified in the Greenways Plan.

## **The Benefits of Non-Motorized Transportation**

Greenways and trail systems throughout the country are rich and diverse, having evolved as the result of a variety of concerns related to ecology, transportation, recreation and aesthetics. The basic concept is that of a multi-linear system based on existing roadways, natural resource corridors, or other protected corridors and districts which increases non-motorized transportation opportunities, improves the beauty and health of the environment and provides for outdoor recreation. Following are descriptions of the benefits related to the development of facilities for bicycling and walking:

**Transportation enhancement:** According to the 1990 *Nationwide Personal Transportation Study* (NPTS), 7.2 percent of all travel trips in 1990 were made by walking and 0.7 percent by bicycling. Enhanced bicycling and walking facilities offer travel options for those who are unable to drive or choose not to drive for all or some trips. Roadway improvements to accommodate bicycles such as paved shoulders and reduced speeds can reduce the frequency of certain types of motor vehicle accidents, decrease congestion and encourage pedestrian activity (Zegeer and Council, 1991 and National Bicycling and Walking Study (NBWS), 1993). In addition, non-motorized



transportation can be a cost-effective means of improving transportation in comparison to the cost of expanding and maintaining the existing roadway network.

Although distance and time are frequently cited as reasons for not bicycling or walking, data from the NPTS shows that more than a quarter of all travel trips are 1 mile or less, 40 percent are 2 miles or less, almost half are 3 miles or less, and two-thirds are 5 miles or less. Moreover, 53 percent of all people nationwide live less than 2 miles from the closest public transportation route, making a multi-modal bicycle- or walk-transit trip an attractive possibility.

**Recreation Enhancement:** Bicycle paths provide a range of recreational activities and opportunities in and of themselves as well as links to parks and other areas of recreation such as marinas and commercial facilities. National recreation surveys conducted in 1960 and 1982 marked dra-

matic increases in the percentage of Americans that cycle or walk for recreation, up 382.1 percent and 132.1 percent respectively over this 22 year period.

**Health:** The overall health of the entire population is a goal of the U.S. Centers for Disease Control (CDC). The NBWS quotes a CDC handbook, *Promoting Physical Activity Among Adults*, which praises the dual benefits of cycling and walking, improving one's health while also serving as a means for transportation:

“the most effective activity regimens may be those that are moderate in intensity, individualized, and incorporated into daily activity. Bicycling and walking are healthy modes of transportation that incorporate these components. Bicycling or walking to work, school, shopping, or elsewhere as part of one's regular day-to-day routine can be both a sustainable and a time-efficient exercise regimen for maintaining an acceptable level of fitness.” (p. 15)

**Safety:** The NBWS cites research completed in King County, WA, Sweden, and Orlando, FL indicating that increased use of a network of pedestrian and bicycle facilities can actually reduce the number of accidents involving vehicles. The theory hypothesizes that with increased use, all users and vehicle drivers become aware of each other and accidents occur with less frequency over time (p17).

**Environmental Benefits:** Case Study No. 15, *The Environmental Benefits of Bicycling and Walking* (1993), a companion paper to the National Bicycling and Walking Study, identifies various arguments in support of bicycling and walking, citing the most significant benefit to be the reduction of fossil fuel usage. When people opt to travel by non-motorized transportation means instead of using their cars, fossil fuel usage declines and congestion decreases. Increased bi-

cycling and walking can be effective means to meet standards set by the Clean Air Act. In respect to long-term environmental benefits, increased bicycling and walking can help to contain sprawl, a land-use pattern resulting from reliance on the motor vehicle as a means for transportation.

**Economic Benefits:** Bikeways provide the opportunity for increased revenue through tourism, increased quality-of-life, and increased property values. Bikeways can be tourist attractions which generate spending on lodging, food, and recreation oriented services. Indirectly, an improved non-motorized transportation system, by raising quality-of-life standards, can attract businesses and as a result strengthens the local economy. A 1989 survey of chief executive officers conducted by Cushman and Wakefield concluded that quality of life was the third most important factor in terms of the siting of businesses (*Economic Impacts of Protecting Rivers, Trails and Greenway Corridors*, 1991, p. 63).

**Support of the Comprehensive Plan:** Bikeways can provide the means to regulate growth patterns. They strengthen the effectiveness of the Comprehensive Plan by providing a non-motorized transportation element, as well as policies and guidelines for future growth.

*It has been estimated that in the United States since 1991, bicycling and walking were equivalent to between 7.6 and 28.1 billion motor vehicle miles, saving 370 to 1,340 million gallons of gasoline and 4.4 to 16.3 million metric tons of exhaust emission air pollution.*

**Federal Highway Administration  
Publication  
No. FHWA-PD-93-015**

## Previous Plans

A Major task of this process was to review previous planning documents and identify relevant information to reference and incorporate into this plan. Some documents were specifically written for Kitsap County and the Puget Sound Region, including the *Kitsap County Comprehensive Plan (Transportation Chapter, 1998)*, the *Kitsap County Greenways Plan (1996)*, *Vision 2020, 1995 Update (PSRC)*, and the *1995 Metropolitan Transportation Plan (PSRC)*. Other documents, written in the context of the state and country, were also reviewed for relevant information. They include *The National Bicycling and Walking Study* and subsequent technical papers (USDOT, 1993), the *Guide for the Development of Bicycle Facilities (AASHTO, 1999)*, *Washington's Transportation Plan 1997-2016 (WSDOT, 1996)* and *the Local Agency Guidelines (WSDOT, 1999 revision)*.

Review of these documents was in some cases necessary to assure that the Bicycle Facilities Plan will comply with the Growth Management Act (GMA) requirement of concurrency between planning documents and with Intermodal Surface Transportation Efficiency Act (ISTEA) federal funding standards. The review helped to avoid repeating work already completed, and also shed light on the unique issues and challenges presented by the topography and development patterns existing in Kitsap County.

### **Kitsap County Comprehensive Plan, Transportation Chapter, May 7, 1998 (Kitsap County)**

The transportation chapter of the Kitsap County Comprehensive Plan is based on travel forecasting relative to employment and population forecasts developed by the Department of Community Development. The comprehensive plan pre-

dicts that there will be 86,000 new residents and 34,000 new jobs in Kitsap County from 1992 to 2012. The Public Works department and Community Advisory Committees (CAC's) have been working since 1991 to develop goals and policies, to identify transportation issues and needs, and to work towards potential solutions.

The 1998 transportation plan includes four major objectives all in support of the development of a Bicycle Facilities Plan, including the provision of multi-modal goals and policies, the identification of a prioritized list of multi-modal transportation improvements, the establishment of action strategies for the implementation of policies and improvements, and the need to comply with federal and state requirements (p. 125).

Towards this end specific goals and policies supporting the development of a system of non-motorized travel were developed. The stated goals are as follows (p. 139-140):

- Maximize the opportunity for non-motorized travel, including development of greenways.
- Encourage development of rights-of-way to safely accommodate motorized and non-motorized travel.
- Create a contiguous non-motorized transportation system which integrates on- and off-road facilities.

Policies for non-motorized travel promote the development of facilities for pedestrians, bicyclists and equestrians and the incorporation of these into existing and future transportation projects. Goals and policies included in Part IV of this report are designed to comply with and add to the fore-mentioned goals and policies of the Comprehensive Plan.

### **Kitsap County Greenways Plan, 1996 (KCPW)**

As explained in the preface of this report, this Bi-

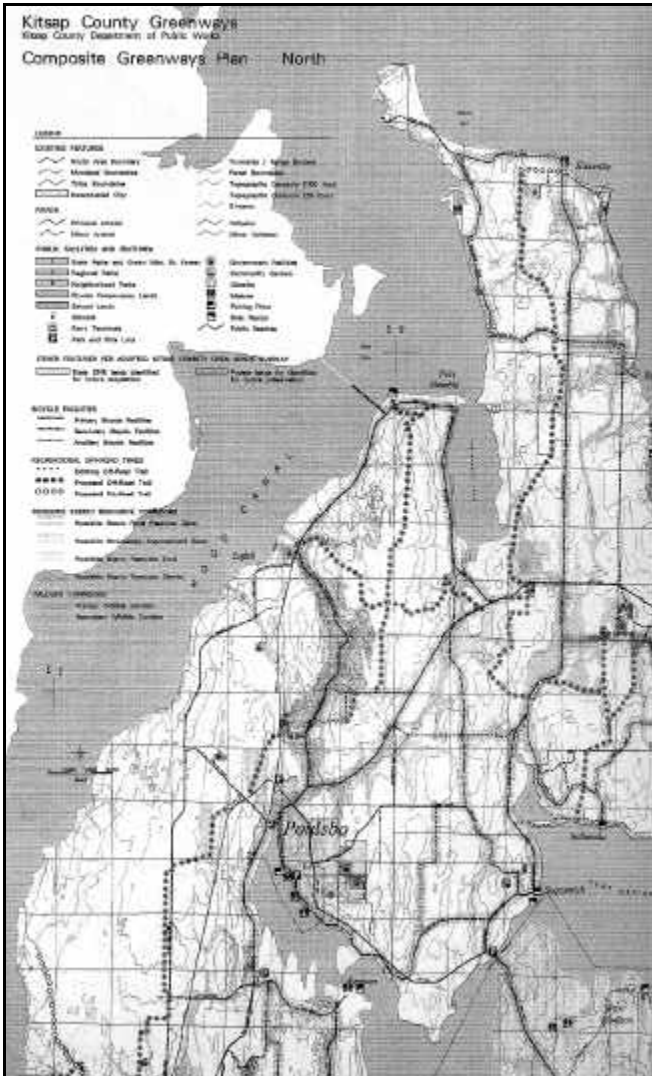


Figure 1. Detail of the Kitsap County Greenways Plan (1996) "Composite Greenways Map", identifying bicycle facilities, off-road trails, natural and scenic resources.

cycle Facilities Plan is based on the Transportation component of the Kitsap County Greenways Plan. The plan was developed over the course of three years with an extensive public planning process to identify corridors that would serve as non-motorized transportation routes and recreation opportunities and that would protect scenic and natural resources throughout the county (Figure 1). Though not adopted, the plan serves as a guide for the various departments that form the Kitsap County governing structure and it provided a strong foundation for the development of this Bicycle Facilities Plan.

### Kitsap County Open Space Plan

Kitsap County Parks and Recreation recently completed the Kitsap County Open Space Plan, which was adopted on June 19, 2000. This inter-jurisdictional plan is based on the recreation and natural resources components of the Kitsap County Greenways Plan. Included in the plan are off-road trails for pedestrians, cyclists and equestrians. These trails link into the on-road bicycle facilities proposed in this plan.

The Open Space Composite Map depicts an interconnected system of trails and open space corridors and includes facilities proposed in this plan as part of that vision. In the draft capital facilities plan, prepared as a first step towards the implementation of the Open Space Plan, Kitsap County Parks and Recreation proposes funding for trails across the county, an opportunity for the Parks and Public Works departments to work towards a complete system of non-motorized trails both off-road and road related.

### The National Bicycling and Walking Study, 1993 (U.S. DOT)

In 1993 the U.S. Department of Transportation published this report on national trends in bicycling and walking in the United States. Over

twenty additional case study supplements have also been published examining specific elements relevant to the nationwide emphasis on planning and developing better systems for pedestrian, bicycle, and transit movement within communities. The study identifies some relevant and interesting points for this plan, including the beneficial effects of bicycling and walking in terms of health, safety, transportation, recreation and economics, all of which have been described previously in this report in the section on the “Benefits on Non-Motorized Transportation.” (Section Two, p. 6)

Included in the study was a 5-point Recommended Action Plan for implementation by state and local governments:

- Organize a bicycle/pedestrian program.
- Plan and construct needed facilities.
- Promote bicycling and walking.
- Educate bicyclists, pedestrians and the public.
- Enforce laws and regulations.

The Kitsap County Bicycle Facilities Plan provides a framework for achieving these objectives.

### **National Bicycling and Walking Study Five Year Status Report, 1999 (U.S. DOT)**

In April 1999, the U.S. Department of Transportation released a study to assess the impacts of the goals and specific action items identified in the National Bicycling and Walking Study. The two major goals of the NBWS had been to “double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips” and “to simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.”

While there was inconclusive data in terms of any change in percentage of trips, crash statistics showed that little progress has been made to-

wards the goal of reducing bicyclist fatalities. As a result the study identified three critical needs:

- Better document bicycling and walking activity.
- Improve internal support and commitment to bicycling and walking.
- Improve external awareness and support for bicycling and walking.

### **Vision 2020, 1995 Update (PSRC)**

The Puget Sound Regional Council developed *Vision 2020* to provide a strategy for making regional decisions related to growth, transportation, and other elements that affect the quality of life for residents of the region. *Vision 2020* was first adopted in 1990 and amended in 1993 and 1995. The Puget Sound Regional Council is currently preparing another update to be released in Spring 2001. Kitsap County falls within the area covered by the Regional Council so the policies and goals of the *Vision 2020* plan should be consistent with the efforts undertaken by the County.

The 1995 update examines the current transportation system, predicting that the future will be more congested: “Regional travel trends continue to show more cars on the road, more trips per person, and increases in the number of people driving alone. The region’s traffic is already estimated to be among the 10 worst in the country.” (p 10-11)

The report proposes a four-part strategy to curb trends leading to greater congestion (p. 11-12):

- Improve efficiency through effective transportation system management.
- Use transportation demand management measures to reduce travel demand, provide new sources of revenue, and help meet environmental objectives.
- Focus on transportation investments to sup-

port transit and pedestrian-oriented land use patterns.

- Add transportation capacity where appropriate to provide alternatives to automobile travel, enhance safety and access, and improve freight and goods mobility.

These four strategies and related commitments to support and fund alternatives to traditional road development projects can be considered an opportunity for the County. Timely adoption of the Bicycles Facilities Plan will position the County to apply for additional funding sources to complete the plan.

Specific policies within Vision 2020 that support the Bicycle Facilities Plan are:

#### RG-1.5d

Encourage development of convenient and safe bicycle routes and footpaths with connection to stores, schools, and other activity areas. Improve transportation connections, particularly transit and bike, between nearby communities. (p. 20)

#### RT-8.14

Emphasize transportation investments that provide alternatives to single occupant vehicle travel to and within urban centers and along corridors connecting centers. (p. 58)

#### RT-8.21

Promote the development of local street patterns and pedestrian routes that provide access to transit services within convenient walking distances of homes, jobs, schools, stores, and other activity areas. (p. 59)

#### RT-8.38

Support opportunities to redevelop the road system as multi-modal public facilities which accommodate the needs of pedestrians, cyclists, transit, high-occupancy vehicles, automobiles, and trucks. (p. 64)

### **Metropolitan Transportation Plan, 1995 (PSRC)**

This plan was prepared as a first step towards implementation of the policies set forth in Vision 2020. It explains in great detail the current picture related to funding, transportation use patterns and objectives of the regional plan. In the section relating to non-motorized transportation the report provides a simple summary of why the development of pedestrian and bicycle facilities is so important to the community:

“A balanced approach to transportation provides people with choices that are desirable, practical, and safe. Bicycling and walking should be viable alternatives for many local and some regional trips and for combining non-motorized trips with transit services. Improving conditions for bicycling and walking is almost synonymous with improving the accessibility and livability of activity centers, neighborhoods, and communities. The Metropolitan Transportation Plan (MTP) calls for a significant increase in investments that support pedestrian and bicycle travel.” (p. 54)

To this end the MTP identifies the need to invest in three major program areas:

- Development of a Regional Network of Non-Motorized Transportation Facilities.
- Development of Local Networks for Non-Motorized Travel.
- Development of Transit Access for Pedestrians and Cyclists.

In addition, the MTP includes a map demarcating a Preliminary Regional Non-motorized Network (*Figure 2*), which includes major separated trails or bikeways and shared use bikeways or walkways. These routes in combination with those identified in the Kitsap County Greenways Plan were used as a basis for development of the Bicy-

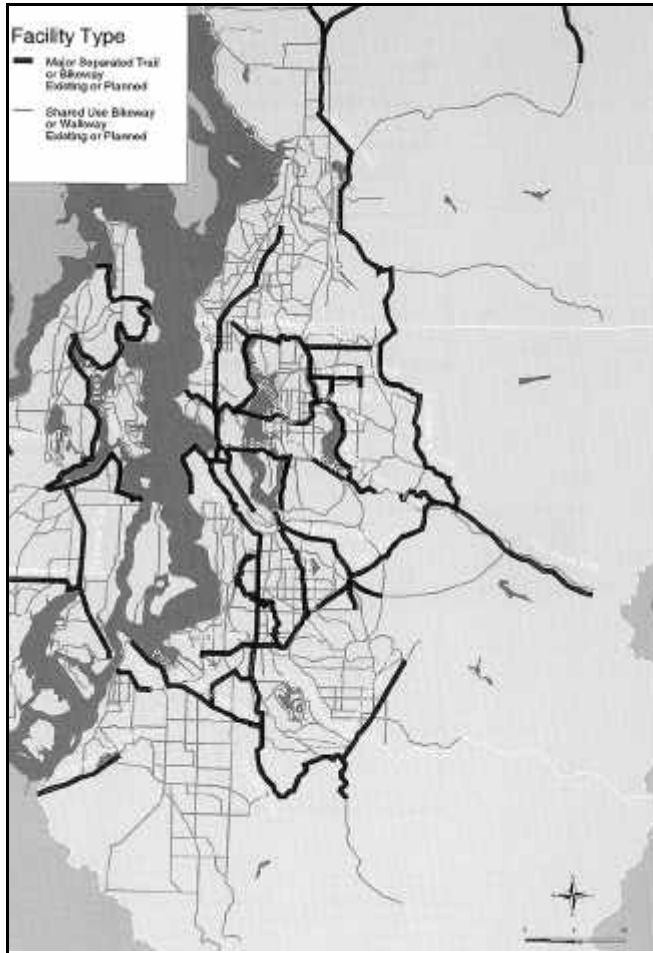


Figure 2. Preliminary Regional Non-Motorized Network prepared by the Puget Sound Regional Council.

cle Facilities Plan.

