

FINAL
ISLAND COUNTY
TRANSPORTATION PLAN: 2000 - 2020



Clinton Ferry Terminal, Circa 1920

Prepared For: **ISLAND COUNTY**

Prepared By: H. W. LOCHNER, INC.

ADOPTED BY ISLAND COUNTY BOARD OF COMMISSIONERS
DECEMBER 18, 2000

**BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF ISLAND COUNTY, WASHINGTON**

IN THE MATTER OF AMENDING THE CAPITAL) **ORDINANCE C- 115 -00
FACILITIES AND TRANSPORTATION ELEMENTS) **R-50-00**
OF THE ISLAND COUNTY COMPREHENSIVE PLAN)
AND CHAPTER 11.04 ICC THE CONCURRENCY)
ORDINANCE)**

WHEREAS, Island County adopted a GMA Comprehensive Plan and implementing development regulations on September 28, 1998 and September 29, 1998; and

WHEREAS, during the 1998 session the Washington State Legislature passed Substitute House Bill (SHB) 1487, also known as the "Level of Service Bill", to enhance the identification and coordination of planning for major transportation facilities identified as "transportation facilities and services of statewide significance" (RCW 47.06.140); and

WHEREAS, the State subsequently identified SR-20, SR-525, the Clinton/Mukilteo Ferry Service and the Keystone/Port Townsend Ferry Services as Highways of Statewide Significance in Island County; and

WHEREAS, the State has adopted level of service standards for Highways of Statewide Significance in Island County; and

WHEREAS, SHB 1487 requires Island County to update its previously adopted 1998 Transportation and Capital Facilities Elements and its concurrency ordinance on or before December 31, 2000 to include the level of service standards adopted by the State; and

WHEREAS, RCW 36.70A.070(6)(e) requires the County to adopt and implement ordinances that prohibit development approval if the development causes decline in transportation service levels adopted in the Transportation Element of the Comprehensive Plan; and

WHEREAS, the Island County Planning Commission reviewed the proposed amendments in public hearing on November 14, 2000 at 9:15 A.M. and forwarded its recommendation for approval together with its findings of fact to the Board of Island County Commissioners; and

WHEREAS, in 1998, the County completed environmental review under Chapter 41.21C RCW, SEPA, on its Comprehensive Plan and Development Regulations; and

WHEREAS, pursuant to WAC 197-11-340, the County SEPA official has determined that the proposed changes to the Transportation and Capital Facilities Elements of the GMA Comprehensive Plan and Chapter 11.04, ICC, all as mandated by SHB 1487, are not likely to have probable significant adverse environmental impacts and issued a Determination of Nonsignificance on November 18, 2000:
NOW, THEREFORE,

BE IT HEREBY ORDAINED, that the Board of Island County Commissioners hereby adopts the proposed amendments to the County's Comprehensive Plan Capital Facilities and Transportation Elements, attached hereto as Exhibit A and Exhibit B respectively, and adopts amendments to Chapter 11.04 ICC, the Concurrency Ordinance attached hereto as Exhibit C, together with the Findings of Fact of the Island County Planning Commission attached hereto as Exhibit D. Material underlined is added and material stricken through is deleted. Material both underlined and stricken through was presented to the Planning Commission and the Planning Commission did not recommend its approval. These amendments shall be effective December 31, 2000.

Page Two
C- 115 -00
R-50-00

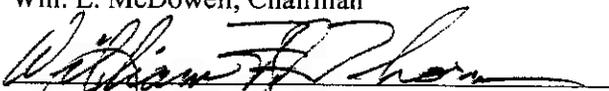
Reviewed this 20th day of November 2000 and set for public hearing at 10:15 a M. on the 18th day of December 2000.



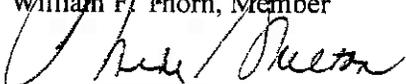
BOARD OF COUNTY COMMISSIONERS
ISLAND COUNTY, WASHINGTON



Wm. L. McDowell, Chairman

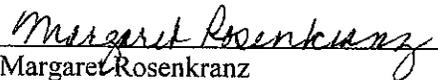


William F. Thorn, Member



Mike Shelton, Member

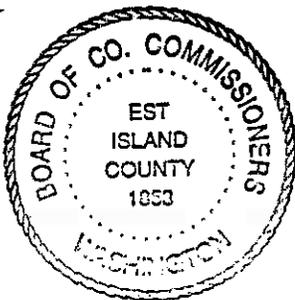
ATTEST:



Margaret Rosenkranz
Clerk of the Board
BICC 00-680

APPROVED AND ADOPTED this 18th day of December, 2000 following public hearing.

BOARD OF COUNTY COMMISSIONERS
ISLAND COUNTY, WASHINGTON



Wm. L. McDowell
Wm. L. McDowell, Chairman

William F. Thorn
William F. Thorn, Member

Mike Shelton
Mike Shelton, Member

ATTEST:

Margaret Rosenkranz
Margaret Rosenkranz
Clerk of the Board

APPROVED AS TO FORM:

David L. Jamieson, Jr.
DAVID L. JAMIESON, JR.
Deputy Prosecuting Attorney
& Island County Code Reviser

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SECTION I: PURPOSE

During the 1998 session the Washington State Legislature passed Substitute House Bill (SHB) 1487, relating to transportation and growth management planning in Washington. SHB 1487, also known as the “Level of Service Bill”, was passed to enhance the identification and coordination of planning for major transportation facilities identified as “transportation facilities and services of statewide significance” (RCW 47.06.140).

For these facilities, the new legislation identifies specific Growth Management Act (GMA) planning requirements for local jurisdictions, clarifies that the state establishes the level of service, and changes the application of concurrency. The intent of the legislation is to enhance the coordination of planning efforts and plan consistency at the local, regional, and state level. This legislation requires jurisdictions, planning under the GMA, to update the transportation elements of local comprehensive plans to be in compliance by December 31, 2000.

This legislation recognizes the importance of specific transportation facilities and services that are of statewide importance, from a state planning and programming perspective. In addition, these facilities are to be reflected within the local plans along with measures for monitoring them in order to promote consistency among local, regional, and state transportation plans, including financial plans.

The 1998 legislation, identified as Chapter 171, laws of 1998, amended several laws including the GMA (RCW 36.70A); Priority Programming for Highways (RCW 47.05); Statewide Transportation Planning (RCW 47.06); and Regional Transportation Planning Organizations (RCW 47.80).

HISTORY OF LEGISLATION

The 1998 legislation has an eight year history that began when the Growth Management Act (GMA) was passed into law in 1990. When enacted, the GMA did not address a number of transportation related issues for a variety of reasons. In particular, there was much discussion on how state transportation facilities would be treated in local comprehensive plans, how level of service standards would be set on state facilities, and how concurrency requirements would be applied to state facilities with regard to the GMA. For many reasons the GMA was silent on many key issues.

In 1994 the Legislative Transportation Committee (LTC) directed a coordinated comprehensive study on the appropriate relationship between state transportation facilities and local comprehensive plans and addressed many of the GMA gaps related to these issues. The study was guided by a legislative and multi-jurisdictional steering committee and was known as the Level of Service (LOS) study.

Between May 1994 and January 1995, the steering committee, along with a technical committee comprised of staff from the LTC, Association of Washington Cities, Washington State Association of Counties, Washington State Department of Transportation, and a consultant team, conducted the study. There was general agreement on a number of broad policy issues. However, the

recommendations that were provided in their report were based on extensive review and discussion but did not represent consensus by the committee.

Through coordination and additional efforts, legislation (SHB 1487) was drafted to address many of the issues and recommendations identified in the LTC study, including transportation facilities determined to be “significant” from a statewide perspective. The facilities identified under the legislation (RCW 47.06.140) also include transportation facilities and services that may not be owned by the state, such as the “freight railroad system”.

Transportation and Growth Management Planning Law Changes

SHB 1487, as passed by the 1998 Legislature, amended several RCWs relating to transportation and growth management planning including:

- ◆ RCW 36.70A - Growth Management Act
- ◆ RCW 47.05 - Priority Programming for Highways
- ◆ RCW 47.06 - Statewide Transportation Planning
- ◆ RCW 47.80 - Regional Transportation Planning Organizations

Several sections of the GMA (RCW 36.70A) were amended. In general, the amendments are related to the requirements for the transportation element of each jurisdiction’s comprehensive plan, the county-wide planning process for identification and siting of essential public facilities, plan consistency, and the adoption of deadlines established to meet the new requirements. The jurisdiction’s transportation element shall now include state-owned transportation facilities in the transportation inventory, a new sub-element that includes estimates of the impacts to state-owned facilities resulting from land use assumptions, and the LOS for state-owned transportation facilities. The concurrency requirements of the GMA do not apply to highways of statewide significance, except in island counties.

