

# Whatcom County Bicycle Plan

Approved by the Whatcom County Council  
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# 1. Introduction

## 1.1 Historical Perspective

The bicycle has a long history in Whatcom County. Nearly a century and a half ago, as the first Euro-american settlers arrived at Bellingham Bay, inventors in other parts of the world were making significant improvements to the earliest “running machines” and “boneshakers.” These two- and three-wheeled wood and iron contraptions would eventually evolve into “penny-farthings” and velocipedes complete with handlebars and pedals. Belts, chains, gears and brakes would soon follow, producing a new and fashionable vehicle for transportation, The first bicycles were expensive and highly sought-after by the well-to-do. .

The first bicycles in Whatcom County appeared well before the turn of the century. Bicyclists were the first proponents of the “Good Roads” movement, an effort to fund paved roadways instead of the rutted tracks that became impassable in wet weather. By the 1920s, bikes were popular and affordable as young and old thrilled to the experience of freedom and mobility offered by these new machines., The Bicycle Corps deployed in World War 1 demonstrated the versatility and efficiency of this technology and soon every community had bicycle delivery services complementing the ubiquitous railroads, horse-drawn carts and walking routes.



*As a mode of transportation, bicycling has a long history in Whatcom County. Photo courtesy of Whatcom Museum of History and Art, J. W. Sandison Collection, #143.*

Prior to the immigration of European settlers, thousands of years of Native American civilization had produced a well- established and extensive travel network—a nonmotorized transportation system—that provided for sustenance, security, trade, communication and enjoyment of their natural surroundings. Foot-paths and “water trails” for canoes allowed access to the wilderness and helped tie communities together. West of the Cascades, people living on the shores of the inland sea and along rivers and lakes were linked by rugged paths to people living east of the mountains.

*“After Whatcom and Skagit Counties were separated (1883), Nellie Coupe became County Superintendent... For many years she continued her profession [teaching], mostly handling private pupils... teaching children and grandchildren of earlier students.*

*“There are men and women in the Northwest today, who received their early education from Nellie Coupe. They yet carry memories of the brilliant and outstanding little teacher, who, in the experimental days of the ~safety—bicycle~ daringly rode her wheel over the rough streets of Whatcom as she went about her serious business of education.”*

—Lelah Jackson Edson *The Fourth Corner: Highlights from the Early Northwest* [1951]

In the mid-1800s, newcomers to the territory discovered an immense wealth of resources and natural beauty here and soon began to settle by the thousands. Horses quickly became the preferred mode of travel. Many utilized trails that native people had built and maintained for centuries. Some were converted to wagon roads and new road systems were developed as the first urban centers appeared.

Railroads, motorcars and bicycles were not far behind. As steam trains and the internal combustion automobile revolutionized the mobility and industrious capacity of Americans, profound changes began to spread across the landscape. Communities developed around the automobile and railroads linked them together.

In Europe and elsewhere, cities and towns had developed around paths and carriageways, long before motorized transportation was even conceivable. In America, the automobile, a quick and easy means of getting around, led to the emergence of a different kind of urban-suburban community, one that can suffer from traffic congestion, smog and urban and suburban sprawl if growth is not carefully planned or managed. Today, automobiles are the largest source of air pollution in Washington State.

Without good planning, cars also tend to “consume” the landscape. It is not unusual, for example, for a mid-sized American city to devote more than half its total land area to streets, highways and parking lots—far more than we normally dedicate to public parks, trails and open space.

As larger cities in the Puget Sound/Georgia Basin region grapple with the problems of sprawl and congestion, Bellingham has the opportunity to take creative action to solve our increasing demand for transportation facilities. Citizens are taking a new look at transportation as a result of public policies that have emerged from the Growth Management Act, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and Transportation Equity Act for the 21<sup>st</sup> Century (TEA 21). Each of these gives communities a larger local voice in decisions about how Transportation funds are spent, and includes bicycle and pedestrian Transportation modes in the funding to a larger degree than previously.

People are looking at ways to reduce our reliance on the automobile and encourage alternative modes of transportation, such as high-speed rail, public transit and the development of nonmotorized facilities like multi-use trails and bike lanes. None of the alternatives are perfect and none are meant to replace the automobile, but rather to give people more options to choose from. Ironically, road shoulders and abandoned railroad grades offer excellent opportunities to develop a regional bicycle transportation system in Whatcom County.

High-speed rail, transit or bikeways will not suit everyone's needs, but combined, they can make a difference. By looking at all the costs and benefits of providing alternative modes of travel, citizens, planners, engineers and public officials can make transportation decisions that best serve the community over the long haul. Nonmotorized options are the least expensive to build, easier to maintain, friendlier to the environment, and most rewarding in terms of personal fitness, a positive community outlook, and quality of life in the region.

For the last 50 years, transportation planning in Whatcom County has focused almost exclusively on motorized travel along roads and highways—not unlike most communities around Washington State or the nation as a whole. Nonmotorized travel modes, principally walking and bicycling, have not been addressed in a comprehensive way and, as a result, facilities to accommodate them are discontinuous and do not effectively link destinations for effective travel.

*'It is the policy of the United States to develop a National Intermodal Transportation System that is economically efficient and environmentally sound, provides the foundation for the Nation to compete in the global economy, and will move people and goods in an energy efficient manner.*

—Intermodal Surface Transportation Efficiency Act of 1991

As a result of ISTEA, a regional transportation planning process began in 1993 and has been regularly updated since then, most recently in August, 2002. By taking a comprehensive look at the county's transportation system and needs for the future, it encourages us to recognize that a well designed multimodal system-- including facilities for bicycling-- can bring significant environmental, social and economic benefits to the people of Whatcom County.

## **1.2 Plan Scope**

This Bicycle Plan is intended to focus on unincorporated areas of Whatcom County Washington, but also includes references to community links in incorporated areas which are a high priority for inter-community mobility. Specifically excluded from this plan is a detailed listing of

recommended projects within the city of Bellingham, which is covered by others, and is hence outside of this plan's scope.

### 1.3 Plan Overview

The Bicycle Plan is presented in six parts beginning with this introduction and a summary of recommendations. The plan looks at current activities, trends, opportunities and constraints for bicycling in Whatcom County, followed by a discussion of citizen participation in the process and a list of planning goals and objectives.

Relevant programs, policies and regulations have been evaluated, and recommendations made with regard to facility types, level of service, primary and secondary routes, design guidelines, safety, education and enforcement. Opportunities for intermodal transportation are addressed which involve nonmotorized links to roads and highways, passenger rail, public transit, and air and water travel.

Finally, the plan includes strategies for implementation that address priority projects and capital facilities planning, funding sources and needs, right-of-way acquisition, development, maintenance and administration. Despite the emphasis on developing a system of primary and secondary routes, the plan strives for bike-friendliness throughout the road system. And, it recognizes the recreational and transportation benefits that off-street travel corridors can provide.

It is clear that bicycling should not be viewed as strictly recreational. Throughout the nation and in Washington State, ridership is increasing and more people are relying on the bicycle for commuting to work or school, running errands, and for other "utilitarian" travel needs. The added recreational benefits of developing multi-use trails or improving bicycle touring routes through the county should not overshadow the importance of providing vital transportation facilities for bicycles.

In 1994, Whatcom County developed the first *Bicycle Plan for Whatcom County*. This plan was presented to the Planning Commission for inclusion in the *Whatcom County Comprehensive Plan*, by reference. While the plan was not formally adopted at that time, the map of recommended bicycle routes was included in the Transportation Chapter.

This 2003 updated version of the *Bicycle Plan* has been prepared by the members of the Whatcom County Bicycle Pedestrian Advisory Committee, established in May, 2001. It will be recommended to the Whatcom Council of Governments as a key element of the next *Regional Transportation Plan* and will be presented to the Whatcom County Council for incorporation into the 2003 updated *Whatcom County Comprehensive Plan*.

With the support of citizens, the business community, transportation officials and others who value cycling as one of many viable modes of travel, this plan can contribute much to the needs of the larger community and to the quality of life in Whatcom County.

## 1.4 Summary of Recommendations

A summary of all major plan recommendations is provided below.

### Goals & Policies

- As a matter of policy, Whatcom County should strive to serve the public's current and future bicycling needs in a manner consistent with this plan.
- A countywide system of safe, efficient and interconnected trails and bikeways should be provided, including on- and off-street facilities that link populated areas of the county with important travel destinations.
- Bicycle travel needs should be met through appropriate planning, design, construction and maintenance of facilities, including single-use and shared use trails, roads and road shoulders, sidewalks, bike lanes and related improvements. Design should address the needs of both experienced and less experienced riders.
- Public safety, education and law enforcement should be recognized as integral to the development of bicycle transportation opportunities in Whatcom County.

### Facility Types & Level of Service

- The countywide bicycle transportation system is made up of a number of on- and off-street routes and facilities that are designed to meet a preferred level of service for each route. Specific recommendations are made for the type of facility that is most desirable or appropriate for each trail or roadway segment in the system.
- Facility types range from restricted bike lanes with signs and pavement markings, wide paved shoulders, wide curb lanes and other shared roadways, to paved and unpaved multi-use paths, generally with signs, access improvements, and other amenities. Single-use paved bicycle paths have not been recommended for any specific routes but may be appropriate under certain circumstances.

### Bicycle Transportation System

- A countywide system of primary and secondary bicycle travel routes is recommended (Section 6.2). The system utilizes existing roads and highways, abandoned railroad grades, dikes and levees (where accessible), utility corridors, and public open space, as well as land, easements or other right-of-way that may become available in the future.
- The highest priorities for on- and off-street facilities within unincorporated Whatcom County are illustrated in Map 17. Each is briefly described in Table 1—1. (Other routes that comprise the balance of the system are discussed in Section 6.)
- The recommended system of primary and secondary routes includes many segments within incorporated areas of the county. These routes are either existing or planned by the cities and are included in order to better coordinate the design and development of continuous routes through urban areas.

**Table 1—1  
On- & Off-Street Routes  
Priority Project Recommendations**

<b>ON-STREET ROUTES</b>	Length (miles)	Route Classification	Recommendation
East Bakerview Rd. From Meridian to Hannegan	2.0	Secondary	Bike lanes.
West Bakerview Rd./Airport Dr. From Marine Dr./CMT to Meridian	2.8	Primary	Bike lanes.
Birch Bay Dr. From Pt Whitehorn Rd. to Birch Bay Village (Coast Millennium Trail segment)	5.5	Primary	Develop consistent with CMT corridor plan: bike lanes; paved shoulders, shared roadway and separated path.
Marine Dr. From Nooksack River to Bellingham C/L (Coast Millennium Trail segment)	4.0	Primary	Bike lanes from city limits to future Nooksack River Trail
North Shore Rd. From Bellingham C/L to North Shore Trail	6.2	Secondary	Bike lanes or separated, shared use path where possible along utility corridor.
Portal Way From Blaine to Ferndale	11.0	Primary	Bike lanes
Hannegan Rd. From Hwy 542 to Lynden	11.0	Secondary	Bike lanes
Birch Bay/Lynden Rd. From Lynden to Harbor View Rd.	12.0	Secondary	Bike lanes
Sunset Dr. (Hwy 542) From Hannegan Rd. to Hwy 9 S.	13.0	Primary	Bike lanes
Coast Millennium Trail, Misc. on-road segments (TBD, tentatively Unick/Douglas Rd. to Pt. Whitehorn)	8.0	Primary	Bike lanes
Tyee Dr. From Roosevelt Rd. to Edwards Dr.	1.5	Primary	Bike lanes or shared use path
<b>OFF-STREET ROUTES</b>			
Coast Millennium Trail, Misc. off-road segments, Primarily Marine Dr. to Ferndale, Point Whitehorn Bluff Trail and Birch Bay to Semiahmoo	7.5	Primary	Note that the Coast Millennium Trail will be primarily on-road and specific segments above are part of this route, but off-road segments will also be developed where practical.
Bay-To-Baker Trail From Little Squalicum Beach to Shuksan Arm	7.4	Primary	Develop in segments (where feasible) consistent with the master plan.
Point Roberts Trails, Interconnecting loops around Monument Park and Lily Pt.	8.0	Primary	Develop in segments (where feasible) consistent with the master plan.
Nooksack River Trail From Marine Dr. to Kendall	3.5	Secondary	Develop in segments (where feasible) consistent with the master plan.
Lookout Mountain (Galbraith area) Trails, North/South connecting Whatcom Falls Park to Lake Padden, East/West connecting Lake Louise Rd to Yew St. and Park Department properties.	5+	Primary	Develop in segments (where feasible) consistent with the master plan.

## **Design Standards and Guidelines**

- The plan recommends that all facilities be designed, developed and maintained in accordance with recognized federal, state and local standards and guidelines. The principal references for bicycle facility design are the *Washington State Department of Transportation Design Manual*, section 1020 (WSDOT, May 2001) and the *Guide for the Development of Bicycle Facilities*, published by the American Society of State Highway and Transportation Officials (AASHTO, 1999).

## **Safety, Education & Enforcement**

- Safety, education and law enforcement are key to the success of any bicycle plan or program and should be encouraged and supported at all levels of County government (Section 6.4).
- A bicycle facilities user map and information brochure, periodically updated, should be made available to the public.

## **Intermodal Transportation**

- Bicycles and bicyclists should be accommodated to the greatest extent practical in the design and operation of all multi-modal facilities (such as transit stops, park-and-ride lots, marinas, foot ferries, the Alaska and Lummi Island Ferry Terminals, the AMTRAK station, and Bellingham International Airport), except where clearly inappropriate.

## **Funding & Implementation**

- Strategies for implementation of this plan have been developed, including specific recommendations for funding, administration, right-of-way acquisition and related needs (Part 7). Projects that may qualify for both transportation and recreation funding sources have been identified.
- Wherever feasible, on-street facilities recommended in this plan should be coordinated, designed and developed in concert with county road projects. The needs of bicyclists should be considered in all new road construction, reconstruction, resurfacing, maintenance and repair projects, including routes that are not identified in this plan but which are likely to experience regular use by cyclists.
- Off-street facilities should be coordinated through the Department of Parks and Recreation in cooperation with the Departments of Public Works, Engineering and Planning and Development Services.

- In recognition of concerns to provide access for other users such as pedestrians and agricultural equipment, signed shared shoulders may be implemented on some of these routes in the near term in lieu of bike lanes. The 20-year plan is to provide bike lanes or shared use paths along these routes where practical, in accordance with the latest WSDOT and AASHTO standards, subject to appropriate funding. Bike lanes, which provide preferential use zones, will become increasingly important as the county population infills and traffic increases. Roadway segments that have a higher bicycle use such as along the Coast Millennium Trail, should be categorized as bike lanes as a higher priority.
- A variety of potential funding sources exist and all should be aggressively pursued on an annual basis. The Paths and Trails Reserve Fund should be augmented considerably to provide a useful source of local matching funds for priority projects identified in this plan. However, because these funds are limited, they should not be utilized for new road shoulders or other improvements that would routinely be provided in the course of road development.
- A reasonable mix of zoning, shoreline and subdivision requirements, development standards, impact fees, and incentives should be adopted by Whatcom County and other jurisdictions to help ensure that facilities for bicycles are included in all developments except where they are clearly inappropriate.

## 2. Bicycling as a Mode of Travel

### 2.1 Why Bikes?

The bicycle is the most efficient method of travel ever invented. In fact, the human powered bicycle is the most thermodynamically efficient transportation mode on the earth. Its production generates very little pollution and its power source is the physical activity of its rider. In consideration of our country's obesity epidemic and heavy reliance on foreign oil, it makes perfect sense to offer attractive bicycling facilities to improve community health while improving our international trade balance.

In addition, transportation bicycling reduces demand for expensive construction of new roads and preserves our air and water quality, benefiting all residents whether they bicycle or not. These goals have been identified as being very important by the Washington state legislature, which enacted the Commute Trip Reduction law to encourage citizens to commute by transportation modes that are more sustainable than the single-occupancy-motor vehicle. Citizens that are commuting by bicycle to fully participate in this important program deserve safe and attractive bikeways.

When Whatcom County developed the original Bicycle Plan in 1994, it was a significant step toward addressing the needs of bicyclists. Since that time, additional progress has been made through the establishment of the Bicycle Pedestrian Advisory Committee and the inclusion of bicycle interests in the update of the *Whatcom Transportation Plan* in 2001.

Although both pedestrian and bicycle travel modes are essential to a successful multi-modal transportation system, the needs of pedestrians should be considered separately from those of bicyclists. Most pedestrian travel, for example, occurs within urban areas or clustered village-type developments where the majority of trips are less than a half-mile in length. Sidewalks, footpaths and shared use paths are typical facilities for pedestrian travel; that may or may not be cost-effective investments in areas with low density development.

Bicycling, on the other hand, often occurs within, adjacent to, or between urban areas and frequently involves trips of two or more miles. Typical facilities include bike lanes, paved road shoulders, shared roadways, and paved or unpaved shared use paths. Whatcom County has a few miles of shared use paths, hundreds of miles of paved roads, and approximately 108 miles of county roads with paved shoulders. Clean, smooth, road shoulders, bike lanes and shared use paths are important facilities that people depend on for nonmotorized travel.

Whatcom County includes seven incorporated cities, two sovereign Indian Nations and thousands of acres of federal land. This plan focuses on linking the population and commercial centers in the rural and urban areas of the County. Significant opportunities exist in the smaller urban centers especially, where many trips cover only short distances, nonmotorized travel opportunities are essential to getting people from one place to another.

*In the Netherlands, more than 30% of all trips made are by bicycle.*

In rural areas, bicycle travel takes on greater importance as the demand for longer-distance facilities, and safe shoulders and highway crossings increases. Travel to, from and within rural areas often involves greater distances and higher traffic speeds than in urban areas, thus the needs for cyclists and other nonmotorized travelers are somewhat different between the two areas. Trip purposes and destinations also vary.