**Metropolitan Transportation Plan 1998 Progress Report (PSRC, May 1998)**

The Progress Report to the MTP was prepared to evaluate the methodology used in the 1995 MTP, to document progress that had been made towards attaining goals, and to share information about current and ongoing planning efforts. Since the publication of the MTP, four planning projects related to non-motorized transportation have been in effect. These are (p. 17):

- Identification of existing and planned non-

motorized facilities.

- Identification of regional non-motorized transportation corridors.
- Development of a Pedestrian Facilities Guidebook.
- Restructuring of the regional transportation model to address non-motorized trips.

Data obtained from these studies was used as an aid in developing this plan.

**Guidelines for Development of Bicycle Facilities, 1999 (AASHTO)**

This manual of design standards is recognized nationally as the “industry standard for development of bicycle facilities.” All of the design guidelines included in the recommendations section of this plan meet the minimum standards articulated in the AASHTO document.

**WSDOT Local Agency Guidelines, 1999 Revision**

This manual identifies specific design standards related to bicycle and pedestrian facility installations. These standards are referenced in the design guidelines included in this plan.

**Washington’s Transportation Plan 1997-2016 (WSDOT, 1996)**

Washington’s Transportation Plan includes a chapter on Bicycle and Pedestrian Transportation published in April 1996. The study identifies two major service objectives, to improve safety for bicyclists and pedestrians and to increase the amount of cycling and walking done for transportation purposes. To this end, a two part goal was established proposing to double the amount of bicycling and walking done in Washington while at the same time reducing crashes by 10 percent over the next twenty years. In order to accomplish these goals, a Bicycle and Pedestrian com-

mittee created 30 action strategies to be implemented by state, regional, and local agencies along with volunteer groups.

The action strategies are broken down into five topics: facilities, safety education and enforcement, promotion, intermodal connections, and improvements. Twenty of these strategies are meant to be implemented by local and regional agencies. Some of the key strategies relevant to the development of the Bicycle Facilities Plan are:

- Local governments should designate a bicycle and pedestrian system in order to prioritize funding.
- WSDOT, other state agencies and regional and local governments should preserve linear corridors for bicycle and pedestrian purposes.
- Local governments should identify major activity centers and ensure bicycle and pedestrian access within a bicycle and pedestrian travel shed.
- Ensure state and local funding agencies give priority to transportation projects based on serving the most users and that link bicycle and pedestrian origins and destinations.

Through adoption and implementation of the Bicycle Facilities Plan, Kitsap County will take a major step towards completion of these action strategies.

### **State Highway System Plan 1999–2018 (WSDOT, 1998)**

The State Highway System Plan is one component of Washington’s Transportation Plan. It identifies ten service objectives and fifty-three action strategies which provide a framework for the state highway system’s 20 year needs. The estimated cost to meet these needs is \$41 billion. Projected revenue for that period is only \$18.3 billion. In response to these financial constraints, funding priorities were established that place maintenance, traffic operations and preservation

activities as the top priority and highway safety, environmental retrofit, economic initiatives, and Puget Sound area HOV lanes as high priorities. Any remaining revenue would then go to mobility improvements.

Only \$7.09 billion out of the total \$29.07 billion estimated 20 year cost for mobility improvements is expected to be funded. Urban bicycle connections (\$0.11 billion) are one part of the mobility improvements that are expected to be funded.

Bicycle Touring Routes are part of the high priority economic initiatives included in the State Highway System Plan. Along designated bicycle touring highways, this program provides for a four-foot minimum shoulder. Due to the financial constraints, only \$0.12 billion out of the \$0.25 billion estimated 20 year cost for bicycle touring routes is expected to receive funding.

With few mobility improvement projects receiving funding, WSDOT will not be able to meet level of service standards and increased congestion will result. As a response to this, the plan suggests alternative approaches to improve congestion, including (p. 4):

- A stronger emphasis on multi-modal alternatives
- Improvements that encourage people to car-pool and use bus and transit will continue to be a high priority
- Continue to implement strategies that make the existing highway system more efficient
- Land use alternatives to manage growth in suburban areas
- Strategic investments of mobility dollars

These alternative approaches to transportation support the goals and recommendations of this bicycle facilities plan.

## The Process

The first draft of the Kitsap County Bicycle Facilities Plan was presented to Public Works staff for review and comment. After incorporating comments received from staff, a second draft was then prepared and posted on the County's website, distributed to County libraries and presented at a Kitsap County Planning Commission work session held on October 3, 2000.

Shortly thereafter, the draft plan was presented at a countywide public meeting held in Silverdale on October 25, 2000 to citizens and bicycle enthusiasts. A fruitful discussion was generated at this meeting, which both confirmed the need for this bicycle facilities plan and stressed the importance of specific components of this plan. Most significantly, there was general agreement that the county should add bicycle facilities as the opportunity arises, when paving a road or making other improvements. In recognition of the fact that this is a twenty year master plan, opportunity projects are an important means towards filling in the gaps between bicycle facilities in a timely manner. In addition, riders at the meeting confirmed that safety was the biggest deterrent keeping Kitsap County residents from getting out of their cars and onto their bicycles. The majority of participants agreed that Kitsap County was deficient in terms of the provision of adequate and safe facilities for bicyclists and pedestrians.

This plan incorporates comments made by the planning commission and Kitsap County residents at a Kitsap County Planning Commission work session held on October 3, 2000 and at a public hearing held on December 5, 2000. It was submitted for review in early 2001 to the County Commissioners, and both state and county agencies, including the Washington State Department of Transportation. Comments received from the Commissioners and these various agencies were

incorporated into the final version of this plan. It will be submitted for adoption to the County Commissioners in Spring 2001.



## EXISTING CONTEXT

### BICYCLING IN KITSAP COUNTY

This section of the report addresses the inventory of pertinent transportation resources and features in Kitsap County. Included is a survey of existing state, county, municipal and private facilities, a review of current transportation planning efforts, a survey of existing non-motorized facilities and a discussion of the potential user groups and functions of a bicycle facilities plan.

### EXISTING TRANSPORTATION FEATURES AND RESOURCES

The transportation inventory primarily consists of roads and their associated right-of-way. Kitsap County's road system is comprised of state highways, principal and secondary arterials, and local and residential roads that feed into the larger facilities. Several agencies are responsible for constructing, operating and maintaining different roads throughout the County, including the State, the County, cities and private parties.

#### State Facilities

The Washington State Department of Transportation (WSDOT) is responsible for all state highways and public ferry services in Kitsap County. The Olympic Region of WSDOT manages state roads in Kitsap County while Washington State Ferries (WSF) operates and manages the public ferry routes. Currently, Kitsap County is served by eleven State Routes (highways), which primarily serve regional, inter-county and inter-city vehicular travel. Bicycle travel is allowed in the

shoulder of all state routes in Kitsap County. The routes are described below:

SR-3: This is the main north-south regional road connection through Kitsap County. SR-3 is primarily a two-lane highway facility running from the Mason County line near Belfair to SR-104 at the Hood Canal Bridge, which connects to Jefferson County. The segment of SR-3 from south of Bremerton to north of Poulsbo is a four lane freeway designed to handle large volumes of urban traffic.

SR-16: This mostly freeway route connects Kitsap County and Pierce County, running from SR-3 south of Bremerton to the Pierce County line at Purdy, continuing across the Tacoma Narrows Bridge, and connecting to Interstate 5 in Tacoma. This is a major regional north-south route.

SR-104: This predominantly two-lane road provides the major east-west route through northern Kitsap County. It is a continuation of WSF's Kingston-Edmonds ferry service and SR-104 in Snohomish County. The route runs from the Kingston Ferry terminal to Hood Canal. It passes over Hood Canal on the Hood Canal floating bridge and continues to SR-101 in Jefferson County. This route provides the major regional link between the Olympic Peninsula and the Puget Sound region.

SR-160 (Sedgwick Road): This route connects WSF's ferry service to and from Vashon Island and West Seattle at Southworth to SR-16, connecting with SR-16 west of Port Orchard. As the other state route serving Southworth, its primary function is to provide ferry patrons with a direct connection into Port Orchard.

SR-166 (Bay Street, Mile Hill Drive) This route is approximately five miles in length and connects State Route 16 to Port Orchard.

SR-303 (Wheaton Way, Waaga Way): This route

connects Bremerton and Silverdale via the Tracyton Peninsula. The route runs from Bremerton up the peninsula to Waaga Way west of Brownsville, which provides an arterial connection to Silverdale.

SR-304: This route connects WSF's Bremerton ferry terminal, which provides service to/from Seattle, with SR-3 west of Bremerton. From the ferry dock, the route winds to the west through downtown Bremerton, connecting with SR-3 on the west edge of the city.

SR-305: This major north-south route connects WSF's ferry service to/from Seattle at Bainbridge Island with SR-3 at Poulsbo. SR-305 serves major regional travel patterns between Seattle and the Olympic Peninsula, as well as significant traffic between the Puget Sound region and Kitsap County as a whole.

SR-307 (Bond Rd. NE): This route connects SR-305 at Poulsbo to SR-104 east of Kingston.

SR-308: This spur route connects the community of Keyport and the U.S. Navy Undersea Warfare facility with SR-3 and the Bangor Naval Station on Hood Canal.

SR-310 (Kitsap Way): This spur route connects downtown Bremerton with SR-3.

With approximately 228 miles of shoreline, Kitsap County's ferry system is a crucial part of the transportation system. WSF provides passenger-only and auto ferry service between Kitsap County and communities on the eastern shore of Puget Sound. Passenger-only ferry service currently operates between Bremerton and Seattle. Auto service operates between:

- Kingston and Edmonds
- Bainbridge Island and Seattle
- Bremerton and Seattle
- Southworth and West Seattle; and

- Southworth and Vashon Island

In the past, WSDOT has also provided guidance for student pedestrian safety. In response to the 1990 *Final Report of the Washington State Task Force on Student Transportation Safety*, WSDOT commissioned the preparation of *A Guidebook for Student Pedestrian Safety* (1995), which provides guidelines for school districts to develop safe non-motorized commuting routes for students.

### **County Facilities**

Arterial connections in Kitsap County were largely established on historic travel routes developed when the County was first settled. Many routes were never designed and built to serve as arterials; rather, they were meant to serve rural transportation needs. Now, these same roads are handling suburban and urban levels of traffic. While these heavily traveled routes may not be ideal for non-motorized facilities because of their high traffic and current geometric configuration, in many cases they provide the logical regional connections through an area and may be candidates for the addition of bicycle facilities. To minimize cost and duplication of construction projects, the Plan will identify roadways that have been designated for improvements in other comprehensive and/or transportation plans. These represent opportunities by which non-motorized facilities could be included in the design of the improved roadway.

### **Kitsap Transit**

Kitsap Transit along with the privately owned Horluck Ferry system provide public transportation connections throughout the county. Among the bicycle services that Kitsap Transit offers are: the Bainbridge Island Bike Barn, which includes bike lockers, repair services, bicycle rentals and sales; bike lockers at ferry terminals and park-and-ride lots; and bike racks on buses. Non-motorized connections to transit facilities such as these increases the opportunities for commuters

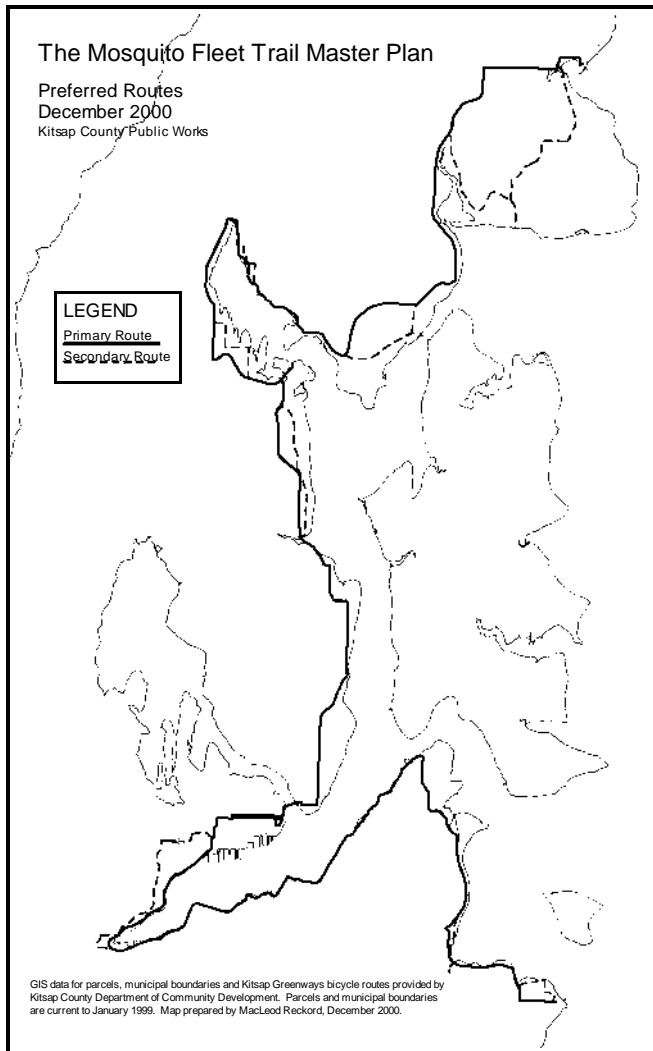


Figure 3.  
Mosquito Fleet Trail.

and residents to use public transit as an alternative mode of transportation.

### Municipal Facilities

Kitsap County has over 300 miles of city-owned roads and streets, maintained and operated by the cities of Bainbridge Island, Poulsbo, Bremerton and Port Orchard. Some of these roads constitute the major through routes in these cities and, in many cases, are logical choices for bicycle facilities.

### Private Facilities

Kitsap County also has a number of roads which

are owned and maintained by private parties. Most of these private roads are access roads to specific parcels of private property, and are not likely to be suitable for non-motorized facilities due to their discontinuity. However, certain roads may be candidates for a local connection between two regional non-motorized facilities.

### Unimproved Roads (public and private)

Kitsap County has a number of unimproved roads owned and maintained by large public and private landholders such as the Washington State Department of Natural Resources and private timber companies. These roads range in condition from good gravel surfaces to primitive double track paths, making them potential candidates for equestrian, pedestrian, or non-touring bicycle trails.

## CURRENT NON-MOTORIZED TRANSPORTATION PLANNING IN KITSAP COUNTY

In section two of this report there is a review of previous planning efforts in relation to non-motorized transportation. Following is a discussion of current and ongoing efforts by various government agencies and private organizations, including other planning efforts by KCPW, the Department of Parks and Recreation, the Department of Community Development, and Municipal planning efforts.

### Kitsap County Public Works Plans

The Department of Public Works is currently working on three major non-motorized transportation projects that arose out of the Kitsap County Greenways Plan: the Mosquito Fleet Trail Master Plan, the Clear Creek Trail Extension and the Liberty Bay Trail.

**The Mosquito Fleet Trail Master Plan:** This master plan identifies routes and suggested cross sections for a 57 mile long non-motorized transportation corridor that will connect historic

docks, public facilities, recreation sites and transportation nodes along the eastern shoreline of Kitsap County between Kingston and Southworth. The plan is due for completion in Spring 2001. All improvements in the Bicycle Facilities Plan that overlap with the Mosquito Fleet Trail plan are considered high priority projects.

**Clear Creek Trail Extension:** The proposed alignment of the Clear Creek Bicycle Trail adds much needed non-motorized facilities to the rapidly urbanizing Silverdale area. The trail will connect the existing off-road Clear Creek Trail to and across SR 3 at the Trigger Avenue interchange, utilizing county and state road right-of-way and an existing easement. The trail expands recreation opportunities in Silverdale and creates commuting routes between the Ridgetop community, Naval Submarine Base Bangor and the center of Silverdale.

**Liberty Bay Trail:** Public Works is currently collaborating with the City of Poulsbo to develop pedestrian and bicycle facilities along Lemolo Shore Drive and Fjord Drive.

### **Kitsap County Subarea Plans**

The Kitsap County Department of Community Development (DCD) is currently overseeing the development of four Subarea Plans for Kingston, Poulsbo, Port Blakely and Manchester. At the time of the preparation of this plan, these Subarea Plans were all in various stages of completion. The plans are being developed to address guidelines established in the GMA and to develop land use strategies that will guide future development in a manner consistent with each community's needs and desires. Non-motorized transportation is a component of each of these plans. These plans were reviewed in their draft stages to ensure concurrency between DCD and Public Works planning efforts.

### **Municipal Plans**

The cities of Bainbridge Island, Poulsbo, Port Orchard and Bremerton have been involved in their

own Comprehensive Planning efforts, each of which includes a transportation component. Current planning efforts for non-motorized transportation facilities were reviewed to connect and coordinate county and municipal facilities and design standards. Following is a list of some of the major non-motorized facilities that are either in construction or currently being planned:

- Bremerton: SR-304/Charleston Blvd. Gateway Improvements
- Bremerton: Gorst to Gateway Bicycle and Pedestrian Study
- Poulsbo: Liberty Bay Trail

## **EXISTING NON-MOTORIZED FACILITIES**

Currently few non-motorized facilities have been developed within Kitsap County. Among the existing facilities most are located in the incorporated cities and few exist along county roads. Overall, the Kitsap County transportation system is characterized by a shortage of safe and/or well-located non-motorized transportation facilities. This deficiency includes bicycle facilities which serve regional, sub-regional and local destinations as well as pedestrian paths which serve local destinations.

The lack of improved, designated cycling facilities in Kitsap County is highlighted by recent articles in county papers. An article in the *Sun* printed on July 30, 2000 devoted two full pages to cycling in Kitsap County. Mary Vaughn of the Silverdale Cyclery Shop summed up the problem, "We need more shoulders. More people would ride if they felt reasonably safe."