In addition, the legislation amended Priority Programming for Highways and Functional Classification (RCW 47.05) to include a process for designation of highways of statewide significance by the Transportation Commission, including adoption by the Legislature. Additionally, the Commission is directed to give higher priority for correcting deficiencies on facilities defined as statewide significant. These facilities are identified in RCW 47.06.140, Statewide Transportation Planning, in a new section, which identifies certain transportation facilities and services to be of statewide significance and establishes who sets level of service for these facilities.

Transportation facilities and services of statewide significance are declared essential public facilities under the GMA. The required county-wide planning policies for siting essential public facilities must include these facilities. The new legislation emphasizes the requirement for local plans to be consistent with the statewide plan with regard to identified needs. The process for review of methodologies and development of alternative transportation performance measures under RCW 47.80 (Regional Transportation Planning Organizations or RTPO) is also added with regard to transportation facilities and services of statewide significance, including highways of statewide significance (HSS), and other state highways and ferry routes.

In summary, the new legislation creates a strong tie between the local transportation plan requirements under the GMA and the state's enhanced role in the RTPPO process for designating LOS on state-owned facilities, and recognizes the importance of certain facilities as being of statewide significance. This includes provisions for consistency with Washington's Transportation Plan (WTP, currently being updated), the regional plans, related (local, regional, and state) financial plans, and funding priorities for transportation facilities and services of statewide significance, as identified by the Transportation Commission.

Table I-1 is provided to identify changes related to specific sections of the legislation as adopted. Additional reference is provided in the table regarding related state rules and regulations, and a summary of requirements.

Summary of New GMA and Transportation Planning Requirements

The requirements of the amended legislation that must be implemented can be divided into two broad areas. The first area relates to the need to address and include specific items within the transportation element of a locally adopted GMA comprehensive plan. An example of this includes the requirements to include state-owned transportation facilities in the transportation facility inventory (RCW 36.70A.070). The second is a much broader challenge, which is to make existing processes work more effectively in order to coordinate the overall transportation planning efforts locally, regionally, and statewide.

The purpose of this section is to identify the recent transportation planning changes in the Growth Management Act (GMA) that must be addressed by local jurisdictions. Specifically, this section discusses the changes to the transportation element requirements of the GMA and identifies other planning issues under the GMA. This section also addresses data and inventory needs, and consistency issues between local, regional and state plans that must be included in required comprehensive plan updates. Requirements for implementation are provided, and where appropriate process issues discussed.

When the GMA was first passed in 1990, the Legislature recognized that uncoordinated and unplanned growth posed a threat to the overall quality of life in Washington state. To address this threat, the Legislature established planning goals to guide the development of comprehensive plans by local jurisdictions required under the GMA. The GMA is recognized as a "bottoms up" planning mandate, addressing the need to reflect local preferences, to improve the ability to coordinate planning processes locally and regionally, and to involve citizens.

The overall planning goals of the GMA specifically identify transportation and the need to:

"Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans" (RCW 36.70A.020).

The goals further identify the importance of transportation facilities as public facilities identifying the need to:

"Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available"

for occupancy and use without decreasing current service levels below locally established minimum standards” (RCW 36.70A.020).

**TABLE I-1
SUMMARY OF REGULATORY CHANGES**

Section SHB 1487	What's Amended	General Description	Other Related Rules & Regulations	Summary Requirements
1	RCW 36.70A.040 (GMA)	Who must plan – Summary requirements – Development regulations must implement comprehensive plans.	RCW 47.80 RTPOs, WAC, 365-195-510 Concurrency, WAC 173-420-080 Transportation Plan Conformity	Date of Compliance for comp plans to include new requirements established (December 31,2000)
2	RCW 36.70A.070 (GMA)	Comprehensive Plans – Mandatory Elements. Transportation Element Requirements.	RCW 47.80 RTPOs, RCW 47.06 State Transportation Plan, WAC 365-195-325 Transportation Elements, WAS 468-86-150 Certification	Adds transportation element requirements (WAC rule or procedural criteria).
3	RCW 36.70A.200 (GMA)	Siting of essential public facilities. OFM maintained list of essential public facilities shall include prioritized planned projects by the Commission.	RCW 47.06.140 Transportation facilities and services of statewide significance – Level of Service, WAC 365-195-070 Interpretations.	Includes transportation facilities and services of statewide significance as essential public facilities.
4	RCW 36.70A.210 (GMA)	County-Wide Planning Policies.	WAC 242-02-220 Petition for review – time for filing, WAC 365-195-765 State Agency Compliance, WAC 468-86-150 Certification.	Requires County-wide Planning Policies to reflect transportation facilities of statewide significance.
5	RCW 47.05.021 (Priority Programming for Highways)	Functional Classification of Highways.	RCW 47.06.140 Transportation facilities and services of statewide significance - LOS.	Transportation Commission to designate HSS. List adopted by WSTC and sent to Legislature.
6	RCW 47.05.030 (Priority Programming for Highways)	Six Year Programs – Investments, Improvements, Preservation.	RCW 47.06.140 Transportation facilities and services of statewide significance - LOS.	HSS reflected in WSDOT priority formula.
7	RCW 47.06.140 (Statewide Transportation Planning)	Transportation facilities and services of statewide significance - Level of Service Standards for HSS set by WSDOT, statewide planning process leads to essential state public facility listings.	RCW 36.70A.200 GMA - Siting of Essential Public Facilities, RCW 81.104.015 - High Capacity Transportation Systems.	Defines transportation facilities and services of statewide significance, declares identified improvements to these facilities as essential state
8	RCW 47.08.023 (Regional Transportation Planning)	Identify process within the WTP update and existing RTPO process for establishing LOS methodologies and performance measures. Coordinate approach with required plan elements, such as concurrency and financing.	RCW 47.80 RTPOs, RCW 36.70A GMA, RCW 35.58 Public Transportation TIPs, RCW 35.77.010, RCW 36.81 programming, WAC 365-195-325 Transportation Element, WAC 479-113-010 Six year programs for transportation improvement account projects.	Affirms RTPO role and responsibility in developing LOS methodologies and performance measures.
9	RCW 47.08.030 (Regional Transportation Planning Organizations)	Regional transportation planning RTPO's set LOS on state highways which are not HSS in coordination with WSDOT.	RCW 47.06.140 - Transportation facilities and services of statewide significance - Level of Service, WAC 365-195-510 - Concurrency, WAC 173-420-080 Transportation Plan Conformity,	Affirms and clarifies RTPO responsibility to establish LOS on regional highways (State-owned transportation facilities not designated as HSS).

		WAC 365-195-325 Transportation Element.	
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The definition of “public facilities” under the GMA includes streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

From a transportation planning perspective, the GMA substantially changed and enhanced the linkage between land use and transportation planning. This linkage, consistent with the GMA planning goals, has continued to evolve, including passage of this legislation that amended transportation and growth management planning laws during the 1998 session.

Each comprehensive plan adopted in accordance with the GMA is required to be coordinated and internally consistent and contain, at a minimum, the mandatory plan elements called out (RCW 36.70A.070). The transportation element is a major component of a local comprehensive plan. Specific direction on what is included in the transportation element of a comprehensive plan is identified in the procedural criteria (Chapter 365-195-325 WAC).

Amendments to the GMA made by the 1998 legislature largely reflect the need to establish and affirm the linkage between transportation and land use with respect to two areas. The first is specific identification of state-owned transportation facilities, as well as recognition of the importance of certain facilities defined as “transportation facilities and services of statewide significance”. The second identifies a responsibility to monitor the performance of the system and coordinate improvements and financing of those transportation facilities. Transportation facilities and services of statewide significance are stated in RCW 47.06.140 and include categories of publicly-owned and privately-owned statewide significant transportation facilities.

Planning Deadlines

The 1998 amendments to the GMA require jurisdictions planning under RCW 36.70A to update the transportation elements of local comprehensive plans to be in compliance by December 31, 2000. The transportation element of a local comprehensive plan must be in compliance with RCW 36.70A by December 31, 2000. Local plan updates should be coordinated between local, regional, and state jurisdictions.