*More than 50% of Americans commute less than five miles from home to work.*

*- Bicycling Magazine [April, 1991]*

Locally and nationally, cars and trucks account for a huge portion of the *distance* that people and goods move on any given day. However, walking and bicycling account for a significant share of the *number of trips* made. Bicycling is the most important mode of nonmotorized transportation for medium length trips of five miles or less (each way). Trips that might be described as more than a short walk but less than a long drive may be well suited to bicycles. Bicycling is particularly attractive as a mode of transportation where travel distances are not great and roads and hard-surfaced trails are found.

The availability and quality of facilities has a direct bearing on the extent of bicycling activity occurring in a given area. As facilities are built or improved, most communities find that ridership increases significantly. Cities that provide the best facilities often have the highest rates of bicycle use. Communities that do not provide for the needs of cyclists (as is currently the case for much of the country) see much lower numbers of riders even though the potential for bicycling may be high.

A recent national survey found that 2.2% of the trips made that are less than one-half mile in length are done by bicycle (Table 2—1). For one-mile trips, cycling falls off to 1.2%. Other studies have found that in communities where cycling is more popular and more facilities are available, ridership increases to 3% or 4% or more of the trips people make.

Some of the most successful bicycle programs are in cities where street designs are friendlier to cyclists, and bikeways, bike parking and other facilities are more extensive: Boulder, Colorado, Eugene, Oregon, Davis and Palo Alto, California and Missoula, Montana. Occasionally, the number of trips made by bicycle exceeds 10%. In the Netherlands, more than 30% of the trips made are by bicycle. In the U.S., anything over 2% or 3% should be viewed as a significant level of activity.

The need for bicycle facilities applies to both on- and off-street routes. Because the road system goes where people go, it is important to make improvements throughout the system, which will make bicycling a safer and more viable mode of travel in Whatcom County. However, the facilities needed most are those which provide the most direct links between people and destinations and between communities. For this reason, a system of primary and secondary routes is recommended as a way to establish priorities for bicycle travel within the nonmotorized transportation system.

**Table 2—1  
Choice of Travel Mode by Distance (U.S., 1990)**

Travel Mode	Distance Traveled				
	<1/2 mi	1 mi	2 mi	5 mi	10+-mi
Walking	39.4%	9.2%	3.1%	0.7%	0.1%
Bicycling	2.2%	1.2%	0.8%	0.4%	0.1%
Public Transit	0.8%	1.4%	1.6%	1.8%	2.2%
Private Vehicle	55.8%	86.0%	90.8%	93.1%	95.6%
Other	1.7%	2.2%	3.8%	4.0%	2.1%

*Source University of North Carolina Highway Safety Research center*

## 2.2 Bicycling Activity & Opportunities in Whatcom County

The level of bicycling activity in Whatcom County is not easy to discern. Bicycles are less visible than automobiles and little data has been collected to determine their numbers. The general lack of facilities also limits the number of riders and discourages less experienced cyclists from riding more.

The level of bicycling activity can be explored through surveys, personal knowledge of active cyclists, the experience and observations of public works, planning and park department staff, and trends in retail bike sales. A 1989 survey conducted for the Comprehensive Park and Recreation Open Space Plan provides further insights into the level of interest in bicycling in Whatcom County.

Responses to recent transportation and visioning questionnaires emphasize the general lack of facilities and suggest that safety concerns and public demand for on- and off-street bikeways warrant the County's active involvement in their development. Information on activity or trends in cycling was not obtained.

The 1989 park and recreation survey, however, found that bicycling was among the top five recreational activities that county residents participated in (behind television, reading, walking for pleasure and watching sports). Participation rates for bicycling exceeded those for dozens of other listed activities, including camping, swimming, gardening, aerobics, driving for pleasure, picnicking and boating.

The survey did not make a distinction between recreational or transportation-oriented cycling, thus it may be assumed that both are included in the survey responses. Of particular interest is the comparison that was made between Whatcom County, Snohomish County and the Northwest as a whole (Table 2—2). It was found that people in Whatcom County took 20% more trips by bike than did people in the Northwest, and almost 40% more trips than people in Snohomish County. Kids between 10 and 17 years of age rode nearly double this Northwest average.

**Table 2—2**  
**Bicycling Activity in Whatcom County (1989)**

<i>Bicycle trips per month (per capita)</i>	
All age groups, Whatcom Co.	4.7
Children 10-17, Whatcom Co.	6.9
Northwest Average	3.9
Snohomish County	3.4

Because of the improvements that the City of Bellingham has made to enhance bikeways, bicycling is becoming more common in the area. Hence, these numbers are likely to be higher now than they were fourteen years ago.

*A 1990 Harris Poll found that 20% of adult Americans would commute-to work by bicycle at least occasionally if safe and convenient facilities were available.*

*—Bicycling Magazine [April, 1990]*

Bicycle shop owners anticipate sales to continue at present levels into the foreseeable future. Although most bikes are sold to men, sales to women are also on the rise. All but one of the shop owners agreed that the creation of new bicycle facilities will lead to increased bicycling activity.

The opinion is based on strong interest in bicycling organizations and events in the county, and the large number of requests for suggested bicycle routes that shops receive from riders of all ages.

### **Types of Riders**

Cycling can be recreational or utilitarian in nature or some combination of the two. The facilities needed to accommodate riders vary by trip purpose, destination, and physical or environmental limitations, as well as rider skill and experience. For planning purposes, bicyclists are often described as a mix of three different types of riders (reference WSDOT Design Manual Section 1020.03):

- Experienced cyclists                      Category A
- Casual adult riders                        Category B
- Children & inexperienced riders        Category C

The first group, children and inexperienced riders, often find their own way by dodging cars, riding the wrong direction in traffic, crossing roads between intersections, riding on sidewalks, and otherwise riding in a less predictable way than the other two groups. They tend to stay closer to home and are often riding for recreational purposes.

Casual adult riders often prefer off-street travel and a more scenic or recreational ride, including occasional touring. They will mix with motor vehicle traffic but may not be comfortable in situations involving higher speeds or volume. Bicycle surveys suggest that as many as 80% of the riders in a community typically belong to these first two groups. Yet these riders may only account for 20% of the total miles covered by bicycles.

Most of the mileage belongs to experienced cyclists. These riders move comfortably in and out of motor vehicle traffic and are astute at finding the quickest, safest and most direct route from one place to another. Some are avid long-distance riders as well. Although experienced riders may comprise only 20% of all cyclists, their numbers can be expected to increase as facilities improve and new riders and less experienced riders gain confidence in their skills.

The needs of each group should be addressed in planning and designing bicycle facilities. Designated bikeways for both on- and off-street travel should be built to an appropriate standard while keeping in mind the experience level of the riders who will use them. However, providing for the needs of bicycling does not stop at designating routes, paving shared use paths or building bike lanes along a few major arterials. The entire road system, which was built to get people where they want to go, can potentially serve most travel needs of cyclists. Non-designated bike routes, often consisting of little more than a four- to six-foot wide paved road shoulder, may be as important as designated bike lanes and bike paths in the development of a regional bicycle transportation system. As a key element of nonmotorized transportation, bicycling offers the greatest potential for converting a portion of single-occupant motor vehicle traffic in Whatcom County to a nonmotorized form of travel.

## **Routes & Destinations**

Currently, Whatcom County cyclists ride on all roads and highways open to bicycle use. The only location where bicycles are prohibited is along the section of Interstate highway 5 between exits 251 and 256. Quiet paths, low traffic roads and major arterials and collectors serve as bicycle routes. Urban destinations include all the places that people need to access:

- home,
- school,
- workplace,
- shopping areas,
- service establishments,
- recreational sites, and
- scenic areas.

In rural areas, popular destinations include:

- county parks
- state parks,
- Lookout Mountain area,
- Lake Whatcom area,

- Lake Padden,
- Lake Samish,
- Chuckanut Mountain,
- Lummi Island,
- Birch Bay,
- Mount Baker recreation area
- North Cascade National Park.
- National Forest
- Ross Lake Recreation Area

Experienced riders regularly bicycle to these areas, but the following conditions along the roadways can deter less experienced cyclists:

- High traffic speeds,
- High traffic volumes,
- Lack of paved shoulders,
- Poor maintenance.

Many roads and highways in the county could better accommodate bicycles without large investments by making small improvements. The following types of local-traffic roads could be made safer for cyclists through policy changes and sign installation:

- Moderate traffic volume roads with four foot paved shoulders
- Low traffic volume roads without paved shoulders

Current policy does not permit signage or designation of any road without shoulders as a bicycle route. This policy is based on some assumptions about liability exposure for the County that should be reviewed and updated. Many jurisdictions designate bicycle routes in order to reduce risk and maintenance expense. Reduction of liability exposure can be effected through the following steps on designated bike routes:

- Installation of MUTCD standard “Bicycle on Roadway” signage,
- Regular schedule of shoulder sweeping,
- Regular maintenance monitoring and repair,
- Enforcement of laws that curtail erratic driving of motor vehicles.

Many county roads are surfaced with a material known as “chip seal”. This results in a rough pavement surface, especially noticeable on shoulders, that adds significant rolling resistance to bicyclists. New technology in paving may enable asphalt surfaces (without chip seal) to be competitive in cost and durability without the roughness. If chip seal surfacing continues to be the most economical method, shoulders should be left without the chips for a smoother bicycling surface. Improvements along existing routes are more cost-effective than construction of new facilities.

As important as existing facilities are, they do not provide a complete countywide system for bicycle transportation. All communities and major travel destinations in the county should be linked by a more substantial system of improvements. Along routes that carry higher volumes of motor vehicle traffic, or where speed, sight distance and other factors warrant enhanced facilities for bikes added shoulders, bike lanes, resurfacing or separated trails may be required.

## *On-Street Bicycle Facilities in the 1890s*

*“Small tax receipts meant very small road funds, so we had to turn in on volunteer road work and pass around the hat vigorously for donations. The first wagon road connection between Whatcom and Skagit Counties was built entirely of donations... ..a friend and I went to Skagit. None of them had any money but nearly all we saw contributed a few tons of hay and oats apiece... the road workers took half pay. So by everybody helping we got a passable highway that we could drive over, and even bicycle upon very comfortably. As the very cheapest method of getting about, bicycles had become a popular mode of travel by that time.”*

*—George H. Bacon - Booming and Panicking on Puget Sound [1912]*

To this end, major improvements are already under way. As new and existing rural collectors and urban arterials are constructed or reconstructed by the county, they are generally being built to a higher standard with paved shoulders six to eight feet wide. In most situations this provides an excellent on-street facility for bicycling as long as intersections are properly designed and the shoulder surface is kept clean and free of obstructions.

Off-street bicycle facilities outside the city of Bellingham include:

- The Interurban Trail linking Bellingham with Skagit County
- The Lake Whatcom Trail off the end of North Shore Rd.
- The Everson Trail (a section of the Bay to Baker)
- The Jim Kaemingk Trail in Lynden
- Semiahmoo Parkway and Spit Trail
- Nooksack River Trail (Hovander/Tennant Lake)
- Intalco and Lake Terrell Wildlife Reserve Trails
- Lookout Mountain Trails
- Maple Falls to Glacier (Bay to Baker) undeveloped trail easement
- Coast Millennium Trail – Pt. Whitehorn segment (Trillium)

These facilities represent important components but do not yet constitute a connected route system. Also there should be moves to publicly develop trails such as on Lookout Mountain and in the Bay to Baker corridor, before other interests permanently restrict public access.

### **Whatcom Trail, 1858**

*‘Then, like a sudden thunderbolt, the long awaited news burst on the city of tents on Bellingham Bay... The Northern Light came out with an extra issue, proclaiming the good news:*

*THE TRAIL THROUGH! NO HUMBBUG THIS TIME!*

*“Then, the firing of the 100 guns from the hill, and the reverberating answers from Sehome across the Bay. All afternoon, at regular intervals, the thundering kept up, until every native on the semi-circle of Bellingham Bay was aware that the great day had come—that the Trail was at last open.”*

*- P. R. Jeffcott - Nooksack Tales and Trails [1949]*

Mountain bicycling has soared in popularity during the past decade and Whatcom County has become internationally known for its single track, downhill and cyclocross trails and events. Popular sites include:

- National Forest lands in the North Cascades,
- Natural Resource and private forestlands in the Cascade foothills,
- Lookout Mountain (also known as Galbraith)
- Chuckanut Mountain
- Black Mountain
- Stewart Mountain

Mountain biking serves as recreation more than transportation. This plan focuses on transportation functions of bicycling, since this provides the greatest benefit for the entire community. However, recreational bicycling can serve an important role in providing enjoyable touring of natural areas. Potential rail-trails, dikes and utility corridors that link communities and destinations are valuable transportation amenities that in most cases serve the recreational bicycling community as well.

## Trail Routes

**Bay-To-Baker Trail** is the region's most ambitious trail project since the days of the goldrush. When fully developed, this east-west corridor will be the premier trail facility in Whatcom County, linking five of the county's seven incorporated cities: Bellingham, Everson, Nooksack, Lynden and Sumas, as well as the communities of Kendall, Maple Falls and Glacier. Whatcom County Parks and Recreation' has been awarded grant funds for development of a 5 mile segment near Boulder Creek, and Everson has begun work on a one-mile grant-funded section south of the Nooksack River. The City of Bellingham has completed all of the trail within city limits and has begun work on the section linking I-5 with the Irongate Industrial area.

**Nooksack River Trail** : A second major corridor is the Nooksack River Trail outlined in the 1974 Nooksack Plan. This north-south corridor would follow dikes, levees, roads and other rights-of-way along the river from Marietta to Lynden and then head southeast to Deming area and up to Kendall. A section of this trail exists between Hovander Park and Slater Road.

**Coastal Bike Route**: Now known as the Coast Millennium Trail, this , is a coastal north-south corridor of on- and off-street facilities from Larrabee State Park on the Skagit County line to Peace Arch State Park at the international border with Canada. A short segment at Birch Bay is currently signed and designated.

These routes can serve both transportation and recreation functions if properly designed, developed and maintained. They are identified in the 1989 *Park and Recreation Open Space Plan* and each is discussed in the inventory and recommendations sections of this plan.

## Bicycling as an Alternative to the Single-Occupant Automobile

The bicycle is one of the most efficient human-powered machines ever invented. As such, it provides people with the opportunity to cover much greater distances than can be achieved on foot in the same amount of time. A leisurely walk averages around two miles per hour, or three miles per hour for a brisk walk. An experienced cyclist, on the other hand, can cover ten to

fifteen miles or more in an hour of riding on flat terrain. Even with hills, traffic and a leisurely pace, cycling is usually much quicker than walking.

However, speed is generally less important to commuters than the time it takes to travel somewhere. This partially explains why walking, as a mode of transportation, falls off rapidly beyond a one or two mile threshold. The time it takes to drive two miles in light to moderate traffic is well below the hour it may take to walk there. Yet, the bicycle can still compete with a car time-wise, assuming adequate facilities are available. For example, a two-mile bike ride under the best of circumstances may take only ten minutes, a reasonable commute to be sure.

Of course, there are many factors other than time and distance that affect our travel choices. Inclement weather, steep grades, limited daylight hours, the lack of bicycle parking, or a simple lack of ability or interest in bicycling are a few of the reasons many people choose cars over bikes.

For many, the environmental, economic and personal benefits of bicycling are incentive enough to leave the car home at least occasionally. Some of the most serious cyclists in the county rarely drive an automobile and will regularly commute by bicycle on all but the stormiest and iciest days of winter. A dedicated few are known to ride 5,000 to 10,000 miles or more in a single year.

As facilities develop and constraints to cycling are reduced or eliminated, both the number of riders and the distances traveled will likely increase. Substantially more short-distance trips (five miles or less) will be made by bicycle. How many more cannot be accurately predicted. Nevertheless, this translates into fewer cars on the road, less pollution, and less wear and tear on the overall road system than might otherwise occur.

Although the growth in automobile trips may continue for some time, a meaningful portion of this new traffic could be absorbed by the emerging bicycle transportation system. Combined with creative land use planning and site design, encouragement of home office and telecommuting enterprises, expanded carpools and vanpools, and improved pedestrian facilities and transit service, the bicycle offers one of the best low cost, low impact alternatives to the single-occupant automobile.

Whatcom County participates in the state's Commute Trip Reduction program and has recorded the highest percentage bicycle commute participation in the state. Building on the existing trail systems and high interest in outdoors activities, bicycle facilities planning and implementation will result in cost effective commuting solutions to avert congestion problems faced in other parts of Puget Sound and around the country.

## **Bicycle Safety & Accident Records**

A fundamental goal of this plan is to enhance the safety of those who choose to travel by bicycle in Whatcom County. Each year in Washington State, more than 1,300 people are injured in car/bike accidents. In 1992, 1,642 cyclists were injured, including nine fatalities. During the same year in Whatcom County, 36 cyclists were hurt, including one fatality (Table 2—4). A fatality also occurred in 1991 when 47 injuries were reported.

Whatcom County accident and injury rates are generally comparable to statewide averages. In unincorporated areas of the county, about one person in ten thousand was injured in a bicycle collision in 1992. This is well below the rate for Bellingham where more than five injuries per ten thousand population occurred the same year. The Bellingham rate was slightly higher than the statewide rate for cities.

**Table 2—4  
Bicycling Collisions (1992)**

Injury Rate	Injuries	Fatalities	
WHATCOM COUNTY			
Incorporated*	29	..	5.34
Unincorporated	7	1	1.08
WASHINGTON STATE			
Incorporated*	1,114	3	5.13
Unincorporated	425	5	1.71

Per 20,000 population \*cities of 20,000 or more

The higher rate of collisions in urban areas can be attributed to a higher concentration of traffic, intersections (streets and driveways), turning movements, commercial parking, and other circumstances that are less frequently encountered in rural areas.

Nationally, intersections are involved in 60 to 70 percent of all collisions, and because urban areas have higher numbers of intersections, it is no surprise that more than 80% of collisions occur where posted speed limits are 35 mph or less. Collisions on roads with speeds greater than 35 MPH result in more fatalities.

