

# Island Sub-Regional Transportation Plan



*Adopted by the Skagit/Island RTPO  
Policy Board on February 26, 2003*

*State Route 20 at Penn Cove. Photo by Roy Daniel, Island Transit*

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# ISLAND SUB-REGIONAL TRANSPORTATION PLAN

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## **CHAPTER 1**

### **INTRODUCTION**

#### **Background**

In 1990, the Washington State Legislature determined that uncoordinated and unplanned growth poses a threat to the environment, sustainable economic development and quality of life enjoyed by the residents of the state. As a result, the Legislature passed the Growth Management Act of 1990 (GMA) and supplemental amendments in 1991. In 1994, the Legislature passed HB 1928 that enabled transportation planning at a regional level. Once a county or counties decided to form a regional transportation planning organization (RTPO) they were required to develop a regional transportation plan (RTP). In 1998 SHB 1487 revised the Growth Management Act to require that local agencies identify impacts to state highways. It also required jurisdictions in Island County to meet concurrency requirements for state highways of statewide significance.

The Growth Management Act requires counties that meet the population criteria adopt a comprehensive land use plan and development regulations. A county is required to plan if it:

- Has a population of 50,000 or more, and
- Has experienced a population increase of more than 10% within the last 10 years.

One of the mandatory elements of a comprehensive plan is the development of a transportation plan based on future land use and employment projections. Cities and towns located within such counties must also adopt their own comprehensive land use plans and development regulations. The plans adopted by the county and cities, as well as the plans of adjacent counties and effected agencies, must be coordinated. This sub-regional transportation plan is a compilation of the transportation elements of the Island County, City of Oak Harbor, town of Coupeville, and the City of Langley's Comprehensive Plans.

Subsequently, SHB 1928 mandated that RTPO's base their planning efforts on a least cost planning methodology that identifies the most effective facilities, services, and programs. On the federal level, least cost planning can fulfill the Intermodal Surface Transportation Efficiency Act requirement that the cost effectiveness of alternative modes and transportation demand management be evaluated in planning transportation investments where federal funds are involved. Island County was selected by the State as a pilot planning effort. Refer to Chapter 15 for additional information on least cost planning.

#### **Regional Transportation Planning Organizations**

Skagit and Island counties created the Skagit/Island Regional Transportation Planning Organization (SIRTPO) in 1991 to serve as a mutual forum to identify, discuss, study, and bring into focus regional transportation challenges and opportunities. The counties created the SIRTPO in accordance with the GMA that authorized local governments to create Regional Transportation Planning Organizations to coordinate transportation planning among jurisdictions. Much of the SIRTPO's work effort and activity takes place at a sub-regional or county level; the member agencies are divided into two sub-regional organizations.

#### **Island Sub-Region Organization**

The Island Sub-regional Organization represents Island County on the Skagit/Island Regional Transportation Planning Organization (SIRTPO). The SIRTPO is comprised of Island County, City of

# ***Introduction***

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Oak Harbor, Town of Coupeville, City of Langley, Port Districts, and Island Transit. The purpose of the Island Sub-regional organization is to:

## **A. General Purpose**

- 1) To serve as a mutual forum to identify, discuss, study, and bring into focus regional transportation challenges and opportunities.
- 2) To serve as a vehicle for the collection and exchange of transportation information of regional interest.
- 3) To provide a continuing organizational mechanism to insure effective communication and coordination among governments and agencies on transportation related issues.
- 4) To foster, develop, and review policies, plans, and priorities for transportation facilities and services.
- 5) To Facilitate agreements and cooperative action proposals among member governments for specific transportation projects or other interrelated developmental needs and for the adoption of common policies and plans with respect to common regional transportation challenges.
- 6) To maintain liaison with members, governmental units, and groups or organizations and to serve as regional transportation spokesperson for local government(s).
- 7) To furnish general and technical aid to member governments, at their direction, to promote and accomplish transportation policies and plans.
- 8) To review and coordinate federal, state, and local transportation programs of regional importance.
- 9) To review, discuss, and prioritize transportation projects for funding under state and federal programs, where appropriate.

## **B. Specific Responsibilities**

- 1) Develop and adopt a Regional Transportation Plan for the Skagit and Island County Region.
- 2) Certify that the transportation elements of comprehensive plans adopted by counties, cities, and towns within the region conform with the requirements of the Growth Management Act and related state laws and regulations.
- 3) Certify that the transportation elements of comprehensive plans adopted by counties, cities, and towns within the region are consistent with the regional transportation plan and all applicable state laws. Certify that the Countywide Planning Policies and the Regional Transportation Plan are consistent.
- 4) Review the regional transportation plan biennially to ensure that it is current and forward the plan, with documentation of the biennial review to the Department of Transportation.
- 5) Develop, on an annual basis, a unified planning work program through which the SIRTPO may address regional transportation issues in a systematic, coordinated, and cooperative effort.

- 6) Develop, review, and adopt the annual Regional Transportation Improvement Program (RTIP).

Island County is the designated lead agency for the Island Sub-region. The Island Sub-regional Transportation Planning Organization consists of a Sub-region Policy Board and a Technical Committee. The Policy Board is the county-wide decision making body of the RTPO, comprised of elected officials of the member organizations and other representatives pursuant to the Growth Management Act. The Island Sub-region Policy Board membership is as follows:

Island County	3	County Commissioners
Cities/Towns	3	Mayors of Oak Harbor, Coupeville, and Langley
Ports	1	Port Commissioner representing all Island County
Public Transit	1	PTBA Board member (an elected official)
Ferries	1	WSDOT ferry official (ex-officio member)
State Highways	1	WSDOT official involved in highways who is not directly involved with staffing the RTPO. (this member shall also be on the Skagit Sub-Regional Policy Board).
Naval Air Station	1	Official from Naval Air Station Whidbey Island (ex-officio member)
Business	1	Major private employer representative appointed by the Board of County Commissioners (ex-officio member)

The Island Sub-regional Policy Board established a Technical Committee comprised of planners, engineers, and citizen representatives from the member jurisdictions. The Technical Committee has the responsibility to:

- Provide staff support for the Island Sub-regional Policy Board.
- Recommend an annual sub-regional unified planning work program to the Policy Board.
- Coordinating all transportation planning activities, studies and projects within the sub-region.
- Evaluating, ranking, and prioritizing STP projects within the Island Sub-region and making recommendations to the Policy Board.

## **Regional Transportation Plan**

The Island Sub-regional Transportation Plan guides sub-regional transportation system development. It is based on the compilation of the transportation elements of the Island County, City of Oak Harbor, Town of Coupeville, and the city of Langley's Comprehensive Plans. The Island Sub-regional Transportation Plan is a major component of the SIRTPO Regional Transportation Plan.



## CHAPTER 2

### ISLAND SUB-REGIONAL GOALS AND POLICIES

#### **Introduction**

Goals and policies form the vision and the guidelines for transportation planning and development. The goals provide the vision of the transportation system, and the policies provide the guiding framework for implementing the vision. This chapter represents the goals and policies developed and adopted by the Island Sub-region of the SIRTPO.

The Skagit/Island Regional Transportation Plan contains regional goals and policies as well as sub-regional goals and policies within the sub-regional plans. Local government goals and policies need to be consistent with the sub-regional goals and policies contained in this plan. Although regional goals and policies are intended to guide transportation planning, they must be flexible enough to allow room for local variation. The sub-regional goals and policies are meant to support individual jurisdictions while providing a sub-regional framework, regional guidance and regional support.

The sub-regional goals and policies are general in nature and are intended to provide a vision and framework and provide guidance to local jurisdictions within the Island Sub region. Island County and the cities and towns have adopted specific transportation goals and policies unique to their individual needs.

#### **Island Sub-Region Transportation Goals And Policies**

The following general transportation goals and policies for the Island Sub-region are:

Goal 1    *Provide adequate mobility for all people, goods, and services.*

Policy 1-A:    Keep travel time for people and goods as low as possible.

Policy 1-B:    Emphasize the movement of people and goods rather than vehicles in order to obtain the most efficient use of transportation facilities.

Policy 1-C:    Increase the efficiency of the Sub-regional road and highway system by maximizing use of existing facilities.

Policy 1-D:    Construct intermittent passing lanes and turn pockets on State highways to improve system efficiency.

Goal 2    *Provide a transportation system that supports economic growth and vitality in Island County.*

Policy 2-A:    Distribute transportation costs and benefits equitably

Policy 2-B:    Provide for consistency and fairness in establishing priorities for transportation expenditures.

Policy 2-C:    Protect the capital investment in the transportation system through adequate maintenance of facilities.

## ***Island Sub-Regional Goals and Policies***

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Policy 2-D: Identify strategies to mitigate both the impacts of urban congestion on roadway freight movement and the impacts of roadway freight movement on urban congestion.

Policy 2-E: Promote non-motorized transportation facilities to enhance eco-tourism.

### ***Goal 3 Minimize negative environmental impacts on the physical and social environment***

Policy 3-A: Appropriately design, construct, operate and maintain transportation facilities to minimize degradation of the environment.

Policy 3-B: When possible, locate and align transportation facilities away from environmentally sensitive areas.

Policy 3-C: Promote the wise use of limited resources such as land, fuel, and money.

### ***Goal 4 Provide transportation alternatives for moving people and goods.***

Policy 4-A: Actively promote transit service throughout the Island Sub-region.

Policy 4-B: Provide a wide range of non-motorized transportation facilities throughout the sub-region to meet the needs of bicyclists, pedestrians, and equestrians.

Policy 4-C: Recognize the importance of air transportation facilities within the Island Sub-region.

Policy 4-D: Encourage greater use of high occupancy vehicles such as carpools and vanpools to move people more efficiently and minimize the need for additional roadway capacity.

### ***Goal 5 Provide a safe, comfortable, and reliable transportation system.***

Policy 5-A: Establish a minimum level of adequacy for transportation facilities throughout the sub-region through the use of consistent and uniform level of service standards.

Policy 5-B: Promote plans, procedures and systems intended to provide safe freight movement and routing and to reduce accidents, vehicle breakdowns, spilled loads, or other events which reduces roadway capacity.

Policy 5-C: Identify and protect outstanding scenic vistas visible from the Sub-regional Transportation System, to improve the quality of travel.

### ***Goal 6 Facilitate effective use of the transportation system through coordination between governments, private enterprise, and the community.***

Policy 6-A: Encourage multi-jurisdictional involvement in the development of park-&-ride lots.

Policy 6-B: Encourage compatibility between transportation facilities and surrounding development.

# *Island Sub-Regional Goals and Policies*

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Goal 7 *Develop multi-modal transportation service connections at transfer sites such as ferry terminals, transit stations and airport facilities.*

Policy 7-A: Minimize the walking distance between different modes at transfer points.

Policy 7-B: Support shared use of the roads or corridor by different travel modes.

Goal 8 *All transportation modes and facilities should be accessible to all persons.*

Policy 8-A: Determine and provide desirable levels of accessibility as required by the American with Disabilities Act (ADA).

## **County-Wide Transportation Policies**

The Growth Management Act, specifically RCW 36.70A.210, requires that counties planning under the Act, develop county-wide planning policies. These policies are to be used as a framework the County and cities/towns will use to develop comprehensive plans.

The county-wide planning policies provide the foundation for assuring consistency among all local jurisdictions within the county. The following county-wide policies and strategies for transportation were originally approved and adopted by Island County, the City of Oak Harbor, City of Langlely, and the Town of Coupeville on June 22, 1992 and amended on February 29, 2000:

- The transportation element of the Island County Comprehensive Plan should include Urban Growth Area elements to assure consistency among planning jurisdictions. All transportation planning, including that of federal and state agencies, as well as port districts, should be jointly and cooperatively developed, adopted and implemented through coordinated planning;
- The County and municipalities will cooperate in the analysis of and the response to any major regional industrial, retail/commercial, recreation or residential development proposals that may impact the transportation systems in Island County;
- The County and the municipalities will remain actively involved in multi-county regional transportation planning;
- The capacity of the roadway system must be planned, built and managed to meet planned land use densities in UGAs, and the development of transportation modes offering alternatives, such as transit and telecommunications, to the automobile should be encouraged;
- The planned transportation system should be implemented in a coordinated and cost effective manner utilizing a fair and sufficient method of funding;
- All jurisdictions within Island County will cooperate with each other and the state of Washington in coordinated planning for state highways and ferry facilities with respect to current revisions to RCW 36.70A as amended by SHB 1487. This coordination recognizes that the State Department of Transportation will be primarily responsible for establishment and maintenance of the level of service for these facilities.

## ***Island Sub-Regional Goals and Policies***

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### **Summary**

The regional goals and policies demonstrate that the Island Sub-region supports a multi-modal transportation system. The availability of alternative travel modes is promoted as a strategy to reduce the reliance on single occupant vehicles. Freight mobility is recognized as important to the region's economy. Highway system efficiency, safety, and quality of travel are emphasized. Bicycle and other non-motorized opportunities are recognized as part of the Sub-regional Transportation system. Interagency cooperation on transportation issues is stressed. All transportation modes should be accessible to everyone.

## **CHAPTER 3**

### **GROWTH AND ACTIVITY PROJECTION**

#### **Introduction**

As part of Island County's overall planning process, the County has developed a planning concept for population and employment growth to establish and maintain a desirable living and working environment and retain the historical character of the Sub-region. This concept is defined as a planning ideal, which groups future growth and development within and around presently developing areas. This "development-clustering concept" is intended to preserve the islands' natural resources and open space characteristics. This planning concept relies on the formulation of supportive goals and policies to guide the future growth and development of the islands. Planning emphasis is given to maintaining and enhancing the rural and open character of Island County, maximizing the productivity of natural resources, and ensuring a high level of environmental quality. Langley, Coupeville, Oak Harbor and Island County have adopted GMA mandated Comprehensive Plans.

#### **Land Use Summary**

Island County's land use plan illustrates the general planning concept for the County. The land use patterns contained in the plan were developed to optimize the utilization of the land and preserve the rural and open space characteristics of Island County. The planning principles, used to develop the optimal land use plan, are as follows:

- Ensure the mutual compatibility between existing and planned land use activities;
- Preserve the rural and open space character of Island County by clustering projected urban growth and development;
- Conserve the renewable and non-renewable resources, including agricultural, forest and mineral lands;
- Enhance the taxation base through planned, high quality development;
- Maintain and provide adequate public service and facilities at the lowest possible cost;
- Coordinate circulation and public facilities plans;
- Balance the capability of the land and natural systems to support the land use activities; and,
- Fulfill the citizens' desires through participation in plan development.

The optimal land use plan provides a wide range of development intensities. An important feature of this plan is the low-density buffers located between areas of intensive urban or residential usage and low intensity agricultural or forest uses. These buffers are necessary to maintain a compatible land use separation and support the above planning concepts. These plans address the overall concerns in Island County and should be used as a planning policy reference in land use decision-making.

# ***Growth and Activity Projection***

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## **Population And Employment Forecasts**

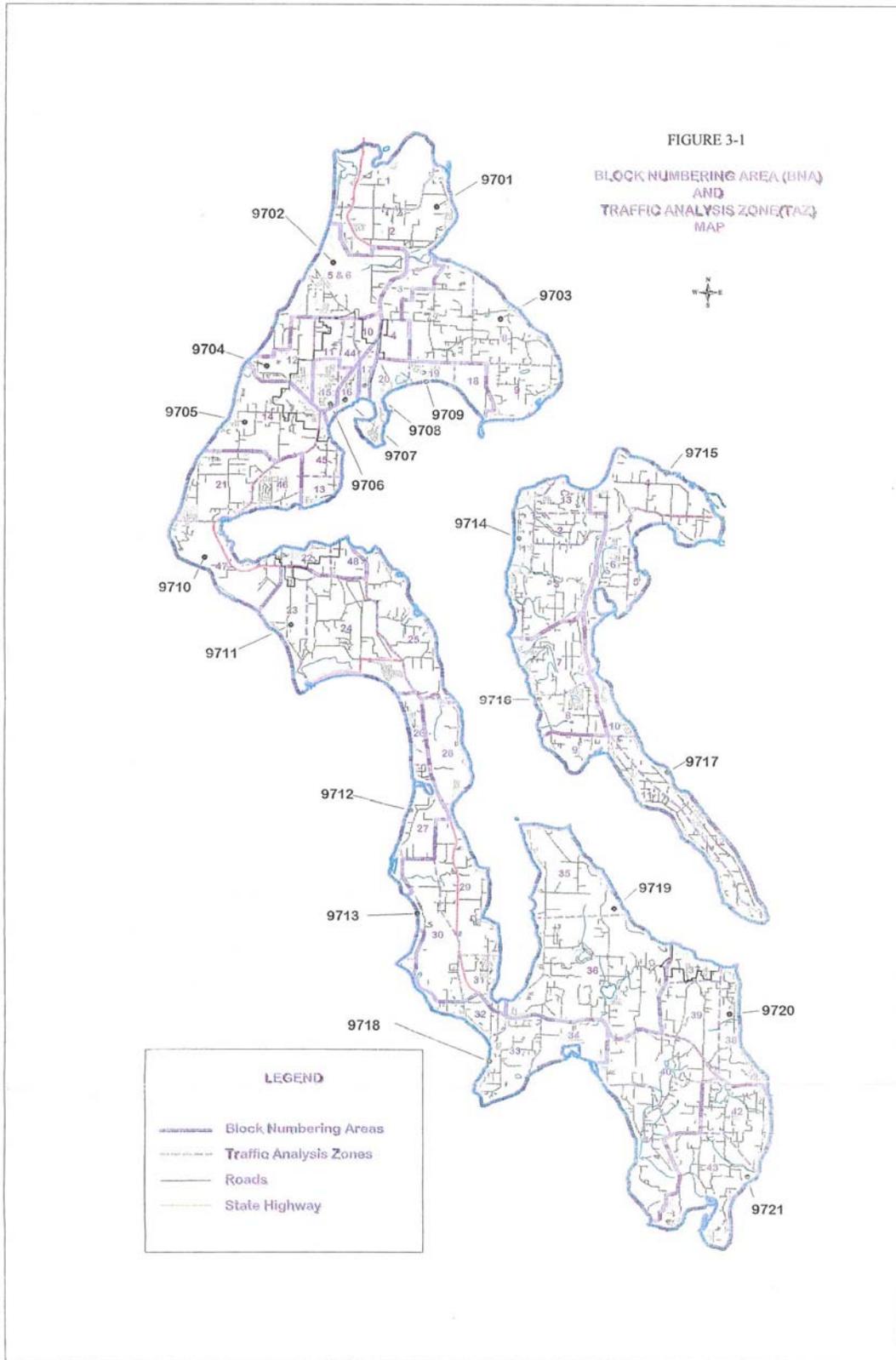
Island County is currently subdivided into four major planning areas: North, Central, and South Whidbey Island and Camano Island. Existing population estimates have been developed, based on 2000 census data. County staff has allocated population forecasts for 2010 and 2020 obtained from the State of Washington to each of these sub areas, based on the land use planning assumptions. State Office Of Financial Management (OFM) forecasts will be used for the next update of the Regional Plan.

Employment forecasts were prepared by the Island County Economic Development Council (EDC) for the four planning areas of the County. The employment statistics are for the average annual jobs in the following employment sectors: Farm; construction; manufacturing; transportation, communications and public facilities; wholesale trade; retail trade; finance, insurance and real estate; service; civilian government employment; military; and other. It is anticipated that the retail, service and manufacturing sectors will experience higher rates of growth than the other sectors. The EDC revised these employment forecasts in 2000 based on the use of the high OFM population projections and extended the planning period through the year 2020.

Since the population and employment forecasts will serve as a basis for forecasting horizon year traffic, these forecasts must be allocated to a zone structure that will facilitate the development of future year traffic projections. The Island Sub-region (County) was subdivided into 21 zones entitled Block Numbering Areas (BNA's) as a part of the 1990 census. As a point of beginning, this zone structure was adopted as traffic analysis districts (TADs) for this study. This TAD system was subdivided into Traffic Analysis Zones (TAZ)

The final TAZ system map is displayed on Figure 3-1. The assumptions for forecasting the population and employment estimates are summarized below (See Island County Transportation Element of the Comprehensive Plan for detailed analysis).

Figure 3-1 Traffic Analysis Zone Map



## ***Growth and Activity Projection***

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The forecasting process applied to estimate the 2003 population simply involved interpolation of the data and an allocation to a finer zone structure. This allocation was based on the area of the zone and general knowledge of the existing and proposed land use types that exist within the zone. This allocation was reviewed and adjusted by the Island County, and the Cities of Oak Harbor, Coupeville and Langley to ensure coordination with the land use forecasts. The results of this process can be found in the County's Transportation Element of the Comprehensive Plan. The total permanent population for Island County was estimated at approximately 81,500 persons in 2000 and is expected to grow to approximately 98,700 persons in 2010. This represents an increase of approximately 21 percent over the ten-year period or approximately 2.1 percent annually.

The process of forecasting employment included the allocation of existing employment by SIC code to each BNA and using historical employment growth from 1970 to 1996 for the various SIC codes on Island County to develop growth trends. These growth trends were applied to the 1996 data to obtain 2003 employment forecasts by BNA. This data was then subdivided into traffic analysis zones. The TAZ allocation was based on the area of the zone and general knowledge of the existing and proposed land use types that exist within the zone. The allocation was reviewed and adjusted by Island County and the Cities/Towns of Oak Harbor, Coupeville and Langley. The detailed results of the forecasting process can be found in the County's Transportation Element of the Comprehensive Plan. The total employment for Island County in 1996 was estimated at 21,589 jobs and by the year 2006 employment is estimated to reach 26,095. This represents an approximate increase of 20.8 percent over the eleven-year period or 2.08 percent annual growth rate.

The distribution of the permanent population and employment estimates by the four planning sub areas is summarized as follow: The largest increases in population between 1992 and 2003 are expected in North Whidbey with an increase of approximately 3,800 persons and in South Whidbey with an increase of approximately 3,436 persons. The lowest population increase is expected in Central Whidbey with approximately 1,738 persons. The largest employment increase is expected in North Whidbey with approximately 2,784 jobs. Each of the other planning sub areas is expected to have employment increases of less than 750 jobs. The lowest employment increase is expected on Camano Island with approximately 122 jobs. These increases in population and employment are consistent with the land use assumptions and the Land Use Plan, as prepared by Island County.

## CHAPTER 4

### ISLAND SUB-REGIONAL TRANSPORTATION SYSTEM

#### **Introduction**

##### *Approach and Process*

Developing the Island Sub-Regional roads element requires identifying and describing the existing Sub-Regional Transportation System. This process includes several steps. First, the Sub-Regional Technical Advisory Committee identifies which road segments are regionally significant and should be included in the plan.

Second, the Sub-Regional Technical Advisory Committee decides on sub-regional levels of service as a measure of capacity. A level of service analysis determines roadway capacity deficiencies. However, the focus on level of service and capacity does not mean that safety and maintenance issues are determined to be less significant. The Island County Sub-Region wants to emphasize the importance of safety and maintenance to an effective transportation system.

Third, the analysis relies on the data that is derived from the coordinated approach taken by the local agencies of the sub-region in the development of their respective Growth Management Act (GMA) transportation elements. This approach ensures the coordinated planning of regional transportation facilities and services, as well as their consistency as envisioned under the GMA.

##### *Criteria for Designation of the Sub-Regional Roadway System, Including Intersections*

The first step in developing the Sub-Regional roads element is to designate the components of the regional transportation system. As defined in the GMA a component of the regional transportation system has one or more of the following characteristics:

- It physically crosses member county lines and provides significant regional connections;
- Solutions to problems are expected to have significant impacts that are expected to be felt in more than one county;
- Solutions to problems have potential adverse impacts that can be better avoided or mitigated through adherence to regional policies, and;
- Solutions to problems are deemed to have regional significance.

The Sub-Regional SIRTPO member agencies considered several additional criteria to determine the roadway's regional significance. The criteria considered were:

- Volume of inter-county and intra-county traffic;
- System use by regional tourist traffic, including non-motorized use;
- System use by commercial and freight traffic;
- System use by transit (not including feeder routes);
- Interconnections to other modes of transportation;
- Potential to provide for logical future connection between existing identified components;
- Implementation of GMA land use plans, and;
- Impact on the economic vitality/stability of the Sub-regional area.

# ***Island Sub-Regional Transportation System***

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The Washington State Department of Transportation established, in its guidelines, that all state highways, regional arterials, transit, non-motorized facilities, marine ports, and airports must be included as components of the Regional Transportation System.

The primary elements of the regional transportation roadway system include, bridge connections, intersections, HOV or passing lanes, state routes, specific county and city/town arterial roads, and other facilities (existing or identified as needed), which have been determined to have "regional significance" by member agencies within the Sub-Region.

## **Sub-Regional System**

### ***State Highways and Regional Arterials***

Interstate 5 serves as the major freeway for the region. All vehicular traffic entering Island County funnels through one of the following points of entry: SR-20 over the Deception Pass Bridge; SR-532 over the Davis Slough Bridge; SR-525 Ferry Terminal at Clinton; or SR-20 Ferry Terminal at Keystone. In 2000, the average annual daily traffic volume entering and exiting the county at each of the entry portals was: (See Figure 4-1 for graphic display)

Davis Slough Bridge (SR-532) -	17,000
Deception Pass Bridge (SR-20) -	16,000
Mukilteo/Clinton Ferry (SR-525) -	6,100
Port Townsend/Keystone Ferry (SR-20) -	1,039

These totals do not account for foot passengers on the ferries. Most foot passengers impact the highway in one of three ways. They are: 1) someone drives to the terminal and leaves them off/picks them up; 2) they take the bus; or 3) they have a car parked at the park and ride lot or elsewhere.

State Routes 20 and 525 traverse Whidbey Island to serve as the major transportation corridor supporting Island County's arterial and collector roads. State Route 532 connects Camano Island to the mainland via the City of Stanwood, I-5, and Snohomish County. Arterials provide the most mobility in the functional classification system. Within the sub-region, arterials connect major destination points such as Deception Pass, Ft. Ebey, Ft. Casey, South Whidbey, and Camano Island State Parks; Naval Air Station Whidbey Island; Ebey's Landing National Historical Reserve; the Clinton - Mukilteo, and Keystone - Port Townsend Ferries, and the incorporated communities of Oak Harbor, Coupeville, and Langley. Traffic flow to these destinations increases significantly during the summer tourist months. Regionally significant arterials have been identified according to the road's ability to provide either mobility or access to land as related to the hereinabove established criteria. Figure 4-1, Island Sub-Regional Transportation Map, depicts all regionally significant roadways in the Island Sub-Region.