GMA TRANSPORTATION ELEMENT

RCW 36.70A.070 now requires each jurisdiction planning fully under the GMA to include additional detail in the transportation element of their comprehensive plans. This additional detail includes:

- ◆ A new subelement that includes estimates of traffic impacts to state-owned transportation facilities resulting from land use assumptions to assist the Washington State Department of Transportation (WSDOT) in monitoring the performance of state facilities, planning for improvements, and assessing the impact of land-use decisions on state-owned transportation facilities.
- ◆ State-owned transportation facilities to be included in the local plan’s transportation inventory, including highways of statewide significance (HSS).

- ◆ Level of Service (LOS) for state-owned transportation facilities.
- ◆ Identified needs for state-owned facilities in local plans must be consistent with the state plan.

As summarized above, the requirements for a transportation element under the GMA have been expanded and jurisdictions planning under the GMA shall include a new sub-element.

The new subelement description is as follows:

RCW 36.70A.070 (6) (a) The transportation element shall include the following subelements: (ii) Estimated traffic impacts to state-owned transportation facilities resulting from land use assumptions to assist the department of transportation in monitoring the performance of state facilities, to plan improvements for the facilities, and to assess the impact of land-use decisions on state-owned transportation facilities;

Concurrency Requirement

The GMA requires that jurisdictions identify “level of service standards for all locally owned arterials and transit routes to serve as a gauge to judge performance of the system,” and, “for state-owned transportation facilities, level of service standards for highways...” RCW 36.70A.070(6).

The 1998 amendments to the GMA changed this section of the regulation with regard to the concurrency requirement as it relates to transportation facilities and services of statewide significance. This change included the following language:

“The concurrency requirements of (b) of this section (RCW 36.70A.070) do not apply to transportation facilities and services of statewide significance except (emphasis added) for counties consisting of islands whose only connection to the mainland are state highways or ferry routes. In these island counties, state highway and ferry route capacity must be a factor in meeting the concurrency requirements in (b) of this subsection.”

The 1998 changes to the GMA specifically identify that the concurrency requirement does not apply to transportation facilities and services of statewide significance. The exception, for island counties, means that the concurrency requirement of the GMA (RCW 36.70A.070) applies in counties consisting of islands whose only connection to the mainland are state highways and ferry routes. In these island counties, state highway and ferry route capacity must be a factor to meet the concurrency requirements of the GMA.

Prior to the 1998 changes to the law, jurisdictions planning under the GMA took different approaches with regard to the inclusion of state-owned transportation facilities in local comprehensive plans, as well as identifying LOS standards for state-owned facilities. The concurrency requirement of the GMA is significant, and as a tool, provides for a basic structure to assure that a community’s adopted LOS will be maintained. If development of a specific project threatens to cause the LOS on a transportation facility to decline below standards identified in the transportation element, that project shall be denied by the local government, unless improvements can be made concurrent with development that maintain the adopted LOS. It is important to note

that the changes to the GMA did not affect the ability of a local jurisdiction to develop a concurrency management system, just the application of concurrency on specific designated components.

The 1998 amendments to the GMA and the RTPO planning process (RCW 47.80) clarify and specifically address several issues that were previously left to local interpretation with regard to identifying and including LOS for regional and statewide significant transportation facilities in the local plans, and concurrency requirements for these facilities. These issues and the relationship to the planning requirements are summarized in Table I-2.

The following address the concurrency requirement of the GMA with regard to transportation facilities and services of statewide significance in the local comprehensive plan's transportation element.

- ◆ The concurrency requirements for transportation facilities and services of statewide significance do not apply except in counties consisting of islands whose only connection to the mainland are state highways or ferry routes. In these island counties, transportation facilities of statewide significance must be a factor in meeting the concurrency requirements of RCW 36.70A.070 (6).
- ◆ The concurrency requirements for all other transportation facilities are unchanged under the GMA and jurisdictions should refer to WAC 365-195 (procedural criteria) and guidance provided in GMA publications such as *Your Community's Transportation System - "A Transportation Element Guidebook"*, published by CTED.
- ◆ In island counties, state highway and ferry route capacity must be a factor in meeting the concurrency requirements of the GMA. Island counties should coordinate with the appropriate WSDOT regional planning office in order to obtain data relating to capacity to address this requirement.

TABLE I-2
TRANSPORTATION FACILITIES, CONCURRENCY AND LOS

Facility	Level of Service *	Concurrency
<i>Local Transportation Systems</i>	<i>LOS identified and set by locals through the local (GMA) planning process</i>	<i>Concurrency required under GMA for local transportation facilities.</i>
<i>Regional State Highways and Ferries</i>	<i>LOS set through a coordinated process (RTPO) with state, regional, and local input.</i>	<i>Concurrency requirement (as amended in 1998) does not address state-owned transportation facilities other than HSS.</i>
<i>State Highways of Statewide Significance. (HSS)</i>	<i>LOS set by state in consultation with locals. (State has final authority to establish LOS on HSS.)</i>	<i>Concurrency requirements of GMA do not apply to transportation facilities and services of statewide significance. (Exception Noted Below)</i>

<i>Exception: Island Counties</i>	<i>LOS established as identified above for local, regional, and HSS.</i>	<i>Concurrency required for HSS. State highways and ferry route capacity must be a factor in meeting the concurrency requirements in island counties.</i>
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** Level of service or alternative transportation performance measures as identified in RCW 47.80.023*

Island County will adopt and enforce ordinances that implement the requirements of GMA. Any implementing ordinances which include transportation facilities of statewide significance should establish review methodologies that are similar but contain substantially different thresholds from those used to evaluate impacts on county arterials/transit routes.

Highways of Statewide Significance

Growth management planning declares that certain transportation facilities and services are of statewide significance. These facilities provide and support transportation functions that promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant transportation facilities should be planned from a statewide perspective. Planning includes policy development and the accompanying funding support to represent a broad range of perspectives serving the interests of all citizens in the state who depend on the system both directly or indirectly. Examples of highways designated as transportation facilities of statewide significance include Interstate 5 and Interstate 90.

Transportation facilities and services of statewide significance are identified under RCW 47.06.140 and specifically include the following:

- ◆ The interstate highway system
- ◆ Interregional state principal arterials including ferry connections that serve statewide travel
- ◆ Intercity passenger rail services
- ◆ Intercity high-speed ground transportation
- ◆ Major passenger intermodal terminals excluding all airport facilities and services
- ◆ The freight railroad system
- ◆ The Columbia/Snake navigable river system
- ◆ Marine port facilities and services that are related solely to marine activities affecting international and interstate trade, and
- ◆ High-capacity transportation systems serving regions as defined in RCW 81.104.015.

While the list identified in under RCW 47.06.140 identifies transportation facilities and services of statewide significance, identification of specific facilities has not been accomplished, with the exception of designation of highways of statewide significance. Criteria to identify specific facilities is being developed by a special workgroup coordinated by the Washington State Department of Transportation (WSDOT) and will be forwarded as an update to this implementation guidance when complete.

The Transportation Commission designated state highways of statewide significance and submitted a list of such facilities for adoption by the 1999 legislature. This statewide system at a minimum

shall include interstate highways and other statewide principal arterials that are needed to connect major communities across the state and support the state's economy"

Transportation Commission's List of Highways of Statewide Significance within Island County by Resolution #584, dated December 17, 1998 include the following facilities:

- ◆ State Highways:
 - ⇒ SR 525 - I-5 to SR20 (entire route)
 - ⇒ SR 20 - SR101 to SR2/Newport (entire route)
- ◆ State Ferry Routes
 - ⇒ 525 Mukilteo/Clinton Ferry
 - ⇒ SR20 Pt. Townsend/Keystone Ferry

The Transportation Commission has also adopted level of service standards for facilities of Statewide Significance using the "*Travel Delay Methodology LOS standards of ACR 10 for those state highways in rural areas and ACR 12 for those state highways in urban areas of Island County, including the SR 20 corridor between Ault Field Road and Deception Pass Bridge and a 'two-boat wait' LOS standard for the Mukilteo/Clinton ferry route*" by Resolution #611, dated November 15, 2000.