Because of a lack of training in safe bicycle riding techniques and rules, both bicyclists and motorists share responsibility for collisions. Children and inexperienced riders, are especially vulnerable to collisions and injuries. Since simple steps such as being highly visible and riding predictably can avoid most collisions, a formal bicycle safety certification training program such as that offered by the League of American Bicyclists should be incorporated into the regular school physical education curriculum.

More specific data on bicycle related collisions has not been available for the Whatcom County area since 1995 due to technical data processing delays at the Washington State Patrol. Once collision data is made available again, Monitoring the circumstances and roadway design features associated with collisions will offer important insight into how unsafe facilities, practices, or other contributing factors can be changed to improve the safety of all cyclists.

"Nobody ever died from not knowing how to play flag football. Yet we spend tax money teaching kids its nuances in gym classes, while bicycle safety is still foreign to most school curriculums."

--- Don Cuerdon.

## 2.3 The “Four Es”

The National Center for Bicycling and Walking, the leading bicycle research and advocacy organization in the U.S., has been working to advance the science of bicycle planning and design since the 1970's. The “Four Es” spell out the essential components of a good community bicycle system:

- Education,
- Encouragement,
- Enforcement,
- Engineering.

In the early 1990's the Federal Highway Administration funded a study team whose conclusions showed the importance of integrating each of these steps in order to achieve a functioning and safe system. In addition, it shows that a community investment in education is highly cost effective compared to an exclusive focus on construction or engineering solutions. Reference the *“Guide to the development of Bicycle Facilities”* by FHWA, 2002 edition.

A successful bicycle transportation program requires much more than the construction of facilities. Bikeways must be designed properly for their intended use and they must be well constructed and maintained. Information concerning a variety of issues and opportunities for cycling should be made available to the public. Traffic laws must be adequately enforced. Limited resources require careful consideration of alternative plans, projects and programs that make the most sense and that will best serve the needs of the public over the long run.

## 3. Public Participation

The development of the original 1994 plan elicited citizen input through public meetings, workshops and the formation of a Bicycle Plan Citizens Advisory Committee to oversee the process. Appendix A details the method by which public comment was collected and documented.

### Public Survey

Beginning in the summer of 2001, the Whatcom County Bicycle Pedestrian Advisory Committee began to update data on public interests and needs for bicycle facilities. Members of the committee distributed a survey at community fairs, events and meetings throughout Whatcom County. The resulting data was compiled and graphed to show general opinions about priority needs for bicycle or pedestrian facilities. As an interim measure, this data gives a useful guide for planning, however budget constraints prevented a thorough scientific sampling and analysis. For accuracy, a regular system of measuring and analyzing public attitudes, needs, and useage of bicycle facilities should be implemented by the County Public Works Department.

The following is a summary of the responses to survey questions:

Question 1 - A majority of respondents consider trails a positive amenity near their residences.

Question 2 - Respondents feel that the current road system functions well for motorized users but needs improvement in order to accommodate bicycle or pedestrian users.

Question 3 - Double the number of respondents show an interest in more bike lanes than in more roads, and almost as many are interested in separated trails.

Question 4 - People don't want to raise taxes to pay for bike facilities, but it is important to note that more respondents want to see existing road funds spent on bike facilities, rather than outside sources such as grants.

Question 5 - Nearly all respondents show they could walk or bike to destinations near their home or work if safe and comfortable facilities are provided. Since motorized trips less than 1 mile in length represent a large proportion of traffic, congestion could be reduced through better accommodations for these types of nonmotorized trips.

Question 6 - Respondents cite traffic being too close as the main discomfort for walking or bicycling in their neighborhoods. This can be interpreted as a desire for better or separated facilities such as sidewalks, trails or shoulders. Note that few consider themselves or their children as unaware of rules of the road, despite the fact that this subject is not generally formally taught: it may be that few are aware of the existence of rules for bicycling and walking on roadways.

Question 7 - About half as many respondents see bicycling or walking as a way to commute rather than exercise or recreation. A significant number are aware that bicycling can reduce pollution.

Question 8 - Choosing between education, enforcement, or engineering, respondents emphasize a preference for engineering solutions. Note that driver education ranks higher than bicycle safety education.

### **Bicycle Facilities Map**

In July, 2002, the Committee hosted a public open-house to request comments on the proposed map for inclusion in the Whatcom County Comprehensive Plan update. Attendees wrote comments and posted them on the map indicating locations for improved facilities. The comments have been tabulated in Appendix C. The Committee reviews these and all public comments to determine which projects should receive priority attention.

### **Transportation Summit**

In May, 2001, the Whatcom Coalition for Healthy Communities brought together a wide spectrum of community groups, business interests, government agencies and individuals to address the question of transportation and the future of Whatcom County. The results of the discussion and comment at the summit indicated a strong interest in addressing growth in transportation through other means than expanding facilities for the private automobile. From August, 2001 through 2002, a transportation summit task force met to refine a set of recommendations and actions to forestall the gridlock that has gripped so many communities in the Puget Sound region. These recommendations emphasize the importance of providing for bicycling and walking as essential transportation modes.

## 4. Planning Policies and Level of Service

This plan provides the framework for actions that will enhance bicycling in Whatcom County. Through the coordinated development of policies that encourage bicycling and the construction of facilities that enhance the safety of bicyclists, our community will benefit from a greater spectrum of the transportation advantages offered by bicycling. To address specific needs of cyclists, the plan establishes:

- Policy statements,
- Long-term goals
- Near-term objectives
- Level of service recommendations
- Intermodal transportation linkages

The goals express the public's vision for bicycle transportation opportunities over the next ten to twenty years. The objectives represent incremental steps that must be taken now or in the near future in order to achieve that vision. Goals and objectives focus on three major themes:

- The overall bicycle transportation system,
- Specific facilities and design guidelines that comprise the system, and
- Related issues involving public safety, education and law enforcement.

### Vision Statement

The following vision statement represents the County's commitment to serving the bicycle transportation needs of its citizens:

Bicycling in Whatcom County is an enjoyable, safe and efficient transportation mode for residents and visitors of all ages and abilities. The bicycle facilities interconnect with residential, commercial and recreation destinations and create a comprehensive transportation system accessible to the population. Engineering, design, maintenance, safety, education, law enforcement and encouragement are included in the overall bicycle strategy. Planning and funding of bicycle projects is integrated with the existing transportation programs and results in a higher than average percentage of daily trips by bicycle.

### Goal #1 - The Bicycle Transportation System

To provide a safe, efficient and interconnected system of trails and bikeways, including both on- and off-street facilities that link populated areas of the county with important travel destination

#### *Objectives:*

- Identify and map a regional system of on- and off-street routes that serve the needs of bicyclists.
- Provide for the diverse needs of bicyclists through single-use and shared use facilities.
- Interconnect bicycle routes to major destinations by designing links to: neighborhoods, schools, employment and commercial centers, medical and social service centers, recreation sites, transit, ferry, and rail stations, touring destinations, adjoining counties and nations.

- Provide bicycle access and parking facilities at destination sites.
- Develop a cost-effective and comprehensive bicycle transportation system that addresses bicycle concerns in all stages of project design and implementation.
- Accommodate recreational bicycle use of the system.
- Seek funding in coordination with local, regional, state, federal and tribal jurisdictions.

## **Goal #2 - Facilities & Standards**

To achieve a high standard in meeting the needs of bicyclists through -appropriate planning, design, construction and maintenance of user friendly facilities, including single-user and shared use paths, road and road shoulders, bike lanes and related improvements

### *Objectives:*

- Adopt a level of service standard for bicycle facilities that reflects up-to-date bicycle planning best practices
- Annually count bicycle transportation mode use on priority bicycle routes and facilities
- Index transportation funding decisions to Comprehensive Plan goals
- Develop land use policies that compliment transportation needs of bicyclists.
- Adopt best practices standards for development of the bicycle transportation system routes and facility design.
- Establish bicycle representation on the public advisory committees and staff, including public works, parks, and planning commissions
- Implement systematic measures to remove barriers to bicycling
- Develop a cost-benefit evaluation model for transportation projects that quantifies environmental and fiscal efficiencies for a range of alternative actions
- Establish minimum bicycle parking and access standards for development activities in accordance with industry best practices
- Ensure that the requirements of the Americans with Disabilities Act are met in facility design and construction
- Endeavor to provide adequate provision for parking and sanitation at trailhead facilities.
- Develop and incorporate design standards to preserve or enhance sense of place.

## **Goal #3 Safety, Education & Enforcement**

To recognize public safety, education and law enforcement as integral to the development of bicycle transportation opportunities in Whatcom County.

### *Objectives:*

- Establish an effective, consistent and coordinated bicycle safety and training program accessible to all ability levels
- Promote community and school-based educational programs that teach techniques for safe bicycling
- Work with enforcement agencies to establish consistent and effective enforcement measures for motorized and nonmotorized travelers.

- Build awareness among motorists of the rights and responsibilities of motorists and cyclists in sharing the road.
- Plan, design and educate to minimize conflicts among trail and road users.
- Develop interpretive sites oriented toward nonmotorized travelers.
- Promote the community benefits of bicycling
- Integrate bicycle safety training with the driver's licensing program
- Establish a full-time bicycle transportation staff position in County government.
- Develop, publish and maintain an accurate system map for bicycle facilities, routes, and trails
- Promote bicycling through special events and publicity.

## 5. Facility Inventory & Suitability

Bicycle travel in Whatcom County takes place on the existing network of state and county roads and on off-street trail corridors. The 1989 *Comprehensive Parks and Recreation Open Space Plan* lists some trail corridors and more are being developed.

Bicyclists are subject to all the rights and responsibilities of motor vehicles according to the Washington State Code and as such are legally permitted to operate on roadways. Utilizing existing roadways, when possible, allows communities to provide a benefit to bicycling while keeping overall costs to a minimum. With this in mind, an inventory and road system suitability assessment was conducted in order to lay out a system of bicycle routes that make good use of existing or planned road shoulders along urban arterials and rural collectors, and along quiet, narrow back roads (or local access roads) where, even though shoulders are often lacking, traffic volumes are low enough to make many routes suitable for bicycle use.

The following off-street trails are included in the inventory:

- Interurban Trail,
- Bay-To-Baker Trail,
- Lake Whatcom Trail and
- Nooksack Trail .

The following high traffic volume roads and highways should be considered priority routes for future construction of off-street parallel routes:

- Guide Meridian between Bellingham and Lynden,
- Mt. Baker Highway east from Bellingham (i. e. Bay to Baker Trail and Nooksack River Trail).

Acquisition of sufficient right-of-way would be required as a first step.

Off-street bicycle paths are attractive and can increase the likelihood that inexperienced cyclists will feel comfortable learning bicycling skills in a safe environment. The difficulty and expense of acquiring right-of-way and building and maintaining trails can be a deterrent when trail projects are not included in the regional transportation funding decision process. When identified as priority transportation infrastructure investments comparable to roadways, larger highway fund sources become available.

Following the inventory, existing on- and off-street facilities, route selection and the suitability assessment process are discussed in some detail.

A useful methodology for evaluating traffic volume, speed and pavement width to determine bicycle compatibility is available at the FHWA website, [www.hsrrc.unc.edu/research/pedbike/bci/index.html](http://www.hsrrc.unc.edu/research/pedbike/bci/index.html) .

## 5.1 Existing Facilities Inventory

The Whatcom County Public Works, Engineering Department maintains current data on the county roadways in their Roadlog Database. At the time of this edition, there are approximately 950 miles of county roads. Of the 950 miles of county roads, approximately 108 miles of the roads have paved shoulders of three feet or more. For the most current detailed listing, please contact the County Public Works, Engineering Department.

The good news is that it is now a county policy to add paved shoulders of four feet or more to all county roads being reconstructed. This will increase the safety of bicyclists and pedestrians.

It is also recommended that the county adopt a formal policy of providing separated paths between all community centers (such as schools, libraries and markets) and residential areas, when the distance is 1.5 miles or less. These paths should be retrofit at existing developments as funding allows and required for new housing developments. Most of these pathways would be low volume and may not require application of stringent standards such as those required for shared use paths. Walking trails as defined by WSDOT Design Manual section 1025.07.2(d) would be affordable and may be well suited for this use, since they would primarily serve pedestrians, however efforts should be made to ensure these community pathways are suitable for access by disabled people.

*‘As late as 1883, Whatcom County remained a wilderness, with no roads but the Military Road to Fort Bellingham and the Nooksack; and the Telegraph Road to the Nooksack Crossing. The rest of the county was penetrated by trails’*

—Lelah Jackson Edson *The Fourth Corner*, Highlights from the Early Northwest [1951]

Since 1950, transportation projects funded in Whatcom County have focused on *motorized* travel along roads and highways—reflecting trends in the nation as a whole. A fractionated funding system has separated agencies involved in each different mode and that system has resulted in planning that has not addressed walking and bicycling in a comprehensive way. As a result, facilities to accommodate these modes are discontinuous and ineffective for practical transportation. .

Beginning in 1992 with ISTEA and continuing through 2003 with TEA-21, more regional and local agencies have been empowered to make decisions about which projects should receive federal funds. The 2001 update of the *Whatcom Transportation Plan* reflects an increased attention to multi-modal and nonmotorized transportation in Whatcom County. The Transportation Summit report also indicates a strong community commitment to enhancing modes of travel other than the private automobile.

Opportunities to enhance bicycling in the region have been identified in several county and city plans and programs . In 1973 the *Whatcom County Trail Plan* outlined objectives and criteria to implementing a countywide trail system as an integral part of the transportation system and linking residential areas, shopping areas, recreational areas, and educational facilities. The 1991 *Whatcom County Natural Heritage Plan* was adopted by the County Council and it also recommends trail development for recreation and transportation.

Whatcom County Subareas could be updated to address bicycling more comprehensively. Some facilities recommendations to consider are detailed below:

### **Birch Bay/Blaine Subarea**

Birch Bay Drive as well as roads leading to the county park at Semiahmoo Spit offer popular bicycle routes for residents and many summer visitors. Birch Bay Drive is a two lane roadway that was upgraded and re-surfaced in 1996 to include 4ft. shoulders for walking and bicycling. The unique beauty of this resort beach attracts thousands of visitors who enjoy the bay by car, bicycle, bicycle carriage, and by foot both along the roadway and on the beach. The Birch Bay Community Planning Committee has expressed strong support for making the drive more recreation-oriented in order to encourage bicycle and pedestrian travel. Reducing the arterial function of the drive and reducing the speed limit to 20 mph during the summer months has helped. Birch Bay Drive is one of the originally designated sections of the Coastal Bike Route, now a key section of the Coast Millennium Trail.

The proposed 2001 Birch Bay Community Plan, an update of the sub-area plan, recommends developing a beach berm promenade if logistical and environmental concerns can be resolved. The establishment of Bay Horizon Park gives rise to the possibility of creating a trail connection between it and the State Park at the south part of the bay, a potential alternative route for the Coast Millennium Trail. Recreational trails in the Lake Terrell area are maintained by the state Department of Fish and Wildlife and include a trail on Alcoa/Intalco property used by hunters in season. Pedestrians have access to the Georgia Strait shoreline at the base of the Point Whitehorn bluff at low tides, however the feasibility of establishment of a formal path has not been determined. Trillium Corporation has donated a trail easement through its property just south of Pt. Whitehorn as part of the Coast Millennium Trail (CMT). Malibu Corporation has

agreed to donate a trail easement through property just south of the State Park, also a link in the CMT.

### **Chuckanut/Lake Samish Subarea**

The Interurban Trail is an extensive trail corridor paralleling Chuckanut Drive from Bellingham to Larrabee State Park and the Skagit County boundary. Since 1994, some steep grades have been mitigated and there are better trail links with nearby trail systems on Chuckanut Mountain. The City of Bellingham will construct a bypass at Old Samish Highway by 2005 to ease the grade change and improve trail access as part of the CMT.

The increased popularity of mountain bicycling and the dedicated work of volunteer mountain bicyclist club members has established a popular bicycle trail network on Lookout Mountain (also known as Galbraith Mountain). Some private forest-land owners have adopted formal policies permitting recreational access on the forest lands. Regular trail monitoring and maintenance programs should be formally administered by the County to ensure the preservation of both trail and forest-land interests.

The roads to and around Lake Samish are popular bicycle routes due to low traffic. Community members concerned about over-development at Lake Samish indicate that walking and bicycling is an important transportation mode that would be jeopardized by heavier traffic volumes.

### **Foothills and South Fork Valley Subareas**

The Mt. Baker Foothills Subarea extends from Nugents Corner to Glacier and from Silver Lake to Wickersham, over a vast and sparsely populated forestry area. There are no incorporated cities in this sub-area and residents often choose to live in this area because they enjoy the open spaces and the outdoors. Three state highways form the main road transportation routes. Motorized vehicle traffic has increased in volume and speed during the past decade. Because residents no longer feel safe walking or bicycling along these roadways, many are interested in development of separated trails provided their privacy and security are assured. Through the Chain of Trails project, a survey was conducted that identified priority sites for trail development.

The following sites are important potential links in the Chain of Trails :

- Kendall Elementary School to Paradise/Peaceful Valley
- Acme/ Mosquito Lake Road to Van Zandt/Josh VanderYacht Memorial Park
- Stewart Mountain from Y Road to Acme
- Silver Lake Rd. to South Pass Road loop
- Maple Falls to Glacier
- Van Zandt State Forest to Mosquito Lake Road
- Future Nooksack Tribal Recreation Fields to Deming and Casino
- Wickersham to Deming
- Deming to Welcome

Sharing existing utility easements and other rights of way should be investigated for these connectors.

The Bay-To-Baker Trail has been proposed for the area on the former Milwaukee Road right-of-way. While funding for a 5.5 mile portion west of Glacier is available, and construction was planned for 1995, some members of the community have expressed concerns and the project has been put on hold in order to address those concerns. The Mt. Baker Foothills Chamber of Commerce Economic Development Committee has identified this project as an important economic development benefit.