Members of the bicycle riding community must use ad-hoc routes to get to desired destinations. These routes often follow heavily used vehicular corridors that are substandard in terms of provisions for bicyclists. Inadequate shoulder widths, deficient or failing pavements, potholes, difficult road crossings as well as nonexistent pavement

marking and signage often lead to discomfort and anxiety on the part of the user.

Similar concerns have been voiced regarding the relative scarcity of safe and convenient pedestrian facilities. Residents of various Kitsap County communities frequently speak of difficulties and frustrations encountered when traveling on foot to well-used destinations that are not served by sidewalks or trails. Pedestrians must also use ad-hoc routes adjacent to sometimes heavily traveled roads which may prove to be unsafe and which may promote discomfort and anxiety. Nonexistent sidewalks, inadequate shoulder widths, deficient or failing pavements or difficult road crossings are frequently encountered.

Local officials and transportation planners have expressed interest in improving bicycle and pedestrian facilities, and see the benefit in saving public funds by developing diversified transportation systems that are less dependent on large, costly road projects. The inclusion of non-motorized facilities in new transportation projects is increasingly required by funding sources and agencies.

Following is a summary of the existing non-motorized county and municipal facilities.

### **County Facilities**

There are few existing bicycle facilities in the county. While many roads have paved shoulders, few are wide enough to provide adequate space for cyclists and or pedestrians. Often shoulders are discontinuous with varying widths that force cyclists to merge into traffic at hazardous locations.

Multi-use trails, bicycle, pedestrian and/or equestrian facilities that are separated from the roadway edge, are non-existent along county roads. In terms of pedestrian facilities, sidewalks can be found only in the urban cores of communities

such as Kingston, Silverdale and Keyport. Otherwise pedestrians must currently use road shoulders or follow the road edge.

### **Municipal Facilities**

**Bremerton:** Within the City of Bremerton virtually all streets have sidewalks. However, because of the narrow streets, there are limited separate non-motorized facilities, such as designated bike lanes or multi-use paths. The transportation element of the Bremerton Comprehensive Plan includes a map of existing bicycle and pedestrian facilities. Facilities that are currently in development include:

- SR 304/Charleston Blvd. Gateway Improvements

**Bainbridge Island:** Pedestrian ways and bicycle routes in Bainbridge Island have thus far been constructed piece by piece and are not continuous. Outside of Winslow, the roads are generally narrow, with little room for sidewalks or bike lanes. Despite these obstacles, bicycle use remains popular, particularly on routes leading to the ferry terminal. A comprehensive sidewalk plan was developed for Winslow in 1986. This plan dictates that the city should provide sidewalks only where there is a demonstrated safety need, and only in old Winslow and along school routes designated by the City. Bainbridge Island also has a variety of trails which receive moderate use. The usage by Island residents may grow significantly if a system of interconnecting trails linking neighborhoods and activity centers is developed. Bainbridge Island has recently begun to develop its own Bicycle Facilities Plan slated for completion in 2001.

**Port Orchard:** Based on the existing facilities and the National Recreation Standards, the City of Port Orchard has identified the need for 3 miles of bicycle facilities. Port Orchard will look to the County's alignment to determine which roadways should be outfitted with bike lanes within the City. The City has expressed the desire to add bi-

cycle facilities to Port Orchard Boulevard.

Poulsbo: As with Port Orchard, the City of Poulsbo has few designated bicycle facilities. However, it has proposed a non-motorized trail system in its Comprehensive Plan that identified primary areas where non-motorized facilities should be considered. These areas include the shoreline of Liberty Bay and providing access to the shopping area along SR-305 from Caldart Ave. south of Lincoln St. Existing facilities and facilities that are currently in development include:

- Viking Way from the South City Limits to Lindvig Road
- Liberty Bay Trail

## **POTENTIAL USERS AND FUNCTIONS**

A network of safe, well-located and well marked bicycle facilities could serve a wide variety of functions for a broad spectrum of existing and potential users.

### **Commuters**

Walking, and, especially, bicycling commuters who travel from home to work would benefit substantially from an improved network of safe facilities. They would benefit by new non-motorized facilities that permit and encourage travel from residential areas to significant employment centers such as the county government offices in Port Orchard or businesses and offices in Silverdale. Commuters would also benefit from bicycle and pedestrian facilities that lead from residential areas to major transportation nodes such as ferry docks and Park-and-Ride lots.

### **Local and Inter-Community Users**

Safe, well marked bicycle and pedestrian facilities address the needs of local and inter-community users who travel frequently by bicy-

cle or foot to a wide variety of nearby destinations. Local users benefit from facilities that permit and encourage travel from residential areas to destinations such as the post office, the bank, the convenience store, the community center or to friends living in a nearby neighborhood. Inter-community users would benefit from facilities to more distant residential neighborhoods or to larger shopping centers and commercial districts in other nearby communities.

### **Children**

Safe bicycling and pedestrian facilities are a special concern to children, and to some extent teens, as many have a lack of experience in solo travel beyond the home. These groups are both commuters, traveling between home and school as well as local users traveling between home and a variety of destinations, including libraries, parks, local “hang-outs”, nearby convenience stores or the homes of friends.

### **Bicycle Touring**

Bicycle touring routes are generally bike lanes or paved bike paths. Increased facilities for bicycle touring such as the development of the Mosquito Fleet Trail will enhance recreation opportunities for Kitsap County residents and increase tourism.

### **Serving Non-Motorized Transportation Needs**

Improved bicycle and pedestrian facilities are necessary to safely and conveniently meet the needs of a large range of users.

Given the objectives and requirements of the Kitsap County Department of Public Works, a Bicycle Facilities Plan is the most appropriate method of addressing these facilities. This Plan, supplemented by pedestrian facilities, provides a basic non-motorized transportation core for the Comprehensive Plan. This core, in turn, forms a general context for the addition of future elements.

Non-motorized elements address a variety of local, sub-regional and regional transportation

goals. At the local level, they connect residential areas with locally significant destinations. At the inter-community level, they link nearby communities with one another. At the regional level, they link residential areas with major transportation, employment and business centers, or connect existing urban and developed areas with surrounding rural areas.

Parts of a particular route can frequently serve several goals simultaneously. With well planned routing, a wide range of goals can be addressed with the same bicycle or pedestrian facility. For example, a portion of a regional route that links residential areas with employment or transportation centers for adult commuters can also provide local links between the same residential areas and local schools for commuting schoolchildren. The route can simultaneously link those residential areas to other residential neighborhoods or community, shopping and business centers for local users. Finally, for the inter-community user, portions of the “regional” route can connect existing urban and developed areas with one another and with surrounding rural areas.



The main role of the Kitsap County Bicycle Facilities Plan is to provide non-motorized transportation alternatives to the existing County transportation system. This non-motorized transportation system strives to interconnect neighborhood communities, urban and rural areas, schools, places of employment, and intermodal nodes such as park and rides and ferry terminals in order to create a viable non-motorized transportation system.

## GOALS AND POLICIES

The provision of safe and well located non-motorized transportation facilities is an important concern to the Kitsap County community and to the Kitsap County Department of Public Works. Accordingly, the transportation component of the Kitsap County Greenways Plan designates a system of Bicycle Facilities to address these concerns. These facilities seek to connect destinations of interest to the broad range of commuters, inter-community users and local users discussed in the previous section of this report.

Recommended goals and policies related to Non-motorized Transportation Facilities are outlined below. These goals and policies are recommended for ultimate inclusion in the transportation element of the Comprehensive Plan. The General Goals are taken from a preliminary survey of goals and objectives that was performed in 1992. The survey formed part of a pre-planning study which explored the potential scope of the Greenways Plan. Accordingly, the General Goals



form the “background” for the Specific Goals and Policies which follow. The Specific Goals and Policies are taken from the transportation component of the Kitsap County Greenways Plan and adopted for use in this plan.

### General Goals

**Goal A:** Interconnect neighborhoods within urban areas and communities, including residential areas, shopping, schools, parks and other local destinations.

**Goal B:** Develop commuter routes from residential areas to major employment and business centers.

**Goal C:** Interconnect urban areas and communities, e.g., Silverdale with Bremerton; Kingston with Indianola; Port Orchard with Belfair.

**Goal D:** Interconnect urban areas with surrounding rural areas.

## Specific Goals and Policies

**Goal 1:** Develop a system of Non-motorized Transportation Facilities that are constructed primarily within the right-of-way of existing and proposed public streets or roads and that provide safe transportation between a variety of regional, inter-community and local Kitsap County destinations for bicyclists and pedestrians.

**Policy 1.1:** Designate a system of bicycle facilities and include at a minimum a network composed of:

- Regional Facilities which provide principal bicycle connections to regionally significant destinations such as large existing communities, major transportation facilities or significant commercial/employment districts;
- Sub-Regional Facilities which provide supplementary bicycle connections to regionally significant destinations identified above or to significant sub-regional destinations such as smaller existing communities, secondary commercial/employment districts or state parks;
- Local Facilities which provide connections between locally significant destinations such as local residential neighborhoods, community facilities, schools or parks and schools and the overall “trunk” network of bicycle facilities.

**Policy 1.2:** Assign top priority to the implementation of bicycle facilities and/or pedestrian facilities designated in the Kitsap County Bicycle Facilities Plan.

**Policy 1.3:** Evaluate publicly owned, undeveloped road ends, tax title lands, and rights-of-way for use in implementing the bicycle/pedestrian system.

**Policy 1.4:** Where designated bicycle and/or pedestrian facilities parallel future Kitsap County vehicular transportation projects (both new construction and rehabilitation projects), include the bicycle/pedestrian facilities within the vehicular transportation project.

**Policy 1.5:** Coordinate with the governments of the state, tribes, incorporated cities and Pierce, Mason, and Jefferson counties to provide a continuous bicycle system throughout and beyond Kitsap County.

**Policy 1.6:** Develop criteria, standards and procedures that allow the designated Bicycle Facilities Plan to expand to include future facilities that link to facilities designated on the Kitsap County Bicycle Facilities Plan.

**Policy 1.7:** Require the provision of accessible bicycle/pedestrian facilities within the road system of planned unit developments.

**Policy 1.8:** Construct bicycle facilities to recommended design standards based on standards promulgated by the American Association of State Highway and Transportation Officials (AASHTO).

## THE PHYSICAL PLAN

The following section presents specific recommendations for the project component of the Bicycle Facilities Plan. Included with the Bicycle Facilities Plan mapping are related Design Standards, a 20 Year Priority Array, and the first 6 Year Capital Improvements Program.

The Bicycle Facilities Plan map at the end of this section shows the recommended alignments of bicycle and bicycle/pedestrian facilities. These mapped facilities are typically located within public rights-of-way, on public lands and semi-public lands.

Design Standards are recommended for bicycle and bicycle/pedestrian facilities of the Bicycle Facilities Plan. These Design Standards provide minimum dimensions and requirements to ensure safe and viable non-motorized transportation facilities.

The 20 Year Priority Array is a prioritized project listing of the facilities shown on the Bicycle Facilities Plan map. These non-motorized transportation facilities are broken down into projects, assigned recommended improvements and estimated costs for construction. The projects listed were assigned criteria and ranked within a context of High, Medium, and Low Priority groupings. This priority array has a 20 year horizon and is flexible in terms of time rather than a specific 20 year time table for construction.

The 6 Year Capital Improvements Program outlines proposed budgeting for the initial 6 year period of construction of facilities shown on the Bicycle Facilities Plan. Projects listed were drawn from the highest ranking projects in the 20 Year Priority Array. The program indicates the breakdown of funding per year for each project listed.

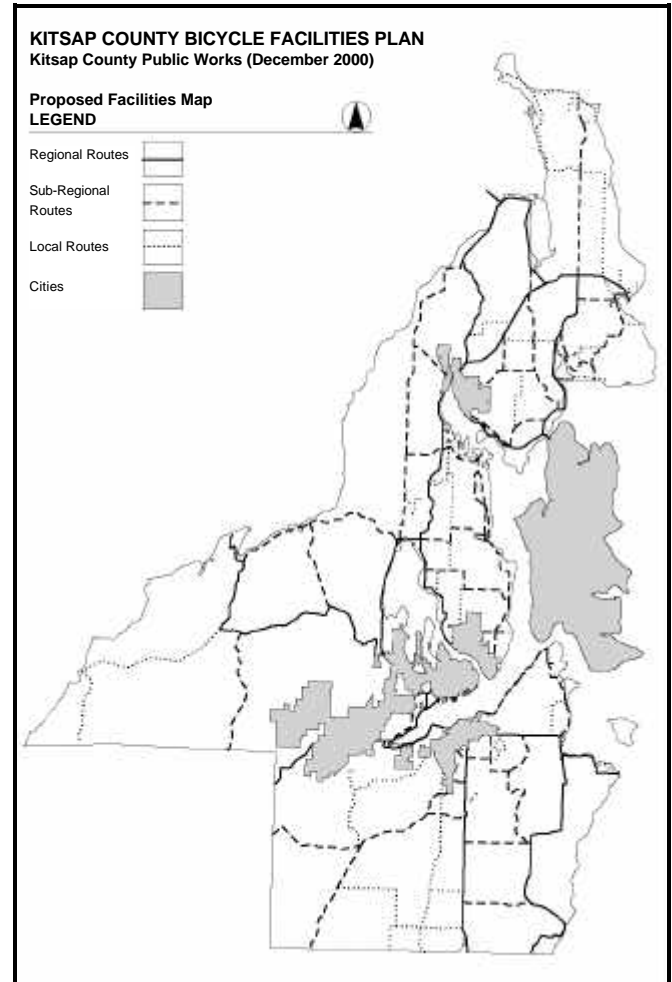


Figure 4.  
Map of Kitsap County showing regional, sub-regional and local bicycle facilities.

## Facilities

The Bicycle Facilities Plan strives to provide non-motorized transportation/commuter facilities for bicycle and mixed bicycle/pedestrian user groups with the understanding that many of these facilities should also meet recreational needs. The Bicycle Facilities Plan proposes to direct future development of bicycle and pedestrian facilities, with the understanding that some of these facilities or “improvements” will be developed as capital improvements and that some could be developed by means of incentives to private developers, and



*Routes such as Viking Way provide regional bicycle facilities.*



*Routes such as Totten Road provide sub-regional bicycle facilities.*

with the further understanding that it will be integrated with the Kitsap County Comprehensive Plan.

Three types of bicycle facilities have been included in the Plan: regional facilities, sub-regional facilities, and local facilities. These terms refer to a functional relationship within the overall bicycle system and do not necessarily indicate relative importance or priorities for construction.

The following section provides a general description of each type of facility and the criteria used to locate each facility with the County.

### **Regional Facilities**

Regional facilities provide regional connections through and within Kitsap County. Because of the longer distances these facilities traverse, they will constitute the highest mileage of facilities in the system. Examples include connections from the Bainbridge Island Ferry Terminal into Poulsbo, from Silverdale to Bremerton, and from Port Orchard into Pierce County. Regional facilities consist of bicycle paths (or bicycle/pedestrian paths) or bike lanes on both sides of the roadway. Proposed standards for bicycle facilities are discussed in this section.

The following criteria were employed when recommending alignments for regional facilities. All criteria were given equal weight during analysis.

- The system, when complete, should provide continuous connections between major entrance points to the County and its urban centers.
- Facilities should serve and connect urban centers within Kitsap County.
- Facilities should serve and connect the public and private ferry systems serving Kitsap County.
- Facilities should serve and connect Mason, Pierce, and Jefferson Counties.
- Facilities should serve and connect with the public transportation system.
- Facilities should provide connections in as direct a manner as possible, subject to the following constraints:
  - Facilities should avoid high traffic arterials and state highways unless no other feasible direct connection exists.
  - Facilities should avoid roadways posted at greater than 50 mph unless no other feasible direct connection exists.
  - Facilities should avoid major hills.
  - Facilities should avoid designated sensitive wildlife and natural areas where possible.

### **Sub-Regional Facilities**

Sub-regional facilities provide sub-area connections meant to complement the regional facility

system. Typically, they serve smaller commercial, residential, or employment centers, schools or other locations that are not connected by regional facilities. As with regional facilities, these facilities may also cover longer distances. Sub-regional facilities consist of paved shoulders, bicycle lanes on both sides of the roadway or bicycle paths (or bicycle/pedestrian paths).

The following criteria were employed when recommending alignments for sub-regional facilities. All criteria were given equal weight during analysis.

- Facilities should connect urban centers with major parks and recreation centers in Kitsap County.
- Facilities should provide connections to military installations.
- Facilities should provide alternative connections to areas served by the regional trail system if either of the following criteria apply:
  - The alignment provides access to points of interest and scenic features that otherwise would not be served by the regional trail system.
  - The alignment provides connections between two regional facilities that otherwise would not be connected in the immediate vicinity.
- Facilities should provide alternative connections into Pierce and Mason County so as to assure continuity between alignments within these jurisdictions.
- Facilities should avoid high traffic arterials and state highways.
- Facilities should avoid major hills unless no other feasible alignment is available.
- Facilities should avoid designated sensitive wildlife and natural areas where possible.

### **Local Facilities**

Local facilities connect residential neighborhoods, commercial centers, employment centers, schools

and specific activity centers to the regional and sub-regional trail system. They provide local connections within these areas, or connect these areas in shorter distances than either the regional or sub-regional facilities. Local facilities are either paved shoulders, bicycle lanes, bicycle paths (or bicycle/pedestrian paths).

The following criteria were employed when recommending alignments for local facilities. All criteria were given equal weight during analysis.