TRANSPORTATION PLAN SUMMARY

The purpose of this Transportation Element is to update the foundation for future Transportation Improvement Programs, capital budgets, and development regulations in Island County. In particular, this update to the Island County Transportation Plan will incorporate the requirements of SHB 1487 as discussed above for state facilities of statewide significance and to update the level of service standards in accordance with the Washington Transportation Plan (WTP) Travel Delay Methodology. This document, upon adoption, will supersede the *Island County Comprehensive Transportation Plan: 1998 – 2020*, adopted on December 29, 1998.

The following is a brief summary of the information contained in this element:

- ◆ The Island County Transportation Goals which are the underlying strategy for the development of the transportation element are presented in Section II.
- ◆ The growth and activity projections in Island County that are based on the future land use plan are described in Section III.
- ◆ The level-of-service standards used as a measure of the transportation system performance are discussed in Section IV.
- ◆ The existing conditions of the transportation system including highways, transit, marine, air and non-motorized transportation in Island County are presented in Section V.
- ◆ The future conditions of Island County's transportation system based on the future land use plan are presented in Section VI.
- ◆ The proposed improvements to mitigate the deficiencies of the existing and future conditions of the transportation system in Island County are described in Section VII.
- ◆ The financial analyses, showing the costs and potential revenue sources as well as implementation strategies, are presented in Section VIII.

- ◆ The transportation demand management strategies are presented in Section IX.

COORDINATION

Intergovernmental coordination and public involvement has been an ongoing activity throughout the development of the Transportation Element of Island County's Comprehensive Plan. Island County participated in regular meetings with the City of Oak Harbor, the Town of Coupeville and the City of Langley to coordinate transportation planning and land use activities. Meetings were also held with Island Transit, WSDOT Northwest Region, and WSDOT Marine Division to coordinate planning of the transit system and the state highway, marine and aeronautical systems within Island County. Information was also coordinated with the Skagit-Island Regional Transportation Planning Organization (RTPO), Skagit County, Snohomish and Jefferson Counties and the Ports of South Whidbey and Coupeville.

During the development of the *Transportation Element* for Island County's *Comprehensive Plan*, public involvement was maintained through public workshops, newspaper informational items, and correspondence with concerned citizens and groups. A mailing list of interested persons and organizations was also maintained. A public survey questionnaire was published in the Whidbey News-Times and the South Whidbey Record, as well as directly sent to public and private organizations and agencies in Island County. The results of this public survey and other information on the purpose and elements of the transportation planning process were presented in a series of public workshops. A second series of public workshops were held in November 1993 to present the preliminary assessment of the traffic and transportation conditions and possible solutions to the transportation deficiencies in Island County and to seek the public's ideas and concerns. In addition, information was given to concerned citizens and organizations, whenever requested.

During 1996 to 1998, joint presentations and discussions on land use and transportation issues were held at several public meetings and workshops at various locations in Island County. Information on land use and transportation issues was also presented annually to the Island County Planning Commission as well as on numerous other occasions. This information is always made available for public review and comment.

During this update to the Transportation Element additional meetings and/or discussions were held with WSDOT, Washington State Ferries and Island Transit to identify issues and coordinate the development of an integrated plan. Information was also coordinated with the Skagit-Island Regional Transportation Planning Organization (RTPO), Snohomish County, City of Oak Harbor and the towns of Coupeville and Langley. The results of this update process were presented to the public at a series of open houses in October 2000, at a public meeting of the Island County Planning Commission on November 14, 2000, at the December 4, 2000 public meeting of the Island County Board of Commissioners and at a public hearing held during the December 18, 2000 public meeting of the Island County Board of Commissioners.

Island County will continue to work with the City of Oak Harbor, the Town of Coupeville, the Town of Langley, WSDOT, the Skagit/Island RTPO, Washington State Ferries and Island Transit in a collaborative manner to resolve level of service issues, needed improvements, monitor

system performance and to modify the Transportation Plan, as needed, until the next formal update of the Plan.

The critical issues facing the future of transportation systems in Island County and the State primarily relate to the regional components of the system and the ability of the State to plan and budget for system improvements before the LOS declines to an unacceptable level for a rural community. It is incumbent upon the RTPO to identify system deficiencies that are beyond the ability of local government to remedy, e.g., the limited capacity of the existing bridge connections, bridge structural and safety deficiencies, peak seasonal tourist traffic surges and their impact to the LOS, the finite limitation to ferry service between Clinton and Mukilteo, and the potential for system closure as a result of disaster. Continued coordination is essential to deal with these issues through the on-going planning and implementation process for future improvements and developments.

The following plans and documents developed by WSDOT are also incorporated by reference into Island County's *Transportation Element*:

- ◆ *Washington's Transportation Plan (1999-2018)*
- ◆ *State Highway System Plan (1999-2018)*
- ◆ *Statewide Freight and Goods Transportation System Study*
- ◆ *Roadside Classification Plan*

SECTION II: TRANSPORTATION PLANNING GOALS

As part of their continued planning process, Island County has established a set of goals and policies to coordinate and guide the development of their Comprehensive Plan. Separate goals were developed for each element of the Comprehensive Plan. For the Transportation Element the following transportation planning goals and policies were developed to ensure orderly development and integration of the land use element with the transportation infrastructure:

TRANSPORTATION GOALS FOR ISLAND COUNTY

General:

- ◆ *Provide adequate mobility for people, goods, and services.*
- ◆ *Provide a transportation system that supports economic growth and vitality in Island County.*
- ◆ *Minimize negative environmental impacts on the physical and social environment.*
- ◆ *Provide transportation alternatives for moving people and goods.*
- ◆ *Establish an effective transportation planning process in Island County.*
- ◆ *Support affordable housing goals.*

Coordination:

- ◆ *Promote coordination between governments, private enterprise, and the community.*
- ◆ *Facilitate effective use of the transportation system through coordination of transportation facilities and services for all types of motorized and non-motorized transportation.*

Standards and Capacity:

- ◆ *Provide a safe, comfortable, and reliable transportation system.*
- ◆ *Reduce consumption of energy through an efficient and convenient transportation system.*
- ◆ *Enhance options for future improvements to the transportation system by taking advantage of advances in technology and transportation research.*

- ◆ *Keep travel time for people and goods as low as possible.*
- ◆ *Emphasize the movement of people and goods rather than vehicles in order to obtain the most efficient use of transportation facilities.*
- ◆ *Establish a minimum level of adequacy for transportation facilities throughout the county through the use of consistent and uniform standards.*
- ◆ *Protect the capital investment in the transportation system through adequate maintenance of facilities.*

Land Use and Transportation Planning:

- ◆ *Support and enhance the type of development that is planned in Island County.*
- ◆ *Encourage compatibility between transportation facilities and surrounding development.*
- ◆ *Secure adequate land for needed transportation system improvements.*

Finance and Prioritization:

- ◆ *Distribute transportation costs and benefits equitably.*
- ◆ *Keep the costs of transportation as low as possible for those who use transportation facilities and services.*
- ◆ *Provide for consistency and fairness in establishing priorities for transportation expenditures.*
- ◆ *Obtain the maximum return from the expenditure of county funds.*

- ◆ *Promote the wise use of limited resources such as land, fuel, and money.*

OBJECTIVES, PRINCIPLES AND STANDARDS

To achieve these goals, Island County has developed the following transportation objectives, principles and standards:

TRN Objective 1. TRANSIT. Transit and ridesharing are important elements of the transportation system.**1.1 Transit Service.**

Actively promote transit service through County involvement in the planning, location, timing, financing, design and technological decisions about a regional transit system by:

- 1.1.1 Participating in regional transit studies;
- 1.1.2 Creating the kind of environment that will support and enhance transit use through the provision of adequate access for pedestrians and bicycles, incorporation of policies which promote transit use (i.e., flextime) and land use decisions which will support the system (i.e., higher development densities around transit centers); and
- 1.1.3 Participating in the planning, location and design of park-and-ride lots and other facilities and services to support the regional transit system.

1.2 Transit Service Extensions.

Encourage Transit operators to establish a process for evaluating boundary and service extensions which includes criteria to determine the feasibility of providing service to new areas; and evaluate alternatives to regular, fixed route transit service (e.g., vans for occasional service, demand responsive service, para-transit service, vanpools, ride matching, and dial-a-ride).

1.3 Coordination with Social Service Agencies.

Encourage coordination between Transit operators and all social service agencies in the location of transit and new social service facilities so that social service agency clients can be served effectively by transit.

1.4 Encouraging Use of High Occupancy Vehicles (HOV's).

Encourage greater use of HOV's such as transit, carpools and vanpools, by travelers in order to move people more efficiently and minimize the need for additional roadway capacity.