The Trails Sub-committee of the County Bicycle Pedestrian Advisory Committee has identified Stewart Mountain as a potential site for establishing recreational access agreements with the private forestry land-owner.

### **Point Roberts Subarea**

The Point Roberts Economic Development Committee has identified development of a series of trails as a priority project to increase recreation and tourist income to the community. The trails will link visitors to the marina and the various parks and recreation areas around the Point. The first priority project is called the Monument Park Loop. Utilizing funds from a cancelled road-widening project for Tyee Drive the community is working with the County Engineers to instead construct a separated trail within the County-owned right-of-way. This project and the agreements and policies it generates will establish a valuable precedent for other similar projects around Whatcom County. An Equestrian center is proposed on private land in the central area of the Point. The Point Roberts Park District has planned trails linking that area to Maple Beach, Lily Point, the Marina, and Lighthouse Park.

### **Bellingham Urban Growth Area**

Trails planned or existing in the Bellingham urban growth area include:

- Little Squalicum Beach trail and boardwalk
- West Airport Trail
- June Road Trail (west-side access to Whatcom Community College)
- Dewey Valley Trail (a segment of the Bay-To-Baker Trail)
- Sudden Valley Trail connector (to Bellingham)

Bellingham conducted extensive public outreach to update its Parks and Recreation and Open Space plan. The Bellingham Bicycle Pedestrian Advisory Committee continues to work with the city engineering department to enhance bikeways and ensure that the needs of bicyclists are incorporated into roadway projects on a systematic basis. Projects include:

- State Street Bicycle Lane
- Magnolia Street Bicycle Lane
- Girard Street Bicycle Lane
- North Forest Street Bicycle Lane (conversion from 3 lane to 2 lane road)
- Broadway Street Bicycle Lane
- Northwest Avenue Bicycle Lane
- Roeder Avenue Bicycle Lane
- Sunset Drive/Mt. Baker Highway Bicycle Lanes and sidewalks
- Railroad Trail over-crossing at Alabama St

Recent missed opportunities include:

- Fraser Street connector (implemented without bike lanes or sidewalks)
- Harris Street re-surfacing (implemented without bike lanes)
- Hannegan/Sunset intersection (project resulted in reduced bike access)

## **Ferndale**

In 2002, the City of Ferndale consolidated its Parks Department within Public Works due to budget constraints. Reconstruction of the Main Street bridge over the Nooksack River will include bicycle lanes and cantilevered pedestrian walkways. Ferndale is a growing residential and employment center that will benefit from nonmotorized transportation planning to forestall congestion over the coming decade. Bicycle facility opportunities in Ferndale include:

- Bicycle/Pedestrian bridge connecting Hovander Homestead Park and Pioneer Park
- Bicycle route connections to Coast Millennium Trail from Nooksack River to Lake Terrell
- Portal Way paved shoulders/bike lanes
- Pacific Highway paved shoulders/bike lanes
- Vista Drive paved shoulder for bike lanes

## **Lynden**

Lynden has begun to develop some bicycle facilities during the past decade such as:

- The Fishtrap Creek Trail
- The Jim Kaemingk Trail
- The City of Lynden Bicycle Map
- The Downtown Bicycle Lending Program

Some of these projects were developed through public private cooperation. The reconstruction of Front Street with a center turn lane but without bicycle lanes represents an opportunity that may have been addressed differently had there been an active bicycle committee or bicycle plan for the city. According to the engineering department streets that are 40 feet wide are considered adequate to accommodate both cars and bicycles without the creation of restricted bike lanes. The increasing retirement population of Lynden will lead to higher numbers of residents with a need for nonmotorized transportation. Lynden's strong identification with its Netherlands heritage offers a unique opportunity to also embrace the Netherlands' strong bicycle transportation leadership.

## **Sumas**

Sumas was the location of one phase of the 2001 Bicycle Racing Time Trials and has been popular with bicyclists from both sides of the border touring the Silver Lake/South Pass Road loop. Planning of bicycle routes is not a current priority for the City however motorized traffic congestion at the

border crossing offers opportunities for changing travel modes. Bicycle facilities should be incorporated into the re-design of the border facility. The Sumas Police Department distributes bicycle safety literature at the Sumas Community Days celebration in June of each year. Bicycle registration at City Hall is available as a safeguard against theft.

## **Blaine**

- The City of Blaine took a leadership role in enhancing bicycling opportunities through implementation of the Blaine/Birch Bay Traffic Plan. The Plan outlines an extensive system of bicycle routes in and adjacent to the city. The city constructed a bicycle path on the north side of Marine Drive offering a scenic off-street route facing White Rock and Peace Arch Park.. Bicycle projects planned or in process in Blaine include: Coast Millennium Trail from Semiahmoo to British Columbia border
- Planned trail and natural “Necklace” around Drayton Harbor
- Downtown boardwalk facing Drayton Harbor along Peace Portal Way
- Plover Historic Ferry dock renovation and expansion

## **Bellingham**

Bellingham made bicycling a priority in the ongoing development of trail and street systems throughout the city. On- and off-street bicycle facilities link most neighborhoods, parks, schools, the downtown area, Fairhaven, and other commercial centers. A complete trail system exists along several major greenway corridors including the Interurban, South Bay, Whatcom Creek, and Squalicum Creek (Bay-To-Baker) Trails. The city continues to reduce gaps in the system and provide secondary links in the system.

The Bellingham Police Department conducts bicycle rodeos for school and community groups when requested in order to teach bicycle safety. Bellingham’s bicycle police patrol has proven popular and effective in reducing crime in the downtown area while increasing a comfortable community feel.

## **Everson**

Everson acquired a mile of abandoned railroad grade that passes through Everson and forms a central link in the Bay-To-Baker Trail. Improvements have been made south of the Nooksack River and a 12-foot wide trail or bike lane was built into the highway bridge over the river in 1995. Everson Public Works hired a consultant in 2001 to carry out final design for the next section of the Everson Trail (a part of the Bay-to-Baker).

Because of its ideal location at a convergence point between the Mt. Baker foothills and the scenic farmlands of the Nooksack River plain, Everson could be a key convergence site for a series of two or more trails discussed in the Chain of Trails project. Trails that cross in Everson could include:

- Nooksack River Trail
- The Bay to Baker Trail

A major trail system was proposed in 1994 with the annexation and potential redevelopment of a large gravel pit between the Everson-Goshen and Pole Roads. This trail system is part of a 20-year plan to convert several hundred acres of the gravel pit to residential development including park and open space areas, small lakes and trails.

### **Nooksack**

No plans exist to develop a bicycle system in Nooksack. The City Council has discussed enhancement of the Sumas Riverfront area which could include a bikeway. Specific plans have not emerged due to a lack of funding.

### **Nooksack Tribe**

The Nooksack Tribal Council has developed an ambitious plan in conjunction with the Nooksack Casino Corporation to build a destination community recreation center on tribal lands near the town of Deming. The design includes recreational ball fields, a science/environment center, and a connecting network of trails. This facility would act as a gateway attraction to the Mt. Baker area.

### **Lummi Nation**

The Lummi Nation has established a bicycle pedestrian plan for the entire reservation lands. This plan includes proposed shoulders and sidewalks along main roads including;

- Haxton Way
- Kwina Road
- Lummi View Drive

The reconstruction of Lummi Shore Road includes shoulder enhancements from Cagey Road to The Portage Point. Lummi agreements with the State Interagency Committee for Outdoor Recreation indicate that Portage Island will include some portion of publicly accessible park land. Lummi Planning Department is in the process of creating designs which protect valuable cultural heritage sites while meeting the terms of the agreement.

Lummi Nation has the opportunity to develop a section of the Coast Millennium Trail in proximity to the Silver Reef Casino in order to attract visitors who are traveling the CMT.

## **5.2 Road System Suitability Assessment**

The route selection process involved an extensive review of the county road system and off-street corridors for their bicycling potential based on the selection criteria listed in the next two sections.

The suitability assessment examined existing road conditions in terms of each road's functional classification (arterial, collector or local access road), average daily traffic, posted speed,

pavement width, shoulder width and surfacing and most importantly route demand for connecting destinations. Much of the information was derived from the Whatcom County Engineering Divisions road system database and from surveys conducted in the field.

Defining on-street bicycle routes is particularly challenging since the overall road system was specifically developed for motor vehicle traffic, rather than bicycle travel. Road shoulder widths and surfacing, posted speeds and traffic volumes are highly variable. Bicycling needs, issues and opportunities also differ somewhat between on- and off-street systems, thus slightly different criteria are used in determining which routes are most suitable for bikes.

### 5.3 Route Selection: On-Street Facilities

Because people go where roads go, the on-street system is of particular importance to bicycling as means of transportation. The principal factors involved in selecting those routes most suitable for bicycles are listed below:

- Right -of- Way*                      Public right-of-way either exists or could be negotiated.
- Directness & Connectivity*      The route provides a direct or indirect link in the system.  
Connectivity is essential.
- Surface & Width*                    Overall pavement width, shoulder width and the type and quality of  
surfacing are conducive to safe and enjoyable bicycling.
- Traffic Volume*

Low traffic volumes are generally conducive to nonmotorized travel. Higher traffic volumes require careful consideration of speed, shoulder width, and pavement conditions.

#### *Speed*

Lower traffic speeds are generally more conducive to bicycling. Higher speeds require careful consideration of traffic volume and pavement conditions.

#### *Truck & Bus Traffic*

Higher volumes of truck and bus traffic may diminish safety for bicyclists. Speed and shoulder width must be carefully considered.

#### *Maintenance*

Poorly maintained facilities are not acceptable to cyclists. A surface that is smooth and generally free of obstructions, gravel and debris is considered acceptable.

#### *Collisions*

Routes prone to bicycle collisions should be investigated for factors that may contribute to the

problem. (Plan recommendations address safety issues and design guidelines that can lessen the risk of collisions.)

### *Safety & Security*

Safety is always an issue of concern. From a practical standpoint, not all safety concerns can be detected or prevented. Unusual problems related to safety and security that have been identified in the field are noted.

### *Parking & Driveways*

A substantial number of on-street parking areas and/or driveways may be problematic in urban areas and are noted in the inventory.

### *Attractive/Scenic*

Routes having high, moderate or low aesthetic appeal in terms of adjacent natural features, views and scenery, historic or architectural features other qualities are noted.

### *Cost*

The relative cost of improvements needed to make a route suitable bicycling is noted. Ongoing maintenance costs should also be considered.

### *Major Barriers*

Significant physical barriers which seriously impede the potential for the route to provide a useful link in the system are noted. Minor and temporary barriers are not considered determining factors.

Other factors may be important as well, such as sight distance, stopping distance, turning radii, signing, pavement markings and abrupt pavement edges. The skill and experience level of the user also has a bearing on the suitability of a particular route for cycling. However, these factors tend to influence the *design* of facilities but generally do not preclude their development.

## **Selection Process**

The route selection process was carried out in three steps. First, the number of known and potential routes were generally identified on a county road map, with an emphasis on linking communities and destinations. "Communities" include all cities and towns, other moderately populated areas or commercial centers, and large residential developments. Destinations included the same communities plus major employment centers outside of urban areas, intermodal transportation links (airport, ferry terminals, Amtrak station, etc.), regional park and recreation areas, including park trails and water access areas, the province of British Columbia, and adjacent counties.

The second step involved field verification of these potential routes. A cursory review of each route was performed and information related to the criteria outlined above was collected. As a

result of these field checks, some routes were deleted and others were added. Information was compiled in a small database of existing conditions and suitability evaluated.

The third step involved a more technical analysis of traffic volumes, speed and pavement conditions to determine suitability based on methodology developed by the FHWA and the Wisconsin Department of Transportation. Traffic volume and pavement width are closely interrelated and have substantial bearing on determining the suitability of on-street routes for bicycle transportation. Because all factors can vary significantly throughout the road system, an almost endless combination of circumstances are encountered. If pavement surfacing is good or can be readily upgraded, shoulder width as well as overall pavement width become major deciding factors. For example, narrow shoulders may be inconsequential on lightly traveled backroads, but may preclude safe cycling on roads with heavy traffic volume or high speeds.

### **Assessing Volume, Speed & Width for Bicycling**

The biggest challenge in determining suitability (or compatibility) of existing roads for bicycle use is to identify which combinations of volume, speed and width are reasonably acceptable to bicycle traffic.

*It should be emphasized that even the best methodology cannot guarantee complete mitigation of all potential traffic hazards. Road conditions and human and environmental factors are highly varied and the circumstances that might contribute to collisions at a given location are often unpredictable. A general assessment of volume, speed and width, however, can improve the reliability of identifying those routes that are most suitable.*

The analysis focuses on the relative frequency of “squeeze-point conflicts,” that is, how often a bicycle may be “squeezed” by two vehicles passing each other immediately adjacent to the moving bicycle. When three vehicles momentarily occupy the same cross-section of road, pavement width becomes especially important to the safety of the cyclist. High truck traffic can increase the risk.

By evaluating peak traffic volumes and passing sight distances, researchers have suggested minimum pavement widths needed to keep squeeze-point hazards to a minimum. Squeeze-point conflicts will still occur but they will tend to be less frequent (or farther apart) as volume decreases. At pavement widths of 26 feet or more, the potential for conflicts diminishes significantly except where higher volumes of truck traffic are present. Even at very narrow widths (under 20 feet), the road may still be suitable for bicycles if volumes are very low and truck traffic is light.

At a given peak volume where pavement width is not sufficient, bicyclists would not normally be prevented from using the road; however, they would not be encouraged to use it either.

For general bicycle compatibility assessment consult the FHWA website [www.hsrc.unc.edu/research/pedbike/bci/index.html](http://www.hsrc.unc.edu/research/pedbike/bci/index.html) .

Selection criteria, including volume-widths assessments are not rigid requirements. Rather, they are intended to serve as flexible guidelines that make the most of potential routes and facilities around the

county. As the system develops, route-by-route evaluations will be necessary to deal with sight distance problems, barriers, intersections, transitions between on- and off-street facilities, or other circumstances that may influence suitability.

#### 5.4 Route Selection: Off-Street Facilities

For off-street routes, the principal issues of concern are directness, access, right-of-way, scenic quality, and major barriers. Because of the difficulties inherent in locating continuous trail corridors through areas that are privately owned and developed, public access or right-of-way is perhaps the primary determining factor for off-street routes.

**Table 5-3  
Whatcom County Bicycle Plan  
Off-Street Routes: Existing Conditions**

Path Name	From	To	Length (Miles)	R/W	Surface	Attraction
<b>Airport Perimeter Trail</b>	<i>Airport, south</i>	<i>Airport, north</i>	1.7	PORT of BHAM	NONE	MOD
<b>Bay-To-Baker Trail</b>	<i>Little Squalicum Beach</i>	<i>Shuksan Arm</i>	74.0	PUB,PRI V	UNPAV	HIGH
<b>Coastal Bike Route</b>	<i>Larrabee State Park</i>	<i>Peace Arch State Park</i>	40.0	WC,BHAM, BLAIN E, WA	PAV, UNPAV	HIGH
<b>interurban Trail</b>	<i>South Bellingham</i>	<i>Skagit County line</i>	6.0	WC,BHAM, PP	UNPAV	HIGH
<b>Lake Whatcom Trail</b>	<i>North Shore Rd</i>	<i>Blue Canyon</i>	4.0	WC,WA	UNPAV	HIGH
<b>Middle Fork Nooksack Trail</b>	<i>Rutsatz Rd</i>	<i>Mosquito Lake Br</i>	4.0	WA,BHAM, PRIV	NONE	HIGH
<b>Nooksack Trail</b>	<i>Marine Dr</i>	<i>Maple Falls</i>	36.0	WC,WA,P RIV	UNPAV	HIGH
<b>Point Roberts Paths</b>	<i>Benson Rd</i>	<i>Johnson Rd</i>	1.0	WC	UNPAV	MOD
<b>South Fork Nooksack Trail</b>	<i>Saxon Rd</i>	<i>Skagit County line</i>	4.0	WC,WA,P RIV	UNPAV	HIGH

Note that most of the above facilities are not formally open to the public as of January 2003.

Trail corridors demand extensive linear access either along a public right-of-way, through publicly-owned land, utility corridors, large private parcels, along dikes and levees, or through other areas where some opportunity exists to establish a corridor for public access. Potential trail corridors are relatively scarce in developed areas since land ownership and development patterns are typically non-linear.

Although certain natural areas like streams and water bodies possess linear characteristics that would be attractive to trail development, significant opportunities to acquire access through them are often lacking, especially where multiple ownerships break up the corridor.

The principal criteria for selecting off-street routes are listed below:

*Right-of-Way*

Public right-of-way either exists or could potentially be negotiated.

*Directness & Connectivity*

The route provides a direct or indirect link in the system. Connectivity is essential.

*Attractive/Scenic*

Routes having high, moderate or low aesthetic appeal in terms of adjacent natural features, views and scenery, historic or architectural features or other qualities. (Less attractive routes may still offer important links in the system or could be enhanced through landscaping or other improvements.)

*Major Barriers*

Significant physical barriers which seriously impede the potential for the route to provide a useful link in the system are noted. Minor and temporary barriers are not considered determining factors.

A number of other issues arise in planning for off-street facilities, such as cost, safety, security and the potential for conflicts among trail user groups (horses and bicycles don't always mix well). However, these concerns tend to influence the design and user designation of facilities rather than the viability of a route. An abandoned railroad grade, for example, may be important to the system regardless of whether or not a single shared use path or separate parallel facilities for bicycles and equestrians are ultimately developed.

Parallel or "braided" trail systems are particularly useful to bicyclists in urban settings or sensitive environments where trail use is high, user conflicts are a concern, opportunities for narrow-width walking or nature trails exist, or where facilities are needed to accommodate both recreational and utility bicycling. A braided trail system often utilizes road shoulders or bike lanes that generally parallel the off-street facility. The Bay-To-Baker, Interurban and Nooksack Trails are potential candidates for the design of braided or parallel systems.