- Facilities should provide local access from residential neighborhoods, commercial centers, and employment centers to the regional and sub-regional trail system.
- Facilities should provide local connections to schools.
- Facilities should provide access to points of interest and natural features from the regional and sub-regional facility system or from nearby neighborhoods, commercial centers, residential centers, or employment centers.
- Facilities should connect urban centers with local parks and recreation centers in Kitsap County.
- Facilities should connect with the public transportation system.
- Facilities should provide access to marine transportation access points such as marinas and boat launches.
- Facilities should provide access to public shorelines.
- Facilities should avoid high traffic arterials and state highways.
- Facilities should avoid major hills unless no other feasible alignment is available.
- Facilities should avoid designated sensitive wildlife and natural areas where possible.

## Design Standards

### Purpose

Safety is the primary consideration when designing bicycle facilities. If bicycle facilities do not offer safe and adequate biking conditions, the facilities will not be used and will not encourage greater use. It is the primary goal of this plan to establish standards to serve as a guide in the development of safe and adequate bicycle facilities for Kitsap County. These standards provide recommended base minimums and other information to aid in the development of new bicycle and pedestrian facilities as well as the improvement (increasing safety and usability) of existing facilities.

### Scope

The design guidelines set forth in this plan are based on those established by the American Association of State Highway and Transportation Officials (AASHTO) in “Guide for the Development of Bicycle Facilities” (1999). These design standards defer to AASHTO guidelines for information not covered herein, or for further clarification.

Facilities located within the right-of-way of any State Routes should defer to the standards set forth in the Washington State Department of Transportation’s (WSDOT) Design Manual, Section 1020, Facilities for Non-motorized Transportation. These standards defer to the Manual on Uniform Traffic Control Devices (MUTCD) for any additional information and guidance with signage and pavement markings.

The design guidelines set forth in this manual are not intended to be the sole solution to bicycle safety issues. In conjunction with any well-designed bicycle facilities it is important to include safety education and established “Rules of the Road”. Bicycle programs often provide this information to the public as well as maps indicating recommended safe bicycling routes.

### Definitions

The following definitions are from AASHTO’s “Guide for the Development of Bicycle Facilities” (p. 2-3)

1. **Bikeway:** A generic term for any road, street, path, or way which 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.
2. **Bicycle Path or Bike Path (Shared Use Path):** A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may be pedestrians, skaters, wheelchair users, joggers and other non-motorized users.
3. **Bicycle Lane or Bike Lane:** A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.
4. **Bicycle Route System:** A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing, but may be a combination of any and all types of bikeways.
5. **Roadway:** The portion of the highway, including shoulders intended for vehicular use.
6. **Right-of-Way (R.O.W.):** A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.
7. **Right of Way:** The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian.



8. Shared Roadway: A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.
9. Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses.
10. Sidewalk: The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians.

### **BIKEWAYS AND THE SELECTION OF THE TYPE OF FACILITIES**

One of the main goals of a well designated facility is to avoid conflict between users and motor vehicles. To determine the appropriate design treatment, several factors should be considered, including the type of users the route is likely to serve, the type of roadway that is involved and the traffic characteristics (volume, speed, mix, existence of parking, etc.)

The design standards discussed below are general in nature and apply to all types of bicycle facilities.

### **Surfacing Materials and Structural Section:**

Bicycle facilities, whether bicycle paths or bicycle lanes, should be paved surfaces. The quality and smoothness of the surface is essential to the safety of the bicyclist. The surfacing material and structural section should be designed so that the facility is capable of supporting maintenance and emergency vehicles. Recommended pavements are asphaltic concrete or Portland Cement. Asphaltic concrete pavement is generally preferred. In order to support maintenance and emergency vehicles the outside edges of pavement should be uniform. Asphaltic concrete surface pavement should be machine laid. If Portland Cement is used, it is preferred that the traverse joints be sawcut in order to provide a smooth surface. The surface should also be either broom or burlap finished (not troweled) in order to provide some skid resistance.

Loose material, gravel or debris on the travel lanes poses a hazardous situation to the bicyclist.

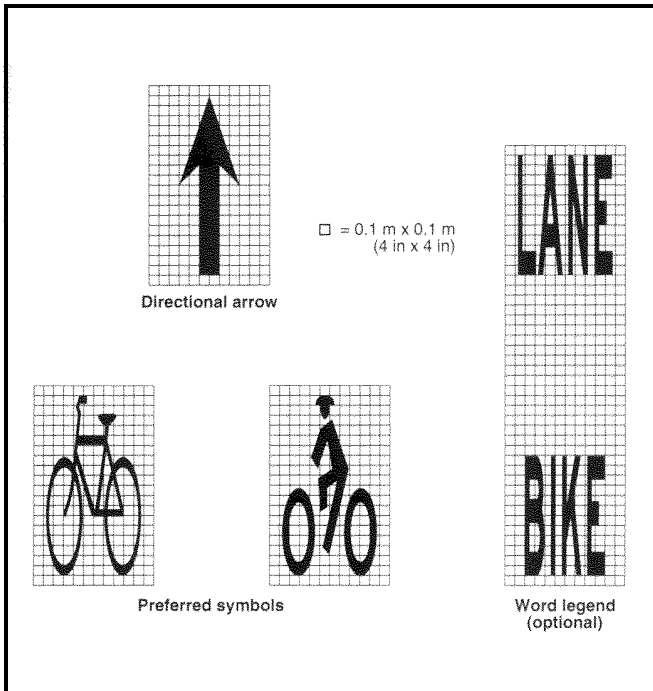


Figure 5.  
Typical Bike Lane symbols.

If the bicycle facility crosses an unpaved driveway or road, the road should be paved on both sides of the bikeway in order to reduce gravel debris on the travel lanes.

**Signage and Striping:** There are three main types of signage to consider for bicycle facilities:

1. **Directional Signs:** Directional signs serve to guide the bicyclist (or motorist), indicating and informing the user of roadway crossings, directions, destinations and distances.
2. **Regulatory Signs:** Signs that inform bicycle facility users and motorists of traffic laws or regulations. These signs should be located where the regulation applies and should be easily legible and visible to facility users and/or motorists.
3. **Warning Signs:** Warning signs should be used

when it is necessary to alert bicyclists or motorists of an existing or potentially hazardous condition. Warning signs should be located preceding the upcoming hazard. The use of warning signs should be kept to a minimum since the over use of these signs may promote disregard for all signs.

Appropriate and adequate signage and pavement marking is paramount to safe bicycling facilities. Separate guidelines for signage and pavement marking can be found in the MUTCD.

Additional signage and marking should be considered for a bicycle-only facility to prevent pedestrian and other non-motorized use.

**Drainage Grates:** Drainage grates and utility covers located in the travel lanes pose safety hazards for bicyclists. For bicycle lanes adjacent to curbs, curb inlets are recommended. For both bicycle lanes and paths, if drainage grates or utilities cannot be located (or relocated) outside of the



travel areas, the covers should be flush to 0.5 inches below finished grade. Grate openings that run parallel with the direction of travel may trap a bicycle wheel. Openings of drainage grates should be narrow and short enough so as to prevent a bicycle wheel from dropping into the grate.

**Barriers and Railings:** A physical barrier should be provided for a bicycle path if the minimum recommended separation width cannot be met and the motorized vehicle posted speed exceeds 35 mph. The barrier should be suitable for the situation and the intended use. Physical separations such as railings or barriers should be a minimum of 4.5 feet high and vertical surfaces should be smooth to avoid any snagging or prevent any abrasive injury. Smooth rub rails should be attached to the barriers (or railings) at handlebar height of 3.5 feet (See Figure 6).

**Barrier Posts (Bollards):** It is recommended that barrier posts be installed at entrances to bicycle paths in order to prevent unwanted motor vehicle use. The bollards should be designed to allow for emergency and maintenance vehicle access. A 5 foot spacing of posts should be provided (if more than one post is necessary) in order to allow bicyclists to readily pass. The bollards should be a minimum of 3 feet high and should be clearly marked and visible in daytime as well as nighttime conditions (by installing reflective tape, reflective paint or reflectors).

**Bridges:** Bicycle lanes are preferred when adding bicycle facilities to existing bridge structures. The minimum width recommended for a clear (one way) bicycle lane on a bridge is 6 feet. “It is desirable that the clear width on structures be equal to that of the approaching path including the 2 to 3 feet graded areas.” (WSDOT). Recommended vertical clearance is 10 feet.

Bicycle approaches to a bridge should be well designed and continuous with the bicycle bridge.

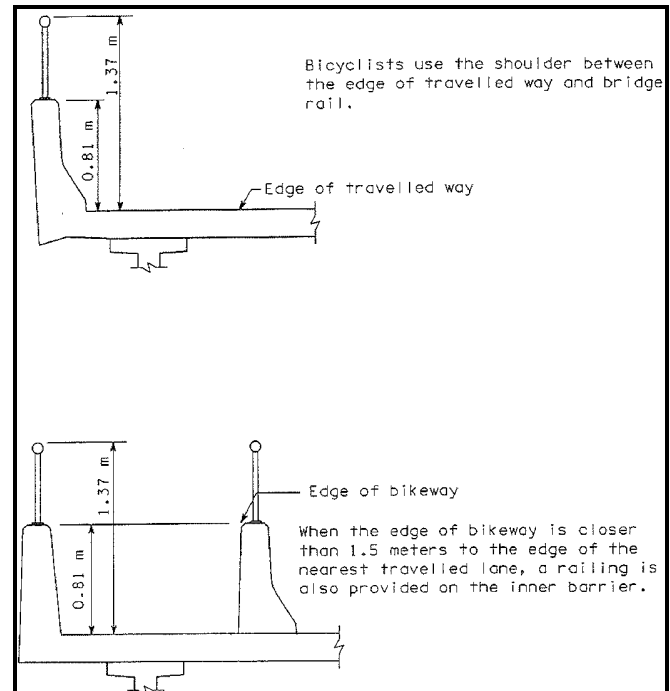


Figure 6.  
Bikeways on highway bridges.

*...our highway transportation system is characterized by three basic modes of transportation: motor vehicles (including transit services), bicycles, and walking... Regardless of the source of funding for transportation improvements, all members of the public are entitled to use public thoroughfares by their choice of mode. Therefore, it is incumbent on transportation agencies to plan and design facilities accordingly.*

*Federal Highway Administration  
Publication  
FHWA-RD-92-073*

The approach facility should maintain the same width as the bridge crossing and should be oriented with the direction of travel. Appropriate barriers and railings should be provided (See *Figure 6*). In addition, signage and lighting should be provided.

**Lighting:** Minimum lighting levels should be provided for bicyclists' safety. Typically the ambient light from roadway lighting provides sufficient light levels for bicycle facilities. The desired amount of light in foot candles depends on the expected amount of nighttime use. Areas where additional lighting should be considered are intersections (road crossings) and bridges or underpasses. The desirable level of illumination for these areas is between 0.5 foot-candle (5 lux) to 2 foot-candles (22 lux). Any additional light standards or fixtures should be appropriate to the scale of bicyclists and pedestrians, and should meet the required minimum vertical and horizontal clearances.

**Bicycle Parking:** Parking for bicycle users should be provided at destination areas such as ferry terminals, park-and-ride lots, schools, shopping areas, recreation areas, as well as public buildings, such as libraries and post offices. For locations where a bicycle may be parked for an extended length of time (8 hours or more) consideration should be given to bicycle lockers. Lockers provide greater security for the bicycle as well as protection from the elements.

Bicycle racks or lockers should be located in a highly visible area. They should not be in a location that will disrupt motorized or non-motorized traffic. Bicycle parking areas should be well signed if out of view or located away from the main entry to a facility. Adequate lighting should also be provided for safety purposes. If possible, bicycle parking should be located in an area that is protected from the weather.





Figure 7.  
Bicycle Path

## BICYCLE PATH

Bicycle paths are typically two-way facilities and may be either bicycle only or bicycle/pedestrian facilities. The following standards are intended to act as a guide for the development of safe bicycle paths. Typical cross-sections for bicycle paths are illustrated in *Figures 8a, 8b, and 8c*.

- Traffic Volumes:** The following counts (from WSDOT) indicate a high volume traffic situation: Sixty bicycles per hour on a peak hour on a nice day = high volume. Twenty pedestrians per hour in peak hour condition indicated above = high volume traffic.
- Width:** The minimum recommended width for a 2-way combined bicycle and pedestrian (multi-mode) use is 10 feet for areas of anticipated low volumes of use; 12 feet minimum for areas of high volume usage. Bicycle paths for exclusive bicycle use should be minimum 8 feet wide for anticipated low volume, 10 feet for high volumes (12 feet preferred). If a bicycle path is one way, the minimum recommended width is 5 feet with a preferred 6 feet width. Careful consideration should be given before constructing a one-way bicycle facility due to difficulty of enforcing a one-way system and the potential for confusion with a pedestrian facility or sidewalk.
- Separation:** Separation of bicycle users from motor vehicles is recommended. The recommended minimum width for separation between the road edge and the edge of the path is 5 feet (6 feet is preferred). If 5 feet of separation cannot be provided, it is recommended that additional physical separation be provided (see Barriers and Railings, p. 33). Planting in the separation should maintain appropriate sight distance and visibility for the safety of both bicyclist and motorist.
- Shoulder:** Graded shoulders should be provided 1 foot from the edge of pavement on both sides of the path. A minimum shoulder width of 3 feet is recommended for paths adjacent to embankments greater than or equal to 10 feet in height.
- Horizontal Clearance:** A minimum horizontal clearance of 2 feet is recommended from the edge of pavement. Where full clearance cannot be provided to an obstruction, additional signage and pavement marking should be installed to alert bicyclists of the condition.
- Vertical Clearance:** A minimum vertical clearance of 8-10 feet is recommended, particularly if maintenance, motorized or emergency vehicles are expected.

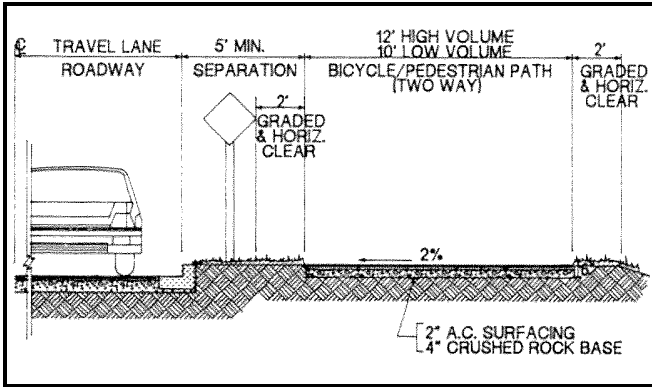


Figure 8a.  
Bicycle/Pedestrian Path  
Two-Way

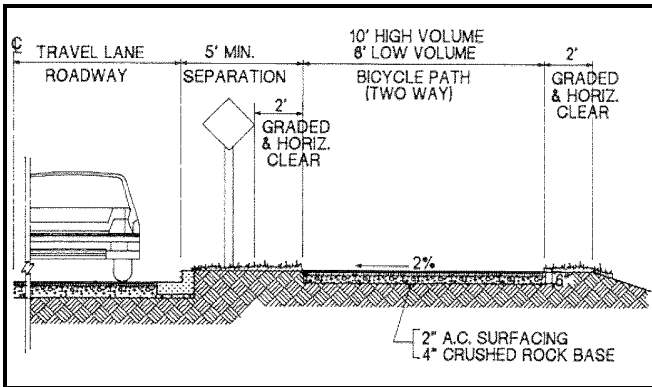


Figure 8b.  
Bicycle Path  
Two-Way

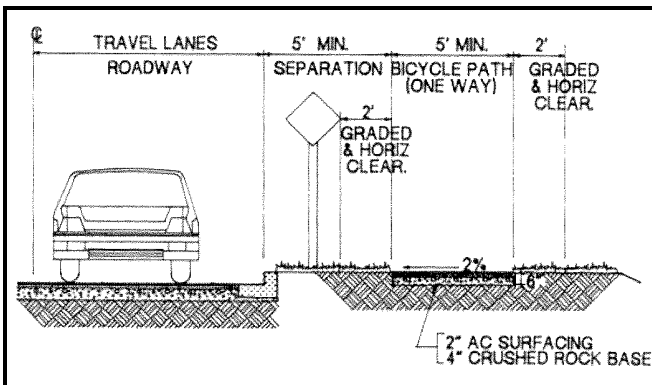


Figure 8c.  
Bicycle Path  
One Way

- Grade:** For ease of travel, 2% grades are preferred for bicycle facilities. AASHTO discourages the development of facilities steeper than 5%, citing that “the ascents are difficult for many bicyclists to climb and the descents cause some bicyclists to exceed the speeds at which they are competent.” However, AASHTO does accept 5% to 10% grades when they occur over short distances, 500 feet or less, and when the facilities are designed to accommodate higher design speeds.

- Drainage and Cross Slope:** Adequate drainage is essential to all bicycle facilities. For bicycle paths, the recommended cross slope is 2%. A one directional cross slope is typically preferred over crowning a bicycle path. In situations where the bicycle path is located on the side of a hill, a drainage swale is recommended on the uphill side in order to intercept any runoff and prevent debris from being washed into the area of travel. Drainage swales should be located and oriented with the safety of the bicyclist in mind. It is recommended that all drainage grates and manhole covers be located outside the travel path. Permanent planting and/or seeding should be a part of the plans in order to reduce the amount of runoff and minimize debris on the travel lanes.

- Design Speed:** The minimum recommended design speed is 20 mph. For grades greater than 4% the recommended design speed is 30 mph.

- Horizontal Alignment and Superelevation:** See Figure 9 for minimum curve radius. Where minimum curve radius for the design speed is selected, additional curve widening is recommended for the inside curve to accommodate the lean of the cyclist. See Figure 10 for curve widening. The maximum recommended superelevation is 5%. A 2% cross slope is recommended for tangents.