1.5 Transportation Demand Management (TDM) Program Development.

Coordinate with Transit operators, local and regional jurisdictions, the RTPO, the Washington State Department of Transportation (WSDOT), and business, development and residential communities to develop an integrated TDM program.

1.6 Transit Facilities.

Encourage private developers and Transit operators to integrate transit facilities (e.g., transfer centers, bus pullouts, bus shelters, transit information centers) and

pedestrian connections into residential, retail, manufacturing, commercial office, and other types of development.

1.7 Transfer Centers.

Encourage transit centers to:

- a. Be located in incorporated communities and activity centers throughout the County;
- b. Be designed to minimize adverse impacts on surrounding development;
- c. Include safe and convenient access and facilities for pedestrians and bicyclists;
- d. Be designed and operated so as to minimize conflicts with traffic operations;
- e. Provide a safe and secure environment for transit users and comply with the requirements of the American Disabilities Act.

1.8 Park-and-Ride Lots.

Encourage multi-jurisdictional involvement in the development of the regional park-and-ride lot system and encourage that such lots:

- a. Are located on sites with convenient access to the arterial and highway system;
- b. Include adequate screening to provide a buffer from incompatible land uses, but maintain views for safety;
- c. Provide mitigation of negative impacts such as increased vehicular traffic and surface water run-off;
- d. Provide a safe and secure environment for park-and-ride users;
- e. Support multi-jurisdictional financial involvement.

TRN Objective 2. NONMOTORIZED TRANSPORTATION. Meet the needs of bicyclists, pedestrians and equestrians and encourage the development of non-motorized facilities.

2.1 Nonmotorized Planning.

Coordinate planning efforts for nonmotorized modes of travel with other jurisdictions, local communities and specific nonmotorized travel interest groups to develop an integrated area-wide plan for bicycles and other nonmotorized travel modes that ensures continuity of routes.

2.2 Pedestrian and Bicycle Facilities.

Consistent with adopted nonmotorized (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 which reflect the needs of the local community.

Such facilities include:

- 2.2.1 Sidewalks, improved shoulders, or off street trails within developments to accommodate internal circulation; and
- 2.2.2. 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 and residential areas, transit routes and trails.

2.3 **Facilities for Nonmotorized Travel.**

Provide facilities for travel by nonmotorized travel modes by:

- 2.3.1 Incorporating improvements for nonmotorized 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:
 - a. The supplemental classification designations for the roadway for pedestrians, bicycles and equestrians;
 - b. The County's adopted road design standards;
 - c. Adjacent land uses;
 - d. Expected level of demand for use by pedestrians, bicyclists and/or equestrians;
 - e. Accident history (number, type and severity);
 - f. Existing and forecast traffic volumes;
 - g. Physical conditions of the roadway corridor;
 - h. Available right-of-way;
 - i. Project costs;
 - j. Availability of funds for the improvements, including any special funds to pay for improvements for nonmotorized travel modes; and
 - k. Community support.
- 2.3.2 Developing an ongoing program to install improvements for nonmotorized travel modes at locations where there are no programmed road improvement projects. The County will establish a program for transportation improvements for nonmotorized 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:
 - a. Condition of existing facility;
 - b. Adjacent land uses;
 - c. Expected level of demand for use by pedestrians, bicyclists and/or equestrians;
 - d. Traffic volumes on the roadway;
 - e. Potential conflict between travelers using motorized and nonmotorized travel modes;

- f. Speed limit on the roadway;
 - g. Functional classification of the roadway;
 - h. Supplemental classification of the roadway for pedestrian, bicycle and/or equestrian modes;
 - i. Connections and/or relationship to other facilities for nonmotorized travel and/or transit; and
 - j. Community support.
- 2.3.3 Proceeding with the development of a comprehensive plan for nonmotorized transportation in Island County.
- 2.3.4 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 nonmotorized travel modes in accordance with the priorities established in the adopted nonmotorized (trail) plan.
- 2.4 **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.
- 2.5 **Low Cost Improvements for Nonmotorized Travel.**
Explore opportunities to provide low cost improvements within existing public rights-of-way to improve conditions for nonmotorized travel modes.
- 2.6 **Nonmotorized Travel and TDM.**
Encourage the use of nonmotorized travel modes as part of the County's TDM program to reduce the use of motorized travel modes.

TRN Objective 3. ROADS. To provide a safe and efficient road network and provide adequate mobility for people, goods and services, while striving to maintain the rural character.

- 3.1 **Functional Classification.**
Classify the Island County transportation system in accordance with federal, state, regional and local guidelines based on:
- 3.1.1 WSDOT's "Guidelines for Amending Urban Boundaries, Functional Classifications, and/or Federal Aid Systems", except that in the labeling of arterials, the County's adopted system of Major, Secondary and Collector arterials, shall be used;
 - 3.1.2 Supplemental classifications for transit, truck, bicycle, and equestrian facilities;
 - 3.1.3 Classification of ferry routes as part of the State highway system;
 - 3.1.4 The Federal Aviation Administration classification system for airports;
 - 3.1.5 The designation of "primitive roads" as defined by RCW (Revised Code of Washington) 36.75.300 when appropriate.

3.2 Classification Updates.

Conduct a comprehensive review and update of Island County's Road Classification every five years, with modifications annually as appropriate.

3.3 Goods Movement.

Preserve the integrity of identified incorporated and unincorporated neighborhoods and provide for a Freight and Goods Transportation (FGT), i.e. truck routes, by:

- 3.3.1 Identifying bypass routes to minimize truck traffic through neighborhoods;
- 3.3.2 Identifying "Key FGT Roads" to serve commercial centers and other areas attracting numerous truck trips; and
- 3.3.3 Designating "FGT Roads" to avoid residential neighborhoods and transportation facilities with load restrictions.

3.4 Road Concurrency Ordinance.

Encourage local jurisdictions, the WSDOT and the community at large to work with the County to develop a road concurrency ordinance to support the development, improvement, and maintenance of adequate transportation facilities throughout the County. This ordinance should establish a regulatory threshold and define specific standards for:

- a. Acceptable levels of service;
- b. Strategies;
- c. Concurrency timelines;
- d. Impact mitigation; and
- e. Definitions of exempt and vested developments.

Exemption threshold levels for transportation facilities of statewide significance should be similar but contain substantially different thresholds from those used to evaluate impacts on county arterials/transit routes.

3.5 Access and Standards.

Ensure adequate access to development through a system of public and, where appropriate, private roads. A range of design and construction standards to cover all facilities will be developed.

3.6 Roadway Design.

Coordinate with local jurisdictions, the Washington State Department of Transportation (WSDOT), adjacent counties, the Federal Highway Administration (FHWA), and Transit to achieve consensus on a uniform set of minimum roadway design standards that:

- a. Are linked to the level and type of land development served by transportation facilities;
- b. Promote compatibility among jurisdictions in the design of transportation facilities;
- c. Comply with federal and state design criteria;

- d. Promote affordable housing goals; and
- e. Protect and enhance the County's rural character by encouraging clustering of roadside developments, requiring screening, buffering, sight and sound separations, and through access control.

3.7 **Threshold Levels.**

Specific "threshold levels" will be established to determine which roadway design standards should apply to individual roads based on the projected ultimate usage of the roadway (i.e., daily traffic volumes and access needs) and its relationship to the County's overall transportation system.

3.7.1 Public roads identified on the County's Transportation Plan may not be constructed and operated as private roads, although an interim private road in a planned future public road corridor may be allowed to serve single family residential development until a route establishment study has been completed by the County.

3.7.2 Private roads that do not meet the "threshold level" established for public roads will not be accepted into the county road system unless they have been identified through the transportation planning process as serving public through-traffic needs.

3.7.3 Street names and addresses for new private roads will conform to the Island County street naming system.

3.8 **Standards for Different Travel Modes.**

Incorporate the special design parameters required for transit, FGT, bicycle, pedestrian and equestrian use into the Island County roadway design standards.

3.9 **Arterial Standards Updates.**

Review Island County policies, standards and practices related to access control and spacing of major, secondary, and collector arterials to see if they are adequately guiding the development of the County's road system in rapidly growing areas of the County. Where problems are identified, these policies, standards and practices may be revised to support the provision of an efficient and cost effective road system for the future.