# *Island Sub-Regional Transportation System*

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## ***Intersections***

Intersections are included in the Island Sub-Regional Plan as an important component of the regional roadway system. The majority of intersections located in the Sub-Regional area are unsignalized, but more are becoming signalized. Because of the interaction of traffic volumes and the critical gap size at unsignalized intersections, correlation can be made between the level of service of the roadway segments and the level of service of the intersection. Intersections and their impact on the level of service of the connecting state highway and regional arterial segments are identified in the Island County Transportation Element, as well as the member agencies. Specific intersections are of regional significance and are identified in this plan. An indication of a level of service problem does not automatically require the installation of traffic signals, rather, it does indicate that a detailed analysis should be conducted utilizing different scenarios to improve the intersection.

Before the installation of traffic signals is permitted, at a given intersection, one or more warrants must be met. Warrants are nationally recognized criteria. There are eleven warrants, but each jurisdiction may choose to only use a selected number of them, those that best suit their policies and circumstances. For instance, the Department of Transportation only uses three for state highways. Those three warrants measure mainline traffic volumes, side-street traffic volumes, and accidents. Specific locations are funded for construction in accordance with a priority list based upon the degree to which the three warrants have been met.

Table 4-1 shows state highway intersections that the 1994 Sub-Regional Transportation Plan recommended for analysis and their status.

**Table 4-1 Intersection Status**

<b>LOCATION</b>	<b>MILEPOST</b>	<b>STATUS</b>
Honeymoon Bay Road	SR 525 - 18.92	#138* on WSDOT List
Main Street / Fish Road	SR 525 - 18.08	Constructed
Bayview Road	SR 525 - 14.68	Constructed
Maxwellton	SR 525 - 12.25	Constructed
Deer Lake Road	SR 525 - 8.96	#72* on WSDOT List
Bob Galbreath Road	SR 525 - 9.06	#223* on WSDOT List
SR 20	SR 525 - 30.52	#104* on WSDOT List

\* WSDOT signal priority list ranking as of April, 2002

The table indicates that all of the requested analyses have been done and that three of the locations have had the signals built. WSDOT only funds four or five new signals in the entire Northwest Region each year, thus, Island County has done well. None of the remaining locations is very high on the priority list, but the list is revised a number of times each year, and the ranking can change, up or down, significantly.

## ***Bridges***

Bridges are crucial links in the sub-region road system, as demonstrated by the Deception Pass and Canoe Pass Bridges. Consequently, bridge safety, including structural design needs such as strength or sight distance, and bridge capacity needs, are important to the Sub-Region. Canoe Pass Bridge is in Skagit County, and thus outside the planning area, but is a critical component of the transportation system nonetheless.

## *Island Sub-Regional Transportation System*

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Deception Pass and Canoe Pass Bridges unite Whidbey and Fidalgo Islands providing a critical link between North Whidbey Island and the mainland. These bridges also connect the mainland to the Olympic Peninsula, via the Keystone Ferry. The bridges provide a scenic viewpoint across the saltwater passes. They are located within the Deception Pass State Park boundaries. The park is one of the largest (6,000 acres) in the state and receives over 5 million visitors each year. In addition to serving commuter and local traffic, the Deception Pass and Canoe Pass Bridges are located along a major tourist route, as a part of Deception Pass State Park. The bridges are one of the major tourist attractions in the state. They attract significant foot traffic, producing conflicts between automobiles and pedestrians. The Deception Pass Bridge was constructed in 1935 and is 976 feet in length. Canoe Pass Bridge was also constructed in 1935 and is 511 feet in length. Both bridges have 11-foot travel lanes.

Traffic counts on Deception Pass Bridge were taken by WSDOT in August 2000. The average 24-hour total for weekdays was 18,900. The month of August represents the peak month in traffic flow and is approximately 18 percent higher in volume than the yearly average.

In 2001 WSDOT constructed bridge end stairways at the southwest, southeast, northwest, and northeast corners of the Deception Pass Bridge resulting in the provision of pedestrian access to walkways under each end of the bridge. There are future plans to widen the roadway from 22 feet to 27 feet, providing for 11-foot lanes, 2.5-foot shoulders, and an additional 2 feet for traffic barrier separating the roadway and pedestrian walkways. The existing pedestrian walkway will be widened from 3 feet 6 inches to 6 feet on both sides of the bridge when funding can be found.

The General Mark Clark Bridge across the Stilligumish River links Leque Island with Stanwood and the 1-5 corridor, and serves as the only connection to the mainland. The bridge was built in 1949 and is 487 feet in length. The bridge is entirely in Snohomish County. In addition to this bridge, the Davis Slough Bridge connects Leque Island and Island County. This bridge was also built in 1949 and is 120 feet in length. Both bridges have 13-foot travel lanes and a year 2000 average daily traffic count of 17,000.

### ***Truck Routes***

The Freight and Goods Transportation System is a statewide network and classification system of truck routes on state highways, county roads, and city streets that carry freight. Routes are classified by total tonnage of freight carried per year as shown in Table 4-2. Virtually all goods transported from and to Island County are carried on the Freight and Goods Transportation System truck routes listed in Table 4-3.

**Table 4-2 Truck Route Classifications**

<b>Truck Route Class</b>	<b>Classification Criteria: Annual Gross Tonnage</b>
T-1	Over 10,000,000
T-2	4,000,000 to 10,000,000
T-3	300,000 to 4,000,000
T-4	100,000 to 300,000
T-5	Over 20,000 in 60 days

# *Island Sub-Regional Transportation System*

**Table 4-3 Island County Truck Routes**

Road	From	To	Class	Seasonal Restrictions
SR 20	Keystone Ferry	SR 525	T-4	No
SR 20	SR 525	Deception Pass Br.	T-3	No
SR 525	Clinton Ferry	SR 20	T-3	No
SR 532	East Camano Dr	Snohomish County	T-3	Yes
Langley Rd	SR 525	Langley	T-4	Yes
Maxwelton Rd	SR 525	Langley	T-4	Yes
Bayview/Brooks Hill Rd	SR 525	Langley	T-4	Yes
Main St/Scott Rd	SR 525	SR 525	T-4	Yes
Patmore Rd	SR 20	Keystone Hill Rd	T-4	No
Swantown St	SR 20	Heller St	T-4	No
Heller St	Swantown St	Whidbey Ave	T-4	No
Heller St	Whidbey Ave	Ault Field Rd	T-4	Yes
Whidbey Ave	Heller St	SR 20	T-4	Yes
Oak Harbor Rd	Whidbey Ave	Ault Field Rd	T-3	Yes
Ault Field Rd	Heller Rd	SR 20	T-3	Yes
Regatta Drive	Pioneer Way	SR 20	T-4	Yes
Goldie Rd	SR 20	Ault Field Rd	T-3	No
Fakkema Rd	SR 20	Taylor Rd	T-4	Yes
Hoffman Rd	SR 20	NAS Whidbey	T-5	Yes
Jones Rd	SR 20	Henni Rd	T-4	Yes
North Camano Dr	SR 532	West Camano Dr	T-4	Yes
East Camano Dr	SR 532	Camano Hill Rd	T-4	Yes
Engle Rd / Main St	Keystone Ferry	SR 20	T-4	Yes
Sleeper Rd	Taylor Rd	SR 20	T-4	Yes

### *Scenic Corridors and Highways*

A scenic highway is a road that has been designated through a legislative or other official declaration for its scenic, historical, recreational, archaeological, natural, or cultural values.

For many roadways in the State, scenic resources have already been identified through WSDOT's Scenic Highways Program. More than 3,000 miles have been designated as scenic highways. The only regulatory requirement for highways with Scenic and Recreational designation is outdoor advertising control outside corporate city limits. Any other requirements to protect scenic views originate at the local level and are incorporated into local comprehensive plans or ordinances. In Island County, SR 20 and SR 525 have been designated as scenic highways by the State Legislature. In 2002 Island County submitted a National Scenic Byway grant application for funds to produce a corridor management plan. The corridor management plan is required to address 14 points as defined by the Federal Highway Administration.

## *Island Sub-Regional Transportation System*

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In addition to the state program, Island County intends to identify Scenic Corridors and Scenic Highways. Some scenic corridors have been identified in the Langley and Coupeville joint planning areas. A scenic corridor pertains to the land on the sides of a roadway that is generally visible to the public traveling on such roads and characterized by views and vistas of unusual natural significance. Roads possessing these values, and designated as a scenic highway, may have reduced standards for improving its capacity, safety, and maintenance. Capacity, safety and maintenance needs would not be compromised in the viewing of surrounding land and seascapes. Nearly all roadways within the unincorporated areas of the County could fall within the scenic corridor designation except for residential streets and commercially zoned areas.

### *Safety*

In order to provide an overview of the safety of state highways in Island County, Table 4-4 provides data for seventeen highway segments on State Routes 20, 525, and 532. This Table provides the number of accidents for the years 1999 and 2000, as well as accident rates. Two types of accident rates are provided, based on the number of accidents per million vehicle miles (MVM) and the number of accidents per mile-year. The traffic accident data was provided by the Washington State Department of Transportation (WSDOT) Traffic Safety Office.

In addition to the accident rates, traffic volume rates are provided. These are Annual Average Daily Traffic (AADT) rates for each highway segment, and were compiled from the WSDOT 2000 Annual Traffic Report. When volumes were available at more than one location within a segment, the volumes were averaged to provide a single volume number for the segment. These traffic rates, when combined with the length of each highway segment, are used to calculate the number of vehicle miles traveled per year in each segment.

As shown in the table, the segment with the greatest number of accidents is on Whidbey Island. The segment of SR 20 from Libbey Road to the north Oak Harbor city limits had more than four times the number of accidents, when compared to the next highest segment. Correspondingly, this segment also has the highest accident rates and the highest AADT of any segment in Island County. This segment is the first of four highway segments on SR 20, from Libbey Road to the Deception Pass Bridge, that represent the four highest accident segments in Island County. These four segments account for over 65 percent of the accidents in Island County, while accounting for slightly more than 30 percent of the highway miles. The information in Table 4-4 is used by County and WSDOT officials to help them determine where safety concerns exist, investigate the particular safety concern, and develop solutions.

## *Island Sub-Regional Transportation System*

**Table 4-4 Accident Summary On Regional State Highways 1999 -2000**

Highway Section	BARM*	EARM*	Length	Number of Accidents (1999-2000)	AADT (2000)	Accident Rate (per MVM)	Accident Rate (per mile/year)
<b>SR 20</b>							
Keystone Ferry - SR 525	12.88	16.3	3.46	6	950	2.5	0.87
SR 525 - Parker Rd.	16.3	19.24	3.11	20	6,200	1.42	3.22
Parker Rd. - Main St.	19.24	21.74	2.38	20	7,600	1.51	4.2
Main St. - Libbey Rd.	21.74	25.22	3.48	25	9,700	1.01	3.59
Libbey Rd. – Oak Harbor Limits N.	25.22	33.59	5.46	301	16,600	4.55	27.56
Oak Harbor Limits N. - Frostad Rd.	33.59	36.31	3.04	62	16,300	1.71	10.2
Frostad Rd. - Troxell Rd.	36.31	39.69	3.36	69	16,200	1.74	10.27
Troxell Rd. - County Line	39.69	41.79	2.99	73	14,000	2.39	12.21
<b>SR 525</b>							
Clinton Ferry - Cedar Vista Dr.	8.72	10.23	1.51	18	8,000	2.04	5.96
Cedar Vista Dr. - Langley Rd.	10.23	11.34	1.11	22	9,100	2.98	9.91
Langley Rd. - Bayview Rd.	11.34	14.92	3.58	40	11,000	1.39	5.59
Bayview Rd. - Main St.	14.92	18.32	3.4	38	11,000	1.39	5.59
Main St. - Bush Point Rd.	18.32	19.16	0.79	10	7,400	2.34	6.33
Bush Point Rd. - Smugglers Cove Rd.	19.16	26.07	6.96	20	5,400	0.73	1.44
Smugglers Cove Rd. - Houston Rd.	26.07	29.27	3.12	7	5,400	0.57	1.12
Houston Rd. - SR 20	29.27	30.75	1.54	7	6,500	0.96	2.27
<b>SR 532</b>							
East Camano Dr. - County Line	0	2.91	2.91	30	15,500	0.91	5.15

\*BARM (Beginning Accumulated Route Mileage) and EARM (Ending Accumulated Route Mileage) represent the actual miles of a section of roadway or route accumulated from the beginning of the route in the direction of the roadway. In Table 4-4 BARM and EARM serve as location reference points for accident statistics.  
Source: WSDOT

# ***Island Sub-Regional Transportation System***

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## **State Facilities Relationship To The Washington State Growth Management Act (GMA)**

In 1998 the GMA transportation element, RCW 36.70A.070, was revised to require each jurisdiction planning fully under the GMA to include additional detail in their comprehensive plan transportation element. This additional detail includes:

- A new sub-element with estimates of the traffic impacts to state-owned transportation facilities resulting from land use assumptions,
- Assisting the Washington State Department of Transportation (WSDOT) in monitoring the performance of state facilities, planning for improvements, and assessing the impact,
- A requirement that State-owned transportation facilities to be included in the local plan's transportation inventory, including highways of statewide significance (HSS),
- A requirement that level of service be calculated for state-owned transportation facilities, and
- A list of identified needs, for state-owned facilities in local plans, that is consistent with the state plan.

The 1998 GMA amendments require Island County to adhere to concurrency requirements on highways of statewide significance. The concurrency requirements provide a structure to assure that level of service is maintained. If a specific, potential development threatens to reduce a level of service below standards identified in the transportation element, the development may be denied by the local government, unless improvements can be made concurrent with development, to maintain the adopted level of service.

The 1998 Amendments to the GMA and the RTPO planning process clarify and specifically address several issues that were previously left to local interpretation. Those issues are the identification and inclusion of level of service for regional and statewide significant transportation facilities in the local plans, and concurrency requirements for these facilities.

## **Sub-Regional Level Of Service And Local Planning**

A regional analysis provides data at key locations in the Island County Sub-Region, but is not a substitute for local analysis or planning. Rather, the sub-regional analysis is both a guide to help WSDOT and local jurisdictions identify areas of potential concern and a supplement that brings focus to regionally significant issues.

It is important to note that a regional analysis provides a snapshot for segments of roadways. At the local level there may be some variation in the level of service. When the regional standard is exceeded, it is a message to WSDOT or local jurisdictions that they have a service level issue. A certain degree of mitigation occurs at the local level as part of their fundamental planning decision making process. However, the nature of transportation in this region necessitates that WSDOT's plans and programs be supportive of the tourist economy of the region.

Level of service is defined by a system developed by the Transportation Research Board, an arm of the National Academy of Sciences. Table 4-5 summarizes the definitions of each of the five levels of service used for two lane highways. The system differentiates Class I two-lane highways that accommodate higher speeds and through traffic and Class II two-lane highways that serve shorter, lower speed trips. The table describes conditions for Class I highways.

## *Island Sub-Regional Transportation System*

**Table 4-5 Level Of Service Definitions For Class 1\* Two-Lane Highways**

LEVEL OF SERVICE CATEGORY	DEFINITION
LOS "A"	This LOS represents the highest quality of traffic service. Motorists are able to drive at their desired speed. Passing demand well below capacity and there are almost no platoons of three or more vehicles. Motorists would be delayed no more than 35 percent of the time, by slow moving vehicles.
LOS "B"	This LOS allows motorists to maintain speeds of 50 mph on level terrain. Passing demand becomes significant and approximately equals passing capacity at the lower boundary of LOS B. Motorists are delayed in platoons up to 50 percent of the time
LOS "C"	Although average speeds exceed 45 mph, unrestricted passing demand exceeds passing capacity. While traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow-moving vehicles. Time spent in platoons can reach 65 percent.
LOS "D"	LOS D describes unstable traffic flow, and passing becomes very difficult. Although speeds of 40 mph can be maintained, platoon sizes of 5-to-10 vehicles are common. Turning vehicles and/or roadside distractions can cause major shockwaves in the traffic stream. The percentage of time motorist are delayed in platoons approaches 80 percent.
LOS "E"	At LOS E, under ideal conditions, traffic speed may fall below 40 mph and delay times are greater than 80 percent. Passing is virtually impossible, and platooning becomes intense. The highest traffic volume attainable under LOS "E" defines the capacity of the highway.
LOS "F"	LOS F represents heavily congested flow with traffic demand exceeding the capacity of the roadway. Traffic volumes are lower than capacity, and speeds are highly variable.

\* "Class 1 – These are two-lane highways on which motorists expect to travel at relatively high speeds. Two-lane highways that are major intercity routes, primary arterials connecting major traffic generators, daily commuter routes, or primary links in state or national highway networks generally are assigned to Class 1. Class 1 facilities most often serve long-distance trips or provide connecting links between facilities that serve long-distance trips." Source: Transportation Research Board, Highway Capacity Manual, Washington, D.C., 2000.

# Island Sub-Regional Transportation System

Table 4-6 shows traffic volume thresholds at which additional traffic volume lowers the level of service. This table reflects a highway section with parameters that reflect the varying conditions in Island County. Some of these parameters, such as no shoulders and 100% no-passing, is a worst case, and others such as zero access points per mile are an ideal condition.

**Table 4-6 Threshold Hourly Volumes For Level Of Service On State Highways**

DESCRIPTION Two-lane Roadways Total Volume Both Directions	DESIGN SPEED	LEVEL OF SERVICE (LOS)				
		A	B	C	D	E
State – Undivided	55	264	555	1065	1813	2664

**ASSUMPTIONS: LOS values in Table 4-6 are for a highway with the specific characteristics described below:**

Lane Width = 11 feet, rolling terrain, truck percentage = 6 percent (typical 200#/HP), recreational vehicle percentage = 3 percent, no obstructions, no shoulders, rural roads, regular users, directional distribution = 55/45, PFH = 0.9, zero access points per mile, 100% no-passing zones.

Source: WSDOT

Reference: TRB Highway Capacity Manual 2000

Overall, there are many sections of these highways that have more capacity than depicted because of better operating conditions than assumed, thus this is a conservative scenario. This information is provided to give the reader a sense of how operating conditions are evaluated using the level of service system used by the county and cities.

Table 4-7 contains threshold levels of service calculations for the Deception Pass Bridge based on factors *specific* to the bridge, such as, 11-foot travel lanes, no roadway shoulders, 35 mph speed limit, and presence of panoramic views that attract large numbers of pedestrians onto the bridge. The Deception/Canoe Pass bridges represents a "bottle neck" on State Highway 20 for traffic flowing on and off Whidbey Island due to the narrow lanes, lack of adequate shoulders and pedestrian shy distances. Traffic volumes greater than 750 in a one hour period would be classified as LOS "F" with traffic demand exceeding the capacity of the roadway (bridge).

**Table 4-7 Threshold Hourly Volumes For Level Of Service On Deception And Canoe Pass Bridges**

DESCRIPTION	DESIGN SPEED	LEVEL OF SERVICE (LOS)				
		A	B	C	D	E
SR 20 Deception Pass Bridge (100 percent No-passing zone)	50	25	85	185	285	750

Assumptions: lane width = 11 feet, rolling terrain, truck percentage = 6 percent, no shoulders for vehicles, peak-hour is 9 percent of ADT, Rural road, directional distribution = 55/45, PFH = 1.0,

Reference: TRB Highway Capacity Manual

## Level Of Service Standards

Pursuant to RCW 47.80.030 WSDOT and the SIRTPO are responsible for establishing level of service standards for all state highways and state ferry routes. For Highways of Statewide Significance, the

## *Island Sub-Regional Transportation System*

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Department of Transportation will establish the level of service after consulting with the RTPO's. Island County, Oak Harbor, Langley, and Coupeville have established level of service standards for their arterial roadway systems and intersections. In addition, the Island RTPO Sub-Region in conjunction with WSDOT has established level of service standards for the State Highways, County arterial, and State Highway intersections (intersections of regional significance), and the State Ferry system. Pursuant to the Island County Transportation Element, the adopted level of service standards for most county arterials are:

- LOS "C" for roads in rural areas,
- LOS "D" for roads in urban areas, and
- The existing level of service for roads that exceeded the standards when they were set.

The following County roads have a 1996 level of service lower than LOS "C" in rural areas and lower than LOS "D" in urban areas:

Ault Field Road (Urban)	LOS "E"
Goldie Road (Urban)	LOS "E"
East Camano Drive (from SR 532 to Cross Island Rd.) (Rural)	LOS "D"
East Camano Drive (from Cross Island Road to Camano Hill Road)	LOS "D"

Level of service standards for intersections of regional significance, including state highway intersections in Island County are:

- County arterial intersections in rural areas are LOS "C;"
- County arterial intersections in urban areas are LOS "D;"
- County arterial intersections with State roads in rural areas are LOS "D;"
- County arterial intersections with state, city, or town roads in urban areas is LOS "E"

NOTE: The urban areas to be used with the above standards are defined by the urban growth areas for Oak Harbor, Coupeville and Langley. In addition, certain roads in the rural community centers of Freeland and Clinton have been assigned the urban level of service standard. The Island County Transportation Element contains details and exceptions to level of service standards.

Level of service standards for state highways in Island County are based on a unique system developed especially for and by the State. It is called the "congestion index. The congestion index values are determined by dividing the average daily traffic volume to hourly capacity. Unlike the commonly used volume to capacity (v/c), this method identifies sections of roads that have "peak spreading" of congestion (i.e., more than one peak hour of delay). For the state, the Transportation Commission adopted a congestion index of 6 for rural areas and 10 for urban areas. However, as a result of the uniqueness of Island County, in 1998 the Legislature adopted the LOS Bill (i.e., EGSB 1487). That legislation requires, "counties comprised of islands whose only connection to the mainland are state highways or ferry routes must factor in state highway and ferry capacity in meeting (GMA) concurrency requirements". As a result, the SIRTPO and WSDOT have agreed to a congestion index of 10 for rural areas and 12 for urban areas.

Table 4-8 gives traffic volumes and level of service for a sampling of locations on state highways. The analysis is based on traffic at a single hour, known as the peak hour. The peak hour is simply the hour of the day with the highest volume of traffic, at a given location, measured in 15-minute segments. So the peak hour can be from 4:45 to 5:45, if that is when it occurs (as it does in Oak Harbor). However, it will not be the same throughout the islands. It will begin at an activity point, usually a place of work, and spread. For Whidbey Island the peak will start in Oak Harbor/Naval Air Station as these two points have the greatest amount of employment in the County. It will then become later for points farther away from

# *Island Sub-Regional Transportation System*

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the City. To avoid confusion, a single peak hour has been defined for the analysis below, that in Oak Harbor.

**Table 4-8 1998 Level Of Service Analysis For Selected Locations  
On The State Highway System**

<b>SR</b>	<b>Location</b>	<b>Hourly Volume</b>	<b>Congestion Index</b>
525	East of Langley Road/Cultus Bay Road	814	6.44
525	West of Maxwelton	931	7.37
525	West of Bayview Road	1013	8.01
525	North of Honeymoon Bay Road-Bush Point Rd	961	6.67
525	South of Smuggler's Cove Road	682	6.65
525	South of SR 20/Race Road	930	9.07
20	Main Street	830	4.77
20	Libbey Road	1212	5.91
20	Boon Road	1516	7.39
20	Pioneer Way	1635	11.50
20	Midway Blvd.	980	7.57
20	Ault Field Road	1758	8.25
20	Jones Road	1467	7.64
20	Cornet Bay Road	1234	6.39

The member agencies of the Sub-Region have also established level of service standards for roadways and intersections within their jurisdictions. These standards are shown in Table 4-9.

**Table 4-9 Urban Level Of Service Standards**

	<b>OAK HARBOR</b>	<b>LANGLEY</b>	<b>COUPEVILLE</b>
<b>Roadways</b>	LOS D	LOS C	LOS C
<b>Intersections</b>	LOS D	LOS C	LOS C

## *Island Sub-Regional Transportation System*

Table 4-10 identifies those arterials that have been determined to have regional significance:

**Table 4-10 Regional Roadways**

<b>County</b>	<b>State</b>	<b>Oak Harbor</b>	<b>Coupeville</b>	<b>Langley</b>
Arnold Rd.	SR 20	6 <sup>th</sup> Ave.	Broadway	Anthes
Arrowhead Rd.	SR 525	SE 8 <sup>th</sup> Ave.	Coveland	Camano Ave.
Ault Field Rd.	SR 532	NE 16 <sup>th</sup> Ave.	Madrona	Cascade Ave.
Auvil Rd.		Barrington Drive	Main St.	Debruyn
Bayview Rd.		Bayshore Ave.		First St.
Brooks Hill Rd.		Crescent Harbor Rd.		Park Ave.
Bush Point Rd.		Crosby Ave.		Second St.
Clover Valley Rd.		Fort Nugent Ave.		Sixth St.
Crescent Harbor Rd.		Heller Rd.		Third St.
Crosby Rd.		Midway Blvd.		Wharf St.
East Camano Dr.		Oak Harbor St.		
Elger Bay Rd.		Pioneer Way		
Engle Rd.		NE Regatta Drive		
Fakkema Rd.		Swantown Ave.		
Fort Nugent Rd.		Whidbey Ave.		
Goldie Rd.				
Golf Course Rd.				
Good Rd.				
Heller Rd.				
Langley Rd.				
Libbey Rd.				
Madrona				
Main St.				
N. Maxwellton Rd.				
Monroe Landing Rd.				
North Camano Dr.				
Oak Harbor Rd.				
Scott Rd..				
Smugglers Cove Rd.				
Swantown Rd.				
Taylor Rd.				
Torpedo Rd.				
Utsalady Rd.				
West Camano Dr.				
West Beach Rd.				

Table 4-11 identifies those intersections that have been determined to have regional significance:

# *Island Sub-Regional Transportation System*

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**Table 4-11 Summary Of County Regional Intersections Island County**

<b>INTERSECTION</b>	
1.	Ault Field Rd./SR 20
2.	Goldie Rd./Ault Field Rd.
3.	Oak Harbor Rd./Ault Field Rd.
4.	Langley Blvd./Ault Field Rd.
5.	Ault Field Rd./Heller Rd.
6.	Crosby Rd./Heller Rd.
7.	Swantown Rd./SR 20
8.	Fakkema Rd./SR 20
9.	Goldie Rd./SR 20
10.	Crescent Harbor Rd./Taylor Rd.
11.	Libbey Rd./SR 20
12.	Broadway St./SR 20
13.	Main St./SR 20
14.	SR 20/Race Rd. & SR 20/SR 525
15.	Smugglers Cove Rd. SR 525
16.	Honeymoon Bay Rd. Bush Point Rd. SR 525
17.	SR 525/Fish Rd./Main St.
18.	SR 525/Scott Rd.
19.	Marshview Ave./SR 525
20.	SR 525/Bayview Rd.
21.	SR 525/Maxwelton Rd.
22.	SR 525/Langley Rd./Cultus Bay Rd
23.	SR 525/Bob Galbreath Rd.
24.	SR 525/Deer Lake Rd..
25.	North Camano Dr./SR 532
26.	East Camano Dr./SR 532/Sunrise Blvd.
27.	Langley Rd./ Maxwelton Rd.