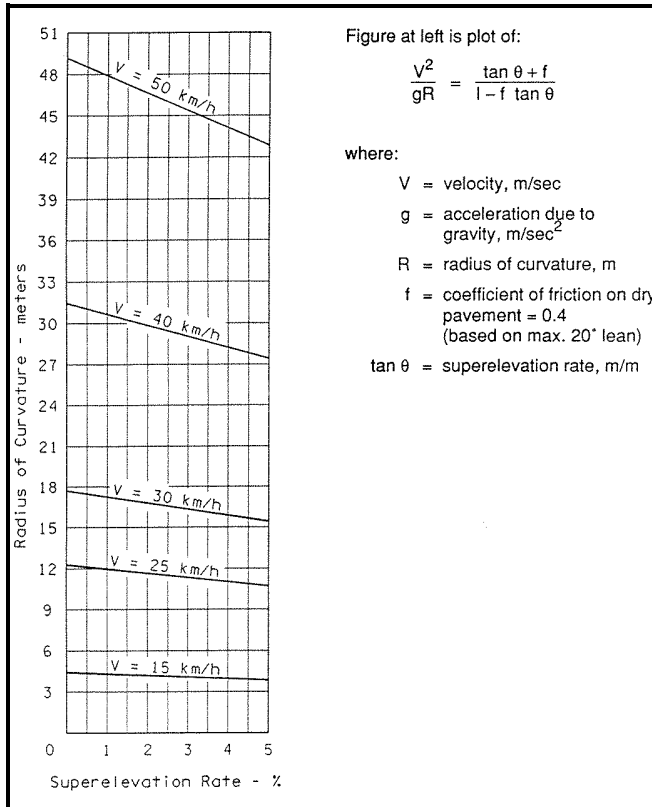


Figure 9.  
Curve radii and superelevations.

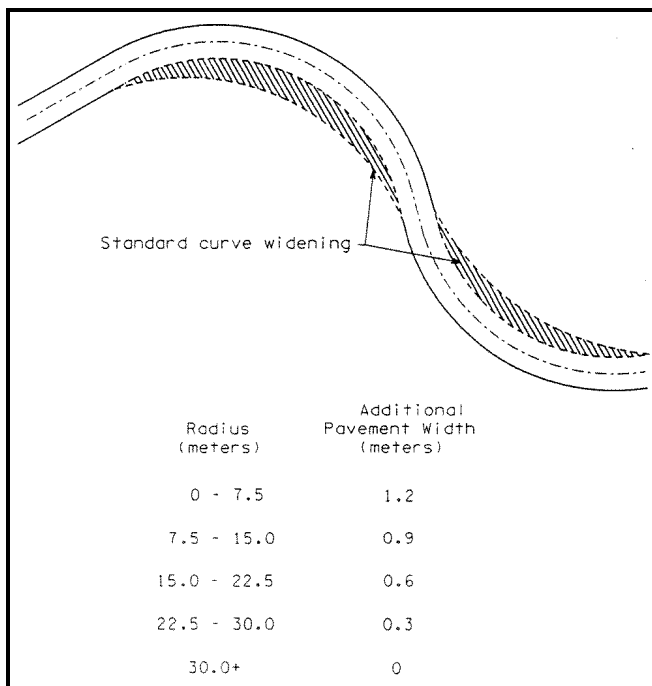


Figure 10.  
Bikeway curve widening for various radii.

- Stopping Sight Distance:** Adequate stopping distance is necessary for the bicyclist to be able to see and react to an unexpected situation. Stopping sight distance is subject to design speed (See *Figure 11*). For bicycle paths, design speeds need to be considered for both directions; the descending direction determines the design. *Figure 12* should be used to determine the minimum recommended length of vertical curve required to provide minimum stopping distances of various speeds. Eye height of a cyclist is 4.5 feet with an assumed object height of zero. *Figure 13* shows the minimum clearance for line of sight obstructions of horizontal curves.
- Intersections:** Well designed intersections with roadways are crucial to the safety of bicycle path users. When intersection or roadway crossings occur at grade, the bicycle path should cross perpendicular to the roadway if possible. The bicycle path crossing should be located where possible at intersections with

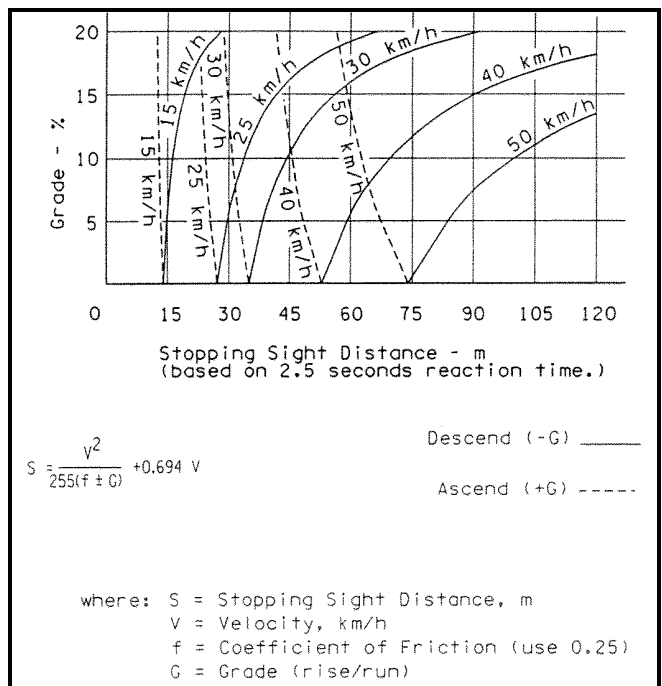


Figure 11.  
Stopping sight distance.

other roadways or should coincide with a pedestrian crossing where motorists can be expected to stop.

Intersections should be clearly marked and signed; necessary traffic control devices should be provided in accordance with the MUTCD. Right of way between path users and motorists should also be clearly established. Signage should warn path users and motorists in advance of the intersection. Signs should be oriented so as not to be confused with roadway signage. Necessary curb cuts and ramps should be provided for bicycle users; they should be the same width as the

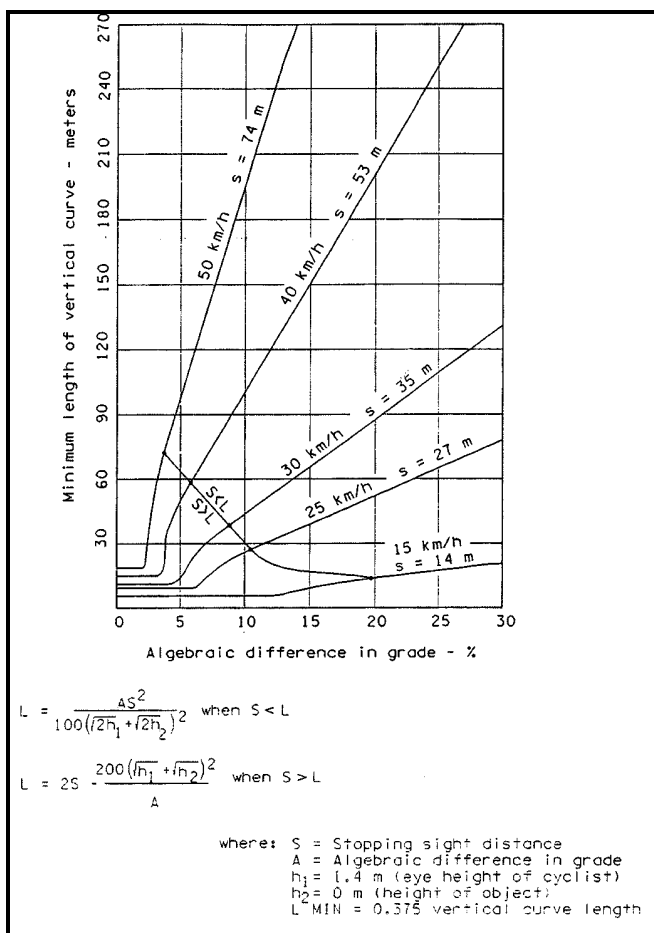


Figure 12.  
Sight distances for crest vertical curves.

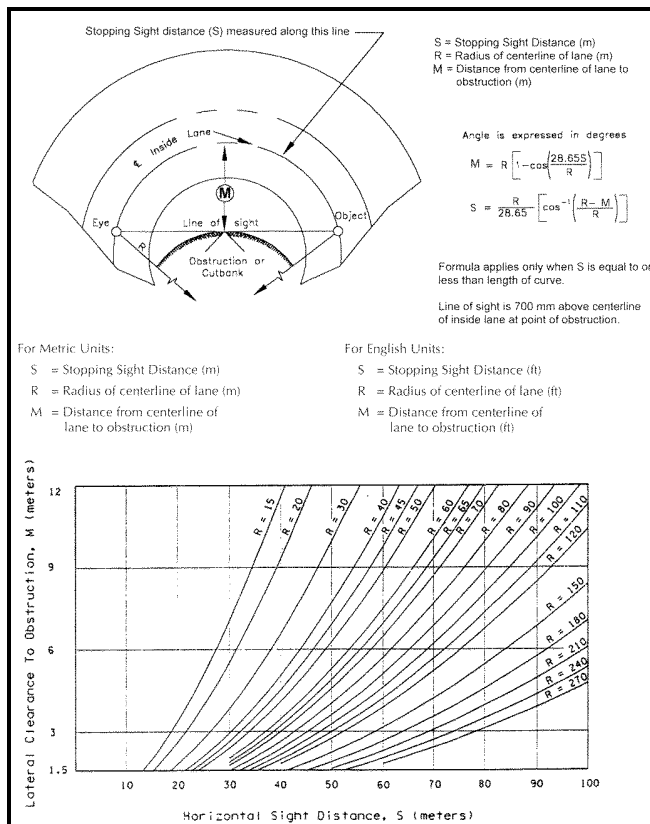


Figure 13.  
Lateral clearances on horizontal curves.

bicycle path oriented in the direction of travel, and provide a smooth transition to the roadway. Appropriate stopping sight distances should be established and checked at intersections. Intersections and approaches should also be of relatively flat grades (2% preferred).

In crossing situations of high volume and high speed roadways, consideration should be given to additional signalization or to a separated structure such as an underpass or bridge.



Figure 14.  
Bicycle Lanes.

## BICYCLE LANES

Bicycle lanes are always one-way facilities that move in the same direction as motorized vehicles. Bicycle lanes are for bicycles only and should not be used by pedestrians. Pedestrians should be provided with sidewalks in urban areas; an additional 3 foot gravel shoulder outside the bicycle lane may be provided if a separate pedestrian walking facility is not feasible. On one-way streets, the bicycle lane should be located on the right hand side of the roadway. The following design standards are to serve as a guide for the development of safe bicycle lanes. Typical cross sections illustrating bicycle lanes are illustrated in Figures 16a, 16b, and 16c.

- **Width:** The width of the bicycle lane is dependent upon the edge condition. For curbed roadways, and roadways with on-street parking the recommended lane width is 5 feet minimum from the curb face, 4 feet minimum to gutter edge (where curb and gutters are used). Bicycle lanes along roadways without curbs should maintain a minimum width of 4 feet. AASHTO advises that “a width of 5 feet or greater is preferable,” adding that along roads with high truck traffic and with vehicle speeds exceeding 35 mph “additional widths are desirable.”
- **Shoulder:** Bicycle lanes without curbs should provide a recommended grade shoulder width of 1 foot from the outside edge of paving. A 3 foot minimum graded shoulder may be provided in order to accommodate pedestrian traffic, if there are no existing pedestrian facilities.
- **Horizontal Clearance:** A minimum of 2 feet of clearance from the face of curb is recommended. For bicycle lanes without curbs a minimum of 2 feet of clearance from the outside edge of pavement should be provided.
- **Vertical Clearance:** A minimum of 8 feet; 10 feet is preferred, and recommended for underpasses and bridges.
- **Intersections:** The combination of bicycle and motor vehicle traffic can pose turning complications at intersections for both bicyclists and motorists. In order to clarify motor vehicle and bicycle movements at intersections, additional signage and striping is recommended to reduce the likelihood of conflict. The recommended general guide for signage and pavement marking for bicycle lanes and intersections is in the MUTCD. Recommended pavement markings for bicycle lanes approaching motorist right-turn-only lanes are

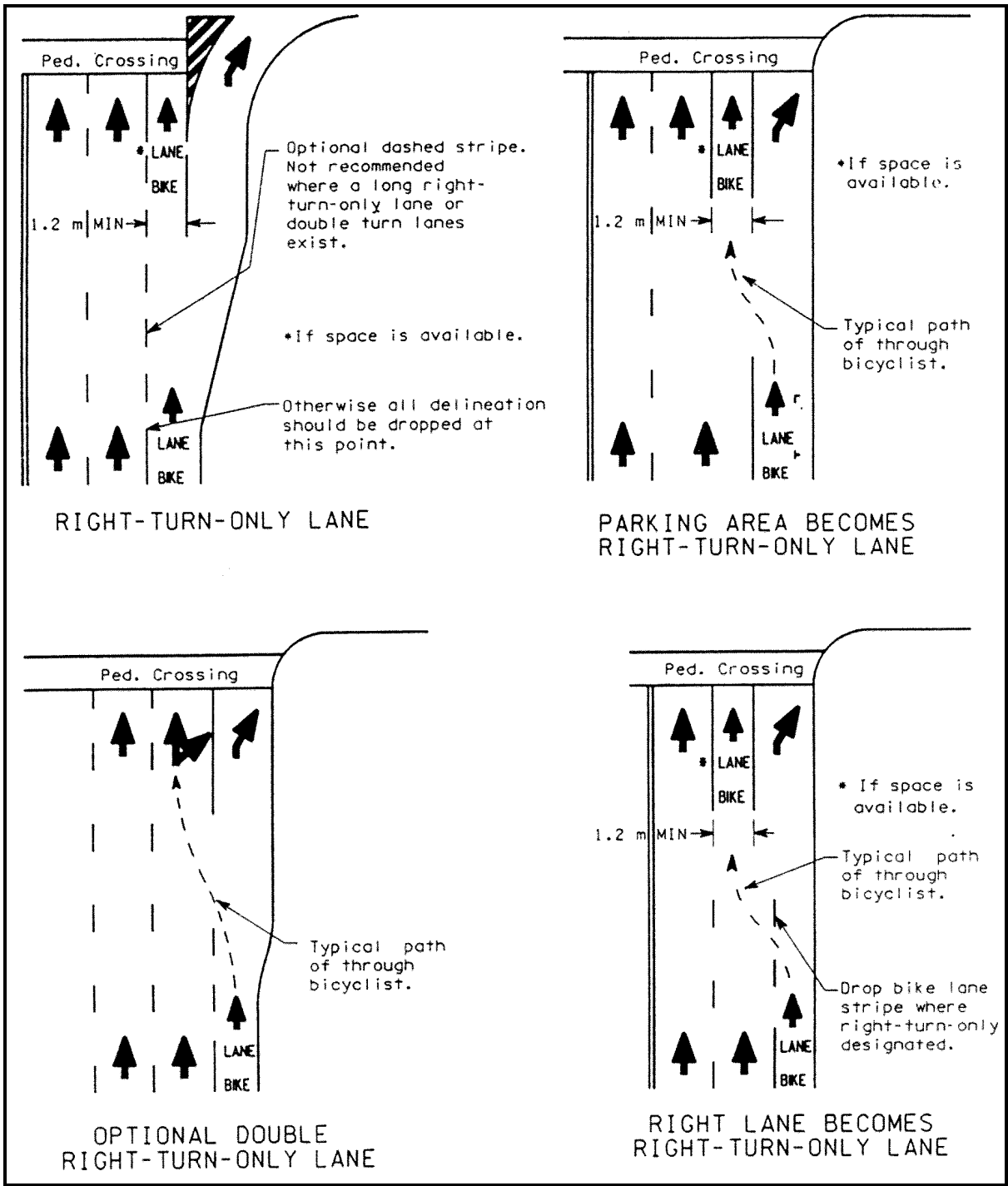


Figure 15.  
Bicycle lanes approaching motorists' right-turn-only lanes.

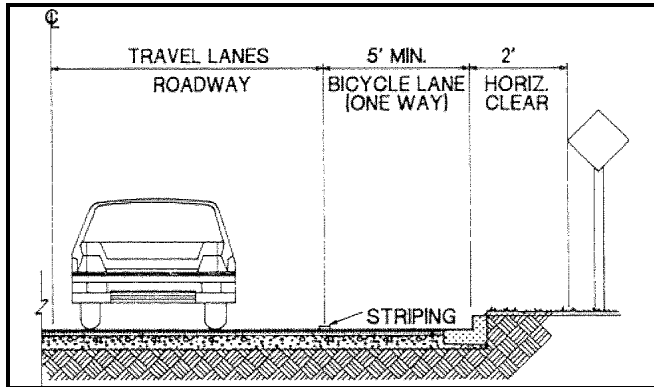


Figure 16a.  
Bicycle Lane with Curb.

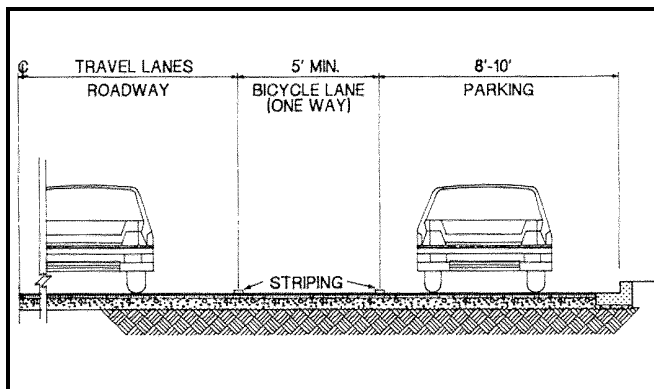


Figure 16b.  
Bicycle Lane with Curb and Parking.