3.10 **Access Control.**

Encourage the consolidation of access to state highways and major and secondary arterials in order to complement the highway and arterial system, reduce interference with traffic flow on the arterials, discourage through traffic on local access streets or private access/circulation roadways and protect the rural character, atmosphere and vistas along the County's arterials and state scenic highways. To achieve this the County:

3.10.1 Encourages, and may assist, land owners to work together to prepare comprehensive access plans that emphasize efficient internal circulation and discourage multiple access points to major roadways from developing areas along highways, and major and secondary arterials;

- 3.10.2 Where access options exist, access to private developments from local access streets is encouraged over access from arterials;
- 3.10.3 Encourages consolidation of access in developing commercial and high density residential areas through shared use driveways, frontage roads, and local access streets which intersect arterials at moderate to long spacing;

3.11 **Speed Limits.**

Speed limits on State Highways and county arterials will be set as a means to encourage safe and efficient use of the roadway system in accordance with the criteria established in the Transportation Plan. Speed limits on the arterial system will only be reduced below these values when an engineering and traffic investigation supports such a reduction.

TRN Objective 4. OTHER MOTORIZED TRANSPORTATION. Coordinate other transportation facilities and service plans with the Island County Transportation Plan.

4.1 **Airports.**

Participate in regional airport planning to ensure that County needs are met and that County concerns are addressed.

4.2 **Preservation and Enhancement of Airport Resources.**

Support the preservation and enhancement of air navigation resources and facilities in the County by:

- a. Considering land use laws that would promote compatibility with surrounding land uses; and
- b. Supporting the development and maintenance of adequate roadways to move people and goods to and from airports.

4.3 **Methods to Ensure Compatibility.**

Support the use of the following methods to provide compatibility between air facilities and surrounding land uses by:

- a. Public education regarding airport locations, usage, plans, and potential impacts;
- b. A coordinated review process for proposed land developments; and
- c. Clear identification, available to the public, of all airports, private landing strips, and noise impacted areas on county maps and records.

4.4 **Ferries.**

Commit to integrated and coordinated transportation service for the public throughout the region and supports further regional discussion of high occupancy vessel concepts. Passenger only ferries would offer improved water connections between cities around the Puget Sound area. Toward this end, Island County in cooperation and coordination with the RTPO, Snohomish County, Jefferson County, and Port Districts:

- a. Encourages the Puget Sound Regional Council (PSRC) to work with the state and local jurisdictions and agencies on the development of an around-Puget Sound mass transportation policy and an action plan for improved passenger-only ferry service; and
- b. Should initiate feasibility studies of additional access for waterborne transportation between Whidbey and Camano Islands and other mainland destinations.

TRN Objective 5. IMPLEMENTATION STRATEGIES AND ACTIONS. Outline the strategies and actions necessary to finance and implement the transportation improvements planned to meet the County's transportation needs.

5.1 Adequate Facilities for All Modes.

Encourage adequate transportation facilities for all transportation modes, including trucks and passenger vehicles, transit, air and ferry service, and nonmotorized modes of travel.

5.2 Agency Coordination.

Actively coordinate the planning, construction, and operation of transportation facilities and programs to support and complement the planning functions of adjacent counties, local jurisdictions, the Skagit-Island RTPO, the WSDOT, Transit operators, and other public and private entities responsible for transportation facilities and services that may affect Island County. This coordination is facilitated by:

- a. Encouraging elected officials to participate in the PSRC subregional council and other PSRC committees and activities;
- b. Working with other jurisdictions to plan, seek funding for, and implement multi-jurisdictional transportation projects necessary to address shared transportation needs; and
- c. Formulating transportation decisions that are consistent with current plan documents of incorporated and unincorporated areas of Island County, and jurisdictions adjacent to Island County.

5.3 Review and Comment.

Review and comment on the transportation plans, Capital Improvement Programs, and Transportation Improvements Programs of local, regional, and state agencies involved in the provision of transportation facilities and services to improve the coordination of individual transportation improvement projects.

5.4 Multimodal Coordination.

Coordinate planning and operation of its transportation facilities and programs to optimize multimodal transportation programs, transportation service connections, and transfer at designated transfer points, including existing and future transit centers and ferry terminals. The County encourages:

- a. Transit operators to review options for accommodating cyclists, including bike racks on buses, and bike racks at major transit facilities and bus stops;
- b. Integration of nonmotorized modes of travel into the roadway system where appropriate; and
- c. Integration of nonmotorized modes of travel into the countywide and regional off road trail system.

5.5 **Utilities.**

Coordinate the location of major utility and transportation corridors and the construction of roadway and utility improvement projects with utility companies/providers. Coordination is necessary to minimize right-of-way disruptions caused by utility construction, minimize costs, maintain pavement integrity, and enhance roadside safety.

5.6 **Identifying Right-of-Way Needs.**

Use the transportation planning process to identify transportation system needs throughout the county in order to:

- a. Provide adequate transportation facilities and services to meet current and future travel needs; and
- b. Identify specific transportation corridors and alignments where transportation facilities are needed;

5.7 **Preserving and Acquiring Rights-of-Way.**

Methods to preserve and acquire right-of-way include, but are not limited to:

- a. Requiring dedication of right-of-way as a condition for development approval;
- b. Requesting donations of right-of-way to the County;
- c. Determining the allowable development density of a given property, based on the total property size (including the donated/dedicated right-of-way portion), so that developers who donate/dedicate rights-of-way are not penalized;
- d. Purchasing rights-of-way/public easements by the County; and
- e. Purchasing development rights from property owners.

5.8 **Protecting Rights-of-Way From Encroachment.**

Protect public rights-of-way from encroachment by any structure, vegetation, landscaping materials or other obstruction in order to:

- a. Provide safety for motorists, pedestrians, bicyclists or other users of the public roads;
- b. Preserve the integrity of County roads, drainage systems, and other publicly provided and maintained facilities; and

- c. Protect access for all travelers using motorized and nonmotorized travel modes.

5.9 Protection Methods.

Use the following methods to protect rights-of-way from encroachment:

- a. Establish minimum setback requirements for property improvements to preserve sufficient right-of-way to allow for expansion of roadways or provision of frontage roads to serve future transportation needs;
- b. Develop specific guidelines regarding the installation and maintenance of any landscaping in or extending into the public right-of-way; and
- c. Develop a public information program to inform property owners about the County's policies regarding private use of right-of-way, the priority of public use over private use, including specific information covering acceptable practices and maintenance requirements.

5.10 Compatibility With Adjacent Land Uses.

Ensure planned transportation system improvements are compatible with adjacent permitted land uses and minimize potential conflicts through guidelines to:

- a. Use a variety of methods to control access to major arterials from adjacent developments;
- b. Route any new major and secondary arterials around, rather than through, neighborhoods and communities so as to minimize traffic impacts on residential neighborhoods;
- c. Separate new residential areas from direct lot frontage on major or secondary arterials; and
- d. Provide facilities for bicyclists and pedestrians to access public transit.

5.11 Allowable Land Use Changes.

Allow land use changes (such as master planned resorts, rezones, subdivisions, and site plans) only when these changes are accompanied by specific documentation or proposed plans showing how the transportation system can adequately support the needs of existing and proposed development. Island County will establish threshold levels for this policy so that minor land use proposals will not be unfairly disadvantaged. Implementation of this policy will be tied to impact mitigation planning that seeks to fairly allocate the costs of transportation improvements among and between the County and all affected parties.

5.12 Environmental Protection and Conservation.

Minimize negative environmental impacts created by County transportation facilities and activities by:

- a. Appropriately designing, constructing, operating, and maintaining transportation facilities to minimize degradation of existing environmental conditions;

- b. When possible, aligning and locating transportation facilities away from environmentally sensitive areas to preclude direct environmental degradation caused by a facility and indirect environmental degradation created by development around facilities;
- c. Mitigating unavoidable environmental impacts;
- d. Soliciting and incorporating the concerns and comments of interested parties regarding environmental issues into the planning, design, construction, operation, and maintenance of the county transportation system; and
- e. Using integrated vegetation management practices, where practicable using native vegetative species.

5.13 Responsibility for Transportation Network.

Provide and maintain a basic network of transportation facilities and services. The County seeks to equitably distribute costs and benefits among all modes of travel (to encourage the growth of a balanced, multimodal transportation system), and to allocate resources fairly and equitably to all areas of the County.