## **Roadway Improvements**

Improvements to the Island Sub-Regional roadway system are planned on an annual basis through the six-year work programs developed by WSDOT; Island County; and the towns and cities. In these six-year programs, emphasis is given to safety and operational improvements. These improvements include resurfacing, restoration, and rehabilitation of roads, retaining structures for steep and unstable slopes, and roadway modifications to improve vertical and horizontal sight distances.

Island County has developed a Transportation Plan, together with a Capital Facilities Plan, which identifies projects and funding sources to achieve and/or maintain LOS standards on County arterials for the duration of the planning period. The Capital Facilities Plan also includes a "Concurrency Implementation and Monitoring System". Chapter 12, Table 12-3 contains a list of projects needed to maintain level of service standards. Table 12-6 contains a list of WSDOT capacity improvement projects and 12-7 lists safety improvements.

## *Island Sub-Regional Transportation System*

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The plan assumes that capacity will be improved in Oak Harbor by extending the four/five lane highway configuration to the urban boundaries at Waterloo Road to the south and Ault Field Road to the north. Outside of Oak Harbor capacity deficiencies will be addressed with a combination of intersection channelization, passing and two-way left-turn lanes, transportation demand management techniques, and increased van pooling and transit. In addition to these capacity improvements, the Island RTPO Sub-region has identified other safety and operational (non-capacity) improvements that should be constructed over the next six years.

Road and highway construction projects will be designed to a uniform set of design standards. In Table 4-12, typical design guidelines are listed that were derived from current state and county design practices. A minimum paved shoulder of four feet should be provided along county arterials and state highways for emergency parking, bicycles and pedestrians. These design standards are intended to be a guide in designing county arterials and state highways. Specific design standards adopted by county and state agencies will be used in all roadway final design construction projects.

These design standards are generally for rural roads. Modifications may be required to these design standards in urban areas for the use of underground storm drains, curbs and gutters, utility locations and scenic highway requirements. The design standards should also be coordinated with utility requirements. The design speeds on county roads may vary due to the land use through which the roads pass.

In addition to these roadway improvements, various intersections will require improvements to maintain their level of service rating. Traffic warrant studies are required to identify the appropriate improvements at the intersections that do not meet level of service standards. However, a list of intersection improvements were developed using available data and based on level of service analyses. The list of intersection improvements is listed in Table 4-13.

Table 4-14 lists state highway mainline locations with their present and projected future level of service.

# *Island Sub-Regional Transportation System*

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**Table 4-12 Highway Design Standards Island County**

TYPE OF FACILITY	DESIGN SPEED (minimum) (mph)	RIGHT-OF-WAY (minimum) (feet)	ROADWAY WIDTH (feet) (incl. shld.)	TRAVEL LANES WIDTH (feet)	BUILDING SETBACK (minimum) (feet) (from C/L or R/W)*
State Highways					
Two-lane	50	120	40	24	80-30
Four-lane	50	140	68 + median	48	80-30
Major Arterials					
Two-lane	50	80	40	24	70-30
Four-lane	50	120	64	48	70-30
Secondary Arterials	50-30	60	34	22	70-30
Collectors	50-30	60	30	22	70-30
Local Access Roads	35	50-60	28-30	20-22	50-20

\*Whichever provides the greater setback (C/L = centerline; R/W = right-of-way)

Source: Island County Transportation Plan, 2000

In most cases travel forecasts and capacity deficiencies form the basis for identifying regional deficiencies. In general, possible solutions to system capacity needs such things as shoulder widening, addition of travel lanes, passing and pull-out lanes, left-and right turn pockets and channelization, re-designation of routes, and construction of new roads and bridges. As a result of the sub region's limited access points to the mainland the highest level of demand and increased use is placed on a few key components of the sub-regional transportation system.

The travel forecast values listed in Table 4-13 are taken from a forecasting model used by WSDOT staff. Some values may differ from those shown in the County's transportation element, for a number of reasons. Some of those reasons are: WSDOT's model was put together later than the County's, therefore they had newer data; the models were put together for difference purposes, therefore they will structure the respective models differently; and each person doing a model uses a different approach. Because they are forecasts they are only sophisticated attempts to guess at what will happen in the future. If forecasts are needed for project level work where the two forecasts differ, additional analysis can be done to reconcile differences.

# Island Sub-Regional Transportation System

**Table 4-13 Summary Of County Intersection Level of Service Island Sub-region**

MP	Intersection (see Appendix A for intersection diagrams)	Year	Type of Control	LOS/ Delay (sec/veh)	Unsignalized*				Signalized*
					NB	SB	EB	WB	
16.32 (SR20)	SR 20 / SR 525 - Race Road (Intersection Diagram A)  Improvements: None	1998	EB/WB Stop	LOS ----- Delay	A 8.3	A 8.4	C 20.2	C 17.0	
		2022 No Build	EB/WB Stop	LOS ----- Delay	B 10.2	A 8.8	F 681.6	F 60.0	
		2022 Build	EB/WB Stop	LOS ----- Delay	B 10.2	A 8.8	F 681.6	F 60.0	
21.83	SR 20 / Main Street (Intersection Diagram B)  Improvements: None	1998	Signal	LOS ----- Delay					B ----- 10.1
		2022 No Build	Signal	LOS ----- Delay					B ----- 18.9
		2022 Build	Signal	LOS ----- Delay					B ----- 18.9
22.15	SR 20 / Broadway Street (Intersection Diagram A)  Improvements: Add left turn channelization	1998	EB/WB Stop	LOS ----- Delay	A 8.3	A 8.4	E 45.1	E 36.8	
		2022 No Build	EB/WB Stop	LOS ----- Delay	B 10.4	A 9.6	F n/a	F n/a	
		2022 Build	EB/WB Stop	LOS ----- Delay	B 10.4	A 9.6	F n/a	F n/a	
25.31	SR 20 / Libbey Road (Intersection Diagram D)  Improvements: None	1998	EB Stop	LOS ----- Delay	A 9.5		C 23.9		
		2022 No Build	EB Stop	LOS ----- Delay	C 15.4		F 663.7		
		2022 Build	EB Stop	LOS ----- Delay	C 15.4		F 663.7		
30.85	SR 20 / Swantown Road (Intersection Diagram E)  Improvements: Widen SR 20 to 4/5 lanes	1998	Signal	LOS ----- Delay					B ----- 13.3
		2022 No Build	Signal	LOS ----- Delay					D ----- 54.7
		2022 Build	Signal	LOS ----- Delay					B ----- 18.5
31.39	SR 20 / Pioneer Way (Intersection Diagram B)  Improvements: Realign to provide 2 EB/WB through lanes	1998	Signal	LOS ----- Delay					B ----- 15.7
		2022 No Build	Signal	LOS ----- Delay					D ----- 47.5
		2022 Build	Signal	LOS ----- Delay					D ----- 47.9
32.94	SR 20 / Goldie Road (Intersection Diagram B)  Improvements: None	1998	Signal	LOS ----- Delay					B ----- 11.5
		2022 No Build	Signal	LOS ----- Delay					C ----- 22.2
		2022 Build	Signal	LOS ----- Delay					C ----- 22.8

# Island Sub-Regional Transportation System

MP	Intersection (see Appendix A for intersection diagrams)	Year	Type of Control	LOS/ Delay (sec/veh)	Unsignalized*				Signalized*
					NB	SB	EB	WB	
34.06	SR 20 / Torpedo Road (Intersection Diagram H)  Improvements: Add signal and widen SR 20 to 4/5 lanes	1998	WB Stop	LOS Delay		A 8.6		C 15.2	
		2022 No Build	WB Stop	LOS Delay		B 10.9		F 169.6	
		2022 Build	Signal	LOS Delay					B 12.2
34.46	SR 20 / Fakkema Road (Intersection Diagram F)  Improvements: Add signal and widen SR 20 to 4/5 lanes	1998	WB Stop	LOS Delay		A 9.2		F 98.1	
		2022 No Build	WB Stop	LOS Delay		B 13.3		F n/a	
		2022 Build	Signal	LOS Delay					A 10.0
34.74	SR 20 / Ault Field Road (Intersection Diagram E)  Improvements: Widen SR 20 to 4/5 lanes	1998	Signal	LOS Delay					B 15.0
		2022 No Build	Signal	LOS Delay					E 77.5
		2022 Build	Signal	LOS Delay					C 31.8
8.96	SR 525 / Deer Lake Road (Intersection Diagram A)  Improvements: Add signal and left turn channelization	1998	EB/WB Stop	LOS Delay	A 7.9	A 7.8	C 15.7	B 12.6	
		2022 No Build	EB/WB Stop	LOS Delay	A 8.6	A 8.4	F 120.5	C 17.9	
		2022 Build	Signal	LOS Delay					A 8.0
9.06	SR 525 / Bob Galbreath Road (Intersection Diagram F)  Improvements: Add signal and left turn channelization	1998	WB Stop	LOS Delay		7.9 A		B 11.9	
		2022 No Build	WB Stop	LOS Delay		8.7 A		C 20.8	
		2022 Build	Signal	LOS Delay					A 4.8
11.1	SR 525 / Langley Road- Cultus Bay Road (Intersection Diagram B)  Improvements: None	1998	Signal	LOS Delay					B 10.7
		2022 No Build	Signal	LOS Delay					C 30.1
		2022 Build	Signal	LOS Delay					C 30.7
12.25	SR 525 / Maxwellton Road (Intersection Diagram B)  Improvements: None	1998	Signal	LOS Delay					B 19.5
		2022 No Build	Signal	LOS Delay					C 32.4
		2022 Build	Signal	LOS Delay					C 33.8

## *Island Sub-Regional Transportation System*

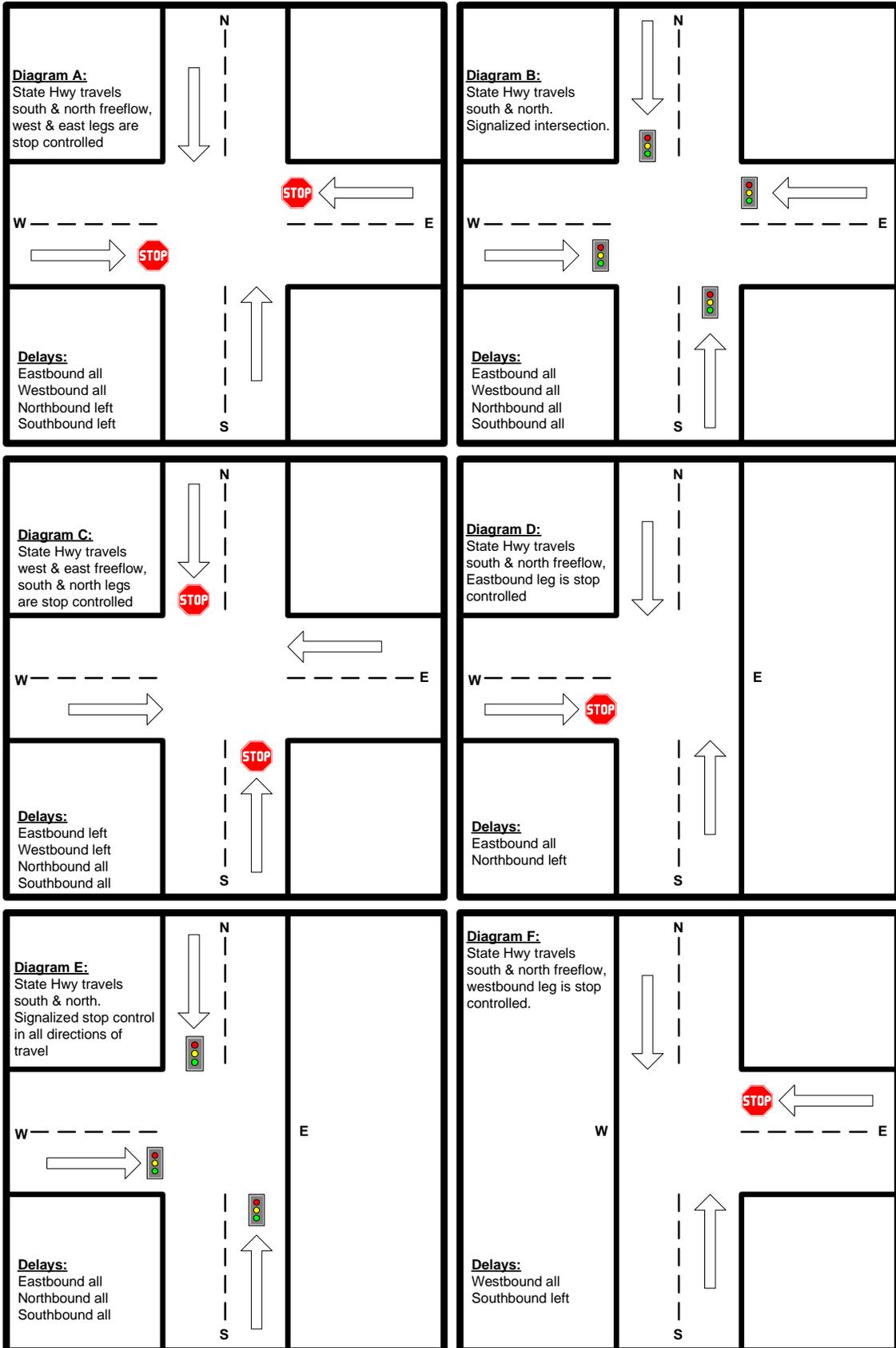
MP	Intersection (see Appendix A for intersection diagrams)	Year	Type of Control	LOS/ Delay (sec/veh)	Unsignalized*				Signalized*
					NB	SB	EB	WB	
14.68	SR 525 / Bayview Road (Intersection Diagram B)	1998	EB/WB Stop	LOS Delay	A 8.4	A 8.6	E 42.4	F 229.0	
		2022 No Build	Signal	LOS Delay					D 39.1
	2022 Build	Signal	LOS Delay					D 39.4	
Improvements: None, signal and channelization added in 2002									
14.95	SR 525 / Marshview Road (Intersection Diagram H)	1998	WB Stop	LOS Delay		A 9.2		C 17.4	
		2022 No Build	WB Stop	LOS Delay		B 12.8		F 221.9	
	2022 Build	WB Stop	LOS Delay		B 12.8		F 221.9		
Improvements: None									
17.26	SR 525 / Scott Road (Intersection Diagram F)	1998	WB Stop	LOS Delay		A 8.6		C 24.2	
		2022 No Build	WB Stop	LOS Delay		B 10.5		F 588.1	
	2022 Build	Signal	LOS Delay					B 12.3	
Improvements: Add signal and left turn channelization									
18.08	SR 525 / Fish Road- Main Street (Intersection Diagram B)	1998	EB/WB Stop	LOS Delay	A 8.0	A 8.4	E 40.4	F 95.5	
		2022 No Build	Signal	LOS Delay					C 22.6
	2022 Build	Signal	LOS Delay					C 22.8	
Improvements: None, signal added in 2000									
18.92	SR 525 / Honeymoon Bay Road - Bush Point Road (Intersection Diagram A)	1998	EB/WB Stop	LOS Delay	A 8.0	A 8.5	C 24.4	C 20.3	
		2022 No Build	EB/WB Stop	LOS Delay	A 8.8	B 10.3	F n/a	F 723.2	
	2022 Build	Signal	LOS Delay					B 12.3	
Improvements: Add signal									
25.83	SR 525 / Smuggler's Cove Road (Intersection Diagram D)	1998	EB Stop	LOS Delay	A 8.0		B 14.3		
		2022 No Build	EB Stop	LOS Delay	A 9.0		E 45.6		
	2022 Build	EB Stop	LOS Delay	A 9.0		E 37.9			
Improvements: Add left turn channelization									
0.00	SR 532 / East Camano Drive - Sunrise Blvd. (Intersection Diagram C)	1998	NB/SB Stop	LOS Delay	B 13.7	C 20.2	A 8.8	A 8.0	
		2022 No Build	NB/SB Stop	LOS Delay	F 107.6	F 400.5	B 11.4	A 8.8	
	2022 Build	Signal	LOS Delay					B 12.2	
Improvements: Add signal									

# Island Sub-Regional Transportation System

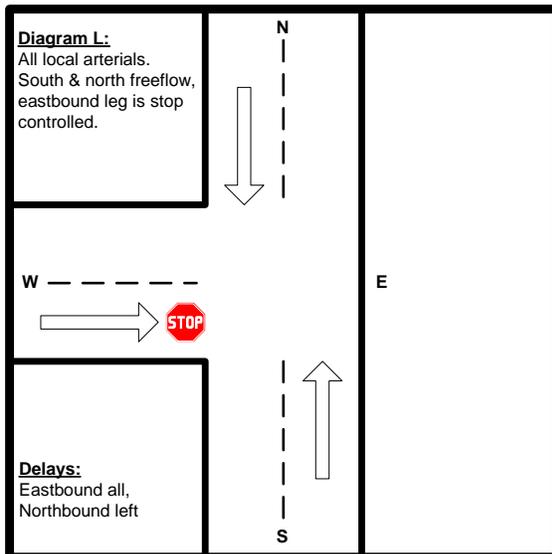
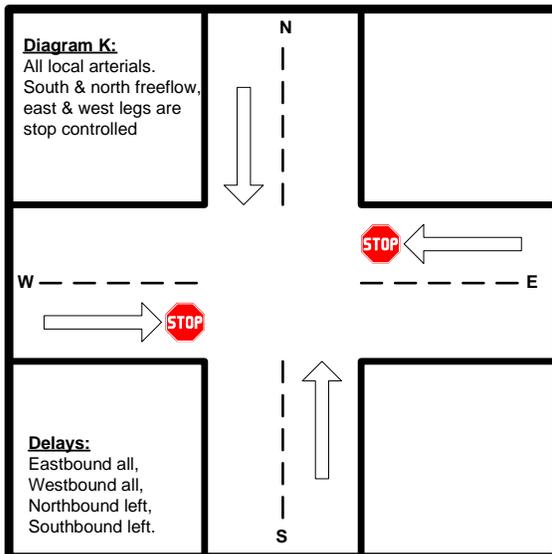
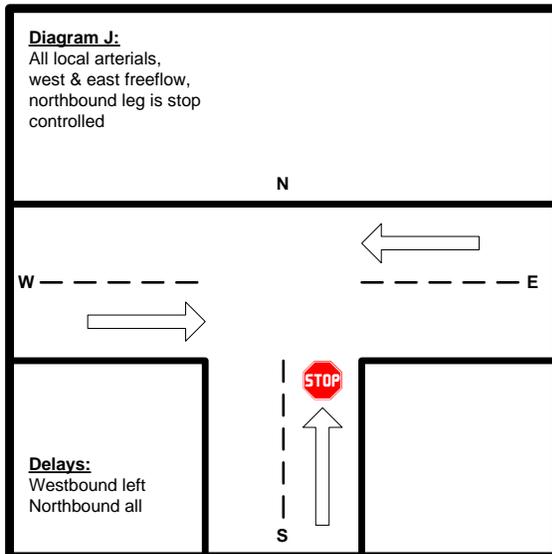
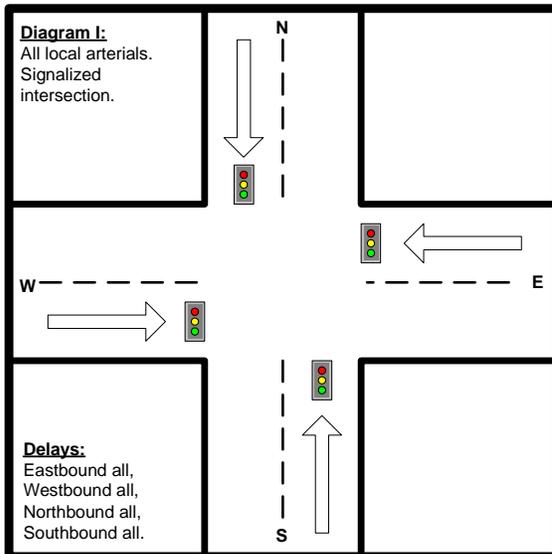
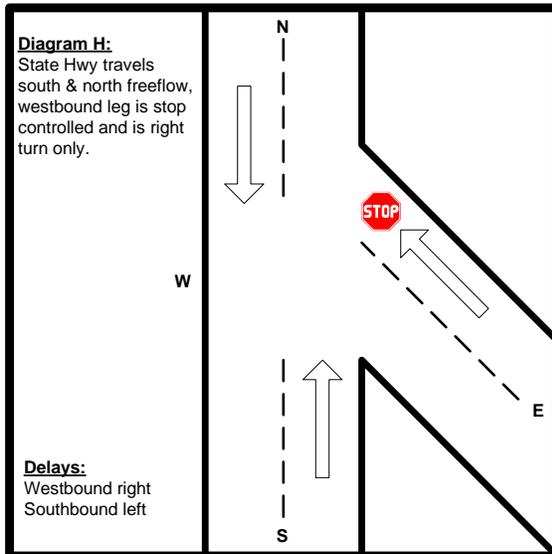
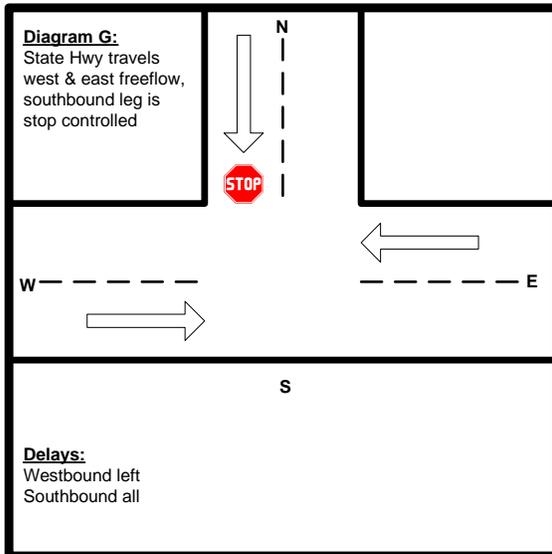
MP	Intersection (see Appendix A for intersection diagrams)	Year	Type of Control	LOS/ Delay (sec/veh)	Unsignalized*				Signalized*
					NB	SB	EB	WB	
0.30	SR 532 / North Camano Drive (Intersection Diagram G)  Improvements: None	1998	SB Stop	LOS Delay		B 13.4	A 9.2		
		2022 No Build	SB Stop	LOS Delay		F 253.5	B 12.7		
		2022 Build	SB Stop	LOS Delay		F 253.5	B 12.7		
n/a	Langley Road / Maxwellton Road (Intersection Diagram L)  Improvements: None	1998	EB Stop	LOS Delay	A 8.3		B 13.5		
		2022 No Build	EB Stop	LOS Delay	A 9.6		E 41.8		
		2022 Build	EB Stop	LOS Delay	A 9.6		E 41.8		
n/a	Crescent Harbor Road / Taylor Road (Intersection Diagram M)  Improvements: None	1998	NB/SB Stop	LOS Delay	E 38.8	F 54.8	A 7.6	A 8.3	
		2022 No Build	NB/SB Stop	LOS Delay	F n/a	F n/a	A 8.7	A 9.6	
		2022 Build	NB/EB Stop	LOS Delay	F n/a	F n/a	A 8.7	A 9.6	
n/a	Goldie Road / Ault Field Road (Intersection Diagram I)  Improvements: None	1998	Signal	LOS Delay					B 14.4
		2022 No Build	Signal	LOS Delay					F 85.6
		2022 Build	Signal	LOS Delay					F 99.1
n/a	Ault Field Road / Oak Harbor Road (Intersection Diagram J)  Improvements: None	1998	NB Stop	LOS Delay	B 11.9			A 8.0	
		2022 No Build	NB Stop	LOS Delay	C 17.1			A 8.5	
		2022 Build	NB Stop	LOS Delay	C 21.2			A 8.6	
n/a	Langley Boulevard / Ault Field Road (Intersection Diagram I)  Improvements: None	1998	Signal	LOS Delay					B 11.9
		2022 No Build	Signal	LOS Delay					D 47.9
		2022 Build	Signal	LOS Delay					E 59.6
n/a	Ault Field Road / Heller Road (Intersection Diagram N)  Improvements: None	1998	EB Stop	LOS Delay	A 8.1		B 14.1		
		2022 No Build	EB Stop	LOS Delay	A 8.8		D 33.3		
		2022 Build	EB Stop	LOS Delay	A 9.4		F 32.1		
n/a	Crosby Road / Heller Road (Intersection Diagram K)  Improvements: None	1998	EB/WB Stop	LOS Delay	A 8.4	A 8.3	C 24.1	F 122.1	
		2022 No Build	EB/WB Stop	LOS Delay	A 9.6	A 9.3	F 730.0	F n/a	
		2022 Build	EB/WB Stop	LOS Delay	A 9.6	A 9.3	F 730.0	F n/a	

# Island Sub-Regional Transportation System

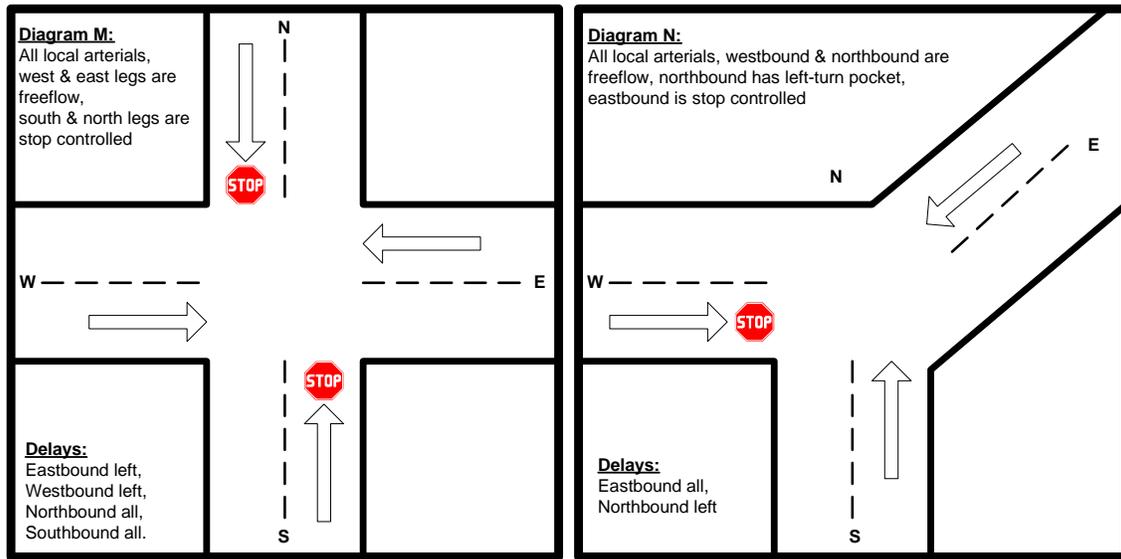
## Appendix A to Table 4-13—Intersection Diagrams



# Island Sub-Regional Transportation System



# Island Sub-Regional Transportation System



# *Island Sub-Regional Transportation System*

**Table 4-14 State Highway Mainline Level of Service Island Sub-region**

<b>Location</b>	<b>Year</b>	<b>Capacity</b>	<b>PM Peak Volume</b>	<b>CI</b>	<b>LOS</b>
SR 20, South of Swantown Road Improvements: Widen to 4/5 lanes	1998	1120	1428	12.75	E
	2022 No Build	1120	2054	18.34	E
	2022 Build	2240	2054	9.17	B
SR 20, North of Goldie Blvd-Midway Road Improvements: Widen to 4/5 lanes	1998	1894	1208	6.38	E
	2022 No Build	1894	1732	9.14	E
	2022 Build	2625	1778	6.77	B
SR 20, South of Ault Field Road Improvements: Widen to 4/5 lanes	1998	1954	1758	9.00	E
	2022 No Build	1954	2879	14.73	F
	2022 Build	3118	2998	9.62	C

Note: Additional mainline improvements are listed in Chapter 12, Tables 12-6 and 12-7.