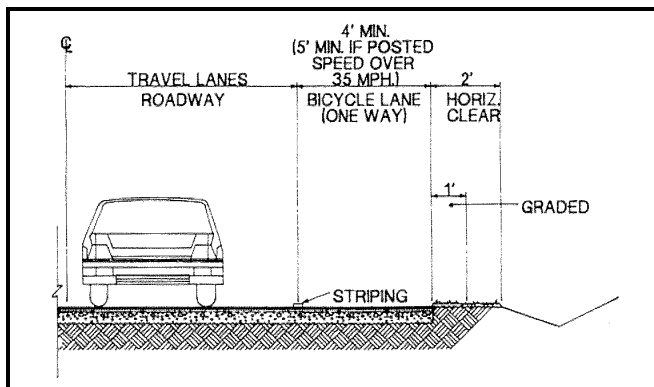


Figure 16c.  
Bicycle Lane without Curb.

from the AASHTO standard and are illustrated in Figure 15. At intersections with both motor vehicles and bicycles it is recommended that bicycle-sensitive loop detectors be installed in the bicycle lane as well as in left turn lanes.

### SHARED ROADWAYS

Shared roadways are defined as roadways with shared use by motor vehicle and bicycle travel. The most serious concern with shared roadways is the available width for these two modes of transportation. If shared roadways are to be signed as designated bike routes, AASHTO advises the provision of paved shoulders or wide outside lanes.

**Paved Shoulders:** In many instances the addition of paved shoulders may be the most cost-effective solution to improving the roadway for use by cyclists and pedestrians. Paved shoulders also help to protect the edge of the roadway from deterioration and provide room for emergency vehicles and break-downs. AASHTO advises that paved shoulders should be 4' wide at minimum to provide adequate space for use by cyclists. If there is a curb, guardrail or other roadside barrier, then AASHTO advises that a 5' shoulder from the face of the obstacle is necessary to meet safety standards. In high traffic situations or along roadways with speeds over 50 mph, additional shoulder width is recommended.

If funding or right-of-way is not available to meet AASHTO standards, then paving a 2' to 3' shoulder is suggested. Even this much additional shoulder will substantially improve the safety of the roadway for use by cyclists.

**Wide Outside Lane:** There are right-side through traffic lanes that are wider than the standard lane width to allow a bicyclist and motorist to share the same lane without coming into conflict or reducing the capacity of the lane. Typically, 14' is the recommended lane width for shared usage by motor vehicles and cyclists. In

situations where roadside barriers such as drainage grates or raised reflectors effectively reduce the usable portion of the lane by cyclists, 15' is the recommended width. If the lane width exceeds 15', AASHTO advises striping in a shoulder. An excessively wide lane may encourage the use of one lane by two motor vehicles. Wide outside lanes are primarily for the regular, adult (commuter) cyclist, and are often favored for that use. Except on residential or low-volume streets, wide lanes do not provide the degree of safety and comfort necessary for less skilled bicyclists or children.

### SHARED SIDEWALK

The County currently has no ordinances addressing sidewalk usage by bicycles. Generally, the shared use of a sidewalk by cyclists and pedestrians is undesirable and recommended only in limited circumstances:

- On long, narrow bridges where there is not enough width to accommodate bicycle lanes or paved shoulders and where traffic volumes and speed limits are high enough to preclude safe shared usage of the roadway.
- In order to close gaps along bicycle routes in areas where (as above) there is not enough width to accommodate bicycle lanes or paved shoulders and where traffic volumes and speed limits are high enough to preclude safe shared usage of the roadway.

In order to facilitate safe usage of sidewalks by cyclists in the above situations, curb cuts should be flush with the street.

### MAINTENANCE

Maintenance is a factor to be considered in budgeting for development of a bicycle facility. Maintenance and security considerations should be taken into account during the project design and development. It is recommended that a plan be developed for regular policing and maintenance as well as the associated costs budgeted. Without regular maintenance and policing, a bicycle facility

may quickly become unusable.

Bicycle lanes and paths should be kept clear of accumulating debris. The surfacing of bicycle facilities should be maintained free of potholes or any other surface obtrusions. All signage and pavement markers should be regularly inspected and maintained. Tree, shrubs, and other vegetation should be regularly controlled in order to maintain necessary horizontal and vertical clearances as well as sight distances. In addition, a regular mowing schedule should be established for sodded/seeded areas. Regular trash removal and inspection of lighting and amenities should also be considered.

Bicycle facilities should also be regularly checked for changes in traffic volumes or any other changes since the time of construction that may require updates, improvements, or the addition of other facilities or amenities.

*The decision to bicycle and walk is also easily influenced by quite minor factors — the presence or absence of secure bicycle parking, missing signs, lack of medians or curb ramps, deep potholes or dangerous utility covers, etc. Cities such as Seattle, Edmonds, Bellevue, Redmond and Tacoma have developed highly responsive, popular “spot” improvement” programs to quickly correct this kind of defect, with the help of the bicycling and walking public. Each jurisdiction in the region is encouraged to include this type of program as part of their routine road maintenance activities.*

*1995 Metropolitan Transportation Plan,  
p. 56*

FACILITY	WIDTH	SEPARATION FROM MOTOR VEHICLES	SHOULDER	HORIZONTAL CLEARANCE	VERTICAL CLEARANCE	GRADE	CROSS SLOPE	DESIGN SPEED	CURVE RADIUS
<b>Bicycle Paths</b>									
Separate 2-way Bicycle/ Pedestrian path (see <i>Figure 8a</i> )	10' minimum (low volume) 12' minimum (high volume)	5' minimum 6' preferred	2' graded	2' minimum	8' minimum 10' preferred	5% max. 2% pref.	2%	20 mph (30 mph for grades > 4%)	$R=v^2$ 15 (e+f) (95 R. @ 20 mph)
Separate 2-way Bike Path (see <i>Figure 8b</i> )	8' minimum (low volume) 10' minimum (high volume) 12' preferred	5' minimum 6' preferred	2' graded	2' minimum	8' minimum 10' preferred	5% max. 2% pref.	2%	20 mph (30 mph for grades >4%)	$R=v^2$ 15 (e+f) (95 R. @ 20 mph)
Separate 1-way Bike Path (see <i>Figure 8c</i> )	5' minimum	5' minimum 6' preferred	2' graded	2' minimum	8' minimum 10' preferred	5% max. 2% pref.	2%	20 mph (30 mph for grades >4%)	$R=v^2$ 15 (e+f) (95 R. @ 20 mph)
<b>Bicycle Lanes</b>									
1-way lane with curb (see <i>Figure 16a</i> and <i>16b</i> )	5' minimum (4' minimum to gutter edge)	NA	NA	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA
1-way lane without curb (see <i>Figure 16c</i> )	4' minimum, 5' recommended if posted speed over 35 mph	NA	1' graded (3' minimum crushed rock for pedestrian use)	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA
<b>Paved Shoulders</b>									
1-way shoulder with curb	3' minimum, 5' recommended	NA	NA	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA
1-way shoulder without curb	2' minimum, 4' recommended	NA	NA	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA
<b>Wide Outside Lane</b>									
Wide outside lane with roadside barriers	15' recommended	NA	NA	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA
Wide outside lane, no barriers	14' recommended	NA	NA	2' minimum	8' minimum 10' preferred	NA	2%	NA	NA

## **CITIZEN REVIEW AND EDUCATION**

There is great value in establishing both a forum for citizen review of the implementation of the Bicycle Facilities Plan and an on-going citizen education program for bicyclists as well as drivers on established “rules of the road.” Successful implementation of the Bicycle Facilities Plan depends not only on the initiative of elected officials and government workers, but also on a supportive and educated populace.

**Education:** Bicycle and pedestrian safety education programs should be designed to improve skills and observance of traffic laws and to promote overall safety for bicyclists and pedestrians of all ages. A cooperative effort through a mix of agencies and interest groups, including schools and libraries, the Department of Public Works and the Department of Parks and Recreation, police departments and cycling clubs, will be the most effective way to reach out to a broad spectrum of the population.

Education programs should address the specific needs of target groups. AASHTO suggests topics and skills for four different audiences (p. 13-14), young bicyclists, parents of young bicyclists, adult bicyclists and motorists. All four groups need to learn the basic rules of the road, but each group has specific needs and concerns to address.

**Citizen Participation:** Citizens and bicycle advocates from around the county can provide support in numerous ways. Citizen participation could include the following:

- Oversee implementation of a bicycle education program.
- Periodically review progress made by the county in regards to implementation of the Bicycle Facilities Plan.
- Annually review the county’s Transportation Improvement Program and Capital Improvement Program.

## Priorities

The attached 20 Year Priority Array suggests priorities for the construction of elements of the Kitsap County Bicycle Facilities Plan. The Priority Array has a 20 year horizon and is flexible in terms of time rather than a specific 20 year timetable for construction. This priority array is derived in part from an assessment of the 20 Year Comprehensive Plans and the 6 Year Capital Improvements Plans (C.I.P.) prepared by the Kitsap County Department of Public Works and is presented in tabular form similar to the “Transportation Improvements” table that is included in the Transportation Element of the Kitsap County Comprehensive Plan.

The array is meant to be consulted when seeking projects to match with funds that become available over time and also functions as the starting point for the initial Bicycle Facilities 6 Year C.I.P. (as well as for following 6 Year C.I.P.’s).

As further detailed below, the 20 Year Priority Array suggests “Priority Projects” as well as “Opportunity Projects.” “Priority Projects” are first generally prioritized within a context of high, medium, and low priority groups. This initial sorting is followed by a more specific prioritization of the projects included in each of these three priority groups. Criteria for prioritizing projects is discussed below. “Opportunity Projects” supplement the list of “Priority Projects.”

### Public vs. Private Improvements

The Plan considers two general kinds of bicycle facilities: public and private improvements.

The first case includes bicycle facilities to be constructed as public improvements within the public right-of-way. It may also include bicycle facilities to be constructed as public improvements on public or semi-public lands. Both of these are indicated on the Bicycle Facilities Plan and are included in the 20 Year Priority Array as well as the

### 6 Year C.I.P.

The second case includes bicycle facilities to be constructed on private lands as a function or condition of the development of Fully Contained Communities, Planned Unit Developments, residential subdivisions, and the like. Given their somewhat unpredictable nature, they are not shown on the Bicycle Facilities Plan and they are not included in the 20 Year Priority Array or the 6 Year C.I.P.

### “Priority Projects” vs. “Opportunity Projects”

In order to keep the overall cost of the Bicycle Facilities Plan reasonable, and to allow the plan to logically organize use of unexpected funding opportunities, the 20 Year Priority Array distinguishes between two types of projects to be constructed as public improvements in the public right-of-way. These are “Priority Projects” and “Opportunity Projects.”

“Priority Projects” include facilities that are clearly desirable to construct at some point in the future. They are shown on the Bicycle Facilities Plan and they are assigned a particular location within the high, medium, and low priority context of the 20 Year Priority Array. The assignment of a project in the high, medium or low priority is outlined in the criteria below. Further sub-criteria are applied to each project and to determine their placement or rank within these priority groupings. These sub-criteria are outlined in the following section.

“Opportunity Projects” include lesser facilities which are low in priority but which nonetheless should be constructed (to complete the entire system) if and when a special opportunity arises. Special opportunities could include widening/reconstruction of the adjacent roadway; widening or replacement of an existing bridge along the alignment; availability of a special or unanticipated funding source; etc. “Opportunity Projects” are shown on the Bicycle Facilities Plan, but they are

included within an un-prioritized listing in the 20 Year Priority Array.

### **Criteria Prioritizing Bicycle Facilities in the 20 Year Priority Array**

Bicycle facilities to be constructed as public improvements in the public right-of-way, and therefore to be included in the 20 Year Priority Array, are differentiated between high, medium and low priority projects as follows:

#### **High Priority Projects:**

- 1) All “latent” bicycle facilities which are designated in this Plan as “regional” and located adjacent to roads presently providing 5 foot or wider paved shoulders.
- 2) All “latent” bicycle facilities which are designated in this Plan as “regional” and located adjacent to roads presently providing 5 foot or wider gravel shoulders.
- 3) All bicycle facilities located adjacent to roads identified in the current Kitsap County 6 Year CIP for new segment construction, segment widening or (relevant) segment safety improvements.
- 4) All bicycle facilities which are coincident with similar facilities identified in the current Kitsap County 6 Year Parks and Recreation Capital Improvement Program.
- 5) All bicycle facilities located adjacent to roads recommended in the Transportation Element of the Kitsap County Comprehensive Plan for new segment construction, segment widening or (relevant) segment safety improvements.
- 6) All bicycle facilities which are coincident with similar facilities recommended in Kitsap County Subarea Plans.
- 7) Bicycle facilities that are not road related, serving high priority destinations, and present-

ing unique opportunities to eliminate potential safety conflicts inherent in an alignment parallel to a roadway.

#### **Medium Priority Projects:**

- 1) Bicycle facilities which are designated in the Plan as “sub-regional”, which serve medium priority destinations, and which are coincident with on-road alignments for similar facilities in the current Kitsap County Comprehensive Park & Recreation Plan.
- 2) New bicycle facilities which are designated in this Plan as “sub-regional” and which serve medium priority destinations.
- 3) New bicycle facilities that are not road related which are designated in this Plan to be constructed on public or semi-public lands, which serve medium priority destinations, and which present an opportunity to reduce potential safety conflicts inherent in an alignment parallel to a roadway.

#### **Low Priority Projects:**

- 1) Bicycle facilities which are designated in the Plan as “local”; serve lower priority destinations, and are coincident with similar facilities in the current Kitsap County Comprehensive Park & Recreation Plan.
- 2) Other bicycle facilities not included above, which are designated in the Plan as “local,” and serve lower priority destinations.

### **Sub-Criteria for Ranking Bicycle Facilities within Priority Project Groupings**

The following sub-criteria were employed to aid in ranking bicycle facilities within each of the high, medium, and low priority groups indicated above. These sub-criteria were given equal weight. Bicycle facilities projects were scored on a 1 through 10 scale for each of the sub-criteria relative to other projects within their respective priority group. (1=low to 10=high, with a total

possible score of 60). Total scores were compared for each project within their corresponding priority group, establishing an initial ranked listing. The sub-criteria are as follows:

1. **Safety:** The degree to which the construction of a particular project will improve existing safety conditions; the likelihood that potential safety conflicts will be avoided or current safety problems would be eliminated.
2. **Constructability:** The relative ease with which a project could be constructed (relative to latent aspects of each project).
3. **Linkage:** The relative importance of the project as a link in the system, as a connection to other counties, and as a connecting link within a priority group.
4. **Intermodal Connectivity and Population Service:** The degree to which a project would serve highly populated areas and areas of concentrated transportation or highly used transportation nodes such as ferry terminals and park-and-rides.
5. **High Priority Destination Service:** The quantity and relative importance of destinations served by the project, i.e. – schools, parks, marinas.
6. **Visibility:** A projects’ visibility to potential users; to what degree the project is likely to be a high profile project due to its particular location and potential use.

In the event of equal rating scores, the projects’ safety scores were compared to determine seniority. If safety scores were equal, the projects’ “constructability” scores were then compared.

### **Estimated Cost and Proposed Improvements**

The following assumptions were made regarding existing roadway conditions for cost estimate purposes:

1. A roadway with no curb (that is indicated as latent) is assumed to have a 3’ wide gravel shoulder.
2. A roadway with curb and no on-street parking is assumed to have a 2’ wide paved area between the edge stripe and the curb.
3. Roadways with curbs were assumed to provide existing sidewalks (sidewalk construction was not included in the estimated cost).
4. Estimates include only the area from the existing edge stripe of the roadway to the proposed outside edge of shoulder or graded area for each section.
5. Roadways with curbing and on-street parking assumed lane widths of 12’ minimum and parking width of 10’. With these existing conditions, it was assumed that bicycle lanes could be implemented by restriping of the roadway space (plus signage and minor upgrades).

The implementation of a bicycle path is dependent upon the available right-of-way (R.O.W.). Available R.O.W. cannot accurately be determined without a survey. **It is recommended that each project be re-evaluated on a project by project basis, to determine the appropriateness of the suggested improvements, and to determine the available R.O.W., as well as to re-evaluate the estimated cost at a project level which includes the items outlined below.** Acquisition may be necessary if the required R.O.W. is not available, or if a bicycle path is deemed more appropriate than bicycle lanes.

The estimated costs indicated in the priority array reflect bicycle lane costs (on both sides of the roadway) for all projects. The cost per mile for constructing new bicycle *lanes* on existing roadways (on both sides of the road) is typically higher than the cost for constructing a new bicycle *path*. The estimated costs do take into account any known latent conditions of a given project.

**Items that are not included in the estimated project costs (and should be included in the cost at the project level):**

- 1. Retaining Walls (dependent upon existing topography)**
- 2. Lighting**
- 3. Signalization and additional traffic control devices (signage is included).**
- 4. Barriers/obstacles**
- 5. Utility Relocation**
- 6. Acquisition**
- 7. Site Furnishings**

**Estimated costs for bridges do not include potential structural load and seismic retrofitting.**

## Capital Improvements

Included in this plan is an initial 6 Year Capital Improvements Plan in a tabular format similar to the standard County 6 Year Transportation Improvement Plan (T.I.P.) found in the Kitsap County Comprehensive Plan.

For each recommended project the table includes:

- Project identification
- Project termini
- Project length
- Project district
- Facility type
- Proposed cross section
- Schedule of project costs for each year of the program period
- Total costs

The funds indicated are from the traditional transportation funding sources indicated in the County's 6 Year T.I.P. These funds may also serve as matching funds for additional state and federal funds that may become available.

### **Inclusion in the 6 Year C.I.P.**

The projects listed in the 6 Year C.I.P. were drawn from the highest ranking projects in the 20 Year Priority Array. The order of projects within the 6 Year C.I.P. reflect an effort to:

- Distribute budgeted funds as evenly as possible among the North, Central and South districts of the county while reflecting the prioritization indicated in the 20 Year Priority Array. Projects may be moved up in prioritization in order to obtain a relatively even distribution of funding per year for each area of the county.
- Foster completion of "latent" projects indicated within the Priority Array.
- Fund initial flagship projects. Flagship projects were selected from the high priority project listing of the 20 Year Priority Array for

each area of the county (North, Central and South) based on their "visibility" score.