5.14 Cost Effective Solutions.

Keep the costs of providing and maintaining adequate transportation facilities as low as possible by emphasizing the most cost effective solutions to meet transportation needs and by equitably distributing the costs for providing the improvements in proportion to the benefits received.

5.15 Funding Strategies.

Provide greater flexibility and equity in transportation revenues and expenditures in Island County's overall funding strategy, and to look beyond immediate needs to long term strategies to secure adequate financing. Island County strives for maximum leverage of County funds by pursuing non-County funding sources for transportation projects and using County funds for local matching funds.

5.16 Sources of Funds.

Work to secure adequate long term funding sources for transportation through a variety of methods, including:

- a. Changes in state law to allow greater flexibility in use of existing funding sources, such as levy shifting, utility franchise fees, and local option financing mechanisms;
- b. Promoting a more equitable distribution of state highway funds to finance needed capacity and safety improvements to State highways and highway intersections within Island County;
- c. Eliminating the use of the Island County Road Levy for non-transportation uses, and restricting its use to right-of-way acquisition and the design, construction, operation and maintenance of transportation facilities;

- d. Encouraging public/private partnerships for financing transportation projects which remedy existing problems, or which foster economic growth in Island County;
- e. Sharing costs with other jurisdictions for needed improvements that solve shared transportation problems;
- f. Sharing costs with private developers who want to accelerate construction of particular transportation improvements or for additional transportation facilities and services needed to serve new developments, in proportion to the impacts and needs generated by individual projects; and
- g. Seek federal funding for transportation projects that support the military facilities, including federal mitigation funds.

5.17 Impact Mitigation.

Recognize that the mitigation of development impacts is the shared responsibility of the public and private sectors. The County requires that developers of land contribute their fair share towards transportation improvements necessitated by their development(s). Impact mitigation efforts may include:

- a. Taking the lead in forming a group of concerned citizens, policy level officials from affected jurisdictions, developers, and other interested parties to develop a transportation impact fee program;
- b. Requiring that developers assist the county and other jurisdictions in the provision of additional transportation facilities and services needed to serve new developments in proportion to the impacts and needs generated by their projects; and
- c. Allowing developers to use lower rates in estimating traffic impacts if a development's access to transit or construction of transit improvements can be shown to result in lower traffic generation rates.

5.18 Project Programming.

Incorporate Island County's priority process into specific planning and implementation documents.

5.19 Updating Priorities.

Conduct a comprehensive evaluation and assessment of transportation priorities every six years. Updates are prepared annually and incorporated into the Capital Improvement Program, the Annual Road Program, the Six Year Road Program and the County budget.

5.20 Maximizing Use of Resources.

Maximize the use of County resources and those from other sources through a sufficiently flexible priority process. In order to enhance the County's likelihood of receiving outside funds for transportation purposes, the priority process incorporates the criteria used by agencies or departments that may provide significant funds to Island County, such as the Transportation Improvement Board.

5.21 Improvement Priorities.

Prioritize transportation improvements based on the following criteria:

- a. **FIRST:** To eliminate safety deficiencies within the existing transportation network;
- b. **SECOND:** To maintain or upgrade existing transportation facilities to serve existing residents and businesses at acceptable levels of service; and
- c. **THIRD:** To upgrade existing or build new transportation facilities to encourage and support growth and economic development consistent with adopted County land use plans; and

5.22 Expenditure Priorities.

Use a standardized, well documented priority process to establish clear priorities for transportation expenditures in the County. The process is clearly stated so that all participants and the general public can easily understand the process and the recommendations that result from its use. Island County encourages public input in the priority process and provides opportunities for review and comment by the community regarding the County's priorities. Island County coordinates with and includes other jurisdictions in determining its priorities for transportation improvements.

Prioritize transportation expenditures to provide for:

- a. Remedial actions to correct known safety hazards, repair physical deficiencies in the road system, and improve traffic operations through low cost improvements;
- b. Adequate maintenance of the existing transportation system to prevent deterioration of capital facilities and to avoid the need for major reconstruction of roads;
- c. Repair/replacement of bridges, roadways and other capital facilities which are near or past the end of their useful lives, or that may become structurally unsound in the near future;
- d. Widening of existing roadways to alleviate existing capacity problems; and
- e. Construction of new roadways to complete the roadway network, to accommodate expected growth in travel demand, and to support adopted economic development and diversification plans.

5.23 Ranking Projects.

Use a consistent process to determine capital project priorities that includes the following steps:

- 5.23.1 Identification and evaluation of the transportation improvements needed to address identified problems;
- 5.23.2 Development of specific transportation improvement recommendations which rank individual projects using the following set of criteria in order of priority:

- a. Safety/Severity of injuries associated with Motor Vehicle Accidents (MVAs)
- b. Transportation system completeness
- c. Economic feasibility
- d. Capacity/congestion
- e. Cost effectiveness
- f. Encouragement of alternatives to Single Occupancy Vehicles
- g. Number of people benefited by the proposed improvement
- h. Ability to acquire additional outside funds from multiple sources in order to leverage County resources
- i. Environmental considerations
- j. Consideration of special needs
- k. Community support/opposition to proposed improvement
- l. Inclusion of proposed improvement in a multi-jurisdictional project
- m. Economic development considerations

5.23.4 Implementation of recommendations based on a schedule and financing strategy.

5.24 Maintenance Standards.

Maintain the County's transportation system at a level commensurate with the original design standards used in constructing the facilities.

5.25 Enforceable Maintenance Agreements.

Require the establishment of maintenance agreements for all new private roads which can be enforced through civil court action. Island County does not maintain private roads.

5.26 Rider Information Package.

Encourage transportation service providers to coordinate with the County to develop a "rider information package" with respect to common passenger transportation. This information package may include maps, routes, schedules, and public information telephone numbers for passenger rail service, local transit agencies, air carriers, private ground transportation providers, and state ferry services.

5.27 Special Needs Transportation.

Support the mobility of persons who are elderly and all persons with disabilities by maximizing transportation system accessibility, affordability, and expanded service capacity through:

- a. Design standards that reflect the infrastructure needs of persons who are elderly and all persons with disabilities;

- b. Identifying and improving existing transportation facilities and services that are not accessible or usable by persons who are elderly or by persons with disabilities;
- c. Encouraging greater coordination of public and private transportation operators to accommodate the special needs of persons who are elderly and all persons with disabilities.

PLANNING POLICIES FOR COUNTY-WIDE TRANSPORTATION FACILITIES & STRATEGIES

To incorporate these goals, objectives, principles and standards in their continuing planning efforts, the Board of Island County Commissioners approved a set of county-wide planning policies on February 29, 2000 by Resolution C-10-99. These planning policies continue to remain in effect. These adopted policies for county-wide transportation facilities and strategies of the County and the municipalities are that:

- "1. The Transportation Element of the Island County Comprehensive Plan should include Urban Growth Area (UGA) 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;
2. The County and Municipalities will remain actively involved in multi-county regional transportation planning;
3. The County and Municipalities will cooperate in the analysis of and response to any major regional industrial, retail/commercial, recreation or residential development proposals that may impact the transportation systems in Island County;
4. 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.
5. The planned transportation system should be implemented in a coordinated and cost-effective manner utilizing a fair and sufficient method of funding.
6. All jurisdictions within Island County will cooperate with each other and the State of Washington in coordinated planning for State Highway 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."

SECTION III: GROWTH AND DEVELOPMENT PROJECTIONS

The Transportation Element requires the forecasting of traffic for at least ten years based on the adopted Land Use Plan. The Land Use Plan provides information on the location and nature of development and the Transportation Element identifies state and local system expansion needs to meet current and future demands; all based upon the land use assumptions. The Transportation Plan is used to evaluate the transportation system capacity and to identify needs that are deemed necessary to accommodate of future growth at the established level of service.

The comprehensive plan concept groups the future growth and development within those presently developed urban and dispersed rural areas to conserve Island County's natural resources, critical areas, open space, and rural characteristics. The objective is to create efficient and attractive urban and rural communities while adhering to the goals and guidelines of the State's GMA. As part of Island County's overall GMA 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 County. This concept is defined as a planning ideal which groups future growth and development within and around presently developing areas.

The "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. The intent is to place planning emphasis on 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.

The future land use plan concept is based on an analysis that recognizes the dispersed nature of both the historical development and the natural features of Island County. Historical development trends and land use regulations fostered a dispersed and fragmented land use pattern that mixed both densities and locations. This has produced small pockets of development through out the County. The land use designations presented in the land use plan will form the basis for a new zoning map and the land use assumptions upon which the Transportation Element is based..