Source: WSDOT

## CHAPTER 5

### MARINE TRANSPORTATION

#### **Introduction**

Scheduled ferry service is provided to Island County by Washington State Ferries. This system provides two connections, both to Whidbey Island. These connections are:

**Mukilteo - Clinton Run** links southern Whidbey Island at Clinton to the Everett / Seattle metropolitan area at Mukilteo in Snohomish County.

**Keystone - Port Townsend Run** links the central portion of Whidbey Island at Keystone to the Olympia Peninsula at Port Townsend in Jefferson County.

#### *Mukilteo - Clinton*

In 2001, total ridership on the Mukilteo-Clinton ferry was over 4.15 million, a 7 percent increase over the 3.87 million riders in 1991. Over half of the ferry riders (54 percent), or 2.23 million, drove a vehicle onto the ferry. Of the remaining 1.92 million riders, 520,000 were walk-ons and 1.40 million were passengers on vehicles driven onto the ferry. Over the course of the year, the average occupancy rate of vehicles driven onto the ferry was 1.63 persons per vehicle.

The total ridership in 2001 translates to an average daily ridership of over 11,350. In August, the peak month for ferry use, daily ridership was 15,300, nearly 35 percent higher than the annual average. In addition, the vehicles using the ferry carried more passengers on the average during August. Vehicle drivers comprised only 48 percent of total ridership, and average vehicle occupancy was 1.78 persons per vehicle. Average daily walk-on ridership in 2001 was more than 1,400. The highest ridership rate for walk-ons (2,000) occurred during the month of August. Walk-ons comprised 13 percent of total riders.

#### *Keystone - Port Townsend*

In 2001, total ridership on the Keystone – Port Townsend ferry was over 820,000, a 4.5 percent increase over the 785,000 riders in 1993. Approximately 46 percent of the ferry riders drove a vehicle onto the ferry. Of the remaining 440,000 riders, 106,000 were walk-on passengers and 334,000 were passengers on vehicles driven onto the ferry. Over the course of the year, the average occupancy rate of vehicles driven onto the ferry was 1.89 persons per vehicle.

The total ridership in 2001 translates to an average daily ridership of over 2,250. In August, the peak month for ferry use, average daily ridership was over 4,150, more than 84 percent higher than the annual average. In addition, the vehicles using the ferry carried more passengers on the average during August. Vehicle drivers comprised only 40 percent of total ridership, and average vehicle occupancy was 2.17 persons per vehicle. Average daily walk-on ridership in 2001 was 290. The highest walk-on ridership rate (550) occurred during the month of August. Walk-ons comprised 13 percent of total riders annually.

The Washington State Ferries' 1999 ferry rider surveys collected information about the trip purposes of the Mukilteo-Clinton ferry riders. Surveys were conducted on a Tuesday and a Sunday during the month of August. The vast majority of weekend ferry riders (80 percent-90 percent) were traveling for

## ***Marine Transportation***

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recreational and personal purposes. During the weekday p.m. peak, however, a majority (60 percent in May) of the embarking passengers at the Mukilteo Terminal are commuters. The proportional drop in commuters in August does not represent a decrease in the number of commuters. It is actually indicative of the increased summer recreational/tourist traffic.

The 1999 WSDOT ferry rider survey also collected information about origins and destinations of Mukilteo-Clinton ferry riders. The majority of riders returning to the mainland during the p.m. peak period (50 percent) had a destination in King County, with 30 percent traveling to Seattle and 20 percent traveling to the Eastside communities. Another 25 percent of the eastbound Clinton-Mukilteo trips were destined to SW Snohomish County, including 1.5 percent traveling to Mukilteo and 9 percent to Everett. Most of these figures are lower than those in the 1993 report, with the difference being that there are now a significant number of riders going to destinations other than Snohomish and King counties.

The 1999 survey discussed wait times. The majority of pedestrians and bicyclists (70.2%) wait 10 or less minutes during the weekday PM peak period, while the majority of motor vehicles (55.3%) wait more than 10 minutes, but no more than 30 minutes. Sunday wait times, on the average, are longer, with only 58.3% of pedestrians and bicyclists waiting 10 or less minutes and 23.9% of motor vehicles waiting between 31 and 60 minutes.

Table 5-1 summarizes the major physical characteristics of the Mukilteo-Clinton and Keystone-Port Townsend runs, including terminal locations, distance, crossing time, and fares.

**Table 5-1 Physical Characteristics For Ferry Service To Whidbey Island**

CHARACTERISTICS	MUKILTEO/CLINTON RUN	PORT TOWNSEND/ KEYSTONE RUN
1. Island Terminal	<b>Clinton Terminal:</b> Southeast Whidbey Island on SR 525	<b>Keystone Terminal:</b> Central Whidbey Island on SR 20
2. Mainland Terminal	<b>Mukilteo Terminal:</b> 26 miles north of Seattle, exit # 189 on 1-5	<b>Port Townsend Terminal:</b> Northeast Olympic Peninsula on SR 20
3. Distance	2.3 nautical miles, 2.6 statute miles	4.3 nautical miles, 4.8 statute miles
4. Crossing Time	20 minutes	30 minutes
5. Frequency	42 trips per day, at approximately 30 minute headways.	During the winter season: 10 trips per day, at approximately 90 minute to 105 minute headways. During the summer season: 16 trips per day, at 45 minute to 90 minute headways.
6. Fares	\$5.50 per vehicle/driver (\$7.00 peak) \$3.10 per passenger (round trip)	\$7.00 per vehicle/driver (\$8.75 peak) \$2.00 per passenger
7. Ridership (2001)	<b>4,152,796 total ridership</b> 2,229,960 vehicle drivers 1,397,505 vehicle passengers 525,331 walk-on passengers	<b>820,167 total ridership</b> 377,751 vehicle drivers 336,153 vehicle passengers 106,263 walk-on passengers

Source: WSDOT Marine Division, March 2002

## **Future Conditions**

Ridership on the Washington State Ferry System overall is expected to increase by approximately 70 percent, from 1999 to 2018, as documented in the *Washington State Ferries System Plan, 1999 to 2018*.

From this report, the average PM peak ridership demand in 2015 for the Clinton to Mukilteo Run (westbound) is expected to consist of approximately 1,520 vehicles/drivers and 3,190 vehicle passengers. Walk-on passengers are expected to be 31% of total passenger ridership. The walk-on riders will consist of kiss-and-ride passengers being dropped off, park-&-ride passengers using nearby parking lots, and transit bus passengers.

The 1999 to 2018 Systems Plan forecasts future operating conditions out to the years 2005 and 2015. Table 5-2 lists the standards and the forecasts. Improvements to the system needed to achieve these standards are described in the next section.

# Marine Transportation

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**Table 5-2 Standards for Level Of Ferry Service To Whidbey Island  
(Number of Ferry Vessel Wait Until Boarding)**

	<b>LOS Standard</b>	<b>2005 Forecast</b>	<b>2115 Forecast</b>
<b>Mukilteo/Clinton</b>	2	2	1
<b>Port Townsend/Keystone</b>	1	1	0

## Improvements To Marine Transportation

Improvements to the marine transportation system in Island County are primarily maintained by the Washington State Ferries and the Port of South Whidbey with support services provided by WSDOT, Island County and Island Transit. The Washington State Ferries maintains the Clinton to Mukilteo Run and the Keystone to Port Townsend run. Island Transit provides transit service to the terminal facilities. Island County works with WSDOT in providing access facilities to the ferries. The County is also investigating possible inter-island ferry service and marine freight facilities

**Table 5-3 Planned Improvements**

<b>Planned Date of Improvement</b>	<b>Location</b>	<b>Improvement</b>
2008	Mukilteo	New terminal complete; allows for 3 vessel service; 75-car vessel reassigned from Port Townsend
2010	Mukilteo/Clinton	Construction of a new 160-car vessel for the Anacortes-San Juan Islands route will allow the replacement of the 75-car third vessel with a 130-car vessel
2010	Port Townsend/Keystone	2 new 110-car "maneuverable" class vessels constructed and assigned to route

With these new facilities at the Clinton Terminal and similar facilities at the Mukilteo Terminal, Washington State Ferries plans to operate an additional ferry vessel to increase the hourly capacity of the ferry run. With this increase in operations, the 1992 level of service standards can be maintained.

## *Camano Island - Whidbey Island Linkages*

Improvements to the transportation and communication systems between Camano Island and Whidbey Island should be made to enhance county cohesiveness. Distances between the two islands range from approximately 60 miles by highways through Snohomish and Skagit Counties to approximately two to seven miles by water across Saratoga Passage. Art Anderson and Associates conducted an investigation of ferry service between Whidbey and Camano Islands during the spring of 1995 on behalf of the SIRTPO Island Sub-region. The purpose of the study was to determine if there is a need for an inter-island ferry system between Whidbey and Camano Islands and if there is a need, determine the type and level of services indicated.

A telephone survey was conducted with 200 randomly chosen residents of Camano and Whidbey Islands to evaluate the degree of public support for a ferry service. In addition, mail-in questionnaires were published in all local newspapers and three open house public meetings were held in Langley,

Oak Harbor, and on Camano Island to receive public input. The conclusions drawn from the study are as follows:

- Of the 200 people responding to the random telephone survey, sixty-five percent stated that they would use a car ferry. Seventy percent of the 175 people responding to the newspaper survey said the same. While the surveys indicate a strong interest in vehicle ferry service they also indicate an interest in this service as a means of access to I-5, not as access to Camano Island as a destination. Island County's Comprehensive Transportation Plan has noted that the road access to I-5 from Camano Island (SR532) is currently congested, and getting worse, and will not improve until major road improvements are made.
- There is support for passenger ferry service between Coupeville (and possibly Oak Harbor) and Camano Island, providing that it can be shown to be cost effective and provided that the supporting infrastructure (terminal facilities, access roads, parking areas, connecting inter-modal transportation, on site vehicles on Camano Island) can be put in place after adequate consideration has been given to impacts to the community.
- The most consistent use of a passenger only ferry system would come from travel to and from Island County government offices in Coupeville.
- Island Transit could shuttle passengers to park and ride lots from the ferry landing.
- State highways and local access roads are not presently adequate to support additional commuter traffic that would be generated from a Whidbey-Camano vehicle ferry service.
- A ferry system should only be studied as one element in an inter-modal transportation system. In this case, the impact on local access roads on Camano Island, and particularly on the SR532 connection through Stanwood and on to I-5, must be part of the study.

### *North Whidbey Island Access Feasibility Study*

In 1998 and 1999 WSDOT and its consultants studied the feasibility of adding vehicular capacity to the north end of Whidbey Island, either in the form of a bridge or a new ferry route. The goals of the study were to:

- Evaluate potential locations for:
  - A new bridge connection from North Whidbey Island to the I-5 corridor,
  - Additional vehicular ferry service/facility between Whidbey Island and the mainland/Stanwood or Camano Island
- To identify feasible alternatives from the potential locations for the expansion of the existing transportation network serving on/off island travel from Whidbey Island,
- To provide feasibility analysis for further consideration in the update of local and regional plans.

The study had a substantial public involvement element and participation from resource and local agencies. A steering committee of elected and WSDOT officials made recommendations to the Skagit/Island RTPO Policy Board on key decisions, including the final recommendations. An initial list of alternatives was pared down to three bridge and one ferry option using screening criteria. The remaining alternatives were studied to a greater level of detail and the findings presented to the technical advisory committee (TAC). The TAC recommended that all of the alternatives be found to be infeasible due primarily to environmental concerns.

## ***Marine Transportation***

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The RTPO Policy Board voted to approve the TAC recommendations with the caveat that the problem would not go away and that the situation needed to be monitored and possibly restudied in the coming years. It was also noted that the useful life span of the bridge was approaching and that if a new route was not built by then, it should be addressed in conjunction with the replacement of the existing bridge, since it would be out of service for an extended amount of time when it is replaced.

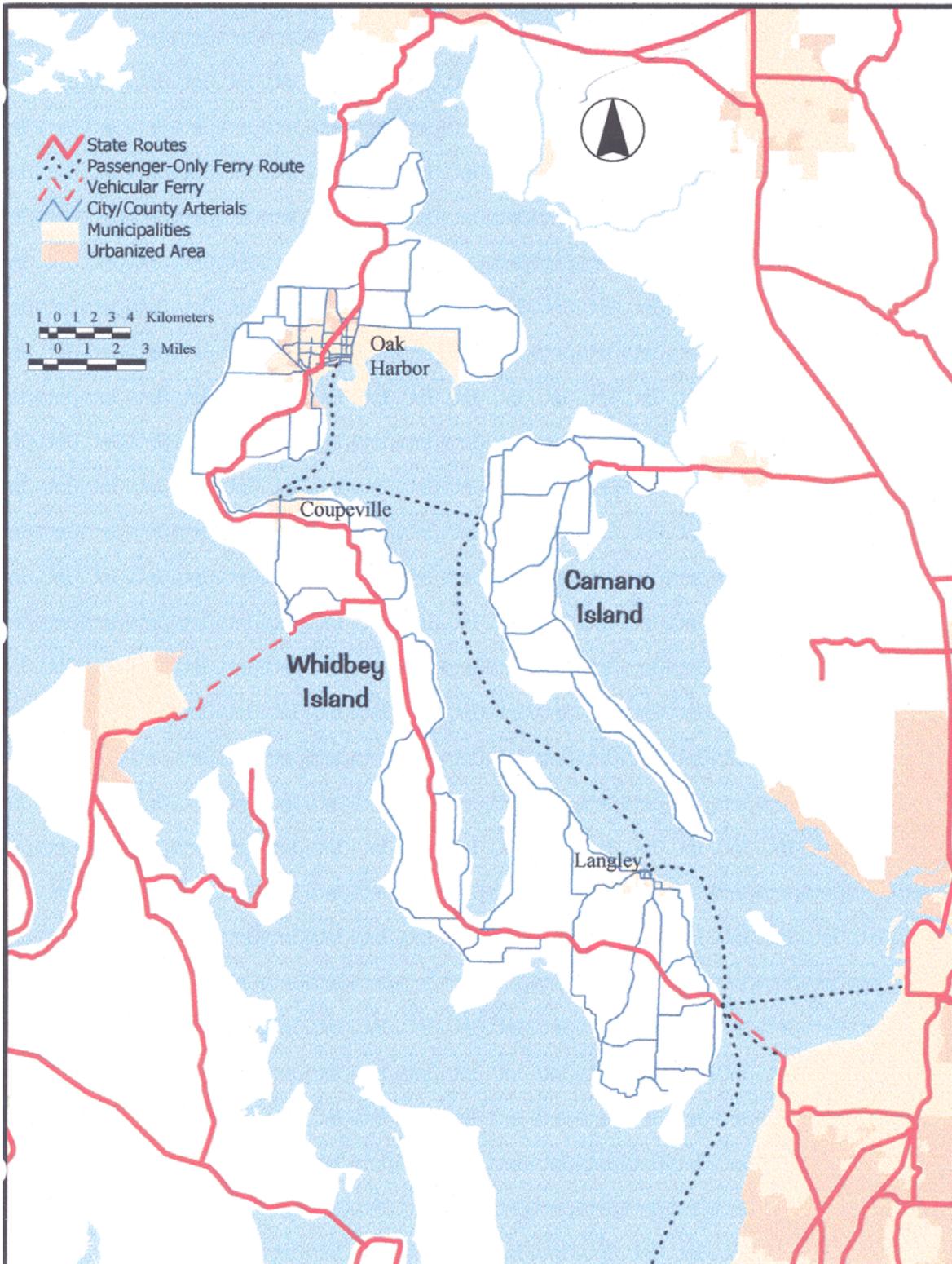
### ***Regional Passenger-Only Ferry Service***

Access to Whidbey Island is becoming increasingly more congested due to increasing traffic volumes. Greater congestion is projected for both SR-20 (Deception Pass) and at the Mukilteo/Clinton vehicular ferry. State concurrency requirements for these regional state transportation facilities further emphasize that additional access to Whidbey Island is critical to maintain quality of life on the Island. The North Whidbey Island Access Feasibility Study, conducted in 1998 and 1999 by WSDOT, sought to identify feasible alternatives for a new bridge connection to the I-5 corridor and/or additional vehicular ferry service between Whidbey Island and the mainland or Camano Island. All of the alternatives were found to be infeasible due to environmental concerns. Clearly, options to the existing ferry and Deception Pass corridor must be pursued if reasonable access to the Island is to be maintained.

A regional transportation alternative that does not depend on the automobile as the primary means of travel should be pursued. A regional passenger-only ferry serving Whidbey and Camano Islands would provide a viable alternative. Oak Harbor, as the population and commerce center of Whidbey Island, is a critical hub for a future passenger-only ferry. Recognizing this, Oak Harbor has designed a municipal pier to accommodate passenger-only ferry service (as well as float plane service). The proposed pier is located in close proximity to the community's transit station and a park-n-ride lot, allowing future passengers convenient access to the ferry service. It is envisioned that the passenger-only service, most likely in the form of mosquito fleets, would serve Oak Harbor, Coupeville, Langley and Clinton on Whidbey Island and Everett or Mukilteo and Seattle on the mainland. Inclusion of this concept in the Regional Transportation Plan is a critical step to the realization of this regional transportation solution.

Figure 5-1 shows potential passenger ferry routes.

**Figure 5-1 Potential Passenger Ferry Routes**



# ***Marine Transportation***

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## ***Marine Freight Transportation Facilities***

Presently, freight transportation to Island County is provided by trucks using SR 20 and the Deception Pass Bridge or by the auto ferry through the Clinton and Keystone terminals. There are no public wharf facilities in Island County that can accommodate freight vessels. However, there are a limited number of private pier facilities that can and do receive some special freight shipments. Island County, the City of Oak Harbor and the Ports of South Whidbey and Coupeville should investigate the need, possible locations and impact of such a pier facility on the economy and environment of Island County.

## **Marine Transportation Level Of Service Standards**

The Clinton-Mukilteo and Keystone-Port Townsend Ferry runs have been designated as Highways of Statewide Significance. In 1998 Washington State Ferries (WSF) established a set of level of service standards for ferry service in the Puget Sound area by working with local and regional agencies as part of the development of its long range system plan. In following GMA guidelines, WSF developed its definition of level of service in terms of the number of boat waits during the average weekday PM peak period in the month of May. The month of May was chosen because it represents an average loading/demand month for ferry service. The PM peak period is from 3:00PM to 7:00PM.

Based upon the WSF's *System Plan for 1999-2018*, and Resolution #661 adopted by the Transportation Commission on November 15, 2000, the following level of service standards were established for general traffic and freight movement using ferry service to Island County:

- Mukilteo/Clinton Route                      two-boat wait
- Port Townsend/Keystone Route              one-boat wait

In estimating the ferry level of service the 85<sup>th</sup> percentile is used. This means that for a one-boat wait, 85 percent of the time ferry demand will experience a one-boat wait, or less, during an average weekday PM peak period during the month of May. For a two-boat wait, 85 percent of the time ferry demand will experience a two-boat wait, or less, during an average weekday PM peak period during the month of May.

To encourage multimodal usage and reduce the number of single occupant vehicles, WSF has established an additional level of service criteria of a zero-boat wait for all non-motorized and high occupancy vehicles (HOV). This policy was developed to ensure that all walk-on passengers, and, high occupancy vehicles (HOV's, vanpools and carpools) registered with the ferry system, be accommodated on the next ferry at all times.

The aforementioned level of service standards will be used for Island County's Concurrency Management Program.

## CHAPTER 6

### TRANSIT SERVICE

#### **Introduction**

Island Transit (IT) provides service to both Whidbey and Camano Islands. Their stated mission is “to provide a package of ridesharing services which emphasizes rider use, safety and satisfaction, and results in increased mobility opportunities, less dependence on the automobile, decreased traffic congestion and improved air quality for all people in the service area, riders and non-riders alike.” Island Transit began service to meet this mission on December 1, 1987 by providing regular Fixed Route Service. Since that first day of operation, Island Transit has expanded its service to include:

*Fixed Route Service*  
*Paratransit Service*

*Vanpool Program*  
*Ride Matching Programs*

*Route Deviation*

#### ***Whidbey Island Service***

On Whidbey Island fixed route service operates Monday through Saturday, with five regularly scheduled buses running up and down the Island, with six rural feeder routes and one Oak Harbor City Shuttle. Two extra buses operate during the peak commuter times Monday through Friday. The hours of service are 3:45 AM – 8:30 PM, Monday through Friday, and from 7:05 AM – 6:30 PM on Saturday. Whidbey Island service is anchored by the Harbor Station multi-modal center in Oak Harbor on Bayshore Drive across from Flintstone Park. More information on Island Transit is available at their informative website at [www.islandtransit.org](http://www.islandtransit.org).

#### ***Camano Island Service***

Three 18 – 20 passenger vehicles operate on Camano Island, serving the entire Island with an east/south route, and a west/north route with a cross-Island deviation connection. This service will deviate 0.75 of a mile off the regular route structure to accommodate persons with disabilities. The system also provides a 30-foot Gillig bus into Stanwood, which connects with Community Transit, Monday through Friday.

#### **History**

In November 1983, voters approved an initial service area to be served by Island Transit covering Oak Harbor and south Whidbey Island. This vote also resulted in locally generated Motor Vehicle Excise Tax (MVET) funds going to Olympia to be returned to the county to enhance and further support Island Transit services. Table 6-1 lists important events in the development of transit service in Island County.

**Table 6-1 Milestones in Island Transit Service**

Date	Milestone
December 1, 1987	Fixed route service began
March 16, 1992	Paratransit service begun
March 23, 1993	Service initiated for north Whidbey Island
1994	Rural mobility grant awarded for Camano Island demonstration service
May 16, 1995	Camano Island votes to support regular service
December 20, 1996	Harbor Station opens, providing multi-modal connections
November 2, 1999	Initiative 695 passes, reducing funding and subsequently, service
May 2000	Island County voters approve increase in sales tax from 0.3% to 0.6% for transit
July 1, 2001	Oak Harbor to Mt. Vernon restored with funding from a Rural Mobility Grant.

## Future Conditions

For planning purposes, Island Transit provides forecasts for a six year period in its 2001 Transit Development Plan (2001 – 2007). Table 6-2 identifies year 2000 base year ridership for the four markets Island Transit services, with year 2007 forecast service levels. *2001 Ridership figures available April 2002.*

**Table 6-2 Ridership Forecast**

Service Market	2000 Ridership	2007 Forecast	Percent Change
Fixed Route	506,234	622,604	23%
Deviated Route	265,113	326,056	23%
Paratransit	18,899	23,243	23%
Vanpools	123,185	422,349	243%

The demand for Fixed Route service expansion, later night service, extension of holiday service and Sunday service remains high. Island Transit continues to explore grant opportunities and other options for capital and operations assistance, but without direct assistance from the legislature, future expansion will most likely not be possible, and additional route modifications may have to be made.

## Transit Improvements

Service Development improvements for Island Transit are planned for a six-year period and approved by the Board of Directors of Island Transit. The six-year plan is reviewed annually for policy and financial impacts and updated every three years by Island Transit. The transit development improvements recommended in the six-year Comprehensive Plan are discussed in the following categories and summarized as follows:

- *Enhancement of Island Transit's Vanpool Program*
- *Integrate Public Transportation Services into a Coordinated System Linked by Intermodal Systems*
- *Island Transit will continue to meet ADA & State Barrier Free Design Regulations and Improve Mobility for the Special Needs Population*

- *Build Partnerships between Federal State, Regional, Local, private sector & public transportation entities to improve public transportation planning, and coordinate service delivery*

The requirement that Island County meet concurrency requirements on state highways makes the improvements to the transit system critical because this plan relies so heavily on transit.

### ***Enhancement of Island Transit's Vanpool Program***

Demand for vanpools continues to exceed the availability of vehicles. The current plan is to increase capacity by 15 additional vans each year, resulting in a ridership increase of 243%. With the Sub-Regional Transportation Plan's strategy relying heavily on transit and transportation demand management, this type of increase in vanpool ridership would be a key element in meeting the objectives of the plan. In order to meet these goals, it is essential that grants be acquired to help fund this increase in vans.

### ***Integrate Public Transportation Services into a Coordinated System Linked by Intermodal Systems***

The three county "Tri-Transit" system connecting Island Transit, Skagit Transit, and Community Transit (Snohomish County) was discontinued when Skagit Transit had to abandon its service link after the passage of Initiative 695. The link between Mt. Vernon and Oak Harbor was restored in July 2001 as a result of a two-year demonstration grant. In order to continue this service on-going funding must be found.

In October 2001, Island Transit applied for, and was awarded, a Federal 5313 Planning Grant to assist in planning efforts for facility expansion for their Whidbey Operations Base. The existing facility was built more than 20 years ago as an auto rebuild facility. Improvements and expansions to the building have been made over the years, but the building footage has not expanded in proportion to system expansion and does not efficiently serve maintenance or operational needs. The Operations Base is located at 19758 SR 20, south of Coupeville.