In addition there are a number of "Opportunity Projects" included in the C.I.P. These are projects that the County has already identified for road related improvements in their current T.I.P.

## Projects

Following is a list of projects (pp. 51-63) for bicycle facilities spread throughout the North, South and Central districts of the County at the end of which is the 6 Year Capital Improvements Program (p. 65). Each project provides either a regional, sub-regional, or local bicycle facility.

Cross sections have been proposed for each project. For detailed information and design guidelines pertinent to these cross sections, refer to the Design Standards section of this report. Bicycle Facility cross sections proposed along State Routes are suggested and have not been adopted by WSDOT. The Washington State Department of Transportation currently allows bicycling in the shoulders of all State Routes in Kitsap County.

It is recognized that these projects may already be part of other county planning efforts. These plans have been referenced and included in the listings. Short segments of some projects may already have been built. Cost estimates do not reflect this, but rather assume construction of the proposed bicycle facility for the entire length of the project.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
1	Beach Dr.	Port Orchard City Limits	E. Ahlstrom Rd.	0.3	S	Sub-Regional	Paved Shoulders	Mosquito Fleet, KC Greenways, KC 1995 to 2000 Bicycle Facilities Plan, KC 2012 Bicycle Facilities Plan (from Retsil Rd. to Ahlstrom)	38
		E. Ahlstrom Rd.	E. Hillcrest Dr.	2			Bicycle Path		239
		E. Hillcrest Dr.	Light-house Dr. E.	1.5			Bicycle Lanes		256
		Light-house Dr. E.	Watauga Beach Dr.	0.6			Paved Shoulders		49
		Watauga Beach Dr.	Hilldale Road	0.4			Bicycle Lanes		43
2	Old Belfair Valley Rd./Sam Christopherson Ave. W/ W. Frontage Rd.	SR 3	SR 16	0.54	S	Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways	27
3	SR 16 (including interchange)	Frontage Rd.	Bay St. Inter-change	1.1	S	Regional	Bicycle Path	Mosquito Fleet, KC Greenways, 2012 Transportation Needs on State Facilities	132
4	SR 166 (Bay St.)	Bay St./SR 16 Inter-change	Port Orchard City Limits	1.6	S	Regional	Bicycle Path	Mosquito Fleet, KC Greenways	192
5	Beach Dr./Main St./Colchester Dr.	Hilldale Rd.	Hemlock St.	2.1	S	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways	229
		Hemlock St.	Mile Hill Dr.	1.5			Bicycle Path		179
6	Trenton Ave.	Bremerton City Limits	Sylvan Way	0.9	C	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways, Bremerton Comprehensive Transportation Plan	45
7	SR 3	SR 304	SR 16	2.3	S	Regional	Bicycle Path	Mosquito Fleet, KC Greenways, Bremerton Comprehensive Transportation Plan, KC 1997 to 2002 T.I.P., Gorst to Bremerton Ferry Study	232

**KEY**

SR = State Route

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\* A separate path is preferred if R.O.W. is available, bicycle lanes otherwise.

\*\* In thousands; year 2001 dollars.

\*\*\* Bridge costs do not include structural load and seismic retrofitting.

**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
8	Mile Hill Dr.	Port Orchard City Limits	Colchester Dr.	2.5	S	Regional	Bicycle Lanes	KC Greenways, KC 2012 Bicycle Facilities Plan, KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	309
9	SR 3	SR 104 (including intersection @ Hood Canal Bridge	Lofall Rd.	3	N	Regional	Bicycle Lanes*	KC Greenways, 2012 Transportation Needs on State Facilities (from SR 104 to Bridge Way)	327
10	SR 305	Poulsbo City Limits	Totten Rd. NE	2	N	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways, KC 2000 to 2005 T.I.P.	403
		Totten Rd. NE	Agate Pass Bridge	1.7		Regional			
11	Bucklin Hill Rd.	Anderson Hill Rd.	Tracyton Blvd.	1	C	Regional	Bicycle Lanes	KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 2012 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P. (Bridge at Clear Creek)	509
		Tracyton Blvd.	Central Valley Rd.	1.3		Sub-Regional			
12	Silverdale Way/Chico Way	Bucklin Hill Rd.	Seabeck Hwy.	4.9	C	Regional	Bicycle Lanes*	KC Greenways, Bremerton Comp. Transportation Plan, KC 2000 to 2005 T.I.P.	533
13	Viking Way	SR 308	Poulsbo City Limits	2.4	N	Regional	Bicycle Path	Mosquito Fleet, KC Greenways, KC 2012 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	286
14	SR 104	Hansville Rd.	Hood Canal Bridge	6.1	N	Regional	Bicycle Lanes*	KC Greenways	775
15	W. Loxie Eagans Blvd./National Ave./McCall Blvd.	Bremerton City Limits	SR 304	1	C	Regional	Bicycle Lanes	KC Greenways, City of Bremerton Comprehensive Transportation Plan	232
16	Illahee Rd. NE/Brownsville Hwy.	Oceanview Blvd. (Illahee Dock)	Brownsville Bridge	3.1	C	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways, KC 1999 to 2004 T.I.P.	337
		Brownsville Bridge	Paulson Rd. NE	0.2			Bicycle Path		

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

S = South Kitsap County

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
17	Brownsville Bridge	Illahee Rd.	Brownsville Hwy.	0.1	C	Sub-Regional	Paved Shoulders	Mosquito Fleet, KC Greenways	18***
18	Liberty Bay Trail (along Lemolo Shore Dr.)	Poulsbo City Limits	NE Johnson Way	0.6	N	Regional	Paved Shoulder Pathway(1)	Mosquito Fleet, KC Greenways, Suquamish Rural Village Subarea Plan	20
		NE Johnson Way	NE Tukwila Rd.	0.5			Bicycle Path		60
		NE Tukwila Rd.	SR 305	1			Bicycle Lanes		171
19	Illahee Rd. NE	Sylvan Way	NE Roosevelt St.	1.2	C	Sub-Regional	Bicycle Path	Mosquito Fleet, KC Greenways, KC 1999 to 2004 T.I.P.	131
		NE Roosevelt St.	Oceanview Blvd. (Illahee Dock)	0.2			Bicycle Lanes		24
20	SR 307 (Bond Rd.)	Poulsbo City Limits	Big Valley Rd.	0.4	N	Regional	Bicycle Lanes*	KC Greenways	84
21	SR 304 (Charleston Blvd.)	Bremerton City Limits	SR 3	0.8	C	Regional	Bicycle Lanes (2)	KC Greenways. City of Bremerton Gateway Project	Under Construction
22	Holly Rd.	Seabeck Hwy.	Seabeck Holly Rd.	4.9	C	Regional	Bicycle Lanes*	KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 1998 to 2003 T.I.P.	838
23	SR 104	Kingston Ferry Terminal	Hansville Rd.	2.4	N	Regional	Bicycle Lanes		261
24	Agate Pass Bridge (SR 305)			0.34	N	Regional	Alt. 1: Remove sidewalk; Alt. 2: Hang exterior structure on bridge for non-motorized use only.	Mosquito Fleet, KC Greenways	Unknown pending more detailed investigation.

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

(1) The City of Poulsbo is planning the construction of a paved shoulder pathway (4'-8' wide) on the water side of the road for 2-way pedestrian travel. Cyclists are expected to share the roadway with traffic. This development is not consistent with the guidelines of this plan and is not advised.

(2) The City of Bremerton is currently constructing portions of Charleston Boulevard. The City is considering replacing the planned bicycle lanes with parking. This is not consistent with the guidelines of this plan and is not advised.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
25	Brownsville Hwy.	SR 308	MP 1.3	1.3	C	Sub-Regional	Bicycle Path	Mosquito Fleet, KC Greenways	156
		MP 1.3	NE Madison Rd.	1.2			Bicycle Lanes		131
		NE Madison Rd.	Paulson Rd. NE	0.8			Bicycle Path		96
26	Long Lake Rd.	Mile Hill Dr.	Mullenix Rd.	5.7	S	Sub-Regional	Bicycle Lanes*	KC Greenways	1165
27	Seabeck Hwy.	Bremerton City Limits	Holly Rd.	3.5	C	Regional	Bicycle Lanes	KC Greenways, KC 2012 Bicycle Facilities Plan	653
28	Big Valley Rd.	SR 3	SR 307 (Bond Rd.)	4.5	N	Regional	Bicycle Lanes	KC Greenways	943
29	Southworth Drive	Mile Hill Dr.	Harper Dock	2	S	Regional	Bicycle Path (Bicycle	Mosquito Fleet, KC Greenways, KC 2000 to 2005 T.I.P. (Curley Creek bridge replacement)	239
		Harper Dock	Stohlton Rd. SE	0.7			Paved Shoulder		57
		Stohlton Rd. SE	Southworth Ferry Terminal	1			Bicycle Lanes		109
30	Silverdale Way	SR 308	Ridgetop Blvd. NW	1.3	N	Regional	Bicycle Lanes	KC Greenways, KC 2012 Bicycle Facilities Plan	141
31	W. Kingston Rd./Kingston Rd.	Miller Bay Rd.	SR 104	2.2	N	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	403
32	Barber Cut-Off Rd.	W. Kingston Rd.	SR 104	1	N	Local	Bicycle Lanes	KC Greenways	183
33	SR 308/Washington Ave. NE	Street End (Keyport Dock)	Brownsville Hwy.	0.5	N	Sub-Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways	55
		Brownsville Hwy.	Viking Way	1.8			Bicycle Path		215
		Viking Way	Clear Creek Rd.	1.6			Bicycle Lanes		302
34	Clear Creek Rd./Kitsap Mall Blvd./Randall Way NW	SR 308	Bucklin Hill Rd.	3.6	N	Sub-Regional	Bicycle Lanes	KC Greenways	833

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

**RECOMMENDATIONS**

C = Central Kitsap County  
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Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
35	Tracyton Blvd. NW/Ridgetop Blvd. NW	Bucklin Hill Rd.	Silverdale Way	3	C	Regional	Bicycle Lanes*	KC Greenways, KC 2012 Bicycle Facilities Plan	568
36	Miller Bay Rd./Augusta Ave./Suquamish Cut-off Road	SR 305	Cowling Creek	2.9	N	Regional	Bicycle Lanes	Mosquito Fleet, KC Greenways, Suquamish Rural Village Subarea Plan	535
		Cowling Creek	Indianola Rd. NE	2			Bicycle Path		239
37	Tracyton Blvd.	Bucklin Hill Rd.	Fair-grounds Rd.	1.4	C	Regional	Bicycle Lanes*	KC Greenways, KC 2012 Bicycle Facilities Plan	323
38	Mullenix Rd.	Bethel Burley Rd.	Olalla Valley Rd. SE	2.9	S	Sub-Regional	Bicycle Lanes	KC Greenways	608
39	Jackson Ave./Lund Ave.	Bethel Rd. SE	Mile Hill Dr.	2	S	Sub-Regional	Bicycle Lanes	KC Greenways, KC 1998 to 2003 T.I.P., KC 2012 Bicycle Facilities Plan, KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	462
40	Jackson Ave.	Lund Ave.	Sedgwick Rd.	1	S	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	235
41	Fairgrounds Rd./Central Valley Rd.	Tracyton Blvd.	Bucklin Hill Rd.	2.3	C	Sub-Regional, Local	Bicycle Lanes	KC Greenways, KC 1997 to 2002 T.I.P., KC 2012 Bicycle Facilities Plan, KC 1995-2000 Bicycle Facilities Plan	483
42	Miller Bay Rd.	SR 104	Indianola Rd. NE	2.7	N	Regional	Bicycle Path	Mosquito Fleet, KC Greenways, Suquamish Rural Village Subarea Plan, KC 2000 to 2005 T.I.P.	567
43	Indianola Rd.	Miller Bay Rd.	S. Kingston Rd. NE	2.7	N	Sub-Regional	Bicycle Path	Mosquito Fleet, KC Greenways, Suquamish Rural Village Subarea Plan, KC 1997 to 2002 T.I.P., KC 1995-2000 Bicycle Facilities Plan	322
		S. Kingston Rd. NE	Street End	0.6			Bicycle Lanes		65
44	Totten Rd. NE	SR 305	Suquamish Cut-off Rd. NE	2.16	N	Sub-Regional	Bicycle Path	Mosquito Fleet, KC Greenways, Suquamish Rural Village Subarea Plan	258

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
45	S. Kingston Rd. NE	West Kingston Rd.	End of Bridge	0.2	N	Sub-Regional	Paved Shoulders	Mosquito Fleet, KC Greenways	26
		End of Bridge	NE Arness Rd.	1.5			Bicycle Path		179
		NE Arness Rd.	Indianola Rd. NE	2.1			Bicycle Lanes		359
46	Clear Creek Trail Extension	Clear Creek Trail	SR 3	1.8	C	Local	Bicycle Path		1120
47	Gateway to Gorst Alternate Route (see Mosquito Fleet Master Plan for proposed upland route)	Charleston Blvd. (Gateway Project)	SR 3		S	Sub-Regional	Paved Shoulders or Bicycle Lanes	Mosquito Fleet, KC 1997 to 2002 T.I.P., Bremerton Ferry/Gorst Study	
48	SE Olympiad Dr./Cherry St.	Southworth Dr.	Southworth Dr.	1.2	S	Local	Paved Shoulders	Mosquito Fleet	188
49	Yukon Harbor Dr.	Southworth Dr.	Colchester Dr.	0.82	S	Local	Paved Shoulders	Mosquito Fleet	129
50	Hilldale Rd.	Beach Dr.	Manchester State Park	0.24	S	Sub-Regional	Paved Shoulders	Mosquito Fleet	31
51	S. Keyport Rd. NE/Ogle Rd. NE	Brownsville Hwy.	Brownsville Hwy.	3.19	C	Sub-Regional	Paved Shoulders	Mosquito Fleet	188
52	NW Scandia Rd./Virginia Lp. Rd. NE	Viking Way	SR 308	1.9	N	Sub-Regional	Paved Shoulders	Mosquito Fleet	299
53	NW Newberry Hill Rd.	Seabeck Hwy. NW	Silverdale Way NW	3.3	C	Sub-Regional	Bicycle Lanes*		564
54	Tracyton Blvd./May St. NW	NW Fairgrounds Rd.	NW Riddell Rd.	2	C	Regional	Bicycle Lanes*	KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 1999 to 2004 T.I.P.	419
55	Bethel Burley Rd./Bethel Rd.	Port Orchard City Limits	Mullenix Rd.	3.8	S	Regional	Bicycle Lanes	KC Greenways, KC 2012 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	501
56	SW Lake Flora Rd./Glenwood Rd./SW Linder Rd.	Sunnyslope Rd. SW	Bethel Burley Rd.	5.1	S	Sub-Regional	Bicycle Lanes	KC Greenways	1069

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs. Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>HIGH PRIORITY PROJECTS</b>									
57	Little Boston Rd./NE Cliffside Rd./Hood Canal Dr. NE	Hansville Rd.	Twin Spits Rd.	4.9	N	Local	Bicycle Lanes*	KC Greenways, KC 2000 to 2005 T.I.P. (Little Boston), KC 1999 to 2004 T.I.P. (Hood Canal), KC 1995-2000 Bicycle Facilities Plan	1028
58	Port Gamble Rd./Port Gamble-Suquamish Rd. NE	SR 104	NE Lincoln Dr.	4.4	N	Sub-Regional	Bicycle Lanes	KC Greenways, Suquamish Rural Village Subarea Plan, KC 2000 to 2005 T.I.P.	924

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>MEDIUM PRIORITY PROJECTS</b>									
59	Seabeck Hwy. NW	Anderson Hill Rd.	Miami Beach Rd. NW	3.3	C	Sub-Regional	Bicycle Lanes *	KC Greenways, 1995-2000 Bicycle Facilities Plan	692
60	Anderson Hill Rd.	Silverdale Way NW	Seabeck Hwy. NW	4.6	C	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 2012 Bicycle Facilities Plan, KC 1999 to 2004 T.I.P. (replace culvert at Anderson Creek with a bridge)	781
61	Old Belfair Valley Rd.	Sam Christopherson Ave.	Bremerton City Limits	0.4	S	Regional	Bicycle Lanes	KC Greenways	305
		Bremerton City Limits	Mason County	2.4					
62	NW Riddell Rd./Tracyton Beach Rd. NW	May St. NW	Bremerton City Limits	1.7	C	Regional	Bicycle Lanes*	KC Greenways, Bremerton Comprehensive Transportation Plan	356
63	Olalla Valley Rd. SE/Crescent Valley Rd.	Mullenix Rd.	Pierce County	6.4	S	Regional	Bicycle Lanes*	KC Greenways	1300
64	SR 307 (Bond Rd.)	SR 104	Big Valley Rd.	5.1	N	Regional	Bicycle Lanes*	KC Greenways	696
65	Seabeck Holly Rd.	Miami Beach Rd. NW	Holly Rd.	3	C	Regional	Bicycle Lanes*	KC Greenways	514
66	Hansville Rd.	NE Twin Spits Rd.	SR 104	7.7	N	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 1997 to 2002 T.I.P., KC 2012 Bicycle Facilities Plan, KC 1995-2000 Bicycle Facilities Plan	1284
67	SE Lund Ave.	Bethel Rd.	Port Orchard City Limits	0.6	S	Sub-Regional	Bicycle Lanes	KC Greenways	96
68	Banner Rd. SE/Olalla Valley Rd. SE	Southworth Dr.	Mullenix Rd.	4.9	S	Regional	Bicycle Lanes	KC Greenways	838
69	Finn Hill Rd.	Poulsbo City Limits	Clear Creek Rd.	1.9	N	Sub-Regional	Bicycle Lanes	KC Greenways	399
70	NW Pioneer Way	Finn Hill Rd.	Lofall Rd. NW	3.1	N	Sub-Regional	Bicycle Lanes*	KC Greenways	650
71	Lofall Rd. NW	Pioneer Way NW	SR 3	1.4	N	Sub-Regional	Bicycle Lanes*	KC Greenways	294

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**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

**RECOMMENDATIONS**

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>LOW PRIORITY PROJECTS</b>									
72	Hood Canal Bridge (SR 104)			1.8	N	Regional	Bicycle Lanes	KC Greenways, KC 2012 Transportation Needs on State Facilities	9176
73	Bethel Burley Rd.	Mullenix Rd.	Pierce County	4.2	S	Regional	Bicycle Lanes	KC Greenways, KC 1999 to 2004 T.I.P., KC 1995 to 2000 Bicycle Facilities Plan	456
74	Gold Creek Rd. W/Tahuyeh Lake Rd. NW	Holly Rd.	Mason County	5.1	C	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 1995-2000 Bicycle Facilities Plan	1069
75	Central Valley Rd./NE Paulson Rd.	Bucklin Hill Rd.	Browns-ville Hwy.	2.3	C	Sub-Regional	Bicycle Lanes	KC Greenways	483
76	Point No Point Rd.	Hansville Rd.	Street End	1.1	N	Local	Bicycle Lanes*	KC Greenways	230
77	Eglon Rd.	Hansville Rd.	Street End (Eglon Dock)	1.7	N	Local	Bicycle Lanes*	KC Greenways	356
78	W. Seabeck Holly Rd.	Dewatto Rd. W	NW Holly Rd.	6.4	S	Local	Bicycle Lanes*	KC Greenways	1342
79	Dewatto Rd. W	Seabeck Holly Rd.	Mason County	3.4	C	Local	Bicycle Lanes*	KC Greenways	714
80	Sylvan Way	Trenton Ave.	Illahee State Park	0.7	N	Sub-Regional	Bicycle Lanes*	KC Greenways	147
81	Scenic Beach Rd. NW/Miami Beach Rd. NW	Seabeck Hwy.	Scenic Beach State Park	1.4	C	Regional	Bicycle Lanes*	KC Greenways, KC 2000 to 2005 T.I.P. (Miami Beach Bridge)	294
82	SW Lake Flora Rd./SR 3	Sunny-slope Rd.	Mason County	4.5	S	Sub-Regional	Bicycle Lanes*	KC Greenways	943
83	Twin Spits Rd.	Hansville Rd. NE	Street End	3.5	N	Local	Bicycle Lanes*	KC Greenways	733

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\*\* In thousands; year 2001 dollars.