## **6. Recommendations**

The principal recommendations of this plan are presented under five general headings as follows:

- Facility Types & Level of Service
- The Bicycle Transportation System
- Facility Design
- Safety, Education & Enforcement
- Bicycling & Intermodal Transportation

## 6.1 Facility Types & Level of Service

Bicycle facilities for both on- and off-street travel are recommended in the development of a comprehensive bicycle transportation system in Whatcom County. Off-street facilities like bike paths and shared use trails offer some advantages in terms of recreational riding opportunities, aesthetic enjoyment, and separation from motorized traffic which may benefit younger and less experienced riders if facilities are properly designed. However, the vast majority of cycling occurs along paved roads, mostly in or near urban areas.

In urban and rural settings, the potential for bicycling to serve as a viable transportation alternative to the single occupant automobile is highly dependent on the road system. Thus, the Bicycle Plan emphasizes the development of on-street facilities, including paved shoulders and bike lanes along roads carrying moderate to high volume traffic flows. Low volume roads that are lacking shoulders can also benefit cyclists, often with only minimal improvements.

The four principal types of bicycle facilities include:

- **Bike lanes** Typically 4 to 6 feet wide
- **Paved Shoulders** 4 to 8 feet wide
- **Shared Roadways** Low volume local access roads & minor collectors with shoulders 0 to 4 feet wide; moderate to high volume collectors and arterials with 13 to 15 feet wide curb lanes
- **Shared use Paths** 5 to 14 feet wide separated, nonmotorized paths, and paved or unpaved

### **Bike lanes**

*While bike lanes may be unnecessary along most rural roads in Whatcom County, they are an attractive option for routes that receive substantial bicycle use. Bike lanes are generally reserved for arterials, popular touring routes, and approaches to regional parks and resorts. They have the benefit of a clear demarcation to alert motorists to generally slower bicycle traffic and designates the bikeway as maintained to transportation standards.*

### **Paved Shoulders**

*One of the most valuable facilities for bicycle transportation in Whatcom County, wide paved shoulders have the potential to lead bicyclists to nearly all major destinations reached by car or transit, while serving multiple users. For heavy bicycle traffic, multiple use can create conflicts. Shoulders must be clean, smooth and at least 4 feet in width (5 to 8 feet with heavier traffic or higher speeds).*

### **Shared Roadway: (low-volume rural roads)**

*Where traffic volumes are below 1,000 average daily trips, visibility is good, and truck traffic is light, bicycles can normally share the travel lanes safely with motor vehicle traffic.*

### **Shared use Path**

*While paved paths are desirable in some situations, unpaved shared use Paths have advantages too, including lower construction and maintenance costs and reduced user conflicts.*

*If pedestrian use is high, compacted crushed limestone provides a smooth, durable surface that helps discourage excessive bicycle speeds.*

The type of facility that may be appropriate for a particular route or segment of the countywide bicycle system depends on a number of factors. Consult WSDOT Design Manual 1020 for detailed definitions and selection criteria.

## 6.2 The Bicycle Transportation System

The bicycle transportation system envisioned by this plan is comprised of a variety of facilities that can vastly enhance the public's opportunity to travel within Whatcom County by means other than the single-occupant motor vehicle. An extensive, phased-in network of on- and off-street routes is recommended in order to serve the needs of bicyclists over the next 20 years.

"Primary" and "secondary" routes are defined as follows:

### Primary Routes

- Serve as principal links between and within communities.
- Provide key links to major destinations outside communities.
- Are generally located where greater demand is expected.
- Are intended to be built and maintained to a high standard.

### Secondary Routes

- Provide intermediate links within the system of primary routes.
- Help to ensure that people living or traveling outside of existing communities have the opportunity to utilize the system without having to cover great distances to access it.
- Are likely to experience less demand.
- May be developed to an appropriate alternative standard.
- Some secondary routes have high scenic or recreational value (something that should be carefully considered in the planning and design stages as individual projects are developed).

Facility types can be developed and maintained to one of several different standards depending on the nature of the route and its classification as primary or secondary. For example, off-street trails will often vary in width and surface treatment in order to accommodate the level and variety of use anticipated. The width of paved road shoulders will also vary depending on traffic volumes, truck traffic, overall pavement width, functional classification, and other factors, including how important the route is to pedestrians and other nonmotorized users.

The routes illustrated in the Proposed Bikeway Improvements map are the priorities of this plan and all are based on detailed corridor analyses, pavement suitability assessments, discussions with knowledgeable city and county park, planning and engineering staff, individuals having an interest in bicycle travel, and, most importantly, public and citizen committee input during the planning process. (Working maps and background data are available through the Whatcom County Parks and Recreation Department.)

## **A Note on the Countywide Road System**

Finally, the fact that a map has been developed that lays out a system of primary and secondary routes does not suggest that other routes should not be considered for bicycle use. Essentially the entire road system has some value to nonmotorized travel and reasonable improvements should be considered whenever any road, bridge, traffic control device or other traffic feature is modified or developed in the future. People tend to go where roads go, whether their means of getting there is by personal automobile, public transit, carpool, or a nonmotorized mode.

While one ultimate goal may be an entire road and trail system that is friendly to bicycles, focusing on a system of primary and secondary routes offers a practical and efficient way to set priorities for the near term.

### **6.3 Facility Recommendations**

A variety of facilities are recommended to provide for bicycle travel in Whatcom County. Paved shoulders and bike lanes are proposed where traffic volumes are higher and significant bicycle use either exists or is anticipated over the next decade. On rural collectors and arterials, six-foot wide paved shoulders will normally be adequate to serve the needs of bicycles and pedestrians, except where high traffic volumes, speeds or truck traffic suggest otherwise.

Where traffic volumes are low (under 1,000 ADT), shared roadways may be acceptable for nonmotorized use. Where sight distance, physical obstructions or other concerns exist, signing, pavement marking or other techniques may be necessary to enhance traffic safety.

In urban situations, designated bike lanes, paved shoulders, and wide curb lanes can accommodate most bicyclists. Shoulders and sidewalks will provide for much of the pedestrian use that might occur. Off-street facilities are also recommended, such as single-use and multi-use paths, as well as more elaborate braided trail systems that provide separate facilities for bicycles, pedestrians and/or equestrians. Motor vehicle access to trailheads will need to be accommodated at some locations.

Both on- and off-street facilities must be coordinated with other transportation modes such as transit and multi-modal facilities. Motor vehicle access to trailheads and parking areas should be provided. Whenever practical, off-street facilities should be designed for accessibility consistent with the Americans With Disabilities Act (ADA).

#### **Priority Projects: On-Street Routes**

##### *All Routes*

- Improve and/or widen shoulders, pavement edges.
- Increase shoulder sweeping frequency, particularly along primary routes.
- Install signs and pavement markings along existing primary routes and accident-prone areas as needed to enhance safety and usefulness of the system.
- Remove barriers or impediments to bicycle use.

*East Bakerview Rd (Meridian to Hannegan)*

- Provide bike lanes
- This route connects central retail areas to the Hannegan bike lane

*West Bakerview Rd/Airport Dr. (Marine Dr./CMT to Meridian)*

- Provide bike lanes
- Design for bicycle movements through intersections
- This route connects the airport and Coast Millennium Trail to central retail areas

*Birch Bay Dr (Pt Whitehorn Rd. to Birch Bay Village)*

- Maintain bike lanes for intermediate and advanced bicyclists and develop shared use path for pedestrians and beginner bicyclists
- This route is a key segment of the Coast Millennium Trail

*Marine Dr (Nooksack River. to Bellingham C/L)*

- Provide bike lanes from *Nooksack River* to Bellingham city limits.
- Provide alternate crossing over RR tracks or widen existing bridge.
- This route is a key segment of the Coast Millennium Trail

*North Shore Rd (Bellingham C/L to North Shore Trail)*

- Provide bike lanes or shared use path where possible along utility corridor
- This route will serve the North Shore community and is a key link to recreation areas around Lake Whatcom

*Portal Way (Blaine to Ferndale)*

- Provide bike lanes
- This route will provide commuter access between Northern communities and major employment centers

*Sunset Drive, Hwy 542 (Bellingham C/L to Hwy 9 South)*

- Provide bike lanes, existing shoulder width adequate
- This route will provide commuter access between Foothills communities and major employment centers

*Hannegan Road (Hwy 542 to Lynden)*

- Provide bike lanes, existing shoulder width adequate
- This route will provide connection between Lynden and Bellingham's major employment centers

*Birch Bay/Lynden Road (Harbor View Rd. to Lynden)*

- Provide bike lanes, existing shoulder width adequate
- This route will provide connection between Lynden and Birch Bay recreational areas, and link to the Coast Millennium Trail

#### *Coast Millennium Trail (various locations)*

- Provide bike lanes on all road segments of the CMT
- The CMT connects between Skagit County and the Canadian border.

#### *Tyee Dr (Roosevelt Rd. to Edwards Dr)*

- Provide bike lanes or shared use path
- Design for bicycle movements through border area.
- This route will provide North/South access for residents and the heavy tourists traffic

### **Priority Projects: Off-Street Routes**

#### *All Routes*

- Make minor improvements to accessible corridors to control drainage, prevent erosion and discourage unauthorized motor vehicle access.
- Consider separated facilities parallel to rural collectors if intersections and transition areas can be safely designed.
- Investigate opportunities to acquire abandoned railroad right-of-way for trail purposes. Promote rail-banking where lines may be considered for abandonment in the future.

#### *Bay-To-Baker Trail*

- Make minor improvements to accessible corridors to control drainage, prevent erosion and discourage unauthorized motor vehicle access.
- Boulder Creek to Glacier: Complete Phase I improvements. Submit for Phase II and Phase III grants to complete water crossings, parking, spur trails, trail surfacing, signing and amenities.
- Maple Falls to Boulder Creek: Consider subgrade improvements and temporary crushed rock surfacing for interim use of county-owned segments; secure access through or around missing link to make this section continuous. Apply for grants to acquire and develop this portion of the Bay-To-Baker Trail to a high standard suitable for pedestrian, equestrian and bicycle use consistent with the Master Plan.
- Complete the Bay-To-Baker Master Plan including a funding strategy for the entire project.
- Continue negotiations with WDNR, WSDOT and private property owners to acquire missing links throughout the corridor, including links to the Nooksack River Trail.

#### *Coast Millennium Trail*

- Complete Phase I implementation and develop future phases to optimize off-road segments. Pursue donations and funding opportunities for key segments such as the River Spur trail between Bellingham and Ferndale and the Point Whitehorn Bluff area.

#### *Nooksack River Trail*

- Identify dikes and levees most suitable for trail use, where public access could potentially be negotiated, and where such use will not be disruptive to residents, property or wildlife. Make general improvements to dike trails and access points as feasible.
- Coordinate trail planning with flood hazard management and basin-wide planning efforts underway in the Nooksack Basin.

- Negotiate agreements with the Whatcom County Diking Districts and private property owners for public use and surface maintenance of dikes and levees in the event that legal access can be secured. Dikes in the Marietta, Ferndale, Lynden, Everson, Nooksack and Deming areas all have strong trail potential.
- Identify publicly owned dikes and levees, secure funding as needed and begin improvements to make them accessible.
- Explore opportunities for trails in habitat conservation areas.
- Identify areas not suitable for public access or trail development.

## Secondary Projects

Secondary projects that could be future enhancements to the system include trails on Stewart Mountain, Black Mountain and around Baker Lake. These secondary projects should be evaluated for future priority in subsequent revisions to this plan.

## 6.4 Facility Design

This plan identifies priorities for routing and the types of facilities that should be provided in order to serve current and future needs for bicycle transportation in Whatcom County. Although some general design recommendations are made for each route, final design of facilities must be conducted at the time a specific project is scheduled for development.

Other design considerations may be equally important, albeit less obvious. For example, tree limbs, mailboxes and traffic signs should not be located where they may intrude into the path of bicycle or pedestrian traffic. Minimum bicycle parking standards should be adhered to for commercial, industrial, institutional and multi-family residential development. Construction activity adjacent to nonmotorized facilities should not damage or unnecessarily interfere with the use of such facilities. Numerous examples exist where project-by-project analysis is warranted prior to settling on an acceptable design.

### Making Decisions in Facility Design

The following four steps are recommended in designing facilities for bicycle and/or pedestrian use:

#### 1. Determine the type and extent of the facility to be provided.

Refer to route-by-route design recommendations in this plan, visit the site, then establish logical boundaries for the project area. Endpoints should tie into existing facilities, destinations or other planned routes whenever possible.

#### 2. Determine the desired width and surfacing

For on-street routes, review the *Washington Department of Transportation Design Manual, Section 1020*, which is available on-line at

<http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/DesignManual.pdf> and *AASHTO Guide for the Development of Bicycle Facilities (1999)*. Other relevant guidelines are also helpful to identify width and surfacing options for bike lanes, paved shoulders or shared vehicle lanes such as the bicycle compatibility index rating system available at the FHWA website, [www.hsrc.unc.edu/research/pedbike/bci/index.html](http://www.hsrc.unc.edu/research/pedbike/bci/index.html). In general, most bike lanes and paved shoulders should be a minimum of four feet wide, asphalt-surfaced, unobstructed and well maintained.

Coarse-grade chipseal (BST) treatments should be avoided on bikeways, if practical. A finer-grade chipseal may be acceptable on secondary routes if pavement edges can be kept free of loose gravel, debris and vegetation.

For off-street routes, a number of design sources should be consulted including, *Washington Department of Transportation Design Manual, Section 1020, 2001* and the *AASHTO Guide (1999)*, the *Washington State Trails Plan Technical Assistance Manual (1992)*, and *Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails* published by the Rails-to-Trails Conservancy. Primary off-street routes open to multi-use should normally be surfaced with compacted crushed rock or asphalt, and constructed to a minimum width of 10 feet (8 feet in less traveled areas, 12 to 14 feet in higher traffic areas).

### **3. Design intersections, accessories, and amenities.**

Intersections, transition zones and other areas where people can enter or leave the facility are critical and must be carefully designed in order to provide a reasonable degree of safety and convenience. Traffic signals and signing should be consistent with the MUTCD manual (*Manual of Uniform Traffic Control Devices*) developed by the Federal Highway Administration.

### **4. Prepare final drawings and specifications.**

Published guidelines and typical drawings do not address every detail that could arise in a given project. Project specifications, drawings and contract documents must be clear and concise to ensure that what is developed meets the objectives of this plan and the overall design requirements established for the project. However, some flexibility should be maintained as needed to adapt the design to unforeseen physical conditions once construction is underway.

The following list of guides, references and other resources provide direction for planning and designing facilities for nonmotorized transportation:

#### **Resources & Guidelines for On-Street Bicycle Facilities:**

- *Washington Department of Transportation Design Manual, Section 1020, 2001*
- *Guidelines for the Development of Bicycle Facilities, AASHTO, 1999*
  
- *Manual of Uniform Traffic Control Devices (MUTCD), Federal Highway Administration*
- *Bicycle Facility Planning & Design, Bicycle Forum handbook, 1993*
- "Selecting Roadway Design Treatments to Accommodate Bicycles" (draft), Federal Highway Administration, 1992
- Bicycle facilities course manual, Traffic Institute, Northwestern University

- ‘Balancing Engineering, Education, Law Enforcement, and Encouragement,” Federal Highway Administration, U.S. Department of Transportation, 1993
- *Pedestrian and Bicycle Transportation Plan*, City of Bellevue Transportation Department, 1993
- *Bikeway Planning & Design*, California Department of Transportation, 1990

## Resources & Guidelines for Off-Street Facilities

- *Washington Department of Transportation Design Manual*, WSDOT, *Section 1020*, 2001
- *Guidelines for the Development of Bicycle Facilities*, AASHTO, 1999
- 
- *Washington State Trails Technical Assistance Manual* (Interagency Committee for Outdoor Recreation, 1992
- “Trail Design Matrix”, Washington State Parks
- *Rails-to-Trails Design Manual*, Rails-To-Trails Conservancy, 1991
- *Trails for the 21st Century: Planning, Design, and Management Manual for Multi-Use Trails*, Rails-to-Trails Conservancy, 1993
- *Standard Specifications for the Construction of Trails*, U.S. Forest Service, 1984
- *Trails Management Handbook*, U.S. Forest Service, 1985
- *Bicycle Facility Planning and Design*, Bicycle Forum handbook, 1993
- Bicycle facilities course manual, Traffic Institute, Northwestern University
- “Trail Safety and Liability,” Charles Lennahan, US Office of General Council, Denver Colorado
- “Trail Safety and Liability: The Standard of Care,” Seymour Gold
- *Design Guide for Accessible Outdoor Recreation*, U.S. Forest Service and National Park Service, 1994

## Related Issues

Road standards and development standards should be revised, as needed, to accommodate bicycle travel in the design and development of subdivisions, business parks, shopping centers, employment centers and other development activities. For example, bicycle and pedestrian paths through or along the perimeter of proposed residential or commercial developments should be provided which interconnect with the regional bicycle transportation system.

Other requirements might address bicycle parking, facility design, surfacing, signing, and pavement markings. Development incentives, such as density bonuses in Urban Growth Areas and Small Towns and setback reductions should be made available to developers who include significant nonmotorized facilities in their projects.

The design of facilities should be consistent with AASHTO guidelines and other appropriate local, state and federal standards. Land owners, the business community, developers, community organizations, and concerned citizens should work together to develop priorities, plans, programs and funding strategies.

## **6.5 Safety, Education & Enforcement**

Safety, education and law enforcement are important elements of any successful nonmotorized transportation plan. The development of facilities, as important as it is, will not by itself tap the full potential for bicycle travel in Whatcom County. Safety and educational programs as well as enhanced law enforcement are needed to increase awareness of nonmotorized transportation opportunities, to improve safety, and to help resolve a variety of issues that concern bicyclists and motorists.

### **Safety & Education**

Studies in some communities have suggested that bicycle facilities are more frequently used and appreciated when programs that increase rider skill and awareness are also implemented. Educational programs that improve bicycling skills make less experienced riders more comfortable sharing roadways and road shoulders with motor vehicle traffic.