Island Transit is also planning for a permanent facility for their Camano Island operations base. The Island Transit Camano Center, to be located within the Island County Annex Facility on Camano Island, will provide convenient access to essential services offered by the County, and will provide a facility for coordinated intermodal connections (Skat, Airporter Shuttle) for access to basic and essential services, and employment and educational opportunities not available on Camano Island.

### ***Multi-Modal Options***

Island Transit also offers these multi-modal options to our passengers:

- Direct Connections with other Transit Systems (Community Transit; Everett Transit; Metro Transit, Skagit Transit, Jefferson Transit).
- Indirect Connections with all other Transit Systems throughout the State of Washington.

## *Transit Service*

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- Connections with Vehicle & Passenger Only Ferries (Clinton / Mukilteo Ferry; Keystone / Pt. Townsend Ferry; Anacortes Ferries to San Juan Islands and International Ferry Connections to Canada).
- Service to Amtrak Connections from Mt. Vernon, North to Vancouver BC, or South to Seattle or Portland.
- Access to the Olympic Peninsula and the State Capital in Olympia via the Keystone / Pt. Townsend ferry run.
- A successful Vanpool Program. Many Island Transit vanpoolers commute to major employers in the Puget Sound area. The demand for this program remains high. The current waiting list for a vanpool vehicle stands at 160.

Island Transit will continue to Meet ADA & State Barrier Free Design Regulations and Improve Mobility for the Special Needs Population

Paratransit boundaries have been expanded throughout the County with the addition of Rural Feeder Route Service. The feeder routes are utilized as Route Deviation service to pick up persons with disabilities in outlying areas, and several mainline routes in the system have been designed to integrate with the Rural Feeder Route Deviation service. The combination of both types of service has proven to be very cost effective and, therefore, has enabled Island Transit to continue to preserve and maintain existing ADA Paratransit service levels. The number of dedicated, daily Paratransit trip requests was reduced from 180 scheduled trips per day, to an average of 80 trips per day because of the successful implementation of the Route Deviation service. The Deviation service has not only increased opportunities and convenience for the Paratransit riders, it has dramatically reduced overall Paratransit costs. The Deviation service will have to be reduced due to funding losses if no other sources can be identified to replace lost funds.

Efforts are ongoing for ADA accessibility improvements for all bus stops. Several improvements were made in 2001, and Island Transit has an aggressive plan for additional improvements throughout this planning period once funds are identified to support such activities and improvements.

### ***Build Partnerships Between Federal, State, Regional, Local, Private Sector And Public Transportation Entities To Improve Public Transportation Planning, And Coordinate Service Delivery***

Island Transit has an excellent working partnership with all of the local jurisdictions and agencies in Island County. The following list highlights some of those efforts.

- Island Transit has entered into a cooperative agreement between Island Transit and the private sector public transportation provider in Island County for the joint use of Harbor Station in efforts to offer a menu of transportation choices which better serve public transportation needs.
- Island Transit will continue to coordinate with the Washington State Ferry System to improve Clinton/Mukilteo and Keystone/Port Townsend ferry connections, and will continue to coordinate with all connecting and neighboring public transportation service providers to coordinate services more effectively to fulfill the statewide goal of developing a seamless, statewide public transportation system.

- Island Transit will also continue to coordinate with WSDOT to identify needed park and ride lot facilities in Island County, as well as to identify and construct the needed bus pullouts on state highways.
- Coordination efforts will continue between Island Transit and Naval Air Station Whidbey Island to address and provide a bus riding incentive program to Base personnel.

### **Transit Level Of Service Standards**

There are no industry-wide accepted levels of service standards (LOS) for transit. Generally, transit level of service varies by operating agency or authority and is comprised of service coverage, service frequency, travel time and productivity. Some agencies also use land use factors, access types and design factors, and availability of other transportation modes as factors to estimate and adjust the level of service. These factors can generally be grouped into supply and demand factors.

Supply-related factors include those elements that evaluate the amount of transit service provided, while the demand-related factors include elements that evaluate the amount of transit service that is needed. Examples of the supply and demand components are:

<b>SUPPLY COMPONENTS</b>	<b>DEMAND COMPONENTS</b>
<ul style="list-style-type: none"><li>• Frequency of Service</li><li>• Coverage of Service</li><li>• Reliability</li><li>• Capacity</li></ul>	<ul style="list-style-type: none"><li>• Modal Share</li><li>• Passenger Loading</li><li>• Transit Person Volume</li><li>• Operating Statistics</li></ul>

Level of service standards were developed for Fixed Route service. To evaluate the transit level of service, scores were assigned in four criteria categories (two supply-related criteria and two demand-related criteria). The total score for a route is the summation of the scores it receives for each of the four criteria shown in Table 6-3. The transit level of service for a route is determined by comparing the composite score for the route with those listed in Table 6-4 and their corresponding level of service. The composite scores have been adjusted to account for those routes that are good in most areas but slip in only one criterion. LOS "A" is the highest service level, and LOS "F" is the lowest service level.

***An example of how a route would be scored is shown below:***

- Average daily frequency of one trip every 65 minutes = score of 3.
- Reliability of 94% = score of 3.
- Average Passenger Loading during the peak period is 80% = score of 2
- Average Passenger Loading during the off peak period is 55% = score of 2

**Composite score = 10.  
Level of Service (from Table 6-4) is “C”.**

The criteria for Rural Fixed Route transit service are calculated in the following manner:

- Average daily frequency is calculated by taking the hours of operation a day, converting the hours to minutes, then dividing by the number of bus trips by route.

# Transit Service

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- Reliability is calculated from the drivers' report for each route for a typical day in March and September.
- Average passenger loading is calculated by comparing the actual number of bus passengers on the bus as it crosses selected locations with the actual seated capacity over the two-hour morning and afternoon peak periods and the midday hour with the highest demand. The selected locations are:

Langley Road and SR 525  
 Howard Road and SR525  
 Houston Road and SR525  
 Scenic Heights Road and SR 20  
 Frostad Road and SR 20

**Table 6-3 Proposed Transit Related Scores Island Transit**

SERVICE TYPE	CRITERIA	CRITERIA SCORES					
		Score = 1	Score = 2	Score = 3	Score = 4	Score = 5	Score = 6
RURAL FIXED ROUTE	Average Daily Frequency (minutes)	<30	30-60	61-90	91-120	121-150	> 150
	Reliability (% within 0 to 5 Minutes of scheduled time)	100-98%	97-95%	94-90%	89-75%	74-50%	< 50%
	Passenger Loading: - Peak Period	0-75%	76-100%	101-150%	151-175%	176-200%	> 200%
	- Off Peak Period	0-50%	51-75%	76-100%	101-125%	126-150%	> 150%

**Table 6-4 Composite Scores To Determine Transit Level Of Service**

**For Island transit**

LEVEL OF SERVICE	COMPOSITE SCORE For Fixed Route Service
A	1 - 5 points
B	6 - 9 points
C	10 - 13 points
D	14 - 17 points
E	18 - 21 points
F	> 21 points

In reviewing the current conditions, demand, and types of service provided by Island Transit, it is suggested that LOS "C" be maintained for the established transit routes in unincorporated Island County. The methodology for determining transit level of service standards will be used until the National Transit

Research Board (NTRB) develops or endorses a transit Level of Service methodology that is more adaptable to a rural transit system. Future system expansion will be considered, provided that:

1. It is estimated that there is sufficient demand for the service;
2. The service is economically feasible;
3. The expansion of the transit service into new areas is not provided at the detriment of established or planned services.

The proposed LOS for established routes does not in any way limit Island Transit's ability and authority to eliminate established transit routes.



## CHAPTER 7

### AIR TRANSPORTATION

#### Introduction

Airports and related support facilities are an integral part of the transportation network serving Island County. These aviation facilities represent significant capital investment and potential long-term economic benefit to the Island Sub-region. Aviation facilities are likely to assume a greater role in the movement of people and goods in the future due to increased congestion of traditional surface transportation modes. It is important to protect the integrity of existing airports by controlling inappropriate development within aircraft approach and departure zones. As an example, single-family residences should not be constructed in these areas. Adequate roadway and transit connections to air facilities, from existing highways, are essential.

#### Airport Classification

The following classifications of airports, or aviation facilities, recognized by the Federal Aviation Administration, are located in Island County:

Private	General use by public-at-large prohibited.
Limited	Intended for private use. Public not prohibited.
Commercial	Privately owned. Intended for general use by public.
Military	Owned and/or operated by the Federal Government. General use by the public is prohibited unless in an emergency or by specific authorization.

Other aviation facilities not classified as airports include seaplane-landing sites, heliports, and privately owned ultra-light landing strips. RCW 36.70A.510 identifies airport facilities as publicly-owned and privately-owned public use airports. The provision within the GMA also applies to Seaplane Bases. The two facilities in the Washington State Aviation System Plan for Island County include: Whidbey Airpark (privately-owned, open for public use) and Wes Lupien (commercial service airport).

Currently, there are ten air facilities located in Island County. Three of these facilities are located on Camano Island and seven are located on Whidbey Island. Five of the airfields are small private facilities, three airfields provide commercial services and two are naval airfields. Air facilities of regional significance are listed in Table 7-1

The Island Sub-regional Transportation Systems Map, Figure 4-1, depicts the location of air facilities located in Island County.

# *Air Transportation*

**Table 7-1 1997 Aviation Facility Characteristics**

Island Sub-region							
FACILITY I	CLASSIFI- CATION	PAVED RUNWAY	RUNWAY LENGTH (feet)	RUNWAY LIGHTS	RUNWAY INSTRUMENT APPROCAH.	1997 OPERATIONS (take-offs /landings)	BASED AIRCRAFT
Camano Island Airfield	Commercial	Yes	1,750	No	No	3,780	14
Oak Harbor Clover Air	Private/Limited	No – turf	1,470	No	No	Unknown	Unavailable
Coupeville Airpark	Private/Limited	No – turf	2,500	No	No	Unknown	7
Coupeville Naval Outlying Field	Military	Yes	5,400	Yes	No	~48,000	Unavailable
Langley- Whidbey Airpark	Commercial	Yes	2,400	No	No	12,870	31
Livingston Bay – Camano Island	Private/Limited	No – turf	1,750	No	No	Unknown	0
Oak Harbor Airpark	Commercial	Yes	3,255	Yes	Yes	20,027	23
Whidbey Naval Air Station	Military	Yes	8,000	Yes	Yes	~150,000	Unavailable

Source: Aviation Division, WSDOT and the US Navy.

All of the private air facilities offer general aviation services. Kenmore Air – Seaplanes offers six daily flights between Seattle and Oak Harbor. The planes are based at Lake Union in Seattle and land and take off from the Oak Harbor Marina.

While limited use of this facility by commercial air carriers is certainly feasible, the potential growth in air transportation service from the Wes Lupien Airpark is limited by the physical constraints surrounding the airport. The runway is bordered by Scenic Heights Road on the east and Monroe Landing Road on the west. The north and south side of the runway is bordered by private property. As a result, the terrain, land use and public roads limit runway expansion, beyond its present length.

The Whidbey Naval Air Station is the major air transportation facility in Island County with an air traffic control tower and an instrument approach system. At present only military aircraft use the base. With the periodic closure of other military bases around the nation, additional air squadrons may be located on Whidbey Island. OLF Coupeville, located in Central Whidbey Island, is a Naval Air facility currently dedicated to Field Carrier Landing Practice (FCLP).

## **CHAPTER 8**

### **PUBLIC INVOLVEMENT PROCESS**

#### **Introduction**

The Island Sub-region recognizes the importance of meaningful public involvement in the transportation planning process. The public involvement program is designed to meet the following objectives:

- To expand the public's understanding of the long-term transportation needs
- To engage the public in the decision making process for Island County's transportation future
- To provide the public with early and continuing public involvement opportunities and reasonable access to technical and policy information
- To provide adequate public notice of public involvement activities and time for public review and comment
- To provide a process that seeks out and considers the needs of those traditionally underserved.

The public involvement activities described in this process are designed to meet the Skagit/Island RTPO's public involvement objectives and federal TEA-21 requirements. Federal TEA-21 mandates require a high level of public involvement in transportation decision-making. These mandates require that RTPO's establish continuing public involvement processes from the early stages of planning through detailed project development.

#### **Public Involvement Opportunities**

The Island Sub-region Public Involvement Program includes various activities and techniques to accomplish the objectives stated above. The following public involvement strategies are being utilized within the Island Sub-region:

#### ***Public Meetings***

All Island Sub-regional Technical Committee and Policy Board meetings are open to the public to provide the public the opportunity to discuss proposed projects and transportation planning efforts with agency staff and elected officials. Policy Board meeting times, dates, locations, and agenda items are published in local and regional newspapers.

#### ***Media Program***

Provides information to media contacts regarding upcoming public meetings, STP project selection process, transportation issues, transportation improvement plans, transportation studies, etc. Press releases and public interest story requests are directed to: The Whidbey News Times, South Whidbey Record, Coupeville Examiner, Stanwood Camano News, Island Independent, Skagit Valley Herald, Everett Herald and KWDB and KBRC radio stations.

# ***Public Involvement Process***

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## ***Presentations to Organizations and Groups***

Provide the public with direct contact with agency staff and officials, opportunities for staff to disseminate information, and opportunity for public input. Target groups include community organizations, city and community councils, planning commissions, service clubs and special interest groups. As an example, Island County Public Works staff conducted nonmotorized trail planning presentations before the membership of the following groups: Island County Trails Council, Citizens for Sensible Development, WSU Beach Watchers, and Friends of Camano Island Parks. These presentations were part of the public outreach effort involved in development of the Island County Non-motorized Trails Plan.

## ***Public Opinion Survey***

Utilized to determine public opinion and attitudes toward proposed transportation projects, transportation alternatives, and planning efforts. Random sample telephone surveys, mail- in questionnaires published in local newspapers and open house forums can be use to evaluate public opinion. As an example, Island County conducted a random sample telephone survey of two hundred households in the county to determine the need for and degree of public support for ferry service between Whidbey and Camano Islands. In addition, the county published a mail-in questionnaire in all the regional newspapers to solicit public input and to evaluate public support for a Whidbey/Camano ferry service.

## ***Public Information Centers***

Are utilized to make project information easily available to the public to review at their leisure. The public is encouraged to go to public libraries or local governmental offices to obtain information by reviewing draft transportation plans and proposed transportation projects and to provide input.

## **Public Involvement For This Plan**

Extensive public involvement was accomplished during the update of this plan. The following activities occurred:

- A ferry riders survey
- Four key person interviews
- Three opening houses for study scoping
- Three workshops for defining alternatives
- A survey to get input for developing measures of effectiveness
- Three open houses for presenting the alternatives analysis for comment
- Two newsletters
- An 1-800 number

Response to the public involvement efforts was good. Many comments were received that help shape the study and provide information for decision makers.

## CHAPTER 9

### TRANSPORTATION DEMAND MANAGEMENT

#### **Introduction**

Travel Demand Management (TDM) strategies have become a recognized method to reduce congestion and improve air quality. They are alternatives to more costly capacity improvement projects in urban and suburban areas.

The Island sub-region has not yet experienced the kind of congestion that exists elsewhere in Western Washington and is not regulated under state and federal laws and rules requiring specific TDM programs. However, within the Island Sub-region, certain demand management strategies are being evaluated and implemented. In rural areas the strategies for TDM are inherently different than more urbanized areas of the state. For example, in Island County, a large portion of the Island's residents are retired. There are only a few large employers in the County that could offer these financial incentives to reduce employee travel during peak commuting hours. As a result, TDM strategies for Island County's residents should provide more convenient and attractive travel alternatives rather than financial incentives. Some of the possible TDM strategies that should be continued or implemented in Island County include: expansion of park-&-ride lots and ridesharing programs, development of non-motorized transportation facilities, expansion of the transit system, and implement high occupancy vehicle (HOV) lanes or bypass lanes in high congestion areas.

#### **Park-&-Ride Lot Program**

Island Transit currently operates six authorized park-&-ride lots on Whidbey Island and is exploring joint opportunities for future park-&-ride development with WSDOT. Island County, Oak Harbor, Langley, and Coupeville should be involved with the planning of these future park-&-ride facilities to ensure that they provide adequate service to the residents of Island County. Coordination with the local agencies will also ensure that the lots are compatible with local plans and regulations. One such facility has been proposed at the intersection of SR 532 and Sunrise Drive, on Camano Island. This 320-space park-and-ride lot will help to reduce the congestion on East Camano Drive and SR 532. Island County is the lead agency for the design and construction of this facility.

In locating these park-&-ride lots, consideration should be given to access to residential areas, and convenient access for carpools and vanpools. WSDOT and Island Transit are currently planning for an additional park-&-ride near Langley Road / SR 525. Other possible locations for future park-&-ride lots are in the vicinity of Monroe Road and SR 20, Race Road and SR 20, Soundview Shopper, Camano Avenue at Sandy Point, Cultus Bay Road Vicinity, South Camano Drive, and Libbey Road near SR 20.

#### **Ridesharing Program**

Since 1988, Island Transit has been operating a vanpool program. In this program, riders with similar origins and destinations are brought together and provided with a van for their commute trip. This program provides a clear schedule of reimbursements as well as comprehensive rider and driver agreements. Demand for vanpools continues to exceed the availability of vehicles. The current plan is to increase capacity by 15 vans per year. In order to meet these goals, it is essential that grants be acquired to help purchase the new vans. In addition, Island Transit does maintain a list of potential carpool users. Island County has instituted a commute trip reduction program for county employees. The County encourages employee utilization of public transportation, van and car pools, bicycles, and walking in

# ***Transportation Demand Management***

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order to reduce parking demands and traffic congestion. A guaranteed ride home is available to all County employees who participate in the program.

## **Non-Motorized Transportation Program**

Island County has adopted a non-motorized transportation plan. Included in this plan is the implementation of separate bikeways along state highways and along major and minor county arterials. As a minimum, a four foot paved shoulder should be provided along these roadways for bicycle travel separate from the general vehicle lanes. These paved shoulders should be provided as the County or WSDOT improves or resurfaces these roadways in Island County. (See Chapter 11)

## **Transit Program**

In December 1987, Island Transit began providing fare-free, fixed route transit service to residents in their PTBA on Whidbey Island. This service was extended to include all of Whidbey Island in 1993, after residents of north Whidbey Island voted to be included in the PTBA. In 1995, Island Transit expanded service to include Camano Island (See Chapter 6). In addition, Island Transit instituted para-transit service in 1992 to provide curb-to-curb service on Whidbey Island for those persons who are unable, due to a disability or limitation, to use regular fixed route service.

Island County should continue to work with Island Transit to encourage Whidbey Island residents to use this alternative mode of transportation when making trips around the Island. In addition, as county and state roads are being improved, provisions for transit stops and shelters should be incorporated in the design and construction of these roadways. Island Transit and Skagit Transit should continue to work toward the goal of inter-connecting service. A transfer station somewhere on Fidalgo Island would enable residents of both counties seamless bus service within the Skagit /Island RTPO.

## **HOV Lanes**

High occupancy vehicle lanes can be used to allow carpools with two-or-more persons and vanpools and transit vehicles to bypass congested areas. Generally, these improvements are incorporated along major transportation routes.

WSDOT policy states that:

HOV lanes are appropriate when current traffic congestion conditions and/or forecasted traffic congestion meet the following criteria:

1. Facility demands exceed capacity for more than one hour each day, as evidenced by level of service E or F
2. Evidence exist that during peak hours of operation, the HOV lane will move more people than the per lane average of the adjacent general purpose lanes
3. Local support for the construction of the HOV lane is demonstrated through active regional support or public surveys
4. An HOV route segment may also be justified if it enhances HOV system continuity

Table 9-1 provides traffic volume guidelines for the development of HOV facilities.

# *Transportation Demand Management*

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**Table 9-1 General Minimum Operating Thresholds for  
HOV Facilities Based on National Experience\***

Type of HOV Facilities	Vehicles per Hour per Lane
Separate right-of-way, bus only	200-400
Separate right-of-way, HOV	800-1000
Freeway, exclusive two-directional	400-800
Freeway, exclusive reversible	400-800
Freeway, concurrent flow	400-800
Freeway, contraflow, bus only	200-400
Freeway, contraflow, HOV	400-800
HOV bypass lanes	100-200

Source: Transportation Research Board HOV Systems Manual, NCHRP Report 414

\*These minimum thresholds are presented as guidance for use in local areas. The minimum thresholds may vary by area and will depend on local characteristics.

In Island County, these types of facilities should take the form of queue bypass lanes at signals, as well as HOV/transit lanes to special destinations. These destinations may include: the Clinton and Keystone ferry docks; transit centers; large park and ride facilities; and tourist destinations such as State Parks.



## CHAPTER 10

### INTELLIGENT TRANSPORTATION SYSTEMS

#### **Overview**

Intelligent Transportation Systems (ITS) have generated considerable enthusiasm in the transportation community as a potential strategy to reduce highway congestion, improve highway safety, enhance the mobility of people and goods, promote economic productivity, and reduce the environmental impacts associated with motor vehicle travel. These benefits are realized by using technology to manage the existing transportation system rather than by constructing additional lane miles.

The use of technology in transportation is not new; Washington State began using it in the 1960s. In the late 1980s, efforts to apply advanced computer and communications technology to improve highway transportation in the United States grew rapidly. Projects were carried out at the state and local level.

Table 10-1 shows the thirty user services currently defined for the ITS program, grouped into seven "user service bundles". The user services shown in bold italic print comprise the nine core components of the metropolitan ITS infrastructure. They are commonly used to illustrate an initial way of considering the potential types of ITS technologies that could be usefully linked in a metropolitan region.

# *Intelligent Transportation Systems*

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**Table 10-1 User Services for the National ITS Architecture**

Travel and Transportation Management	En route Driver Information Travel Services Information Traffic Control Route Guidance Incident Management Emissions Testing and Mitigation Highway-Rail Intersection
Travel Demand Management	Pre-trip Travel Information Ride Matching and Reservation Demand Management and Operations
Public Transportation Operations	Public Transportation Management En route Transit Information Personalized Public Transportation Public Travel Security
Electronic Payment	Electronic Payment Services
Commercial Vehicle Operations	Commercial Vehicle Electronic Clearance Automated Roadside Safety Inspection Commercial Vehicle Administrative Processes On-board Safety Monitoring Freight Mobility Hazardous Material Incident Response
Emergency Management	Emergency Notification and Personal Security Emergency Vehicle Management
Advanced Vehicle Control and Safety Systems	Longitudinal Collision Avoidance Lateral Collision Avoidance Intersection Collision Avoidance Vision Enhancement for Crash Avoidance Safety Readiness Pre-crash Restraint Deployment Automated Highway Systems

Source: Developing Traveler Information Systems Using the National ITS Architecture, USDOT 1998

Island County residents may feel that a metropolitan approach to ITS is not appropriate to the county. However, Island County is clearly a combination of rural and metropolitan with the heavy commute into the metropolitan Puget Sound Region significantly affecting traffic patterns. The USDOT developed the Advanced Rural Transportation Systems (ARTS) Program, a fully coordinated component of the ITS program designed to guide development and deployment of rural ITS applications. The only notable difference in the ARTS Program is that some of the names of the user service bundles are changed to reflect the needs of rural America. The rural user service bundles are as follows:

- Traveler Safety and Security
- Emergency Services
- Tourism and Traveler Information Services
- Public Traveler/Public Mobility Services
- Infrastructure Operations and Maintenance
- Fleet Operations and Management
- Commercial Vehicle Operations

This correlation between the metropolitan and rural user bundles means that projects for Island County may be drawn from either list and still be compatible.

## **I.T.S. in Transportation Planning**

For the most part, ITS planning currently occurs on a statewide or corridor level. The typical "ITS Strategic Plan" recommends an ITS strategy to be implemented in the near-, mid-, and long-term. Near-term strategies recommend projects utilizing applications of proven technology that demonstrate ITS capabilities. These projects answer immediate needs, increase public and private awareness, and have a high probability of funding. Long-term strategies recognize that the technology is constantly evolving, and includes projects that upgrade equipment or implement technology in areas not emphasized in the short- and mid-term plans.

## **Washington State I.T.S. Planning**

Although the use of advanced technologies has been part of Washington's transportation system since the 1960s, formal planning did not begin until 1992. Current ITS planning and implementation efforts are now reaching down to the Regional Transportation Planning Organization (RTPO) level. The Puget Sound Regional Council (PSRC) has developed a regional ITS strategy as part of their Metropolitan Transportation Plan that can be viewed at their website.

## **Washington State Ferries I.T.S. Implementation Plan**

The Washington State Ferries (WSF) ITS Implementation Plan was developed as part of the WSF Static/Variable Signage Project. The goals of this plan should be considered in Island County's ITS planning process:

- Static and variable message signs to disseminate operational information to all WSF customers,
- Improved communications with customers in support of a multi-modal transportation network, and
- Effective communication of operational information (e.g. ferry cancellations, closures, schedules, overload conditions, and delays).

Another goal, queue detection, is scheduled as a mid-term project. The reliability of this technology, however, is still in question. In Island County, the Clinton ferry terminal is a near-term candidate for video surveillance, a mid-term candidate for queue detection, and a long-term candidate for Highway Advisory Radio (HAR). The Keystone terminal is a long-term candidate for HAR and a Variable Message Sign (VMS).

## **Current And Proposed Applications**

The transportation system serves our needs on many levels. It links us to work, shopping, and recreation. In a social context, it serves as our link to enable interaction with others. It is important that each of us have an opportunity to access transportation on some level to satisfy these needs. Island County is home to an older population, and this should be considered in any discussion of access. ITS technology may be of assistance in providing access that is otherwise not available. Additionally, traffic demand on the limited road system, island-mainland commuter patterns, growth management concerns, extreme weather events, summer tourism, and proximity to Seattle make Island County a good candidate for ITS implementation.

# ***Intelligent Transportation Systems***

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## ***Existing Applications***

### En-Route Driver Information: Traveler's Information Radio

A Traveler's Information Radio station is located near Parker Road south of Coupeville. The station is used to provide general information on Ebey's Landing National Historic Reserve and its associated recreational opportunities. The station broadcasts at 1610 MHz.

### Traveler Services Information: Internet Websites

Traveler Services Information user services provide quick access to travel-related services and facilities. WhidbeyNET, a division of the Whidbey Telephone Company, provides an established, comprehensive Island County Internet web site at <http://www.islandweb.org>. The site is a source for information and links to current events, accommodations, government services, health care, recreational opportunities, and transportation. The site is provided as a service to the community.

### Incident Management: WSDOT Incident Response Team

WSDOT formed the Incident Response Team in order to provide quicker response to incidents and thus reduce delays to motorists. The main function of the Incident Response Team is to help alert and direct motorists around blocking problems, and to restore the normal flow of traffic as quickly as possible. Reducing delay also reduces the chance that a second incident will occur as a result of the first.