\*\*\* Bridge costs do not include structural load and seismic retrofitting.

**Notes:** Lengths for project segments are rounded to the nearest tenth of a mile.

See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>OPPORTUNITY PROJECTS</b>									
84	Parcells Rd. NE/R.O.W.	SR 104	Egdon Rd.	3.9	N	Local	Bicycle Lanes*	KC Greenways	699
85	NE Gunderson Rd.	Miller Bay Rd. NE	SR 307 (Bond Rd.)	2.3	N	Local	Bicycle Lanes	KC Greenways	493
86	NE Lincoln Dr.	Port Gamble-Suquamish Rd. NE	Poulsbo City Limits	2.3	N	Sub-Regional	Bicycle Lanes	KC Greenways	482
87	Widme Rd. NE	NE Lincoln Dr.	Totten Rd. NE	2.4	N	Local	Bicycle Lanes	KC Greenways, KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	524
88	NE Columbia St./Division Ave.	Suquamish Cut-off Rd. NE	NE Lincoln Dr.	1.9	N	Sub-Regional	Bicycle Lanes	KC Greenways, Suquamish Rural Village Subarea Plan	398
89	Stottlemeyer Rd. NE	SR 307 (Bond Rd.)	NE Lincoln Dr.	1.4	N	Sub-Regional	Bicycle Lanes	KC Greenways, KC 2012 Bicycle Facilities Plan	294
90	NE Sawdust Hill Rd.	Big Valley Rd.	SR 307 (Bond Rd.)	1.9	N	Local	Bicycle Lanes*	KC Greenways	398
91	Clear Creek Rd. NW	Finn Hill Rd.	SR 308	4.5	N	Sub-Regional	Bicycle Lanes*	KC Greenways	943
92	NE Gusthalvor Rd./Thors Rd. NE/Hillview Ln.	Point No Point Rd.	Hansville Rd. NE	1.1	N	Local	Bicycle Lanes*	KC Greenways	231
93	NE Buck Lake Rd.	Hansville Rd. NE	Buck Lake	0.8	N	Local	Bicycle Lanes*	KC Greenways	167
94	Lindvog Rd. NE	SR 104	Street End	0.3	N	Local	Bicycle Lanes*	KC Greenways	69
95	Illinois Ave. NE/3rd St./Ohio Ave./1st St./Washington Blvd. (Kingston)	SR 104	SR 104	0.3	N	Local	Bicycle Lanes*	KC Greenways	69

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#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>OPPORTUNITY PROJECTS</b>									
96	Bennington Dr./Island Lake Rd./Hill Crest St. NW	Silverdale Way NW	NE Anna Rd.	1.4	N	Local	Bicycle Lanes*	KC Greenways	323
97	NE Jefferson Point Rd.	S. Kingston Rd. NE	Rosemond Pl.	0.75	N	Local	Bicycle Lanes*	KC Greenways	158
98	NE Shore Dr./Kitsap St./Seaview Ave./Chief Sealth Dr.	Indianola Rd.	Street End	1.5	N	Local	Bicycle Lanes*	KC Greenways	314
99	NE Shore Dr.	Indianola Rd.	Division St. NE	0.6	N	Local	Bicycle Lanes*	KC Greenways	126
100	Beachwood Ave./R.O.W.	S. Kingston Rd. NE	Indianola Rd. NE	2	N	Local	Bicycle Lanes*	KC Greenways	419
101	Orcas Dr. NE	Indianola Rd. NE	Beachwood Ave.	0.6	N	Local	Bicycle Lanes*	KC Greenways	126
102	Central Valley Rd.	SR 308	NE Paulson Rd.	3.6	N,C	Local	Bicycle Lanes	KC Greenways	755
103	Stampede Blvd. NW	NW Fairgrounds Rd.	Tracyton Blvd. NW	1.1	C	Local	Bicycle Lanes*	KC Greenways	254
104	NW Fairgrounds Rd.	Central Valley Rd.	Old Military Rd. NE	0.6	C	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 1997 to 2002 Bicycle Facilities Plan	126
105	NE McWilliams Rd./East Blvd. NE/Oceanview Blvd.	Pine Rd.	Illahee Rd. NE	2.3	C	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 2000 to 2005 T.I.P., KC 2012 Bicycle Facilities Plan	483
106	Old Military Rd. NE	Fairgrounds Rd	McWilliams Rd.	0.8	C	Sub-Regional	Bicycle Lanes*	KC Greenways	168
107	Pine Rd. NE	McWilliams Rd.	Bremerton City Limits	1.6	C	Local	Bicycle Lanes*	KC Greenways, Bremerton Comprehensive Transportation Plan	370

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Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>OPPORTUNITY PROJECTS</b>									
108	SR 306 (Sylvan Way)	Bremerton City Limits	Trenton Ave.	0.5	C	Sub-Regional	Bicycle Lanes	KC Greenways	100
109	Seabeck Hwy. NW	NW Holly Rd.	Anderson Hill Rd.	3.9	C	Sub-Regional	Bicycle Lanes*	KC Greenways	755
110	SW Clifton Rd.	Port Orchard City Limits	Sunny-slope Dr.	3.6	S	Local	Bicycle Lanes	KC Greenways	832
111	Sunnyslope Rd. SW	Sunny-slope Dr.	SW Lake Flora Rd.	2.7	S	Local	Bicycle Lanes*	KC Greenways, KC 2000 to 2005 T.I.P.	565
112	Sidney Rd. SW	Port Orchard City Limits	SW Lider Rd.	1.8	S	Local	Bicycle Lanes*	KC Greenways	416
113	SR 160 (Sedgewick Rd.)	Sidney Rd.	Port Orchard City Limits	0.3	S	Sub-Regional	Bicycle Lanes*	KC Greenways, KC 2012 Bicycle Facilities Plan	147
		Port Orchard City Limits	Bethel Rd. SE	0.4					
114	Glenwood Rd./SE Sedgewick Rd.	Sidney Rd.	SW Lake Flora Rd.	1.3	S	Sub-Regional	Bicycle Lanes	KC Greenways, KC 2000 to 2005 T.I.P., KC 1995-2000 Bicycle Facilities Plan, KC 2012 Bicycle Facilities Plan	272
115	Sidney Rd.	Lider Rd.	Pierce County	6	S	Local	Bicycle Lanes	KC Greenways, KC 1997 to 2002 T.I.P., KC 1995-2000 Bicycle Facilities Plan, KC 2000 to 2005 T.I.P.	1258
116	SE Lakeway Blvd.	Sidney Rd.	Bethel Burley Rd.	2	S	Local	Bicycle Lanes	KC Greenways, KC 1995-2000 Bicycle Facilities Plan	419
117	SE Burley Olalla Rd.	Bethel Burley Rd.	Olalla Valley Rd. SE	3	S	Sub-Regional	Bicycle Lanes*	KC Greenways	629
118	SE Salmonberry Rd.	Jackson Ave. SE	Long Lake Rd. SE	0.8	S	Sub-Regional	Bicycle Lanes*	KC Greenways	185
119	SE Pine Rd.	Glenwood Rd. SW	Bethel Burley Rd.	2.7	S	Local	Bicycle Lanes	KC Greenways	567

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See *RECOMMENDATIONS* section of this report for an explanation of facility types, cross sections and estimated costs.

Improvements on State Routes are suggested and have not been adopted by WSDOT.

#	Street/R.O.W.	From	To	Length	District	Facility Type	Proposed Cross Section	Overlap with Other County Plans	Estimated Cost**
<b>OPPORTUNITY PROJECTS</b>									
120	Glenwood Rd. SW/SW Pine Rd.	SW Lake Helena Rd.	Pierce County	3	S	Local	Bicycle Lanes	KC Greenways, KC 1997 to 2002 T.I.P. (Hunter Rd. to County Line), KC 1999 to 2004 T.I.P. (Pine Rd. to Christmas Tree Ln.), KC 1995-2000 Bicycle Facilities Plan	629
121	SW Lake Helena Rd.	Jim Dickenson Rd. SW	Glenwood Rd. SW	2.9	S	Local	Bicycle Lanes	KC Greenways	608
122	Jim Dickenson Rd. SW/Carney Lake Rd. SW	SW Lake Flora Rd.	Pierce County	4.9	S	Sub-Regional	Bicycle Lanes	KC Greenways, KC 1995-2000 Bicycle Facilities Plan	964
123	California Ave. E./E. Chester Rd./E. Madrona Ave./E. Main St.	Beach Dr.	SE Mile Hill Dr.	1.9	S	Local	Bicycle Lanes*	KC Greenways	440
124	SE Lund Ave./Madrona Dr. SE/Harrison Ave. SE	Mile Hill Dr.	Jackson Ave.	1.5	S	Local	Bicycle Lanes*	KC Greenways	347
125	Madrona Dr. SE/Fircrest Dr. SE	Madrona Dr. SE	Lund Ave.	0.9	S	Local	Bicycle Lanes*	KC Greenways	208
126	Sunnyslope Dr.	SW Clifton Rd.	Sunny-slope Elementary School	1.1	S	Local	Bicycle Lanes*	KC Greenways	210
127	SE Cedar Rd./Converse Ave. SE	Bethel Rd. SE	Hidden Creek Elementary School	0.8	S	Local	Bicycle Lanes*	KC Greenways, KC 1995-2000 Bicycle Facilities Plan	167

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## 6 Year Capital Improvements 2001 to 2007

Project Identification	Project Termini		Length	District	Facility Type	Proposed Cross Section	Schedule By Year						Total Funds**	
	From	To					1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year		
Clear Creek Trail Extension	Clear Creek Trail	SR 3	1.8	C	Local	Bicycle Path	170	950						1120
Beach Drive	Port Orchard City Limits	E. Ahlstrom Rd.	0.3	S	Sub-Regional	Paved Shoulders						38		38
	E. Ahlstrom Rd.	E. Hillcrest Dr.	0.2			Bicycle Path						239		239
	E. Hillcrest Dr.	Light-house Dr. E.	1.5			Bicycle Lanes							256	256
	Light-house Dr. E.	Watauga Beach Dr.	0.6			Paved Shoulders							49	49
	Watauga Beach Dr.	Hilldale Road	0.4			Bicycle Lanes							43	43
W. Kingston Rd./Kingston Rd.	Miller Bay Rd.	SR 104	2.19	N	Sub-Regional	Bicycle Lanes	403							403
Liberty Bay Trail (Lemolo Shore Dr.)	Johnson Rd.	Poulsbo City Limits	0.6	N	Regional	Paved Shoulder Pathway (1)	20							20
Silverdale Way/Chico Way	Bucklin Hill Rd.	Seabeck Hwy.	4.9	C	Regional	Bicycle Lanes*				208	324			532
Bethel Road	Lund Ave.	Ives Mill Rd.	1.3	S	Regional	Bicycle Lanes	17	34	120					171
Mile Hill Drive	Long Lake Rd.	Colchester Dr.	1.5	S	Regional	Bicycle Lanes	13	57	115					185
Little Boston Rd. NE	Hansville Rd.	Cliffside Rd.	1	N	Local	Bicycle Lanes*	20	184						204
Glenwood Road	Lake Flora Rd.	Lider Rd.	0.35	S	Sub-Regional	Bicycle Lanes	6	67						73
Bucklin Hill Rd.	Blaine Ave.	Tracyton Blvd.	0.81	C	Regional	Bicycle Lanes	25		6			148		179
Hood Canal Drive	Cliffside Rd.	Hood Canal Pl.	1.9	N	Local	Bicycle Lanes*		399						399
Tracyton Blvd.	Allens Corner	Holland Rd.	0.91	C	Regional	Bicycle Lanes*			28			163		191
Illahee Road (including Brownsville Bridge)	Brownsville Hwy.	South end of Bridge	0.1	C	Sub-Regional	Paved Shoulders						18		18
	South end of Bridge	NE Roosevelt St.	3.3			Bicycle Lanes						348	348	
	NE Roosevelt St.	Trenton Ave.	1.2			Bicycle Path					131	131		
Miller Bay Rd. NE	Gunderson Rd.	W. Kingston Rd.	1.02	N	Regional	Bicycle Path						208		208
Port Gamble Rd.	SR 104	SR 307	1.07	N	Sub-Regional	Bicycle Lanes					48	177		225
Jackson Ave.	Mile Hill Dr.	Lund Ave.	0.98	S	Sub-Regional	Bicycle Lanes					220			220
	Lund Ave.	Sedgwick Rd.	1.02			Bicycle Lanes*					235	235		
<b>Totals</b>							<b>674</b>	<b>1,691</b>	<b>269</b>	<b>208</b>	<b>869</b>	<b>1776</b>	<b>5,487</b>	

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(1) The City of Poulsbo is planning the construction of a Paved Shoulder Pathway (4'-8' wide) on the water side of the road for 2-way pedestrian travel. Cyclists are expected to share the roadway with traffic. This development is not consistent with the guidelines of the Kitsap County Bicycle Facilities Plan and is not advised.

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# APPENDIX



## ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
CAC	Community Advisory Committee
CDS	United States Centers for Disease Control
CIP	Capital Improvement Program
DCD	Kitsap County Department of Community Development
ESA	Endangered Species Act
GMA	Growth Management Act
ISTEA	Intermodal Surface Transportation Efficiency Act
KCPW	Kitsap County Department of Public Works
MTP	Metropolitan Transportation Plan
MUTCD	Manual on Uniform Traffic Control Devices
NBWS	National Bicycling and Walking Study
NPTS	Nationwide Personal Transportation Study
PSRC	Puget Sound Regional Council
R.O.W.	Right-of-Way
TIP	Transportation Improvement Program
USDOT	United States Department of Transportation
WSF	Washington State Ferries
WSDOT	Washington State Department of Transportation



## FIGURES

1. Composite Greenways Plan North.

Kitsap County Public Works, *Kitsap County Greenways* (Kitsap County: the Department of Public Works, June 1996), p. 143.

2. Preliminary Regional Non-Motorized Network.

Puget Sound Regional Council, *1995 Metropolitan Transportation Plan*, (Seattle, WA: Puget Sound Regional Council, May 1995), Appendix D, p. 51.

3. Mosquito Fleet Trail.

MacLeod Reckord, December 2000. GIS data courtesy of Kitsap County Department of Community Development.

4. Map of primary, secondary and ancillary routes.

Ibid.

5. Typical Bike Lanes Symbols.

AASHTO, *Guide for the Development of Bicycle Facilities 1999*, (Washington, D.C.: American Association of State Highway and Transportation Officials, 1999), p. 31.

6. Bikeways on Highway Bridges.

WSDOT, *Design Manual*, (Washington, D.C.: WSDOT), Section 1020, Figure 1020-1c.

7. Bicycle Path.

MacLeod Reckord, June 1996.

8a-c. Bicycle Path Cross Sections.

Idem.

9. Curve radii and superelevations.

WSDOT, *Design Manual*, Figure 1020-2.

10. Bikeway curve widening for various radii.

Ibid, Figure 1020-3.

11. Stopping Sight Distance.

Ibid, Figure 1020-4.

12. Sight distances for crest vertical curves.

Ibid, Figure 1020-5.

13. Lateral clearances on horizontal curves.

Ibid, Figure 1020-6.

14. Bicycle Lane.

MacLeod Reckord, June 1996.

15. Bicycle lanes approaching motorists' right-turn-only lanes.

WSDOT, *Design Manual*, Figure 1020-10.

16a-c. Bicycle Lane Cross Sections.

MacLeod Reckord, June 1996.

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