However, it should be recognized that the youngest riders may be unaware of basic traffic laws, while casual or intermediate bicyclists may not have developed the skills needed to ride safely along challenging streets or through busy intersections. The County should support efforts to address such concerns.

Appropriate signing and pavement markings are another means of improving public safety and should be utilized where appropriate.

### **Motorist Awareness**

Bicycle and pedestrian safety and education programs should be made available to motorists as well. As evidenced by the common experience of nonmotorized travelers being harassed, frightened or cut off by motor vehicles, it is clear that some motorists are unaware of the rights of others to use the public right-of-way in a lawful, courteous manner.

These and other factors are important contributors to automobile collisions involving bicycles and pedestrians in Whatcom County and elsewhere. Education programs should teach motorists to anticipate nonmotorized users and to yield the right-of-way to them, when appropriate.

One key method of increasing motorist awareness used in other states is the inclusion of questions on driver's license exams and in driver's training courses that address bicycle/pedestrian issues, and typical safety problems that might be encountered by the motorist. The County could encourage legislative or administrative action at the state level to help bring this about.

### **Local Initiatives**

Acting on similar concerns, some schools, agencies, organizations, and experienced adult riders in Whatcom County are already helping to educate children and adults on traffic laws and bicycle/pedestrian safety. Bicycle safety and helmet awareness have been emphasized by schools, clubs, civic groups and police departments in several communities.

Park and recreation departments occasionally offer classes on safe bicycling and have helped organize walks and rides for kids and adults. All of these local initiatives can be encouraged and supported by Whatcom County and city departments at little expense to the taxpayers.

Other educational efforts might focus on encouraging people to think of bicycling as an alternative to the use of single-occupant motor vehicles (SOVs). Many of the problems associated with traffic congestion, road development, urban sprawl, air quality and other concerns are directly attributable to high rates of SOV use locally and throughout the U.S. Nonmotorized modes offer low-cost, environmentally friendly, and personally rewarding alternatives. Local educational programs should emphasize these benefits.

Employers are also in a good position to encourage their employees to walk or ride to work by offering incentives to those who may be willing to leave their automobile at home on occasion. In some areas of the country, monetary compensation has been made to employees who walk or bicycle to work, reducing the need for automobile parking and maintenance. Larger employers should be encouraged to provide secure, covered bicycle parking and shower facilities at the workplace.

Educational programs offered through the workplace increase employee awareness of the benefits of bicycle commuting. Where commuter distances are too great, combining bicycling with van pools and transit busses equipped with bike racks can also be encouraged. Personal fitness, environmental quality, and savings on construction and maintenance of roads and parking lots are important benefits of such programs.

Walking and cycling have other practical advantages over automobiles, especially in congested areas or where parking facilities are limited. Ferry terminals, downtown business districts, public parks, waterfront areas and other areas that attract people all have limits to the number of automobiles that can be accommodated. Walking or bicycling to such places lessens the impact on streets and parking areas and allows easy access to a variety of activities and events. Informing people of these advantages can also help increase ridership.

## **Law Enforcement**

Traffic laws help ensure the safety of cyclists and pedestrians as well as automobile drivers. Enforcement of routine traffic violations such as wrong-way bicycle riding, bicyclists running stop signs, or the failure of motorists to yield to pedestrians can improve compliance with the laws and, over the long run, decrease the likelihood of collisions between automobiles and nonmotorized travelers.

While strict enforcement may be desirable for potentially dangerous violations and repeated offenses, creative approaches to increasing awareness of traffic laws may have a more positive effect than heavy-handed enforcement. Inexperienced cyclists, for example, may not be aware of certain laws, either due to their youth or to being ill-informed by others. Joint presentations by police and cycling groups in public schools can help clarify the rules for young people.

Whatcom County law enforcement officials as well as city police and State Patrol officers contribute in many ways to the well-being of the traveling public as well as the larger

community. Their efforts to improve bicycle and pedestrian safety should be recognized and supported by all user groups.

## **6.5 Bicycling & Intermodal Transportation**

### **“Intermodal” & “Multi-modal”**

In recent years, a new emphasis on creating multi-modal transportation systems has emerged regionally and throughout the U.S. Nonmotorized transportation is one part of this new focus. *Multi-modal* transportation involves all modes of transportation, including bicycling, pedestrian travel, rail, transit, carpooling, air and water travel, and other modes. *Intermodal* opportunities provide potential links between transportation modes. Together they can help provide an efficient transportation system for the residents of Whatcom County.

Pedestrians and cyclists benefit from safe and direct connections to rail, public transit, carpools, ferries and airports. Many forms of intermodal transportation are available in the county. Workers, students and others ride bicycles, walk to transit stops, or utilize nonmotorized transportation to meet carpools or catch ferries.

As the county’s multi-modal transportation system develops, including facilities for bicycling and reestablishment of Amtrak rail service between Seattle and Vancouver, the needs of residents to link the various modes will likely increase. These connections need to be carefully planned and designed for efficiency and safety. Ease in connecting to other modes of transportation will also tend to encourage bicycling.

### **Roads & Highways**

The development and maintenance of road and highway facilities should be integrated with the needs of cyclists.

The majority of roads in Whatcom County are currently used by bicycles and should be maintained or improved to safely accommodate them. A regular program of maintaining and sweeping road shoulders may be the single most important step the County can take to enhance bicycling in the region. As soils, gravel and debris collect on road shoulders, bicyclists tend to ride closer to the vehicle travel lane which reduces their margin of safety as well as that of motorists who swerve to avoid them.

The needs of bicyclists should be considered in plans and designs for roads and roadside facilities. Marked highway crossings, for example, should be provided where primary off-street bicycle routes must cross the highway at a point other than a controlled intersection. Highway rest areas and scenic turn-outs can benefit cyclists as well. Restrooms, picnic areas, and tourist information at the southbound 1-5 Custer Rest Area, for example, could be linked to Portal Way to provide safe access to the area by bicyclists.

Bridges also need to be designed or, in some cases, retrofitted to safely accommodate bicycle traffic. Paved shoulders or separated paths with barriers will generally provide an adequate crossing.

Long distance commuters can more easily combine bicycling with carpooling or transit if park-and-ride lots are equipped with secure parking or storage for bicycles. Covered facilities that protect bicycles from theft, weather, and vandalism are optimal. Such facilities will encourage bicyclists to make use of multi-modal transportation options.

Amtrak has resumed service in the Seattle to Vancouver corridor and added a second run each day in 1998. By connecting population centers, Amtrak serves as an alternative to the private automobile for some travelers. Amtrak has made strong efforts to safely accommodate and encourage the use of its system by cyclists.

The only stop in Whatcom County is at the station adjacent to the Alaska Ferry Terminal in Fairhaven. The station is an excellent intermodal transportation site in the county. The Port of Bellingham should consider opportunities to link nearby bicycle facilities to the Amtrak station, the Alaska Ferry Terminal and Harris Avenue. A covered bicycle rack has been incorporated into the new station. Additional safe, convenient and signed bicycle approaches to the site, convenient provisions for loading and off-loading, and further optimization of secure, weather-protected bicycle parking should be completed by the Port. Information on bicycle routes, opportunities, and intermodal facilities in Whatcom County and the surrounding region should also be provided at the station.

Amtrak allows bikes on trains and has provided the Cascades route with baggage cars specially designed for bikes. To improve bicycle access to rail service, Washington Department of Transportation officials have incorporated multi-modal facilities into stations, including the accommodation of bicycles without having to package or break them down.

The accessibility of intermodal bicycle/train trips has been improved by allowing bicycles to be loaded by riders onto cars which are specifically designated for such use. This allows residents and visitors alike to quickly and easily transport bicycles to and from the communities along the rail corridor. This convenience is an important advance for encouraging cyclists to use the rail system.

## **Public Transit**

Public transit should encourage and provide intermodal links for bicycles. Currently, the Whatcom Transit Authority (WTA) equips all buses with bicycle racks that can carry two bikes at a time. Bicycling combined with bus rides for the longer travel sections has become so popular that many bicyclists are denied rides when the racks are full. WTA should actively pursue higher capacity bicycle facilities to leverage this excellent service into a very significant contribution to the state Commute Trip Reduction program.

There are currently no bike racks or designated parking facilities at WTA bus stops. Bicycle parking facilities should be considered at strategic locations to further encourage cycling. Secure bicycle parking will help encourage area residents to use a bike/bus commute option, especially where distances to bus stops are too great for walking.

Intercity bus service (Greyhound) presently connects Bellingham to Blaine, Vancouver, B.C., Seattle, Everett and Mt. Vernon. The Greyhound terminal should provide secure bicycle parking facilities.

National bicycle advocacy organizations have encouraged Greyhound and other carriers to provide more convenient accommodations for bicycles. Currently, bicycles must be broken down and boxed for transport aboard Greyhound.

## **Ferries**

Ferries should give bicycles (and pedestrians) priority for loading and off-loading. Information on bicycling opportunities in Whatcom County should be provided at the Alaska Ferry Terminal. Safe approach routes to ferries are also important.

On the Alaska Ferry, bicycles can be brought onboard and stored on the car deck or locked to the railing at other locations. A locked storage area on board would increase bicycle and luggage security during the voyage. Bicycle racks are available on the grounds of the Alaska Ferry Terminal.

Other passenger ferries or boat service that handles foot traffic should accommodate bicycles whenever practical.

## **Bellingham International Airport**

The Bellingham International Airport can accommodate bicyclists who wish to take bikes onboard airplanes. Bicycles must be packed in boxes and loaded as luggage. Boxes can be ordered ahead of time through the ticket counter for a small fee or sometimes at no charge.

The Port of Bellingham should provide secure and weather-protected bicycle parking facilities for travelers and airport employees and encourage their use. Overnight bicycle storage should also be considered. A few bicycle lockers and bicycle rentals could be provided if demand warrants. Information on bicycling opportunities in the county should be provided at the airport terminal.

## **7. Funding & Implementation**

The Bicycle Plan's success will be measured by whether Whatcom County can implement the Plan's recommendations. While some of the recommendations require relatively low cost policy, education, or enforcement changes, those that involve acquisition of Right of Way and construction will be more expensive. Hence, complete implementation of this plan is expected to take 20 years.

Funding sources identified here represent a sampling of the primary funding sources available to the County for this work. The established priorities allow for the gradual development and maintenance of bicycle facilities and related actions, with preliminary focus on implementing the lowest cost items (low hanging fruit) while making diligent progress toward the milestones of the more complex, longer range items, which are the new, inter-community corridor connections.

This section addresses project priorities in terms of the Capital Facilities Plan adopted by Whatcom County as required under the Growth Management Act. This is followed by a discussion of funding, acquisition, development, maintenance and administration.

## **7.1 Priority Projects/Capital Facilities**

Table 7-1 represents the Bicycle/Pedestrian Advisory Committee's high priority recommendations over the next six years. These recommendations are advisory until incorporated into either the Six-Year Transportation Improvement Program (TIP) or Six-Year Capital Improvement Program (CIP). The County should seriously consider the on-street routes in Table 7-1 when updating the Six-Year TIP. The County should seriously consider the off-street routes in Table 7-1 when updating the Six-Year CIP. Prior to inclusion in either the TIP or CIP, the County and Bicycle/Pedestrian Advisory Committee will work together to determine the costs of these projects in greater detail so that the fiscal impacts to the County can be ascertained. Planning and Development should review all new permit applications for impact to this plan and to identify new nonmotorized transportation facilities and links needed as major developments are planned. Project priorities should be reviewed annually in consultation with the Bicycle Pedestrian Advisory Committee.

### **Recommended Funding Level**

The Bicycle Plan identifies both near-term (1-6 years) and long-term (7-20 years) priorities. In 1994, an annual funding level of \$575,000 was recommended, of which 60 percent, or about \$350,000, was intended to come from state-administered grant programs such as Federal Highways funds (TEA-21) or Recreation grants (IAC). Whatcom County was expected to generate the balance of 40 percent, or about \$225,000 annually.

In 2001, Whatcom County committed to designate \$250,000 annually to construction of miscellaneous shoulder widenings for bicycle and pedestrian enhancements. This indicates good faith on the part of the county to implement bikeway improvements. If this funding source is derived primarily from property taxes, rather than gas tax, it may be appropriate to apply these funds for bicycle and pedestrian projects that are off-road.

Investment in bicycle facilities represents one of the most cost-effective uses of public funds, providing the public with a high return on its investment. However, funding of this plan is expected to be lower in the first two years, with increases contingent on diligent planning and active pursuit of grant funding.

**Table 7—1  
Priority Projects 2003 - 2009**

<b>On-Street Routes</b>	<i>Enhancement Needs</i>	<i>Project milestone target for Y/E 2004</i>	<i>Agency</i>	<i>Funding Sources</i>	<i>2004-2005 costs (\$K)</i>	<i>2006-2007 costs (\$K)</i>	<i>2008-2009 costs (\$K)</i>
E. Bakerview Rd from Meridian to Hannegan	Bike lanes. Some shoulder widenings, particularly within Bellingham city limits	Planning, PE	B'ham and Whatcom Co. Public Works	WCPWM, WCRF, B'hamPW	-0-	64	-0-
W. Bakerview Rd./Airport Dr. from Meridian to Marine Dr./CMT	Bike lanes	Signing & painting	Whatcom Co. Public Works	WCPWM	6	-0-	-0-
Birch Bay Dr. from Pt. Whitehorn Rd. to Birch Bay Village	Bike lanes and shared use path	Planning	Whatcom Co. Public Works; Flood Division	TEA-21, WCRF, IAC, CZM	50	150	300
Marine Drive from Nooksack River to Bellingham city limits	Bike lanes and bridge improvements (connect to CMT/Nooksack River Trail). To be completed in conjunction with roadway reconstruction project.	Planning, PE	Whatcom Co. Public Works	WCRF	10	190	-0-
North Shore Road from Bellingham city limits to North Shore Trail	Bike lanes (4.2mi) and/or separated shared use path where possible along utility corridor (2mi)	Planning	Whatcom Co. Public Works	WCRF, TEA-3x	10	560	700
Portal Way from Blaine to Ferndale	Bike lanes, after county reconstruction	Planning	Whatcom Co. Public Works	WCPWM	-0-	-0-	22
Hannegan Road from Hwy 542 to Lynden	Bike lanes	Signing & painting	Whatcom Co. Public Works	WCRF	22	-0-	-0-
Birch Bay/Lynden Rd. From Lynden to Harbor View Rd.	Bike lanes	Signing & painting	Whatcom Co. Public Works	WCRF	24	-0-	-0-
Sunset Dr. (Hwy 542) From Hannegan Rd. to Hwy 9 S.	Bike lanes	Signing & painting	WSDOT	WSDOT Maint.	26	-0-	-0-
Coast Millennium Trail, Misc. on-road segments (TBD, tentatively Unick/Douglas Rd. to Pt. Whitehorn)	Bike lanes, some segments after county reconstruction	Signing & painting	COG, Whatcom Co. Public Works	WCRF, TEA-21	50	10	-0-

Tyee Dr. From Roosevelt Rd. to Edwards Dr.	Bike lanes or shared use path, after county reconstruction		Whatcom Co. Public Works	WCRF, TEA-3x	5	-0-	4
<b>Off-Street Routes</b>							
Coast Millennium Trail, Misc. off-road segments, Primarily Marine Dr. to Ferndale, Point Whitehorn Bluff Trail and Birch Bay to Semiahmoo	Shared use paths	Planning, PE	COG, Whatcom Co. Public Works	WCRF, TEA-21, IAC, TEA - 3x	50	2250	-0-
Bay-To-Baker Trail From Little Squalicum Beach to Shuksan Arm	Shared use path	Planning	COG, Whatcom Co. Public Works	WC, TEA - 3x, land donations	500	500	8000 (total cost of project Approx. \$15M assuming no land donations)
Point Roberts Trails, Interconnecting loops around Monument Park and Lily Pt.	Shared use paths	Planning	COG, Whatcom Co. Public Works	IAC, TEA - 3x	10	200	1200
Nooksack River Trail From Marine Dr. to Kendall	Shared use path and bike lanes as required	Planning		IAC, TEA - 3x, land donations	10	1000	4000 (total cost of project Approx. \$10M assuming no land donations)
Lookout Mountain (Galbraith area) Trails, North/South connecting Whatcom Falls Park to Lake Padden, East/West connecting Lake Louise Rd to Yew St. and Park Department properties.	Shared use paths	Planning	COG, Whatcom Co. Public Works, Bellingham Parks	WC & B'ham, IAC, Land donations	100	250	250

Projects listed in the table above show total estimated costs unless otherwise noted. Costs in Table 7-1 are conceptual estimates and will be further defined during preliminary engineering phases.

Note that the above costs assume that bike lane installation on roads with adequate shoulder width will include painting and signing only. The county may also adopt a policy of routinely installing recessed reflectors to better delineate bike lanes from motoring lanes. Costs for recessed reflectors are not included above.

Also note that there are additional opportunities to lower the costs that are projected above, by utilizing existing utility corridors and developing partnerships with land trusts.

Partnerships with other local entities such as the health care community and school systems should also be expanded. Health care professionals have a keen interest in providing attractive physical activity opportunities for all county citizens, since encouraging such healthy lifestyles has been shown to lower overall health care costs for society. The County Health Department should embrace this plan as critical to preventing childhood and adult obesity and diabetes, with at least the same vigor that is devoted to tobacco education.

Schools should take an interest in this plan, not only to help replace students' daily physical activity lost by the decreased physical education programs, but also to provide internships for students to work on civil projects and participate in "Safe Routes to School" enhancement projects.

It is the intention of this plan to provide a nonmotorized transportation system without being a significant burden to the local taxpayers. However, investing the time to develop detailed project proposals, ready for grant funding applications and applying for grant funds will be required as a first step in plan implementation. This preparation during the next two years will reap very big rewards.