Incident Response personnel are available 24-hours a day, seven days a week. Incident Response vehicles and personnel are equipped to handle a variety of situations. The two vehicles Island County shares with Skagit and north Snohomish County are based in Mount Vernon. It is unknown if the location of a vehicle on Whidbey Island is justified. If it is, local agencies may want to support a vehicle or petition the state to do so.

### Pre-Trip Travel Information: Clinton Ferry Camera

While Traveler Information Services are general resources of service information, the Pre-Trip Travel Information user service is meant to provide more specific information for selecting the best transportation mode, departure time, and route. The Washington State Ferry Internet site (<http://www.wsdot.wa.gov/ferries>) has a link to a camera at Clinton that provides this information.

### Traffic Control: City of Oak Harbor Traffic Signal System

The only traffic signal system in Island County is in Oak Harbor. Five of the SR 20 signals are interconnected, and one of the detector loops at each SR 20 signal is wired to act as a traffic counter. It is anticipated that the city will continue progress toward interconnectivity of the entire system.

### Traffic Control: WSDOT Traffic Counter

WSDOT has only one permanent traffic recorder (PTR) in Island County. Recorder S706 is located on SR 20 at milepost 20.02, east of Rhododendron Park Drive near Coupeville. This counter provides traffic volumes statistics that are used at both the local and state level.

### Pre-Trip Travel Information: Island Transit

The Island Transit website ([www.islandtransit.org](http://www.islandtransit.org)) provides current rider information, route maps and schedules, and links to other transit systems. Island Transit's goal for the future is a more interactive site where people can put in their origin and destination and get information on the buses and times they need.

## ***Suggested ITS Projects***

From the comments gathered at the stakeholder meetings, and a review of the current situation, several projects are suggested for further evaluation. The method of implementation depends on the Regional Architecture adopted by the RTPO. An ITS architecture is the manner in which the components of the system connect and communicate to each other. Establishing an architecture ensures that systems installed separately can eventually work together, sharing information, reducing redundancy, and promoting efficiency.

### Project One – Travel Demand Management and Public Transportation Operations

Over one-third of the respondents in the McClure Origin-Destination Study said they would utilize transit service between Oak Harbor and Mount Vernon–Burlington. This project would evaluate buses equipped with Automatic Vehicle Location (AVL). The AVL information would be displayed at major transit centers allowing waiting patrons to know the location of the next bus.

### Project Two – Travel and Transportation Management

A parking management program for Deception Pass State Park to provide both pre-trip and en-route information on parking locations and availability. This project should also provide more information on travel patterns.

### Project Three – Electronic Government Services

This project would provide Camano Island residents with greater accessibility to Island County government services via computer, kiosk, or video conferencing.

### Project Four – Regional Automated Trip Planning

This project could begin as a "trip planner" on the Island Transit web site. Ultimately, the goal would be to develop a comprehensive multi-modal schedule information website. At this site, the user would enter trip origin and destination, and receive a list of possible modes, routes, and schedules.

### Project Five – En-Route Driver Information

This project would utilize Highway Advisory Radio and/or Variable Message Signs to provide information to allow en-route drivers to decide which route to use to travel to and from the island.

## **Island County Recommendations**

- Island County should begin the process of developing an ITS Regional Architecture
- Island County should continue to develop an inventory of existing ITS applications and infrastructure
- The Island County ITS Stakeholder's Group could be revived as a forum for discussing ITS implementation if there is enough interest
- Island County should conduct research on travel and tourism to better understand the traffic patterns and needs of Island County tourists
- Island County should include ITS information in public meetings for subsequent updates of the Regional Transportation Plan
- WSDOT should consider installing traffic counters with additional capabilities to collect data for origin-destination surveys or vehicle occupancy studies
- At least one representative from Island County should be involved with a regional or statewide ITS committee such as ITS Washington.

# *Intelligent Transportation Systems*

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## CHAPTER 11

### NON-MOTORIZED TRAILS

#### **Introduction**

Island County has experienced dramatic urban growth during the past decade. New permanent and seasonal resident populations have located within previously urbanized portions of Camano and Whidbey Islands as well as in developments adjoining Oak Harbor, Coupeville, Langley, and other incorporated communities. The growing population base has increased the demand on existing trail facilities. At the same time, county residents have become concerned with protecting and providing public access to the unique environmental resources that make Island County a desirable place to live and work.

Continued urban developments could outpace the combined efforts of state, county, city, and port district agencies to maintain and improve the county's trail system if public resources, policies, and funding are not coordinated to effectively manage the challenge this represents. Consequently, the following planning objectives have been established to address present and projected population growth implications, as well as the specific planning requirements established by the 1990 Washington State Growth Management Act (GMA).

#### **Non-Motorized Planning Objectives**

The planning objectives for non-motorized modes, listed below, were adopted by Island County for the "Island County Transportation Plan: 2000 – 2020. These goals also serve as sub-regional goals. They are "Meet the needs of bicyclists, pedestrians, and equestrians and encourage the development of non-motorized facilities" with:

- Non-motorized Planning – Coordinate planning efforts for non-motorized modes of travel with other jurisdictions, local communities, and specific non-motorized travel interest groups to develop an integrated area-wide plan for bicycles and other non-motorized travel modes that ensures continuity of routes,
- Pedestrian and Bicycle Facilities – Consistent with adopted non-motorized (trail) plans require developers of subdivisions, short subdivisions, and other types of regulated development to provide safe and convenient facilities for pedestrians and bicyclists. Develop and adopt facility design standards and threshold levels that reflect the needs of the local community.
  - Sidewalks, improved shoulders, or off street trails within developments to accommodate internal circulation and
  - Connections to adjacent property and transportation facilities (such as roads, trails, and transit routes) to facilitate safe and convenient access to nearby parks, schools, businesses, residential areas, transit routes, and trails.
- Facilities for Non-Motorized Travel – Provide facilities for travel by non-motorized travel modes by:
  - Incorporating improvements for non-motorized travel into programmed road improvement projects. The most appropriate design for such facilities will be determined on a case by case basis for individual road improvement projects using criteria including, but not limited to:

## *Non-Motorized Trails*

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- The supplemental classification designations for the roadway for pedestrians, bicycles, and equestrians;
  - The County's adopted road design standards;
  - Adjacent land uses;
  - Expected level of demand for use by pedestrians, bicyclists and/or equestrians;
  - Accident history (number, type, and severity);
  - Existing and forecast traffic volumes;
  - Available right-of-way;
  - Project costs;
  - Availability of funds for the improvements, including any special funds to pay for improvements for non-motorized travel modes; and
  - Community support
- Developing an ongoing program to install improvements for non-motorized travel modes at locations where there are no programmed road improvement projects. The County will establish a program for transportation improvements for non-motorized travel modes, and fund it through the County's Annual Road and/or Capital Facilities Programs. Requests for individual improvement projects would be submitted on an annual basis and will compete for available funds. Criteria to determine priority among requested improvement projects may include:
    - Condition of existing facility;
    - Adjacent land uses;
    - Expected level of demand for use by pedestrians, bicyclists, and/or equestrians;
    - Traffic volumes on the roadway;
    - Potential conflict between travelers using motorized and non-motorized travel modes;
    - Speed limit on the roadway;
    - Functional classification of the roadway;
    - Supplemental classification of the roadway for pedestrian, bicycle, and /or equestrian modes;
    - Connections and/or relationship to other facilities for non-motorized travel and /or transit; and
    - Community support
  - Proceeding with the development of a comprehensive plan for non-motorized transportation in Island County,
  - Coordinating the work of the Public Works Department and the Parks and Recreation Department in the planning and provision of on-road and off-road facilities for non-motorized travel modes in accordance with the priorities established in the adopted non-motorized (trail) plan
- Coordination with Schools – Coordinate with each school district and accredited private school to identify safe school walking routes which address pedestrian needs around school facilities,
  - Low Cost Improvements for Non-Motorized Travel – Explore opportunities to provide low cost improvements within existing public right-of-way to improve conditions for non-motorized travel modes,
  - Non-Motorized Travel and TDM – Encourage the use of non-motorized travel modes as part of the County's TDM program to reduce the use of motorized travel modes.

## **Existing Trail Facilities**

### *Island County*

Island County owns extensive public rights-of-way and improved roadways throughout the sub-region. In some instances, the county has improved the road shoulder to provide emergency parking and an on-road bicycle lane (at least 6-feet in width) or a shoulder riding area (4-to 6-feet in width). The inventory includes the following road corridors, although not all have been painted, marked, or otherwise designated as on-road bicycle routes.

### *Camano Island*

The Island has 11.9 miles of on-road bicycle lane, 23.7 miles of bicycle shoulder, and 7.4 miles of designated in-lane bicycle routes.

- On-road bicycle lanes are provided on:
  - a) Cross Island Road for 1.9 miles;
  - b) East Camano Drive, from SR 532 to Camano Hill for 2.6 miles;
  - c) Elger Bay Road for 2.0 miles;
  - d) Mountain View Road for 0.8 mile; and
  - e) West Camano Drive from North Camano to Camano Hill for 4.7 miles.
  
- On-road bicycle shoulders are provided on:
  - a) East Camano Drive from Camano Hill to Mountain View for 1.5 miles;
  - b) East Camano Drive from Mountain View to West Camano Drive for 7.4 miles;
  - c) Monticello Drive for 1.9 miles;
  - d) North Camano Drive for 4.2 miles; and
  - e) West Camano Drive from Camano Hill to East Camano for 12.2 miles.

### *Whidbey Island*

The island has 19.0 miles of on-road bicycle lanes, 38.3 miles of bicycle shoulders, 11.3 miles of designated in-lane bicycle routes, and, 2.14 miles of multi-purpose trail (Kettles Trail) along SR20 near Coupeville.

- On-road bicycle lanes are provided on the following roads:
  - a) Arnold Road for 1.6 miles;
  - b) Ault Field Road for 1.2 miles;
  - c) Crescent Harbor Road for 1.7 miles;
  - d) Crosby Road for 2.2 miles;
  - e) Deer Lake Road for 2.3 miles;
  - f) Fakkema Road for 1.5 miles;
  - g) Fort Nugent Road for 0.8 mile;
  - h) Goldie Road for 0.8 mile;
  - i) Heller Road for 1.3 miles;
  - j) Houston Road for 2.6 miles;
  - k) Main Street in Freeland for 0.6 mile; and
  - l) Maxwelton Road between Langley and SR 525 for 1.6 miles.

## ***Non-Motorized Trails***

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- On-road bicycle shoulders are provided on:
  - a) Bayview Road for 2.9 miles;
  - b) Clover Valley Road for 0.7 mile;
  - c) Cornet Bay Road for 0.3 mile;
  - d) Cultus Bay Road for 3.4 miles;
  - e) Honeymoon Bay Road for 3.7 miles;
  - f) North Bluff Road for 2.4 miles;
  - g) Oak Harbor Road for 1.3 miles;
  - h) Reservation Road for 1.6 miles;
  - i) Scott Road for 0.3 mile;
  - j) Silver Lake Road for 3.5 miles;
  - k) Swantown Road for 2.6 miles;
  - l) Troxell Road for 3.4 miles; and
  - m) West Beach Road for 5.9 miles.
  
- In-lane bicycle routes are designated on Jones Road for 11.3 miles.

### ***Oak Harbor***

The Oak Harbor Public Works Department, Parks Division, has developed a notable system of on- and off-road trail systems throughout the city. This system includes over 1.7 miles of designated off-road trails, 2.5 miles of separated bicycle trails, and 14.1 miles of a mixture of designated and unmarked on-road routes on city streets. The elements of this system are:

- A 2.53 mile waterfront trail is provided or proposed along the waterfront from the City Marina to the intersection of SW Swantown Road and State Route 20:
  - a) The waterfront trail follows SE Pioneer Way and SE Bayshore Drive along a public sidewalk for 0.8 mile;
  - b) A separated pedestrian and bike trail through Flintstone Park for 0.1 mile;
  - c) A separated pedestrian and bike trail along the beach over public and private property (with easements) for 0.13 mile;
  - d) Separated pedestrian and bike trail along the waterfront through City Beach Park for 0.61 mile, and
  - e) A separated pedestrian and bike trail through private property (with easements) and City owned open space veering away from the waterfront to the intersection of SW Swantown Road and State Route 20 for .89 mile.

This trail is an important recreational and non-motorized transportation route that links public and private uses along, and to, the waterfront and to the central business district. Completion of this trail is a high priority for the City of Oak Harbor.

- Additional trails are proposed with the expansion of Fort Nugent Park.
  
- Separated multipurpose day hiking and bicycling trails are provided on over 4.2 miles along:
  - a) The waterfront trail from Flintstone park to SW Scenic Heights Street, and
  - b) Alongside the pavement of NE and SE Regatta Drive.

- On-road bicycle shoulders are provided on over 12.0 miles on:
  - a) NW Crosby Avenue for 0.4 mile;
  - b) NE and SE Regatta Drive for 2.3 miles;
  - c) NE 7<sup>th</sup> Avenue for 0.4 mile;
  - d) SE Pioneer Way for 0.4 mile;
  - e) SW Swantown Avenue for 1.1 miles;
  - f) State Route 20 within city limits for 2.7 miles;
  - g) SW Heller street for 1.2 miles;
  - h) S. Oak Harbor Road for 0.3 mile;
  - i) NE Regatta Drive for 1.9 miles;
  - j) SW 6<sup>th</sup> avenue for under 0.1 mile;
  - k) SW Barrington Drive for 0.5 mile;
  - l) SW Fort Nugent Avenue for 0.4 mile;
  - m) SW Scenic Heights Street for under 0.1 mile;
  - n) NE Ellis Street for 0.6 mile, and
  - o) SE Jerome Street for 0.4 mile
  
- In-lane bicycle routes are designated and marked on:
  - a) SW 6<sup>th</sup> Avenue for under 0.1 mile;
  - b) SE Barrington Drive for 0.5 mile;
  - c) SW Fort Nugent Avenue for 0.4 mile;
  - d) SW Scenic Heights Street in the city limits for under 0.1 mile;
  - e) NE Ellis Street for 0.6 mile;
  - f) NE Izett Street for 0.2 mile, and
  - g) SE Jerome Street for 0.4 mile.

### *Coupeville*

Coupeville has developed a notable system of on- and off-road trail systems throughout the city including over 0.2 mile of designated off-road trails within city parks, 1.1 miles of separated walking and biking trails, and 3.9 miles of a mixture of designated and unmarked on-road routes on city streets. The components of this system are:

- Walking trails are provided for over 0.2 mile in city parks at Captain Thomas Coupe Park for 0.1 mile and Town Park for 0.1 mile,
- Separated multipurpose walk and bike trails are provided for over 2.5 miles of street right-of-way corridors on Main Street from SR 20 to 4<sup>th</sup> Avenue,
- Unsigned and unmarked in-lane bicycle routes are presently used by local residents for over 3.9 miles of the following city streets, which will eventually be improved to provide a system of bicycle shoulders and lanes:
  - a) Parker Road for 1.5 miles;
  - b) Northwest Madrona Way within the city limits for 0.5 mile;
  - c) Sixth Street for 0.4 mile;
  - d) Gould Street Extension for 0.6 mile;
  - e) Second Street from Pennington Circle to Main for 0.4 mile;
  - f) Front Street Extension for 0.1 mile;
  - g) Coveland NW for 0.3 mile;
  - h) Seventh Street for 0.3 mile;
  - i) First Street for 0.3 mile; and

## ***Non-Motorized Trails***

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- j) Ebey to Terry to Broadway for 0.1 mile.
- In-lane bicycle routes are designated for over 1.5 miles of city streets on:
  - a) Front Street for 0.5 mile;
  - b) Coveland NW for 0.3 mile;
  - c) Seventh Street for 0.3 mile;
  - d) First Street for 0.3 mile; and
  - e) Ebey to Terry to Broadway for 0.1 mile.

### ***Langley***

Langley has developed a notable system of on- and off-road trail systems throughout the city including over 0.3 mile of designated off-road trails within city parks; 1.9 miles of separated biking rails; 5.7 miles of a mixture of designated and unmarked on-road routes on city streets; and 0.8 mile of horseback riding trails.

- Walking trails are provided for over 0.3 mile in city parks at:
  - a) Phil Simon Park for 0.1 mile; and,
  - b) Seawall/Totem Park for 0.2 mile,
- Separated walking and biking trails are proposed in separate corridors along:
  - a) Brooks Hill Road to Goss Lake DNR for 0.4 mile;
  - b) Edgecliff to Camano Avenue for over 0.75 miles; and
  - c) Edgecliff to the east end of Sand Point Road for over 1.1 miles,
- Unsigned and unmarked in-lane bicycle routes are used by local residents and tourists on the following roads, which will be improved with pedestrian/bicycle shoulders and lanes:
  - a) Sandy Point Road for 0.6 mile;
  - b) DeBruyn Road for 0.1 mile;
  - c) Park Avenue for 0.1 mile;
  - d) Anthes Avenue for 0.4 mile;
  - e) Cascade Avenue for 0.4 mile;
  - f) Camano Avenue and Langley Road for 0.5 mile;
  - g) Edgecliff to Sandy Point East for 1.1 miles; and
  - h) Third Street to Park Street to 6<sup>th</sup> Street to Camano Avenue for over 1.1 miles,
- Separated horseback riding trails are provided for 0.8 mile within:
  - a) Anderson and Baker Road rights-of-way for 0.4 mile; and
  - b) With a separate easement through residential developments as the Cedar Trail for 0.4 mile.

## CHAPTER 12

### FINANCIAL ANALYSIS

#### **Introduction**

The Skagit/Island Regional Transportation Planning Organization is responsible for coordinating the transportation needs for Skagit and Island Counties. The following financial analysis for the Island Sub-Region was based on the adopted GMA multi-year financing plans developed by Island County, Oak Harbor, Coupeville, and Langley and WSDOT's State Highway Systems Plan. These plans reflect transportation needs and the associated improvements necessary to maintain adopted level of service standards.

The financing plans should provide sufficient funds to implement the proposed improvements at the time developments occur or ensure that a financial commitment is in place to complete the improvements within six years of the development. In GMA, this implementation and financing strategy is referred to as being "concurrent with the development."

RCW 47.80.030 requires that a financial plan be developed as an element of a Regional Transportation Plan. The financial plan must demonstrate how the Regional Transportation Plan can be implemented by identifying resources from public and private sources that are reasonably expected to be made available to carry out the plan.

This chapter will address funding for regional transportation needs through the year 2022. Cost and revenue projections included in the plan are for a twenty-year period that commenced in 2002. However, data for the plan comes from the individual jurisdictions and is not uniform, either in the type of data available, in all cases, or in the base and twenty-year horizon year.

To develop the necessary financing plan for the Island Sub-region, the capital costs associated with the improvements, as well as safety and administration costs, must be identified. In addition, the available revenue over the twenty-year analysis period also must be identified. The following sections present the expected revenues over the next twenty-years, the capital costs to implement the capacity and safety improvements, the administration and maintenance costs and a comparison of expenditures and revenues.

#### **Revenue Forecast**

In the Island Sub-Region, transportation projects are funded by a mix of federal, state, and local revenue. The major revenue sources are:

1. Income from taxes:
  - Street and Curb Permits
  - CAPRON Funds (special gas tax)
2. Income from Intergovernmental Sources:
  - Surface Transportation Program (STP)
  - County Arterial Preservation Program (CAPP)
  - Rural Arterial Program (RAP)
  - HUD Block Grants
  - Federal Aid (FAUS, FAS)
  - Urban Arterial Board
  - Transportation Improvement Board (TIB)

# ***Financial Analysis***

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### 3. Miscellaneous Income:

Interest Earning  
Developer Contributions  
Private Donations  
Property Taxes  
Permit Fees  
Forest Sales

Most of the funding sources listed above are available to local jurisdictions within the Sub-Region to implement their transportation programs and to cover their operating, administrative and maintenance expenses.

### **Island County**

The 2000 Island County Road Fund budget, which was approved by the Board of County Commissioners, listed revenue estimates for the above-revenue sources. These budget estimates are used to forecast revenues and expenditures over the twenty-year financial analysis period. The base revenue estimates are listed on Table 12 -1.

The approach used to forecast transportation revenues for the twenty-year analysis period was based on these revenue sources and the following assumptions:

- Property taxes were extended ahead by 8 percent annually.
- CAPRON funds and motor fuel taxes were extended ahead by 3 percent annually.
- STP & RTPPO funds were estimated based on expected revenue for projects outlined in the six-year Transportation Improvement Program through 2006. An average amount of about \$300,000 and extended ahead by 2 percent annually between 2007 through 2020.
- RAP funds were based on six year TIP and average value of \$1,100,000 was extended ahead by 3 percent annually from 2007 through 2020.
- CAPP funds were extended by 2% per year.
- Miscellaneous revenues were extended ahead by 5 percent annually.

**Table 12-1 Base 2000 Transportation Revenues Island County**

<b>Description</b>	<b>2000 Base Revenue (In Thousands Of Dollars)</b>
Beginning Fund Balance	\$1,073
STP	\$ 426
Motor Fuel Tax	\$1,900
CAP	\$ 234
RAP	\$ 443
TIB	\$ 0
CAPRON	\$2,874
CAPRON (additional correction)	\$725
FEMA	\$128
Department of Ecology Grant	\$922
Property Taxes	\$5,374
Timber Excise Tax	\$20
Miscellaneous Revenue	\$ 175
<b>Total Base Revenue</b>	<b>\$ 9,674</b>

By applying these assumptions to the 2000 base revenue estimates, the anticipated twenty-year revenue estimates were projected and are summarized on Table 12-2. Over the twenty-year analysis period, approximately \$451 million in transportation revenue can be expected to be available to cover the administration costs, operating costs, maintenance costs and capital expenditures of Island County's transportation system.

Improvements to the state routes in Island County are the responsibility of WSDOT. Their revenue forecasts are estimated on a biennial basis and subject to the approval of the state legislature. It has been over 10 years since there has been a general increase in revenue for the WSDOT, making it difficult to forecast yearly increases. Because those revenues are primarily based upon the gas tax and are not indexed to inflation, purchasing power decreases each year between adjustments. Therefore, within the twenty-year period, state expenditures on the state highways in the county can be expected to fluctuate.

# Financial Analysis

**Table 12-2 2000 - 2020 Transportation Revenue Projections Island County**

Source	Revenue Projections By Year (In Thousands Of Dollars)									
	2000	2001	2002	2003	2004	2005	2006	2001 to 2006	2007 to 2020	2001 to 2020
<b>Beginning Fund Balance</b>	1,073	637	1,116	386	0	0	0	2,139	0	\$2,139
<b>Property Tax</b>	5,374	5,804	6,268	6,770	7,311	7,896	8,528	42,577	223,022	\$265,599
<b>STP</b>	426	456	515	212	483	248	73	1,987	4,888	\$6,875
<b>TIB</b>	0	0	0	0	0	0	0	0	0	0
<b>RAP</b>	443	762	1,384	1,310	1,300	500	1,390	6,646	19,359	\$26,005
<b>Motor Fuel Tax</b>	1,900	1,957	2,016	2,076	2,138	2,203	2,269	12,659	39,927	\$52,585
<b>CAPRON</b>	2,874	2,960	3,049	3,140	3,235	3,332	3,432	19,148	60,394	\$79,542
<b>CAP</b>	234	239	243	248	253	258	264	1,506	4,294	\$5,799
<b>CAPRON Add. Correction</b>	725	725	181	0	0	0	0	906	0	906
<b>FEMA</b>	128	0	0	0	0	0	0	0	0	0
<b>Department of Ecology Grants</b>	922	130	140	150	160	170	180	930	3,570	\$4,500
<b>Timber Excise Tax</b>	20	21	22	22	23	24	25	138	481	\$619
<b>Miscellaneous</b>	175	184	193	203	213	223	235	1,250	4,826	\$6,076
<b>Total Revenues</b>	14,294	13,874	15,127	14,518	15,117	14,855	16,395	89,885	360,761	\$450,646

\* See next page for notes

## **Notes for Table 12-2:**

- Based on 2000 approved revenue data;
- Property taxes and motor fuel taxes were extended ahead by 8 percent annually;
- Motor fuel taxes and CAPRON funds were extended ahead by 3 percent annually;
- RAP funds were based on six year TIP and average value of \$1,100,000 was extended ahead by 3 percent annually from 2007 through 2020;
- CAPP funds were extended by 2% per year;
- CAPPRON Additional Correction is estimated at about \$725,000 for 2000 and 2001 and \$181,000 for 2002;
- FEMA funds may not be re-occurring and were not extended forward;
- Department of Ecology Grants were estimated at about \$922,000 in 2000 and at \$130,000 in 2001 and extended ahead with \$10,000 annually increase through 2020;
- RAP funds were based on six year TIP and average value of \$1,100,000 was extended ahead by 3 percent annually from 2007 through 2020;
- STP & RTPO funds were estimated based on expected revenue for projects outlined in the six-year Transportation Improvement Program through 2006. An average amount of about \$300,000 and extended ahead by 2 percent annually between 2007 through 2020;
- Timber Excise taxes were extended ahead by 4 percent annually; and,
- Miscellaneous revenues were extended ahead by 5 percent annually.

Source: Island County Transportation Plan 2000 - 2020

## **Capital Expenditures**

The capital expenditures for the identified roadway capacity improvements are summarized in Table 12-3. The capacity improvements are identified to meet Island County's level of service standards. In addition, the county has identified several joint projects with WSDOT and other agencies to increase the capacity at various locations in Island County, as part of the county's Six-Year Road Program. The cost of these projects is estimated at between \$13.65 million and \$18.5 million.

## *Financial Analysis*

**Table 12-3 Island County's Estimated Capital Costs For Improvements  
To Maintain Level Of Service Standards  
2001 to 2020**

<b>Roadway/ Intersection</b>	<b>From</b>	<b>To</b>	<b>Improvements</b>	<b>County's Estimated Cost in Millions</b>
E. Camano Drive	SR 532	Cross Island Rd.	Widen to 4 lanes	\$1.75 to 2.0
E. Camano Drive	Cross Island Rd.	Camano Hill Rd.	Widen to 4 lanes	\$2.6 to 3.0
E. Camano Drive	Camano Hill Rd.	Monticello Dr.	Widen to 4 lanes	\$5.6 to 6.5
Ault Field Rd./ Heller Rd.			Signalization & Channelization	\$0.3 to 0.5 + R/W
E. Camano Dr./ Cross Island Rd.			Signalization & Channelization	Built in 2000
E. Camano Dr./ Camano Hill Rd.			Signalization & Channelization	\$0.3 to 0.5 + R/W
County share of four intersections along SR 20			Signalization & Chann. – County share ~ 20%	\$1.1 to 2.2 + R/W
County share of five intersections along SR 525			Signalization & Chann. – County share ~ 20%	\$1.4 to 2.7 + R/W
County share of SR 532/E. Camano Dr./ Sunrise Blvd. I/S			Signalization & Chann. – County share ~ 40%	\$0.6 to \$1.1 + R/W
<b>Total</b>				<b>\$13.65 to \$18.5 + R/W</b>

Source: Island County Transportation Plan 2000 - 2020

Similarly, the capital expenditures for the safety and operational improvements, outlined by Island County in their Six-Year Road Program, are summarized in Table 12-4. Included in these capital expenditures are budgets for developing and/or implementing the policies and improvements for non-motorized transportation modes and providing support for the marine program.

**Table 12-4 Island County Roadway Capacity, Safety, And Operational Improvement Costs 2001 To 2006**

<b>Types Of Improvements</b>	<b>Estimated Costs</b>
Planning Studies	\$ 208,000
Paths and Trails	974,000
Intersection Improvements	3,935,000
Roadway Stabilization	2,155,000
Construction Overlays	3,600,000
Miscellaneous Right-of-Way	300,000
Roadway Widening/Realignment	18,508,000
Minor Safety Improvements	1,060,000
Roadway Drainage	3,460,000
Transit Improvements	1,525,000
<b>Total</b>	<b>\$35,725,000</b>

Source: Island County Transportation Plan 2000 - 2020

Overall, Island County's Six-Year Road Program has allotted approximately \$35,725,000 for capacity, safety and operational improvements for the years 2001 through 2006 (from the Island County Transportation Plan). This is almost triple the amount for the previous six years. The most significant items that cause this increase are roadway widening and realignment from almost \$5 million to over \$18 million and intersection improvements from less than \$2 million to almost \$4 million.

In addition to these expenditures, a planning and design study is recommended for an alternative route to SR 525 between Wannamaker and Houston Roads and consider transportation improvements necessary to facilitate the delivery of goods and services to air transportation facilities.

A summary of the anticipated county expenditures, including the capacity, safety, and operational improvements in its transportation program over the next twenty-years, is presented on Table 12-5. These program expenditures are based on the year 2000 expenditure data approved by the Board of County Commissioners and the assumptions for growth that follow:

- Road maintenance and operations expenses were extended ahead by 4% annually through 2006, then by 6.5% through 2020;
- General administration was extended by 5 percent annually through 2006, then by 6.5% through 2020;
- Construction costs from 2000 to 2006 were based on the six year TIP with an average value of \$5,000,000 being extended ahead by 6.5% annually from 2007 through 2020;
- Allocation expenses were extended ahead by 5% annually through 2006, then by 6.5% through 2020;
- Debts were estimated based on the approved payout schedule of \$304,000 per year;
- Miscellaneous expenditures were extended ahead by 4% annually through 2006, then by 7% through 2020;
- Courthouse expansion costs are based on the construction schedule;
- Transfers to other Fund are not considered reoccurring expenses.

Of the approximate \$88.3 million in the county transportation budget over the next six years, approximately \$30 million is expected to be available for county road improvements.

# Financial Analysis

## Comparison Of Roadway Expenditures And Revenue Estimates

Island County has estimated that approximately \$30 million will be available to fund their transportation improvement program, including capacity, safety, and operational improvements for roads over the next six years. Expenditures for all transportation programs over the period from 2001 to 2020 are estimated at \$450,600,000. Table 12-5 summarizes those expenditures below.

**Table 12-5 Summary Of The Island County Transportation  
Expenditure Projections 2000 – 2020**

Source	Expenditure Projections By Year (in thousands of dollars)									
	2000 (Budget)	2001	2002	2003	2004	2005	2006	2001 to 2006	2007 to 2020	2001 to 2020
Maintenance & Operations	4,249	4,419	4,596	4,780	4,971	5,170	5,376	29,311	124,635	\$153,946
Administration	2,378	2,497	2,622	2,753	2,890	3,035	3,187	16,984	73,876	\$90,859
Construction	5,256	4,683	5,398	5,208	5,208	4,773	4,763	30,033	115,911	\$145,944
Allocations	1,159	1,217	1,278	1,342	1,409	1,479	1,553	8,278	36,006	\$44,283
Debts	304	304	304	304	304	304	304	1,824	4,256	\$6,080
Courthouse Expansion	195	0	718	100	0	0	0	818	0	\$818
Miscellaneous	28	29	30	31	33	34	35	193	855	\$1,048
Transfer to other fund	725	725	181	0	213	0	0	906	0	\$906
<b>Total Costs</b>	<b>14,294</b>	<b>13,874</b>	<b>15,127</b>	<b>14,518</b>	<b>14,815</b>	<b>14,795</b>	<b>15,219</b>	<b>88,346</b>	<b>355,539</b>	<b>\$443,885</b>

**Notes:**

- Road maintenance and operations expenses were extended ahead by 4% annually through 2006, then by 6.5% through 2020.
- Administration costs were extended ahead by 5% annually through 2006, then by 6.5% through 2020.
- Construction costs from 2000 to 2006 were based on the six-year TIP with an average value of \$5,000,000 being extended ahead by 6.5% annually from 2007 through 2020.
- Allocation expenses were extended ahead by 5% annually through 26, then by 6.5% through 2020.
- Debts were estimated based on the approved pay out schedule of \$304,000 per year.
- Courthouse expansion costs are based on construction schedule.
- Transfer to other fund are not considered reoccurring expenses.
- Miscellaneous expenditures were extended ahead by 4% annually through 2006, then by 7% through 2020.

Source: Island County Transportation Plan 2000 - 2020

The capital improvements, identified by Island County are summarized below:

- 2001-2006 capacity, safety and operational improvements: \$ 35,725,000
- 2001 to 2020 GMA Capacity Improvements: \$ 13,650,000 to \$18,500,000
- 2001 to 2020 additional studies & improvements: \$190,000 to \$ 250,000

Since the capacity improvements on SR 532 are not expected to be funded over the next twenty years it is preferable to also delay improvements to East Camano Drive until WSDOT widens SR 532 to four lanes. As a result, in the short term, the level of service standards for the section of East Camano Drive from SR 532 to Camano Hill Road has been established as LOS "E."

The recommended level of service standards for roadways are listed in Chapter 4 and are based on the capacity and financial analyses of state highways and county arterials in the Island Sub-Region.

### **Washington State Department Of Transportation**

The State Highway Systems Plan (SHSP) was adopted by the Transportation Commission in February, 2002. The Systems Plan is a 20-year needs assessment for all state-owned highways (surface arterials and limited access freeways) in the region and throughout the state. The mobility needs identified on state facilities in Island County are shown in Table 12-6. Safety Improvement Strategies are listed in Table 12-7. The Washington State Department of Transportation (WSDOT) has identified approximately \$44 million for several capacity, safety, and operational improvements in their current Six-Year Work Program for Island County. Table 12-8 shows WSDOT funded roadway projects for the current biennium (2001 - 2003). Table 12-9 shows Washington State Ferry projects for the current biennium. Projects that are phased and continue into the 2003 - 2005 Biennium and the 2005 - 2007 Biennium do not necessarily have secured funding, but should be funded.

The SHSP for 2003 - 2022 identifies between \$108.49 million and \$146.79 million in mobility improvements on SR 20, SR 532, and SR 525. The safety program (I2) shows a cost estimate range of \$3.37 to \$4.56 million. In their current biennial budget, WSDOT has identified revenue to fund some of these improvements. At present, WSDOT does not have available revenues to fund all of the identified capacity and safety needs for state arterials in Island County. The Transportation Commission has prioritized the different needs categories in the State Highway System Plan (preservation, safety, environmental retrofit, economic initiatives, and safety improvements).

The preservation, safety, and mobility needs shown in Tables 12-6, 12-7, and 12-8 are needs that are included in the Systems Plan. Formerly the Systems Plan was divided into a fiscally constrained section and a non-constrained section. The 2003 – 2022 update does not make the distinction. TEA-21 does not require statewide plans to be fiscally constrained and WSDOT decided to drop doing so on a voluntary basis because of the high degree of uncertainty regarding future funding levels at this time.

As a result of the lack of anticipated revenue, the Island Sub-Region has established level of service standards on state facilities to reflect existing conditions. Island County and WSDOT should work together to raise the priority of these state roadway sections and the identified needs and the state/federal funding for the county and WSDOT transportation programs. An important issue for all transportation agencies is the application of concurrency to highways of statewide significance in Island County. The local agencies are responsible for land use decisions. WSDOT NW Region is responsible for state highway expenditure decisions for a five county area. With scarce resources for improvements, Island County projects have to compete for funding against those in all five counties.

# Financial Analysis

**Table 12-6 WSDOT State Highway System Plan  
20-year Congestion Relief Solutions  
Island County 2003-2022**

LOCATION	FROM	TO	STRATEGY	EST. COSTS*
SR 20	MP 16.32	MP 20.53	Widen to 12' lanes and 8' shoulders, left turn lanes	\$7,050,000
SR 20	MP 22.15	MP 23.15	Construct parking lot for trail users	\$300,000
SR 20	MP 23.99	MP 25.31	Passing lane for westbound	\$4,420,000
SR 20	MP 26.13	MP 26.73	Two-way left-turn lane	\$830,000
SR 20	MP 30.00	MP 31.30	Widen to 4/5 lanes	\$8,770,000
SR 20	MP 31.39	MP 31.39	Realign intersection and add capacity	\$2,980,000
SR 20	MP 32.95	MP 34.74	Widen to 4/5 lanes	\$11,740,000
SR 20	MP 34.46	MP 34.74	Realign intersection to create one	\$2,690,000
SR 20	MP 34.99	MP 36.31	Westbound passing lane	\$5,450,000
SR 20	MP 37.00	MP 38.14	Eastbound passing lane	\$1,810,000
SR 20	MP 41.58	MP 41.90	Capacity and safety improvements	\$91,690,000
SR 525	MP 11.18	MP 11.38	Extend existing TWLTL 1000' north	\$260,000
SR 525	MP 13.20	MP 14.27	Build NB Passing Lane	\$2,530,000
SR 525	MP 17.26	MP 18.08	Southbound passing lane	\$2,050,000
SR 525	MP 18.92	MP 19.97	Northbound passing lane	\$2,450,000
SR 525	MP 24.00	MP 24.68	Southbound passing lane	\$1,700,000

*Source: 2003 Washington State Department of Transportation State Highway System Plan*

\* SHSP provides a range of cost estimates. The high value is listed here.

**Table 12-7 WSDOT State 20-Year Highway System Plan  
Safety Improvement Strategies Island County 2003-2022**

LOCATION	FROM MP	TO MP	STRATEGY	EST. COSTS
SR 20*	25.21	25.40	Realign horizontal curve two-tenths miles	\$520,000
SR 20	25.58	26.53	Realign horizontal curves	\$2,650,000
SR 20*	26.65	26.91	Realign horizontal curve	\$670,000
SR 20*	27.24	27.56	Culvert and treatments	\$0
SR 20*	29.62	30.21	Realign vertical curve	\$660,000
SR 20*	30.31	30.39	Warning signs (4)	\$0
SR 20*	33.00	35.00	Channelize I/S RT pocket realign vertical curve, signalize	\$1,040,000
SR 20**	35.00	37.00	New signal. LT pockets. Install guardrail	\$680,000
SR 20**	35.25	35.57	Extend 0.1 miles guardrail	\$10,000
SR 20**	35.80	36.42	Add 0.1 miles guardrail	\$20,000
SR 20**	36.42	40.97	Resurface roadway to 3R standards	\$0
SR 20**	37.00	38.00	LT & RT pockets and signing	\$100,000
SR 20**	38.00	39.00	LT pockets	\$240,000
SR 20	39(x)	42(x)	Deception Pass/Canoe bridge pedestrian safety enhancements	\$7,100,000
SR 525***	10.08	10.32	Install 400 feet guardrail	\$10,000
SR 525***	11.01	11.06	Signalize intersection (programmed).	\$0
SR 525***	12.00	13.00	New signals, guardrail, LT pockets	\$380,000
SR 525***	13.00	15.00	Guardrail end treatment, LT pockets. Realign horizontal curve	\$660,000
SR 525	15.00	17.00	LT pockets. Realign vertical and horizontal curves	\$540,000
SR 525	17.00	19.00	Guardrail end treatment. Realign horizontal curve and LT pocket	\$620,000

**Source: 2003 Washington State Department of Transportation State Highway System Plan**

Note: MP = Mile Post

\* Libby Road (MP 25.28) to Swantown Rd. (MP 30.81)

\*\* Sleeper Road (MP 35.52 to Monkey Hill Road (MP 38.08)

\*\*\*Clinton Ferry Terminal (MP 10.7) to Bayview Rd. (MP 14.92)

# Financial Analysis

**Table 12-8 WSDOT Project List For Island County  
Funded For The 2001-2003 Biennium**

LOCATION	FROM	TO	IMPROVEMENTS	COSTS
SR 20	Libbey Road Vicinity MP 25.00	Sidney St. Vicinity MP 27.61	Reconstruction	\$4,453,000
SR 20	Sidney St. MP 27.61	Scenic Heights MP 31.00	Reconstruction	\$3,131,000
SR 20	Oak Harbor NCL MP 33.19	Frostad Rd. Vic. MP 37.08	Asphalt Overlay and Safety Improvements	\$3,119,000
SR 20	Deception Pass Bridge MP 42.00		Anchor Connectors	\$434,000
SR 532	Terry's Corner	MP 0.00 – 0.03	Park & Ride Lot and Miscellaneous Construction	\$850,000

Washington State Ferries projects proposed for Island County for the years 1995-2001 are listed in Table 12-9.

**Table 12-9 Washington State Ferries Six-Year Project List For Island County**

LOCATION	PIN	TITLE	01 -03	03 -05	05 – 07
Clinton	952516H	Clinton Ph. 2 Dolphin Replacement, Slip 2 N.	\$17,000,000	\$136,000	\$146,000
Keystone	999920A	Dolphin Replacement		\$296,000	\$2,157,000
Keystone	999920B	Wingwall Replacement		\$227,000	\$1,642,000
Keystone	999920C	Tower, bridge seat & transfer span replacement		\$682,000	\$4,682,000
		WSF Totals	\$17,000,000	\$1,341,000	\$8,627,000

\*Fully funded

## *City Of Oak Harbor*

The city of Oak Harbor currently receives enough funds for the maintenance of the existing roadways and for periodic upgrading or reconstruction of the city's roadways. This will drastically change if CAPRON funds are eliminated. The city has had moderate success in obtaining outside grants for transportation improvement projects within the city. Other sources of revenue include permits, interest, donations, and developer contributions.

Table 12-10 shows the projected revenues for the years 2001-2013. Projected revenues slightly exceed GMA capacity improvement needs. The portion of annual transportation revenues raised by developer contributions is assumed to grow to 30% for capital road projects with an additional 17% from road impact fees. As noted, revenues are expected to slightly exceed identified needs but the revenue is heavily dependent on state and federal funds.

**Table 12-10 City of Oak Harbor 2001-2013 Revenue Forecasts and Expenditures**

	<b>Six-Year 2001-2006</b>	<b>Percent</b>	<b>Thirteen-Year 2001-2013</b>	<b>Percent</b>
Property Tax – Housing	0	0.0%	\$28,911	0.2%
Property Tax – retail/office/industrial	0	0.0%	\$22,365	0.2%
Retail sales and use tax	\$11,516	0.2%	\$44,812	0.3%
Real estate excise tax	\$571,122	10.2%	\$1,427,805	10.0%
Fuel tax – restricted	\$330,095	5.9%	\$825,238	5.8%
State and federal grants	\$2,140,125	38.1%	\$5,203,000	36.6%
Developer contributions	\$1,579,375	28.1%	\$4,214,500	29.7%
Road impact fees	\$979,992	17.5%	\$2,449,980	17.2%
<b>Revenue Forecast Totals</b>	<b>\$5,612,225</b>	<b>100.0%</b>	<b>\$14,216,611</b>	<b>100.0%</b>
<b>Expenditures (GMA Transportation Improvements) *</b>	<b>\$5,142,500</b>		<b>\$13,007,500</b>	

Table 12-11 depicts Oak Harbor’s expected Growth Management Act transportation improvement projects for the years 2001-2013. The cost estimates are based on 2001 dollars. It should be noted that projects listed in Table 12-11 do not reflect the full Transportation Improvement Program for Oak Harbor. The listed projects are only those projected as necessary for compliance with GMA required concurrency.

**Table 12-11 City of Oak Harbor GMA Transportation Improvements  
2001 to 2013 \***

<b>Improvements</b>	<b>Description</b>	<b>Estimated Cost</b>
<b>6-Year Program</b>		
SR 20/Auvil Road	Signal	\$175,000
Midway Boulevard/NE 5 <sup>th</sup> Street	Signal	\$175,000
Midway Boulevard/SE 6 <sup>th</sup> Street	Signal	\$175,000
Pioneer Way/Regatta Drive	Signal	\$175,000
Heller Road/Crosby Avenue	Signal	\$175,000
Heller Road/SW 6 <sup>th</sup> Avenue	Signal	\$175,000
SR 20, Barlow to Swantown Road	Widening (City Share)	\$300,000
SR 20, Midway to Ault Field	Widening (City Share)	\$750,000
SE 6th Ave., Ely Street to SR-20	Arterial	\$650,000
SW Barrington, SW Erie to SW Fairhaven	Arterial	\$800,000
Gun Club Road: Oak Harbor Rd to west side of Business Park	Arterial	\$1,417,500
SR 20/NE 16 <sup>th</sup> Avenue	Signal	\$175,000
<b>6-Year Program Subtotal</b>		<b>\$5,142,500</b>

## Financial Analysis

Improvements	Description	Estimated Cost
<b>13-Year Program</b>		
SR 20/SW 6 <sup>th</sup> Avenue	Signal	\$330,000
Oak Harbor Road/NW 7 <sup>th</sup> Avenue	Signal	\$175,000
Whidbey Avenue & Regatta Drive	Signal	\$175,000
Goldie Road/NE 16 <sup>th</sup> Avenue	Signal	\$175,000
NE 7th Avenue/Midway Blvd.	Signal	\$330,000
Crosby Avenue/Oak Harbor Road	Signal	\$330,000
Oak Harbor Road/Ault Field	Signal	\$330,000
Heller Road/NW 2 <sup>nd</sup> Avenue	Signal	\$175,000
SR 20, Swantown Avenue to South City Limits	Widening (City Share)	\$450,000
SR 20, Swantown to Ault Field.	Signal Interconnect	WSDOT
SR 20/Pioneer/Beeksma	Add Lanes (City Share)	\$150,000
Gun Club Road: Goldie Road to Oak Harbor Rd,	Arterial	\$990,000
Gun Club Road: West Side of Business Park to Heller Rd.	Arterial	\$585,000
NE 16 <sup>th</sup> Avenue/Cemetery Road: Goldie to SR-20	Widening	\$250,000
NE 16 <sup>th</sup> Avenue/Cemetery Road: Goldie to Heller	Arterial	\$3,420,000
<b>Total (Includes both 6-year and 13-year program improvements)</b>		<b>\$13,007,500</b>

\*Projected revenues for years 2001-2013 from the City of Oak Harbor's Capital Facilities Plan.

### Town Of Coupeville

The Town of Coupeville is currently planning for a 2020 population of 2,000 people, and forecasted traffic growth is not expected to result in any capacity deficiencies in the Coupeville arterial system for at least the next six years. All intersections within the town will operate at a LOS C or better in 2008. All arterial segments within the town will operate at LOS C or better in 2008. Therefore, no capacity related improvements are necessary to achieve concurrency under the Growth Management Act.

The Town of Coupeville historically has mainly relied on CAPRON and MVFT funds to pay for street improvements. For many years, annual income from these sources has enabled the town to fund approximately \$17,500 per year for roadway capital improvements projects. However, since 1999, the Town has been able to use general fund revenues to dedicate approximately \$35,000 per year toward an annual maintenance overlay program. For larger projects, such as the recent reconstruction of South Main Street and the planned 2003 reconstruction of North Main Street, ISTE, TEA21 and other grant programs have been used.

Table 12-12 shows the projected revenues and construction expenditures for the years 2003 - 2014. The \$35,000 average of annual capital improvements is assumed to increase by \$5,000 every three years. For 2003-2008, the construction expenditures were scheduled projects taken from the Transportation Improvement Program (TIP).

**Table 12-12 Town of Coupeville 2003 to 2014 Revenues and Expenditures**

<b>2003 to 2014 Revenues and Expenditures</b>					
<b>Year</b>	<b>Annual Revenue</b>	<b>Grants</b>	<b>Total Revenues</b>	<b>Street Expenditures</b>	<b>Funding (shortfall)</b>
2003	\$35,000	\$765,000	\$800,000	\$800,000	0
2004	\$35,000	\$62,000	\$97,000	\$97,000	0
2005	\$35,000	0	\$35,000	\$35,000	0
2006	\$40,000	0	\$40,000	\$633,000	(\$593,000)
2007	\$40,000	0	\$40,000	\$633,000	(\$593,000)
2008	\$40,000	0	\$40,000	\$633,000	(\$593,000)
2009	\$45,000	0	\$45,000	\$45,000	0
2010	\$45,000	0	\$45,000	\$45,000	0
2011	\$45,000	0	\$45,000	\$45,000	0
2012	\$50,000	0	\$50,000	\$50,000	0
2013	\$50,000	0	\$50,000	\$50,000	0
2014	\$50,000	0	\$50,000	\$50,000	0
<b>Total</b>	\$510,000	\$827,000	\$1,337,000	\$3,116,000	(\$1,779,000)

The town is projected to generate about \$1,337,000 for transportation improvements through the year 2014, resulting in a short fall of \$1,779,000 when comparison to the estimated costs of planned and recommended improvements. Therefore, implementation of any of the major roadways or non-motorized improvements will require additional funding.

**City Of Langley**

*Forecasted traffic growth in the city of Langley will not result in any capacity deficiencies in the collector system through the year 2013. All intersections and arterial segments within city limits will operate at LOS C or better. No road capacity improvements are required to achieve concurrency for future growth expected under the city's GMA Comprehensive Plan.*

Langley currently receives only enough funds for the maintenance of the existing roadways. The city has had success, however, at obtaining outside grants for transportation improvement projects within the city. CAPRON refunds and MVFT Arterial Street Fuel Tax combine to provide the bulk of the annual funding. The remaining sources are sought on an "as needed" basis. The city funds approximately \$43,000 per year on roadway maintenance and capital improvement projects.

Table 12-13 shows the projected revenues and construction expenditures for 2002-2012. For 2003-2008, the construction expenditures were scheduled projects taken from the Transportation Improvement Program (TIP). Average annual transportation revenue of \$43,000 was not assumed to increase each year. It was assumed that the city would continue to be at least as successful in the future as in the past, therefore, an estimate of \$70,000 per year from grants was used in the funding analysis.

# Financial Analysis

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Table 12-13 City Of Langley 2002-2012 Revenue And Expenditures

YEAR	ANNUAL REVENUE	GRANTS	TOTAL REVENUES	STREET EXPENDITURES	FUNDING (SHORTFALL)
2002	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2003	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2004	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2005	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2006	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2007	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2008	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2009	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2010	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2011	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
2012	\$43,000	\$200,000	\$243,000	\$300,000	(\$57,000)
<b>Total</b>	<b>\$473,000</b>	<b>\$2,200,000</b>	<b>\$2,673,000</b>	<b>\$3,300,000</b>	<b>(\$627,000)</b>

Through the year 2012, the city of Langley is projected to generate about \$2,673,000 for transportation improvements. This results in a short fall of \$627,000 in comparison to the estimated costs of planned and recommended improvements if full funding of the projects in the TIP is assumed.

## Transit Revenue And Operating Costs Summary

On November 2, 1999, voters in the State of Washington approved Initiative 695, which eliminated the Motor Vehicle Excise Tax. Motor Vehicle Excise Taxes represented 60 % of the annual fixed revenue sources for Island Transit services. The .3% locally dedicated Sales Tax for Island Transit represented the remaining 40%. In May of 2000, Island County voters approved a measure to increase the local sales tax for transit from 3/10's of 1 percent, to 6/10's of 1 percent. This increase in sales tax provided the funds necessary to maintain, at that time, the 1999 reduced service levels. Island Transit still has a 20% annual operating revenue short fall because of the loss of the motor vehicle excise tax. Table 12-14 shows the accumulative effect of the loss of these funds.

The demand for fixed route service expansion, later night service, extension of Holiday service, and Sunday service remains high. The demand for specialized paratransit service for elderly and disabled citizens continues to grow at a phenomenal rate. Island Transit continues to explore grant opportunities and other options for capital and operations assistance, but without dedicated support from the state legislature, future expansion to meet the demands will not be possible, and additional service cuts and service modifications will have to be made.