Current policy for County road reconstruction includes construction of a 4' minimum shoulder. Therefore, providing a bike lane with appropriate signage and striping can normally occur as road reconstruction takes place for those sites identified as priorities in this plan for bike routes. Public Works should routinely be implementing this roadway plan during reconstruction projects as their normal course of business. This approach makes the on-road construction costs very affordable.

Off-road projects such as the Bay-To-Baker Trail, segments of North Shore Rd., and the Nooksack River Trail may be developed separately from or in conjunction with the road program, but do need to be in the capital facilities plan.

Sections of trails adjacent to schools, such as the Bay-To-Baker Trail between Paradise and Kendall elementary, and Chain of Trails segments by Acme could be partially funded by "Safe Routes to School" grants.

It should also be recognized that bikeway construction projects have a beneficial impact to the economy, not only by promoting tourism, but also by employing the construction and trades industry as new infrastructure is being built.

Both on-street and off-street facilities are desirable to serve the spectrum of bicycle transportation needs. To ensure these road projects serve the needs of bicyclists, routes should be properly signed, shoulder parking and other obstructions should be prohibited, and regular maintenance, including routine shoulder sweeping, should be provided.

In recognition of concerns to provide access for other users such as pedestrians and agricultural equipment, signed shared shoulders may be implemented on some of these routes in the near term in lieu of bike lanes. The 20-year plan is to provide bike lanes or shared use paths along

these routes where practical, in accordance with the latest WSDOT and AASHTO standards, subject to appropriate funding. Bike lanes, which provide preferential use zones, will become increasingly important as the county population infills and traffic increases. Roadway segments that have a higher bicycle use such as along the Coast Millennium Trail, should be categorized as bike lanes as a higher priority.

To administer grants, project development, volunteer efforts and other tasks under this Plan, a new planning or technician-level staff position should be established. Due to the transportation and recreation nature of bicycle facilities, design issues, and funding sources, the position should be shared between Planning, Public Works and the Parks and Recreation Departments.

## 7.2 Funding Sources

Funding for the facilities recommended in this plan is available from a number of federal, state, regional and local sources. These are summarized in the following pages. Since 1992, the principal funding source for nonmotorized transportation in Washington State has been the Transportation Enhancement Program administered by the Washington Department of Transportation. Both nonmotorized transportation and multi-modal projects qualify.

Unfortunately, the opportunity for the county to get federal TEA-21 funding has expired. TEA-21 reauthorization is in progress and is expected to contain new funding opportunities for nonmotorized transportation projects. Although TEA-21 reauthorization has not been formally named at this time, for planning purposes this document refers to the reauthorization as TEA-3x.

To provide the local funding share for these bicycle enhancements, more than \$50,000 to \$60,000 each year is available from the Paths and Trails Reserve Fund (dedicated state gas tax money intended for bicycle/pedestrian projects). In 1994, The County Council increased the Paths and Trails Reserve Fund by raising the percentage of motor vehicle fuel tax revenues received from the state to be dedicated to this fund to two percent.

Competition for state and federal funds is keen. Nearly all grant programs require local jurisdictions to assume a substantial share of project costs, so local funding mechanisms must also be considered. Additional local funding could be made available from sources including:

- Parks and Recreation,
- Conservation Futures Levy (the levy may be limited to acquisition of off-street corridors).
- Bond issues
- Special levies
- Revamping the distribution of county road funds,
- Sale of surplus properties
- Assessment of impact fees on new development.

For off-street facilities where recreation or environmental values are substantial, the Washington Interagency Committee for Outdoor Recreation (IAC) administers several grant programs funded by state and federal sources. The major funding sources at IAC are:

- Land and Water Conservation Fund,
- Non-highway and Off-Road Vehicle Activities program (NOVA), and
- Washington Wildlife and Recreation Program (WWRP).

These sources, particularly the WWRP, will be useful in the development of the Bay-To-Baker and Nooksack Trails, and other projects. IAC grants require that the County have an up-to-date Comprehensive Parks and Recreation and Open Space Plan. In 2002, the most recent such plan for Whatcom County had been completed in 1989.

Potential funding sources in the private sector represent an important local resource. Donations can take the form of:

- Land,
- Easements
- Rights-of-way,
- Contributions of expertise,
- Labor
- Materials

Many businesses, organizations and individuals have helped Whatcom County raise critical funds for matching grants.

In summary, there is a wide array of funding sources available for funding this plan. Those sources discussed above are considered the most promising. Perhaps the biggest steps towards plan execution are identifying the best preliminary project design and pursuing the various funding sources available. These steps should not be delayed as the county population increases and rights of way become costlier.

Detailed discussion of all the potential funding sources for this plan follow.

## **Federal Sources**

### *TEA-21 (and future iterations)*

A variety of transportation-related grants and funding programs under TEA-21 (the Transportation Equity Act for the 21<sup>st</sup> Century) offer significant sources of funds for nonmotorized transportation projects in Whatcom County. The act requires states to spend a portion of the federal transportation dollars they receive on facilities and enhancements that go beyond simply building new roads or motor vehicle lanes. Grants are administered through the Washington Department of Transportation. The most promising sources for Whatcom County are the Surface Transportation Program (or STP, which includes funding for “transportation enhancements”), the National Highways Program, the Federal Lands Highway Program, and the Scenic Byways Program, all of which support nonmotorized modes.

The **transportation enhancement grant** program, is one of the more readily available funding sources for nonmotorized transportation. Funds are distributed by state, regional and metropolitan planning organizations and may be used for projects like rail-trails, bikeways, pedestrian facilities, rail corridor acquisition, scenic and historic preservation and for other transportation-related purposes.

The state is required to distribute at least 10% of the funds expended in the Surface Transportation Program (STP) on projects such as bike facilities. The state has the flexibility to designate a higher percentage of funds to this purpose, if it chooses. Local jurisdictions must provide a minimum 20% match on enhancement grants for bicycle, pedestrian or equestrian facilities. The County could direct other STP funds to nonmotorized transportation projects and could submit proposals for statewide competitive funds which support creative, multi-modal solutions to significant transportation challenges.

#### *Federal Aid Bridge Replacement Program*

This is a competitive program administered by WSDOT that provides 80% federal funding for replacing deficient or obsolete road bridges. Retrofitting of older bridges, such as the Marine Drive/BNSF bridge, with cantilevered bike lanes or pedestrian walkways has not yet been approved as a use of these funds.

#### *Land & Water Conservation Fund (LWCF)*

The LWCF comes from federal appropriations administered in Washington State by the Inter-Agency Committee for Outdoor Recreation (IAC). Funding levels have been supplemented in recent years by payments from off-shore oil drilling interests.

#### *Technical Assistance Programs*

The National Park Service Rivers and Trails Conservation Assistance Program provides technical support (not funds) for planning and design of trails and greenways.

The Washington Department of Transportation provides technical support for bicycle safety and education programs, and facility design and construction. WSDOT Sustainable Communities department works closely with the State Bicycle Pedestrian Coordinator to improve bicycling conditions throughout the state.

The Bicycle Alliance of Washington offers technical assistance and strategic advice about development of trails and bike facilities.

IAC provides general information on programs, funding, technical resources, and agency and organization contacts.

The National Center on Accessibility has published two guide books for development of trails and recreation facilities accessible to people in wheel chairs or with other mobility limitations.

#### *Direct Appropriations*

Congress appropriates money directly for certain projects and Whatcom Council of Governments has worked to ensure that federal officials are aware of the unique resources and needs of Whatcom County.

### *Community Development Block Grants (CDBG)*

These limited funds are available through the Federal Department of Housing and Urban Development for projects which benefit low and moderate income households and community development projects. Funds may be used for development but not for maintenance and operations.

## **State Sources**

### *Washington Wildlife and Recreation Program (IA C)*

The WWRP is a major source of recreation and habitat conservation money made available by the Legislature. The program funds trail acquisition and development and other projects such as parks and water access which may include trails.

### *NOVA (IAC)*

NOVA funds are appropriated from a portion of the motor vehicle fuel tax and off-road vehicle permit fees, and are available under certain circumstances for acquisition and development of pedestrian and equestrian trails, as well as off-road vehicle (ORV) trails and facilities. Up to 100% funding is available, depending on the project.

### *Motor Vehicle Fuel Tax*

To support the construction, operation and maintenance of local transportation projects, 22.78% of fuel taxes collected by the state are disbursed to counties (roughly twice what is allotted to cities). These funds can be supplemented through a local option fuel tax, which can also be applied to policing roads. Whatcom County dedicates 2% of this tax to provide a source of local matching dollars.

### *Rural Arterial Program/County Arterial Preservation Program*

These are state funds allocated to counties for rural arterials.

### *Public Works Trust Funds*

The PWTF provides state-administered low interest loans for public works projects.

### *Aquatic Lands Enhancement Account (WDNR)*

Administered by the Washington Department of Natural Resources, these funds are available for the acquisition and development of water-oriented recreation or public access projects including trails. A 25% local match is required.

### *Coastal Zone Management grants (WDOE)*

Washington State Department of Ecology offers small grants for shoreland trails and public access projects with a 50% local match.

### *Timber Excise Tax*

Counties can tax timber harvesters in order to collect a portion of the 5% state timber. Revenue can be used for a wide range of purposes.

### *Community Economic Revitalization Team (Wa-CERT)*

Wa-CERT offers grants and low interest loans to jurisdictions who wish to develop transportation projects related to private development.

### *Direct Appropriations*

The State Legislature occasionally appropriates money directly for certain projects.

### *Cooperative Agency Funding*

Cities, counties, districts, state, federal or tribal agencies and nonprofit organizations may work together creatively to generate funding for a variety of uses.

## **Local Sources**

### *General Funds*

General funds are those appropriated by local government and include property taxes, local option sales taxes, utility taxes, general state-shared revenues, business license fees, public works trust funds, special purpose district revenues, and other sources. General funds may be used for a variety of needs including public transportation and recreation.

### *Whatcom County Road Fund*

The County road fund is primarily derived from local property taxes, a portion of the state motor vehicle fuel tax distributed to cities and counties for building and maintaining the road system, and from grant programs administered by the state. The fund is available for on-street bicycle and pedestrian facilities.

### *Development Impact Fees*

Impact fees may be imposed on development activities for improvements that are related to a proposed development and which reflect the project's impact or cost to public facilities or infrastructure. Whatcom County does not impose impact fees on development. Fees may be collected for transportation or recreation-related impacts and could be applied to needs that are identified in the Bicycle Plan.

### *Development Permits/Impact Mitigation (SEPA)*

Nonmotorized facilities or financial contributions may be required as a condition of approval of development permits to ensure compliance with public policies and regulations, or to mitigate transportation and environmental impacts associated with the project. In many instances, specific conditions can be negotiated to better serve the needs of the developer and the public. Linear developments

such as roads, utility lines and other projects fronting streams and water bodies should be carefully reviewed. They may offer significant corridors for local and regional nonmotorized travel. Land use regulations and development standards may impose requirements for access, circulation, bicycle parking and other improvements.

#### *Conservation Futures Levy*

Under RCW 84.34.210, the County may levy as much as 6.25 cents on every \$1,000 assessed valuation, without voter approval, to generate a modest amount of revenue for land acquisition, including parks, trail corridors, and other recreation/open space areas. The levy can be short or long term but may not be used for development.

#### *Bond Measures*

Bonds are either voter approved or passed by the local legislative body. Voter approved bonds increase property taxes in order to pay the debt incurred and usually require 60% voter approval. Revenue bonds are normally paid from funds generated by an income-producing activity rather than by taxes. Councilmanic bonds, authorized by the legislature, do not increase taxes. Bond issues can be structured to be collected over a short or long period of time.

#### *Real Estate Excise Tax (REET)*

REET is a tax on the sale of property (up to 1/2 of 1%) which can be used to pay for projects identified in the capital facilities plan.

#### *Special Levies*

These include the acquisition of funds through taxation usually involving property taxes. The approval of 60% of the voters is normally required to pass a special levy.

#### *Paths & Trails Reserve Fund*

RCW 47.30 requires local jurisdictions to reserve at least 1/2 of 1% of fuel tax revenues for transportation-related bicycle, pedestrian and equestrian facilities or for planning and design services.

#### *Public Works Trust Fund*

The PWTF provides low-interest loans from the Washington Department of Community Development which can be used for roads, bridges and capital improvement planning.

#### *Transportation Benefit District*

Two or more jurisdictions may cooperate as a district to levy a voter-approved property tax to fund transportation projects.

#### *Special Assessment Debt*

Bonds can be financed through Local Improvement Districts (LID) or Road Improvement Districts (RID) which collect fees from developers based on the level of benefit realized.

#### *Transit Tax*

Whatcom Transportation Authority have levied a sales tax to support WTA bus service operations, with voter approval, in 2002.

#### *Hotel/Motel Tax*

Proceeds can be used for tourism-related and other projects that enhance opportunities for nonmotorized travel.

#### *User Fees & Tolls*

Fees may be collected locally from the user of a public facility. Parking, entrance, registration and program fees are among those which may be collected. Tolls are generally intended to pay off construction bonds.

#### *Local Vehicle License Fees*

By referendum, counties can collect additional license fees for the benefit of nonmotorized transportation (RCW 82.80.020). Revenues are shared between cities and the county.

#### *Street Utility Tax*

Proceeds can be used to pay for maintenance of nonmotorized transportation facilities.

#### *Commercial Parking Tax*

Also by referendum, this tax can be levied for transportation needs related to commercial parking.

#### *Proceeds from sale of surplus property*

Surplus property may be sold to generate funds for land acquisition or other needs.

#### *Franchise Agreements*

Franchise agreements with utilities and other entities can include a provision for nonmotorized use of a site or corridor.

#### *Health Grants*

Small grants are available under a variety of federal programs that can help pay for facilities which benefit public health.

#### *Municipalities*

A variety of revenue sources are available to incorporated cities in much the same fashion as they are described above for Whatcom County.

## Private Sources

### *Private Contributions*

Business, organization and individual donations of money, property, materials or volunteer services are significant resources for trails and other nonmotorized transportation projects. Labor-intensive volunteer efforts such as clearing vegetation or planting trees and shrubs along trail corridors have provided major contributions to projects such as stream habitat enhancement or Bellingham Greenways trail maintenance. The value of volunteer time can be used as an in-kind local match for grants.

### *Land Exchanges*

Public-private land exchanges can be considered under a variety of circumstances. An undeveloped public right-of-way, for example, might be exchanged (vacated) for a more desirable corridor of similar value nearby for the benefit of nonmotorized transportation.

### *Foundation grants to nonprofit organizations*

As government sources of funding have become more competitive, private foundation grants have proliferated and are an important source for trail projects. Encouragement of bicycle use accords with the aims of a wide range of foundation goals including energy conservation, environmental protection, obesity prevention, health maintenance, and community development. Below are a few of the many foundations that have funded trail and bike projects:

- Robert Wood Johnson foundation (health)
- Bikes Belong (trails)
- W. Alton Jones Foundation (energy conservation)
- University of Washington Center for Public Health (obesity)
- Diabetes Foundation (trails)

## 7.3 Acquisition, Development & Maintenance

The vision of this plan cannot be achieved without a true commitment to funding and implementation strategies for bicycle transportation. Funding has a much greater chance of success if priority projects are identified in the county's Capital Facilities Plan for transportation or recreation-related projects. Funds available to the County for use in developing bicycle facilities should be reserved for priority projects identified in the Bicycle Plan.

Once funded, projects can be implemented by agencies and department staff assigned those responsibilities. In January, 2003, for the first time since its inception, the Transportation Technical Advisory Committee to the Regional Transportation Policy Board approved inclusion of a trail project in the list of projects to be forwarded by the Whatcom County lobbyist at the federal level. This is a beginning example of the type of institutionalization that will be required by County departments in order to ensure implementation of this plan.

## A Challenge for Off-Street Facilities

Several important off-street projects identified in this plan may require land or right-of-way acquisition prior to pursuing funds for development. At times, such efforts can be highly contentious and difficult to carry out. While opposition to trail projects, particularly in rural areas, can pose a significant challenge to local trail planners, the difficulties can be surmounted by dealing with the issues fairly and effectively.

Communities around the country have found that by involving adjacent landowners and others in a frank discussion of the issues, real solutions begin to emerge. A landowner who at first opposes a project may become an ardent supporter of the trail after its construction if the County shows a willingness to address all of the legitimate issues raised, many of which concern the privacy and security of adjacent residents.

Strategies for working with landowners and trail opponents are spelled out in a recent book entitled *Successful Rail-Trails: An Acquisition and Organizing Manual for Converting Rails into Trails* (1993) and published by the Rails-to-Trails Conservancy in cooperation with the National Park Service. The book suggests the following ten ways to work with people who may be opposed to trails:

- Reach out to adjacent residents.
- Listen to what they are saying.
- Find allies among adjacent residents.
- Give adjacent residents a role in the project.
- Invite former rail-trail opponents to speak to your future trail neighbors.
- Bring in a third party to help build consensus.
- Act in a positive, constructive way.
- Work with as many landowners and opponents as possible.
- Reframe the discussion from “railroad corridor” to “trail.”
- Work hard for favorable reviews in the media.

Many studies have been done concerning the attitudes of adjacent landowners before and after a major trail was developed, and consistently, the results have been favorable for trail development. An important study on the impacts of rail-trails was conducted by the National Park Service in 1992.

On-street facilities are usually not faced with the same kinds of challenges, except where insufficient right-of-way exists to widen shoulders for nonmotorized use. The benefits of shoulder widening to enhance the safety of both motorized and nonmotorized users may help convince landowners of the need for additional right-of-way. Condemnation should not generally be relied on for on- or off-street right-of-way acquisition, unless a “friendly condemnation” can be negotiated with a landowner.

While acquisition and development of facilities is needed throughout Whatcom County, substantial benefits to bicyclists would be realized through an aggressive maintenance program for existing road shoulders. Frequent, regular shoulder sweeping has the potential to enhance bicycling in the county considerably. Designation of the bike route network described in this plan will enable the County to focus its maintenance efforts on those routes. Establishment and

observance of a priority-route maintenance system reduces the County's liability exposure in the event of collisions or injury to bicyclists.