# Financial Analysis

Table 12-14 2001-2008 Island Transit Revenue And Operating Cost Projections

	2001 Actual	2002 Apprv.	2003 Proj.	2004 Proj.	2005 Proj.	2006 Proj.	2007 Proj.	2008 Proj.
<b>General Fund</b>								
Beginning balance	\$1,733,830	\$977,108	\$43,814	-\$296,428	-\$602,911	-\$830,794	-\$991,834	-\$1,057,868
Sales Tax (+)	\$3,227,154	\$3,527,155	\$3,703,513	\$3,888,688	\$4,083,123	\$4,287,279	\$4,501,643	\$4,726,725
RM-RC/STP/5311/5309 Grants (+)	\$31,688	\$2,417,600	\$744,000	\$2,768,000	\$2,700,000	\$476,800	\$140,000	\$280,000
Rural Mob. SKAT Conn. (+)	\$0	\$108,000	\$54,000	\$0	\$0	\$0	\$0	\$0
All Other Revenues (+)	\$534,045	\$470,000	\$471,499	\$495,076	\$519,828	\$545,820	\$573,111	\$601,767
Operating Expenses (-)	\$3,738,982	\$4,417,237	\$4,549,754	\$4,686,247	\$4,826,834	\$4,971,639	\$5,120,788	\$5,274,412
Transfers From Cap. Reserve (+)	\$201,650	\$606,250	\$178,000	\$92,000	\$75,000	\$119,200	\$35,000	\$70,000
Transfers From Oper. Reserve (+)	\$0	\$0	\$0	\$600,000	\$0	\$0	\$0	\$0
Transfers From Fac. Reserve (+)	\$0	\$0	\$8,000	\$600,000	\$600,000	\$0	\$0	\$0
Income to Cap. Repl. Fund (-)	\$338,478	\$293,962	\$0	\$0	\$0	\$0	\$0	\$0
Income to Oper. Reserve Fund (-)	\$200,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
Income to Fac. Rep. Fund (-)	\$400,000	\$100,000	\$0	\$600,000	\$0	\$0	\$0	\$0
Capital Projects obligations (-)	\$73,799	\$3,201,100	\$949,500	\$3,464,000	\$3,379,000	\$618,500	\$195,000	\$370,000
<b>Ending General Fund Balance</b>	<b>\$977,108</b>	<b>\$43,814</b>	<b>-\$296,428</b>	<b>-\$602,911</b>	<b>-\$830,794</b>	<b>-\$991,834</b>	<b>-\$1,057,868</b>	<b>-\$1,023,788</b>
<b>Operating Reserve Fund</b>								
Beginning balance	\$567,000	\$767,000	\$817,000	\$817,000	\$217,000	\$217,000	\$217,000	\$217,000
Annual Operating Reserve (+)	\$200,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
Transfer to General Fund (-)	\$0	\$0	\$0	\$600,000	\$0	\$0	\$0	\$0
<b>Ending Account Balance</b>	<b>\$767,000</b>	<b>\$817,000</b>	<b>\$817,000</b>	<b>\$217,000</b>	<b>\$217,000</b>	<b>\$217,000</b>	<b>\$217,000</b>	<b>\$217,000</b>
<b>Capital Replacement Fund</b>								
Beginning balance	\$1,748,476	\$1,885,304	\$1,573,016	\$1,395,016	\$1,303,016	\$1,228,016	\$1,108,816	\$1,073,816
Capital Replacement Fund (+)	\$338,478	\$293,962	\$0	\$0	\$0	\$0	\$0	\$0
Capital Purchases (-)	\$201,650	\$606,250	\$178,000	\$92,000	\$75,000	\$119,200	\$35,000	\$70,000
<b>Ending Account Balance</b>	<b>\$1,885,304</b>	<b>\$1,573,016</b>	<b>\$1,395,016</b>	<b>\$1,303,016</b>	<b>\$1,228,016</b>	<b>\$1,108,816</b>	<b>\$1,073,816</b>	<b>\$1,003,816</b>
<b>Facilities Replacement Fund</b>								
Beginning balance	\$125,349	\$525,349	\$625,349	\$617,349	\$617,349	\$17,349	\$17,349	\$17,349
Capital Facilities Fund (+)	\$400,000	\$100,000	\$0	\$600,000	\$0	\$0	\$0	\$0
Capital Purchase (-)	\$0	\$0	\$8,000	\$600,000	\$600,000	\$0	\$0	\$0
<b>Year End Facilities Fund</b>	<b>\$525,349</b>	<b>\$625,349</b>	<b>\$617,349</b>	<b>\$617,349</b>	<b>\$17,349</b>	<b>\$17,349</b>	<b>\$17,349</b>	<b>\$17,349</b>
<b>AVAIL. OPERATING CASH</b>	<b>\$4,154,761</b>	<b>\$3,059,179</b>	<b>\$2,532,937</b>	<b>\$1,534,454</b>	<b>\$631,571</b>	<b>\$351,331</b>	<b>\$250,297</b>	<b>\$214,377</b>

NOTES: From Island Transit 2001 – 2008 Annual Report



## CHAPTER 13

### IMPLEMENTATION

#### Introduction

This chapter addresses implementation of the Sub-Regional Transportation Plan, specifically addressing performance monitoring of the Sub-Regional Transportation System. RCW 47.80 requires that Regional Transportation Planning Organizations monitor the performance of the Regional Transportation System over time. An ongoing program of collecting performance data, such as traffic volumes and vehicle miles traveled, will enable the Island Sub-Region to evaluate system efficiency.

#### Performance Monitoring

Performance monitoring is the periodic measure of progress toward short and long term goals. The purpose of performance monitoring is to provide relevant information to decision makers to enable them to take appropriate action to improve program performance. Feedback from performance monitoring can lead to program and goal modification or changes in data collection methodology. Monitoring the performance of the regional transportation system would typically incorporate methodical measurement of changes in specific factors over time. In most instances, indicators are quantitative, such as total numbers of ferry travelers per year or average daily traffic volumes on arterial roadways.

In order for the RTPO to determine the degree to which the goals and policies of the sub-regional transportation system are being achieved, a baseline of data needs to be developed from which to measure future changes. The Island Sub-region instituted a county-wide traffic counting program in September of 1994. Sixteen vehicle magnetic imaging traffic counters were purchased to obtain vehicle counts on designated arterials and collector roads to determine average vehicle speeds and percent of truck traffic. The vehicle magnetic imaging sensors are very sensitive to changes in the Earth's magnetic field. Vehicles passing over or near the sensor disturb the Earth's field and are thereby counted. The detectors also are capable of computing average vehicle speed and determining the ratio of cars to trucks.

Island County Public Works staff selected twelve permanent count sites for monitoring on a year around basis. Each site was counted for at least one week each month on a continuing basis for thirteen months in order to establish seasonal variation factors. Monthly information is particularly relevant to the Island Sub-Region because the area experiences significant seasonal volume changes due to tourism. Accurate data on the seasonal variation will provide the Island Sub-Region with a more realistic assessment of changing travel patterns. The permanent traffic counting sites are as follows:

- East Camano Drive between Sunrise Blvd. And Cross Island Road.
- West Camano Drive West of Elger Bay Road.
- Sixth Street (Langley) East of Cascade Avenue
- Bush Point Road West of SR 525.
- Cultus Bay Road South of SR 525.
- Deer Lake Road Southwest of SR 525.
- Fakkema Road East of Wilson Road.
- Madrona Way South of SR 20.
- Main Street (Coupeville) North of SR 20.
- Main Street (Freeland) East of SR 525.
- Troxell Road East of SR 20.
- West Beach Road North of Fort Nugent.

## *Implementation*

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Table 13-1 shows the results of monitoring these sites since 1996. Two of the sites, Coupeville City Limits and Camano Avenue in Langley only have a count for 2001. Other years that were not counted for specific locations have counts listed in italics. This indicates that the figure has been extrapolated from the actual counts. When sandwiched between two actual counts these numbers are the mid-point and are reasonable estimates. When they are the last year, they represent a continuation of the trend for the previous two years and may be very unreliable. Three sites in particular fall into this category and are shaded. These values were added to make it possible to graph them to more easily study trends.

**Table 13-1 Island County Traffic Count Monitoring**

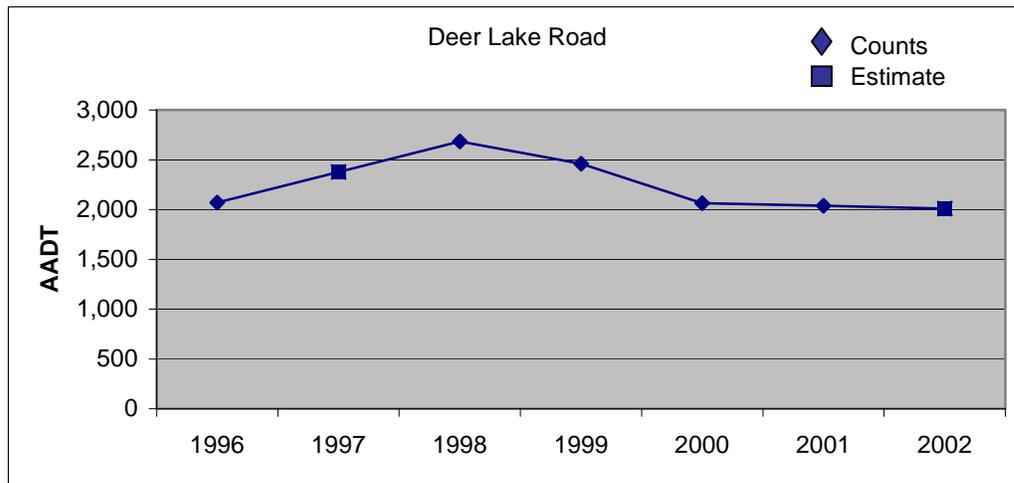
<b>Location</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Deer Lake Road	2,070	2,377	2,684	2,459	2,064	2,037	<i>2,010</i>
East Camano Drive	11,660	14,150	13,320	13,797	14,274	14,750	<i>14,390</i>
Fort Nugent Road	3,350	3,042	2,735	2,427	2,369	2,312	2255
Madrona Way	1,580	1,540	1,500	1,295	1,428	1,561	<i>1694</i>
Main Street/Freeland	6,010	6,262	6,515	4,972	5,640	6,308	<i>5,724</i>
Mountain View Road	1,350	1,166	982	981	981	980	<i>979</i>
Troxell Road	1,170	1,145	1,120	1,020	1008	996	<i>984</i>
West Beach Road	1,730	1,906	2,082	1,969	2,537	3,106	<i>3,221</i>
Coupeville City Limits						6,201	
Bush Point Road	3,230	3,086	2,942	2,663	3,199	2,851	2503
Camano Ave (Langley)						5,129	
Cultus Bay Road	3,270	3,079	2,887	3,194	3,502	3,246	2990

As can be noted from the missing data, the magnetic counters have not performed as well as had been hoped. One particular problem has been the ease with which they can be removed by vandals. Although some results are questionable from an accuracy point of view, the overall trends seem fairly consistent. The County is reevaluating the use of these counters, and alternatives to their use.

WSDOT has been collecting traffic counts on SR 20, SR 525, and SR 532 in the Island sub-region. WSDOT uses permanent traffic recorders at several locations, such as SR 20 near Coupeville. These recorders continuously collect data on a year around basis. The information gathered is summarized in the Annual Traffic Report. The information presented in the report is useful and is frequently utilized in analyzing traffic impacts from new development. This data will be used by the Island Sub-region as part of the performance-monitoring program.

Figure 13-1 shows that traffic peaked in 1998 and then came back to the levels of 1996 in 2000, when it leveled off. A review of Table 13-1 shows that a similar trend appeared at many of the other sites as far as the 1998 figures being higher than 1997 and 1999, but for many the numbers then started rising again in 2000. The most important findings are that there are no trends that indicate that the system is likely to be overloaded in the near future and that traffic on low volume roads tend to vary more that more heavily traveled routes, an observation that has been confirmed by research.

**Figure 13-1 Annual Counts for Deer Lake Road**



WSDOT also regularly collects and compiles information on Vehicle Miles Traveled (VMT). This data can be used in the Island Sub-Region performance-monitoring program. The VMT information for state routes can be obtained from both WSDOT traffic counts and VMT information produced by WSDOT Highway Performance Monitoring System report.

**New Performance Measures**

During the update of the plan additional performance measures were developed. These measures will track four aspects of system performance and two aspects of the planning process. The six measures were determined by having the representatives of the RTPO prioritize the Regional Policies in Chapter 2 as high, medium, or low. The highest ranked policies were then chosen, merged when there was overlap, and performance measures developed. This exercise resulted in the four system measures being adopted. The six measures are shown in Table 13-2 with the means of measurement and the benchmark.

# Implementation

**Table 13-2 Performance Measures**

<b>Performance Measure</b>	<b>Measurement</b>	<b>Benchmark</b>
Emphasize the movement of people and goods rather than vehicles in order to obtain the most efficient use of transportation facilities.	Mode split, comparing single occupancy vehicles against the aggregation of other vehicles.	Each ensuing year will be compared with 2002 for improvement.
Increase the efficiency of the Sub-regional road and highway system by maximizing use of existing facilities.	Each year after construction season is over a timed run will be made at the same time of day from Clinton to Deception Pass State Park.	The timed run in year 2003 will establish the standard.
Protect the capital investment in the transportation system through adequate maintenance of facilities	The pavement management system for each agency will be reviewed for optimal care.	Least cost cycle.
Actively promote transit service throughout the Island Sub-region.		
Travel forecasting from the WSDOT model	Annually compare traffic counts at the county concurrence points to the interpolated counts from the model.	The model counts.
Implementation of the plan.	Compare the annual expenditures to implement the plan with 5% of the financially constrained total for the next 20 years.	Five percent of the 20 years total.

The WSDOT Mt. Baker Area Planning Office will develop a data collection methodology and report on the measures annually. The measure for promoting transit usage does not have a measurement or benchmark because implementation has not been identified. If this measure is to be retained an implementation plan and strategy needs to be developed.

## Other Data

Traffic count and VMT data are important in evaluating system performance. However, since tourism significantly impacts ferry and surface transportation modes, additional information needs to be collected. Data on trip origins and destinations, mode, travel routes, seasonal variation, day and time of day of recreational traffic, and frequency would help to provide a better understanding of recreational travel patterns in the Island Sub-region. This information can be used to define tourist corridors, development of transit connections, and development of transportation demand strategies to alleviate traffic congestion during the peak tourist season. Collecting this data can be expensive, with cost-benefit sometimes hard to prove. Therefore, opportunities to collect the data without deploying new systems should be sought. One such opportunity can be the installation of ITS applications, wherein data is collected for operations purposes but can also be used for planning.

## CHAPTER 14

### REGIONAL CONSISTENCY, GUIDELINES AND CERTIFICATION

#### **Introduction**

In 1994 the state legislature passed Substitute House Bill 1928 requiring Regional Transportation Planning Organizations (RTPOs) to establish Guidelines and Principles. RTPOs are also required to provide specific direction for the development and evaluation of the transportation elements of comprehensive plans. The RTPO guidelines and principles are to be used to ensure that state, regional, and local goals for the development of transportation systems are met.

Guidelines and principles are closely related to goals and policies. However, instead of guiding decision makers as goals and policies do, these guidelines and principles form the criteria for certifying city and county comprehensive plan transportation elements in the comprehensive plans. RTPOs are required to certify that local transportation plans are consistent with the goals and policies set forth in the regional plan and that they are based on the Guidelines and Principles. To determine consistency the Skagit/Island RTPO adopted a certification process in 1994. The process has three major components which are:

- Certification Guidelines,
- Local jurisdiction Certification Application Form, and
- Sub-regional Technical Committee Certification Evaluation form.

For this update of the Sub-Regional Plan, the requirements of SHB 1487 have been incorporated into the certification process.

#### **Certification Process**

The following certification process has been adopted to ensure that local government transportation elements are consistent with state transportation policies, county-wide planning policies, transportation plans of other local agencies, and Regional Transportation Plan guidelines and principles. The steps are:

1. Local government adopts a transportation element of the comprehensive plan,
2. Local government submits an Application for Certification Form and submits it, along with the adopted Transportation Element to Island Sub-regional RTPO staff,
3. Island Sub-region RTPO staff reviews the transportation element and the Application for Certification form submitted by the jurisdiction and prepares an evaluation report to the Technical Committee,
4. Island Sub-regional Technical Committee reviews the report and makes a recommendation on certification to the Sub-regional Policy Board.
5. The Island Sub-regional Policy Board reviews the Technical Committee recommendation. If the recommendation is for withholding certification a letter is sent to the submitting jurisdiction with clearly identified deficiencies and necessary remedies defined, and
6. The Skagit/Island RTPO Policy Board reviews all recommendations for certification and is responsible for making the determination of certification.

# ***Regional Consistency, Guidelines and Certification***

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## **Guidelines And Principles**

RCW 47.80 requires that all RTPOs adopt regional transportation guidelines and principles to assure that state, regional, and local goals for the development of transportation systems are met. Certification of local transportation elements of comprehensive plans is based on the Guidelines and Principles. The guidelines and principles are required to address, at a minimum, the following factors:

- Concentration of economic activity,
- Residential Density,
- Development Corridors and urban design, where appropriate, supports high capacity transit,
- Freight transportation and port access,
- Development patterns that promote pedestrian and non-motorized transportation, multi-modal systems access to regional systems, effective and efficient highway systems,
- Ability of transportation facilities and programs to retain existing and attract new jobs and private investment and to accommodate growth in demand,
- Transportation Demand Management,
- Joint mixed-use development,
- Present and future railroad right-of-way corridor utilization,
- Identification of state highways and impacts to them from the land use plan,
- Essential public facilities, and
- Intermodal connections.

To develop the Guidelines and Principles, the Island Sub-regional Goals and Policies were reviewed. The Goals and Policies that meet the criteria listed above were utilized as a goal as well as a policy and a guideline as well as a principle. Some goals and policies were slightly modified to better meet the intent of the guiding criteria contained in RCW 47.80.

The Sub-regional Goals and Policies do not specifically address four of the required factors. They are: (1) the concentration of economic activity; (2) residential density; (3) joint use development; and (4) railroad right-of-way corridor. However, the Transportation Elements adopted by the towns and cities do address some of these issues. Therefore, selective policy language from the towns and cities were used to formulate guidelines and principles. There are no railroad facilities in the Island Sub-region, therefore guidelines and principles addressing railroad right-of-way corridor utilization are not necessary.

### ***Concentration of economic activity***

- Identify adequate areas for future commercial, retail, and industrial economic growth, preferably in or near areas previously designated.
- Locate transit transfer centers near activity centers.

### ***Residential density***

- Provide types and levels of transportation facilities based on the anticipated intensity of development in areas of the city.
- Future land-use projections based on the Comprehensive Plan to identify and provide adequate rights of way for all modes as areas develop.

### ***Development corridors and urban design, where appropriate, supports high capacity transit.***

- Actively promote transit service throughout the Island Sub-region.

## ***Regional Consistency, Guidelines and Certification***

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- Provide transit stops and transit access for land uses that attract larger numbers of employees and/or customers.

### ***Freight transportation and port access***

- Identify strategies to mitigate both the impacts of urban congestion on roadway freight movement and the impacts of roadway freight movement on urban congestion.

### ***Development patterns that promote pedestrian and non-motorized transportation, multi-modal system access to regional systems, and effective and efficient highway systems.***

- Develop multi-modal transportation service connections at transfer sites such as ferry terminals, transit stations and airport facilities.
- Support shared use of the roads or corridor by different travel modes.
- Maintain adequate access to and circulation within all developments for emergency service and public transportation vehicles.
- Design residential streets that link neighborhoods and complementary land uses for efficient and safe circulation.
- Minimize the walking distance between different modes at transfer points.
- Provide a safe system of pedestrian facilities tying together neighborhoods, downtown, shopping areas and schools.
- Provide transit stops and transit access for land uses that attract larger numbers of employees and/or customers.

### ***Ability of transportation facilities and programs to retain existing and attract new jobs and private investment and to accommodate growth in demand.***

- Provide a transportation system that supports economic growth and vitality in Island County.
- Promote non-motorized transportation facilities to enhance eco-tourism.
- Protect the capital investment in the transportation system through adequate maintenance of facilities.
- Developments which create a significant increase in traffic or change in road access and circulation patterns should examine ways to mitigate impacts to maintain LOS standards.
- Identify and implement strategies to mitigate the impacts of urban congestion on roadway freight movement and to minimize the impacts of roadway freight movement on urban congestion.

### ***Transportation Demand Management***

- Provide transportation alternatives for moving people and goods.
- Encourage the use of programs aimed at reducing peak-period traffic congestion, discourage the use of single occupancy vehicles, and increase the use of public transportation by means such as Park & Ride lots, van pools, carpools, walking, bicycling and ride sharing.

### ***Joint mixed use development***

- Mixed use development should be promoted, when it is appropriate, in urban areas. Mixed use development should consist of mutually supportive retail, service, office and residential uses. The intent of mixed use development is to promote a cohesive physical and functional environment.

# ***Regional Consistency, Guidelines and Certification***

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## ***Present and future railroad right-of-way corridor utilization***

**Note:** There are no railroad facilities in the Island Sub-region.

## ***Identification of state highways and impacts to them from the land use plan***

- Show state highways as part of the transportation system, including level of service analysis.
- Identify the impact to the level of service on state highways caused by future growth provided for in the land use plan.

## ***Essential Public Facilities***

- Adopt an essential public facilities ordinance.
- Identify where essential public facilities will be located.

## ***Intermodal Connections***

- Develop multimodal transportation service connections at transfer sites such as ferry terminals, transit stations and airport facilities.
- Encourage multi-jurisdictional involvement in the development of Park-& Ride lots.

## CHAPTER 15

### LEAST COST PLANNING

#### **Overview**

Least Cost Planning is one of comparing a broad range of alternatives to solve transportation problems by considering direct and indirect costs. The range of alternatives includes strategies to reduce demand for infrastructure as well as to increase it. Direct costs include the cost of the vehicle, fuel, and license fees, for instance, while indirect cost include air pollution and other environmental impacts. The intent of the process is to identify the most cost effective mix of options.

#### **The Origin Of Least Cost Planning**

Least cost planning is a process that was developed by the electric utility industry. The utility industry set out to develop a process designed to maximize efficiency while lowering electrical costs to the customer. Energy-conservation programs are an example of this. After a decade of development, least cost planning methodology is still changing and evolving in the utility industry.

#### **State Requirements For Least Cost Planning**

The Growth Management Act requires each Regional Transportation Planning Organization (RTPO) to develop a regional transportation plan based on a least cost planning methodology that identifies the most cost-effective transportation facilities, services, and programs for their region. Regional Transportation Plans (RTPs) adopted after July 1, 1995 should incrementally incorporate least-cost planning methodologies as they are updated. All RTPs developed or updated and adopted after July 1, 2000 must be based upon a least-cost planning methodology. The least cost planning process can also fulfill federal mandates for consideration of the cost-effectiveness of alternative transportation modes and transportation demand management alternatives as promoted by the Intermodal Surface Transportation Efficiency Act and its successor, the Transportation Equity Act for the 21<sup>st</sup> Century.

#### **The Principles Of Least Cost Planning**

“Least Cost Planning: Principles, Applications, and Issues”, a study commissioned by the Federal Highway Administration, describes six principles of least cost planning as:

- An emphasis on developing system-level plans (e.g. regional or MPO level plans) to explore policies that can only be fully evaluated at that level.
- Consideration of all alternatives, including demand management approaches
- Explicit accounting for uncertainty in the estimation of benefits and costs.
- Public involvement in the decision-making process.
- Coordination among jurisdictions.
- Monitoring and updating plans to reflect new information about demand for different facilities and the cost-effectiveness of different approaches.

Each of these principles was incorporated into the planning process for the update of the sub-regional plan. How this was done is discussed below.

#### ***System-Level Plans***

The state requirement that least cost planning be done at the regional level recognizes the need to apply this process at the system level, rather than the project level. A system level could be countywide or

## ***Least Cost Planning***

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regional depending upon the degree to which individual facilities are linked and interdependent. For instance, bus trips between Oak Harbor and Clinton might not be justified at the level currently served if the link with the lowest ridership were to be considered in isolation. However, once the entire trip is considered, the need for the service is understood. Thus connectedness and continuity are important and can only be assessed above the project level of analysis. What this implies is that these alternatives will be considered and studied. It is important to distinguish between low cost and least cost. A low cost solution is not a least cost solution if it does not solve the problem. But it can be part of a package of solutions that makes up a least cost solution.

### ***Broad Range Of Alternatives***

Least cost planning requires that demand for transportation services should be considered as part of the potential solution set, as well as supply. This means solutions such as transportation demand management (TDM), in which alternatives to travel are encouraged, or transit, in which the trip is taken, but in a more efficient mode than the automobile. The selected alternative may include a mix of many modes, including TDM and highway capacity, where demand is high. For the Island County Sub-regional Plan the alternatives studied were segregated by mode to begin with and then the most cost effective elements of each were combined to create the selected alternative.

### ***Uncertainty Of Benefits And Costs***

Both the measurement of costs and benefits is uncertain at the planning level, particularly when measuring costs such as (what economists call) externalities and benefits such as demand reduction, for applications that have not been tested in the past. Externalities, or non-traditional costs, are indirect costs such as air pollution and other environmental impacts. This uncertainty is particularly relevant at the regional level where resources are not available to develop the design level of detail necessary for reliable estimates. It is also difficult to assign monetary costs to many of the non-traditional costs. A number of books and papers have been written on this subject, but their results vary by hundreds of percentages on what these total costs are, depending upon the assumptions made and the methodologies used.

The planning process for this plan recognizes the difficulties inherent in assigning monetary values to most impacts, especially the externalities. It is also important to note that not everyone agrees that every impact should have a monetary value assigned to it. Once all factors all assigned a monetary value and added, the significance of a particular impact gets lost in the whole. Additionally, much of the data that is available is based on studies in large urban areas. As more research is done in this area better data can be assumed to become available. For these reasons a non-monetary approach was chosen for many of these factors in this study. Initially it was intended that a cost-benefit model developed by the Federal Highway Administration called STEAM would be used. To use the model it is necessary to have data from a travel-forecasting model. However, when it came time to load the data it was discovered that the travel-forecasting model did not work with STEAM. Use of the STEAM model had other limitations. The default values for things like the cost of air pollution were derived from a study done in 1994 and required updating. This and other similar data was not readily available.

### ***Public Involvement***

Public involvement is important to least cost planning because input from the public helps to value the range of impacts being considered as well as to identify the alternatives to be considered. In the update to this plan, public involvement started with a public scoping meeting. The public helped to identify the values that were included as “measures of effectiveness” in evaluating the alternatives, by answering a

questionnaire. A public workshop was held to get feedback on the alternatives that had been identified and to develop new ones. More information on the public involvement process is contained in Chapter 8.

### *Coordination with Jurisdictions*

Coordination with all affected jurisdictions is a key element of least cost planning. Coordination provides the benefits of buy-in at the end, but it also allows all parties to provide information during the study so that the participants will have a chance to contribute to the end product. On the update of this plan, the monthly RTPO technical advisory committee meeting was used as the forum for this coordination.

While no specific invitations were sent out to agencies that would not usually attend, such as resource agencies, they were informed at forums for other studies that were going on simultaneously, and the meetings were open to all. In general, this type of planning is of interest to resource agency staffs but they lack the personnel to participate. They tend to place a higher priority on participating in efforts that are closer to construction and the permitting stage.

### *Monitoring and Updating*

Least cost planning encourages non-traditional solutions to transportation problems. The outcomes may therefore be more difficult to forecast. This may result in unusual levels of uncertainty or even targets rather than forecasts. Instead, results are monitored and, if necessary, adjustments are made to the plan at a future time if goals are not being met, or perhaps exceeded. This plan has not tried to forecast the results of implementing a transit and transportation demand management alternative. Island County is required to meet growth management concurrency requirements on its highways of statewide significance. Therefore, any solutions to traffic growth on these highways will have to meet the level of service standards established by the state.

### *Cost Benefit Analysis*

A cost benefit analysis is a key component of a least cost planning process. The update process for this plan proved that providing a cost benefit analysis for a rural RTP will be a challenge. WSDOT will need to develop guidelines for a process that is meaningful for least cost planning purposes and still cost effective for rural RTPOs.