As new road and highway improvements are implemented under the road program, facilities for nonmotorized transportation should be accommodated through appropriate design and construction techniques. Facility maintenance should be one of the major considerations made during that process.

No right-of-way will be acquired through condemnation for implementation of this plan.

#### **7.4 Plan Administration**

The on-street portion of this plan is intended to be administered as part of the overall transportation program for Whatcom County. The off-street portion should be jointly administered by Whatcom County Planning and Development, Public Works and the Parks and Recreation Departments. To ensure its successful implementation, qualified staff should be assigned to carry out its recommendations.

Plan implementation should be monitored within the departments and a brief assessment of its effectiveness should be conducted annually. Modifications should be made as needed to ensure successful implementation. The plan should also be updated at three to five year intervals with the involvement of affected parties and interested citizens.

*“... a nation of travelers with new opportunities to walk or ride a bicycle as part of their everyday life. They may walk or bike to a carpool or bus or train as part of a new intermodal trip pattern, or they may find that they can walk or bike with safety and ease all the way to their destination. Many will find that they do not have to use a motor vehicle for trips to church, to work, to school, or to the store. They will like what they are doing for the community and for themselves. America will have a changed transportation system—better balanced to serve all travelers.”*

*—The National Bicycling and Walking Study: Transportation Choices for a Changing America, U. S. Department of Transportation, Federal Highway Administration (1994)*

## **Appendix A:**

Detail summary of public comment and participation for 1994 report:

### **Public Surveys**

Surveys are sometimes used in planning projects of this type, however, County staff and the Citizens' Advisory Committee elected not to conduct a bicycle survey due to budget limitations and the availability of recent data generated by other planning efforts in the county.

The Visioning process and the regional transportation planning process both involved the distribution of questionnaires to the public. The results of both emphasized the public's desire for better facilities and more bicycling opportunities for both recreational and utility riding. Data concerning participation rates in bicycling were also available from a park and recreation survey conducted in 1989. All three information sources are discussed in Section 2.2.

### **Bicycle Plan Citizens' Advisory Committee**

The Bicycle Plan Citizens' Advisory Committee was open to anyone with an interest in bicycling or bicycling issues in the county. At the outset of the project, announcements were released to the media, including all major newspapers and radio stations. The general public was invited to get involved by joining the Committee, attending a public information meeting, and/or coming to one of three workshops held in Blaine, Lynden and Bellingham in November, 1993. Copies of the draft plan were also made available to the public for review and comment.

The Citizens' Advisory Committee began meeting in the fall of 1993 and continued to meet once or twice monthly during the winter. A Committee meeting was held again later in 1994 to discuss the draft plan. Presentations were made on several occasions to Parks Planning and Engineering staff and to the Citizens Transportation Advisory Committee overseeing development of the Rural Transportation Plan.

Committee members reviewed the input received at the workshop and most, if not all, of the suggestions and concerns expressed are addressed in the plan. Those who attended workshops or committee meetings showed strong interest in linking communities and destinations with direct commuting routes as well as more leisurely scenic routes that combine quiet backroads with off-street shared use paths.

All of these meetings, presentations and review processes contributed significantly to the final product.

### **Summary of Public Workshops**

Three public workshops were held in the fall of 1993 to gather information concerning the plan's purpose and objectives, as well as the routes, facilities and issues that ought to be addressed. The workshops provided an excellent source of information and ideas which are summarized below.

Blaine November 2, 1993

Four people attended the first workshop at the Grace Lutheran Church in Blaine. All were active in cycling and much local knowledge was evident. A unique interest was expressed in the surreys" (2- to 6 person bicycle carriages) that are available for rent at Birch Bay. Participants discussed bicycle facilities planned for the Blaine area before moving on to three planning questions and mapping exercise that had been prepared for the workshops.

The questions and responses given are summarized as follows:

#### Question #1

*What can/should the County be doing to enhance bicycling as a mode of transportation in Whatcom County (in terms of engineering education, enforcement, and encouragement)?*

- Whatcom County needs to commit staff time and funding to bicycling needs.
- Educate Transportation Services staff about bicycling concerns
- Develop systems connecting destinations
- Indicate services of interest to cyclists on user maps.
- Sign future bike routes.
- Identify private funding opportunities to help with ISTEPA local matching funds.
- Organize fundraising events, like an international bike rally.
- Get bike racks on busses.
- Improve shoulders on Birch Bay Drive and SR 548 (Peace Portal).
- Promote bike safety in schools (helmets, rules of the road).

#### Question #2

*Where do you prefer to ride (destinations, type of facility, environment)?* [Note: This question was worded slightly different at the Blaine workshop although the intent was the same.]

##### *Destinations*

- Scenic bike routes.
- Coffee shops ("reward routes").
- Portal Way, Delta Line Road.
- Paved shoulders (chip-seal generally not desirable).

#### Question #3

*What is your vision for cycling opportunities in Whatcom County 10 years from now? Five years? Two years?*

##### *10 years*

- Bicycle-friendly roads countywide.

##### *5 years*

- Focus improvements on communities.
- Accommodate strollers, buggies, skates, roller blades.

##### *2 years*

- Public-private cooperation in funding projects.

Lynden  
November 3, 1993

Three bicycle enthusiasts attended the Lynden workshop at the Community Center, including a senior with extensive cycling experience in Holland. Like the Blaine workshop, the low turn-out did not dampen the discussion of bicycling issues and it was clear that much can and should be done to enhance bicycling opportunities in the Lynden area. Responses to the three questions were as follows:

Question #1

*What can/should the County be doing to enhance bicycling as a mode of transportation in Whatcom County (in terms of engineering education, enforcement, and encouragement)?*

- Sweep the roads and shoulders more than once a year.
- Make existing bike lanes usable by maintaining them.
- Link routes between communities.
- Enforce dog control regulations; dog owner education.
- Install signs as needed to alert drivers that bikes are on roads.
- Signing for cyclists indicating distances and directions to destinations.
- Educate people to get them interested in bicycling. Newspaper article(s) needed to encourage people to buy a bike instead of a second car.
- Sponsor "bike to work days."
- Make Nooksack River bridge improvements, especially Marine Drive.

Question #2

*Where do you prefer to ride (destinations, type of facility, environment)?*

*Destinations*

- Pacific Highway (to work).
- Marine Drive (Bellingham to Blaine).
- County roads in general for touring.

*Facilities*

- User map should locate comfort stations for cyclists.
- Provide access to Custer 1-5 Rest Area.
- Provide "park and ride" bus stops for bikes.

*Environment*

- Everywhere

Question #3

*What is your vision for cycling opportunities in Whatcom County 10 years from now? Five years? Two years?*

*10 years*

- Develop two designated bike routes between all communities, including a direct (commuter) route and a more leisurely scenic route.

### 5 years

- Link communities by direct routes.

### 2 years

- Create an awareness in motorists that recognizes cyclists' right to use the roads (an ongoing process).
- Drivers' licensing tests should include questions on bicycle/motorist interactions.
- Educate and encourage high school kids to ride bikes to school. How? Heroes, Olympic racers and others could visit schools and help make it "cool" to ride bikes. Emphasize biking as a training mechanism for other sports. Encourage students to travel a specified distance.
- Local communities should have bicycling plans in place which identify routes and facilities within urban areas.
- Promote police on bikes in communities.
- Contact mayors in the county about nonmotorized travel needs and opportunities. Whatcom County Council of Governments should inform small cities on planning and grant-writing.

### Bellingham

November 4, 1993

The Bellingham workshop was held at the Senior Activity Center and was well attended by 27 enthusiastic bicyclists. Participants included college students, retired seniors, city parks staff and a diversity of residents of urban and rural Whatcom County. The group was eager to see bicycle routes developed in the county.

The bicycle planning process was introduced with some background on new federal, state and local policies and funding sources for nonmotorized transportation. Participants were divided into five small groups and each was asked to work on the three questions. Once all of the groups were finished, a member from each group explained their findings to the larger audience. A chance for questions and discussion followed each presentation. A high level of enthusiasm was maintained throughout the evening.

Responses from the Bellingham Workshop were as follows:

#### Question #1

*What can/should the County be doing to enhance bicycling as a mode of transportation in Whatcom County (in terms of engineering, education, enforcement, and encouragement)?*

- The "Four-Es" should be addressed comprehensively.

#### *Engineering*

- Define quantitative engineering standards. The standards should identify and suit the needs of the community.
- Set standards for bike movements through traffic intersections to decrease bike/car conflicts.
- Assign qualified engineering staff to be specifically concerning with bicycling and multi-modal issues. Make sure that staff is knowledgeable of the bicycle plan and performs adequate review of site plans and design features for road projects.
- Place an emphasis on defining feasible projects for the capital facilities plan.

- Make spot improvements.
- Spend STP and NHS funds (ISTEA) on nonmotorized projects.
- Transit should include storage and other means for integrating bikes with bus travel. Suitable bike racks should be located at bus stops and on buses.
- The new Amtrak service should have a train compartment that holds bikes and allows for easy access to bicyclists. The train station should have covered bike racks or bike lockers.
- Ferries should have bike lockers and be made bike compatible.
- Covered, better designed bike racks are needed (repeatedly mentioned).
- Avoid using the term “potential bike routes” on plan maps; all roads are “bike routes.” Instead, label “priority routes” and “priority projects.” The reasoning behind this is to prevent Public Works staff from focusing on assigned bike routes as the only routes that need to be improved for bicycling. It would be a mistake to assume that routes that are not on the map need not be improved.
- The County should adopt street standards that insure all roads are safe for bikes. All arterial road improvements should include paved bike lanes or shoulders.
- Identify designated bike routes on selected roads throughout the County and make them a priority. Require wide shoulders and signing along roads.
- Make shoulders continuous, avoiding situations where shoulders abruptly disappear.
- Shoulders are especially needed along Highway 9 and Marine Drive.
- Identify both on- and off-street routes.
- Where feasible, develop alternative routes that avoid busy streets.
- Add or improve bicycle friendly facilities with all road upgrades.
- Maintain bike lanes and shoulders by sweeping them regularly.
- Develop paths along power lines.

#### *Education*

- Publish county routes for distance bicyclists in the form of flyers and pamphlets.
- Offer orientation classes for “Born Again Adult Bicyclists.”
- Establish a bicycle education program for all age groups which emphasizes effective cycling.
- Encourage high schools to form bicycle clubs.
- Community bike clubs should create awareness for the public, education programs for kids and seniors, promote paths connecting kids to schools, and sponsor events (“bicycle day” or “week”).
- Encourage media to focus on positive biking stories. This would include TV and radio educational ad campaigns. Bike clubs should file stories and pictures that would be available for media use.
- Educate motorists about bicycle rights on the road. Drivers licensing exams should include questions concerning bicycling and bicycle/motor vehicle safety.
- Motorists need to realize that bikes have a right to ride on the roads.
- Discourage the use of automobiles, especially single-occupant driving.

#### *Enforcement*

- Develop or clarify bicycling/motorist rules of the road that police actively enforce.
- Strictly enforce bike laws such as stopping at red lights and stop signs.
- Require all cyclists to wear helmets in Whatcom County.
- Develop a method to report vehicle violations that would supply statistical information about occurrence of problems.

### *Encouragement*

- Sign designated bike routes.
- Organize and publicize bike events, such as “bike to work day.”
- Publish bike maps which show safe places to ride.

### Question #2

*Where do you prefer to ride (destinations, type of facility, environment)?*

#### *Destinations*

- Among those mentioned: Lake Samish, Ferndale/Lynden are: Mosquito Lake Rd., Skagit County, Lummi Island, Lake Louise Road to Alger, Silver Lake loop, Semiahmoo, Birch Bay, Highway 9, Middle Fork loop, Mount Baker, Lake Whatcom loop, Sow Pass, Chuckanut loop, Alger, Nooksack River dikes, Red River Rd. and agricultural areas, Interurban Trail, downtown Bellingham, and Birch Bay.

#### *Type of Facility*

- Shoulders and bike lanes on roads, especially designated bike routes.
- Off road routes.
- Scenic loops that are identified, mapped and signed.
- Low volume roads and areas suitable for meditation.
- Trails for bicycles and hikers only.
- Rest areas with benches and picnic tables.
- Toilet facilities open to cyclists.
- Showers in workplaces.
- Pollution-free and safe corridors with lighting.
- Mass transit that connects county towns with bike lanes.

#### *Environment*

- Public land.
- Scenic routes.
- Both city and scenic rural areas.

### Question #3

*What is your vision for cycling opportunities in Whatcom County 10 years from now? Five years? Two years?*

#### *10 years*

- A comprehensive trail and road network will be in place with signed routes and shoulders.
- Tolerance of motorists for bicycles will be increased.
- Gasoline will be taxed to pay for bicycle facilities.
- Better cyclist facilities will be developed such as bike racks.
- Lanes, trails and routes will be in place.
- More long routes of 50 miles or more without stops will be created.
- Public schools will have bicycle education in their curriculum

#### *5 years*

- Promotions will be made to enhance the notion that ‘bikes are **cool**.

- A bicycling “political action committee will be formed to influence local political races.
- There will be paved bike trails along the Nooksack River and around Lake Whatcom.
- Bike lanes will be added to Chuckanut Drive.
- There will be a network of signed and mapped bike routes throughout the County.

### 2 years

- City routes will be connected with county routes and systems.
- There will be three designated routes through the county.
- More bike lanes will be created and shoulders will be wider.
- Roads that cyclists should avoid will be identified with alternatives signed and mapped.
- Laws will be enforced that require bicyclists to use helmets and lights (at night).
- There will be a driver/cyclist education program. A part of this will be school assemblies which entertain certain aspects of bicycling.
- Whatcom County will hold a “bicycle awareness day.”
- Bicycling will reach a critical mass so that it must be respected.
- Published county bike maps will be available.
- Bike lanes will connect Bellingham to Ferndale.
- Buses will carry racks for more bikes.
- Funding and a real bike plan will become realities. Funding will help encourage businesses to offer incentives for employees to ride bikes to work.

## Map Exercise

At all three workshops, a map exercise was conducted in which participants were asked to place colored dots and arrows on the “Potential Bike Routes” working map to highlight routes and destinations they felt were the most important in the county. (This working map is available for review at the Whatcom County Parks and Recreation office.)

### Lake Whatcom Blvd (near Bellingham)

Clean, smooth, paved shoulders, 4 to 6 feet wide, can provide an excellent facility for bicycles on all but the busiest roads, and can contribute much to the goal of providing a safe, efficient, and interconnected system of bikeways in Whatcom County.

### Semiahmoo Pkwy (Blaine)

When designed to an appropriate standard, shared use paths and multi-use trails offer significant recreational benefits, as well as a means for less experienced riders to avoid difficult traffic situations

### Hemmi Rd (Near Everson)

Many of the lesser traveled roads in rural Whatcom County require neither paved shoulders nor bike lanes to be reasonably safe for bicycle use. Educating motorists and bicyclists on ways to “share the road” is an affordable alternative to paving shoulders along the county’s quiet and picturesque backroads.

## Appendix B: Definitions

**AASHTO** – American Association of State Highway and Transportation Officials

**Bham - Bellingham**

**Bicycle route** – A system of bikeways, designated by the jurisdiction(s) having the authority, featuring appropriate directional and informational route markers. A series of bikeways may be combined to establish a continuous route and may consist of any or all types of bicycle facilities.

**Bike lane** – A portion of a highway or street identified by signs and/or pavement markings reserved for bicycle use.

**Bikeway** – Any trail, path, part of a highway or shoulder, or any other traveled way specifically signed and/or marked for bicycle travel.

**Category A bicyclist** – Advanced or experienced riders who are generally using their bicycles as they would a motor vehicle. They want direct access to destinations with a minimum of delay and are comfortable riding with motor vehicle traffic.

**Category B bicyclist** – Basic or less confident adult bicyclists who might be using their bicycles for transportation purposes. They prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width.

**Category C bicyclist** – Children, riding alone or with their parents, who need access to key destinations in the community such as schools, friends, recreational facilities and convenience stores. Residential streets with low motor vehicle speeds (linked with shared use paths and busier streets with well defined pavement marking between bicycles and motor vehicles) can accommodate children without encouraging them to ride in the traveled lane of major arterials.

**Chain of Trails** – Project to study the potential trail systems links in the county. The first phase, begun in 2000, is led by COG and focuses on the Mount Baker Foothills region.

**CMT** – Coast Millennium Trail. A bicycle route connecting between Skagit County and the Canadian border, sited primarily along the coast.

**COG** – Whatcom Council of Governments. Alliance formed to coordinate regional issues between jurisdictions, such as transportation planning. [www.wcog.org](http://www.wcog.org)

**CZM** – Coastal Zone Management. [www.ocrm.nos.noaa.gov/czm/](http://www.ocrm.nos.noaa.gov/czm/)

**IAC** – Interagency Committee for Outdoor Recreation. [www.iac.wa.gov](http://www.iac.wa.gov)

**PE** – Preliminary engineering

**Shared roadway** – A roadway that is open to both bicycle and motor vehicle travel. Shared roadways do not have dedicated facilities for bicycle travel.

**Shared use path** – A facility on exclusive right of way with minimal cross flow by motor vehicles. It is designed and built primarily for use by bicycles but is also used by pedestrians, joggers, skaters, wheelchair users (both nonmotorized and motorized), and others.

**TEA-21** – Transportation Equity Act for the 21<sup>st</sup> century. A federal program to direct additional transportation funding to travel modes other than single-occupant motor vehicles. These grant opportunities expired in 2000.

**TEA-3x** – Reauthorization of TEA-21, currently being evaluated in congress. These new grant opportunities are expected to become available in 2004.

**WC** – Whatcom county

**WCRF** – Whatcom county road fund. Primarily from gasoline and property taxes, these funds are administered by the county Public Works Department.

**WCPWM** – Whatcom county public works, maintenance. Facility maintenance funds administered by the county Public Works Department.

**WSDOT** – Washington State Department of Transportation.