The Land Use Plan is shown on Figures III-1 through III-4, located at the end of this section. A summary of the acreages for each of the future land use designations is shown on Table III-1. The location of the Oak Harbor, Coupeville and Langley Urban Growth Areas (UGAs) are shown with the location of the Urban Transition Overlays for Oak Harbor and Langley. Coupeville has no Urban Transition Area. The municipal UGAs comprise 5,826 acres, with the future land use designations as given by Oak Harbor and Langley shown on the land use map for the unincorporated portion of their UGAs.

The Rural Residential land use designation is by far the largest in the rural area at 75,249 acres. The Rural Agriculture and Rural Forest make up 7,912 and 14,222 acres respectively, while the Resource Agriculture designation encompasses 2,839 acres. The Residential land use designation comprises 14,494 acres. The remaining lands are comprised of 1,105 acres for non-residential uses, 155 acres in the Special Review District of Greenbank Farm, 4,314 acres of parks and 7,897 acres of federal lands. The logical outer boundaries for the identified areas of more intensive development are identified on the future land use map are not intended for expansion.

**TABLE III-1
FUTURE LAND USE DISTRIBUTION BY ACRES**

	Planning Areas				
	North Whidbey	Central Whidbey	South Whidbey	Camano Island	Island County
Proposed Future Land Uses	Acres				
Rural Lands					
Commercial Center (CC)	0	0	218	0	218
Village Commercial (VC)	66	11	163	126	366
Business Park (BP)	0	0	0	10	10
Light Manufacturing (LM)	18	27	18	57	120
Rural Service (RS)	0	0	0	0	0
Light Industrial Districts (LI)	129	0	214	48	391
Residential (R)	1,262	2,612	4,346	6,274	14,494
Rural Residential (RR)	17,224	16,333	27,038	14,654	75,249
Rural Forest (RF)	1,079	4,193	7,036	1,914	14,222
Rural Agriculture (RA)	2,508	2,348	1,969	1,087	7,912
Special Review District (SR)	0	155	0	0	155
Federal Lands	6,902	995	0	0	7,897
Parks	2,520	1,138	6	650	4,314
Resource Lands					
Resource Agriculture (AG)	493	1,576	57	713	2,839
Total Acres Rural Area	32,201	29,388	41,065	25,533	128,187
Urban Lands					
Municipal Urban Growth Areas (UGAs)	4,339	783	704		5,826
Total Acres	36,540	30,171	41,769	25,533	134,013

Source: Island County

The results of the processes used to convert these land use allocations in population and employment forecasts are summarized in the following sections. All assumptions for forecasting the population and employment estimates are outlined in Appendix A.

POPULATION PROJECTIONS

The Growth Management Act states that the Office of Financial Management (OFM) shall provide 20-year population forecasts for counties and requires counties and cities to create plans

based on these forecasts. OFM provides a low, medium and high series of projections. OFM forecasts do not address the distribution of population within counties or the calculation of seasonal residents. These are the County's responsibility in cooperation with the cities.

Office of Financial Management (OFM) Population Projections Series

The County has chosen to use the high series OFM population projections. The OFM high series projects that Island County's population will grow from a 1996 population of 74,900 persons to a population of 118,800 persons by the year 2020. This represents an increase of 43,900 people over the twenty-four year planning period. OFM states that the high and low series population projections are formulated in addition to the medium series as a means of taking into account the fundamental unpredictability of long-range population projections. Based on an analysis of the building permit activity on Whidbey and Camano Islands from 1990 through 1996, the County believes that the high series population projection is most appropriate at this time.

Population Distribution (Refer to Land Use Element for Detail)

For planning purposes, Island County is divided into four planning areas. Each of the four County planning areas is expected to accommodate a particular share of the County's 43,900 person growth through the year 2020. The methodology for allocating population to the planning areas is based on an analysis of historical trends, available lands and anticipated areas of future growth. The historical trends for 1970 through 1996 are shown below along with the percentages for 2000 through 2020 in Table III-2. In addition, a graphical presentation of the trend is shown in Figure III-5. Special consideration is also given in defining population distributions for the unique characteristics of each planning area, and how people generally move to an area of the County that meets their desired living situation.

**TABLE III-2
PLANNING AREA POPULATION DISTRIBUTION
OF TOTAL COUNTY POPULATION: 1970-2020**

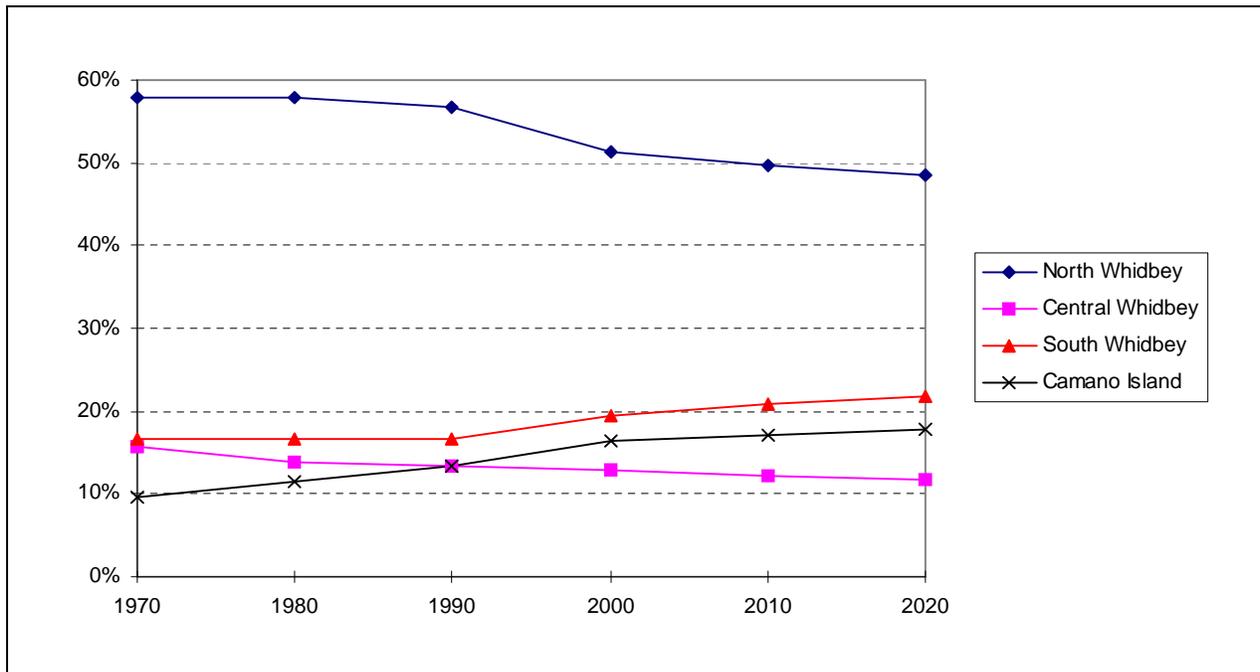
Planning Area	YEARS						
	1970	1980	1990	1996	2000	2010	2020
North Whidbey	58%	58%	57%	52%	51%	50%	48%
Central Whidbey	16%	14%	13%	14%	13%	12%	12%
South Whidbey	17%	17%	17%	18%	20%	21%	22%
Camano Island	10%	12%	13%	16%	16%	17%	18%
Total	100%	100%	100%	100%	100%	100%	100%

Source: Island County

As stated above, it is estimated that an additional 43,900 people will be added to the County's population by the year 2020. This represents an increase of 59% over the next twenty-four years, producing a total population of 118,800. Based on the future land use plan, the rural portion of the County will accommodate 30,500 new residents, or 70% of this growth, while the urban growth areas will add 13,400 persons, or 30%.

One of the implementation strategies of this plan has committed the County to studying the Freeland and Clinton areas for consideration as non-municipal urban growth areas. If these areas become non-municipal growth areas and the urban growth areas expand for Oak Harbor and Langley as shown on the future land use maps at the end of this chapter, the rural/urban split of population growth would be changed dramatically; the estimated result would be a 50% growth in rural areas and 50% in urban areas from 1996 through the year 2020.

**FIGURE III-5
PLANNING AREA POPULATION DISTRIBUTION
AS PERCENTAGE OF TOTAL COUNTY POPULATION: 1970-2020**



Source: Island County

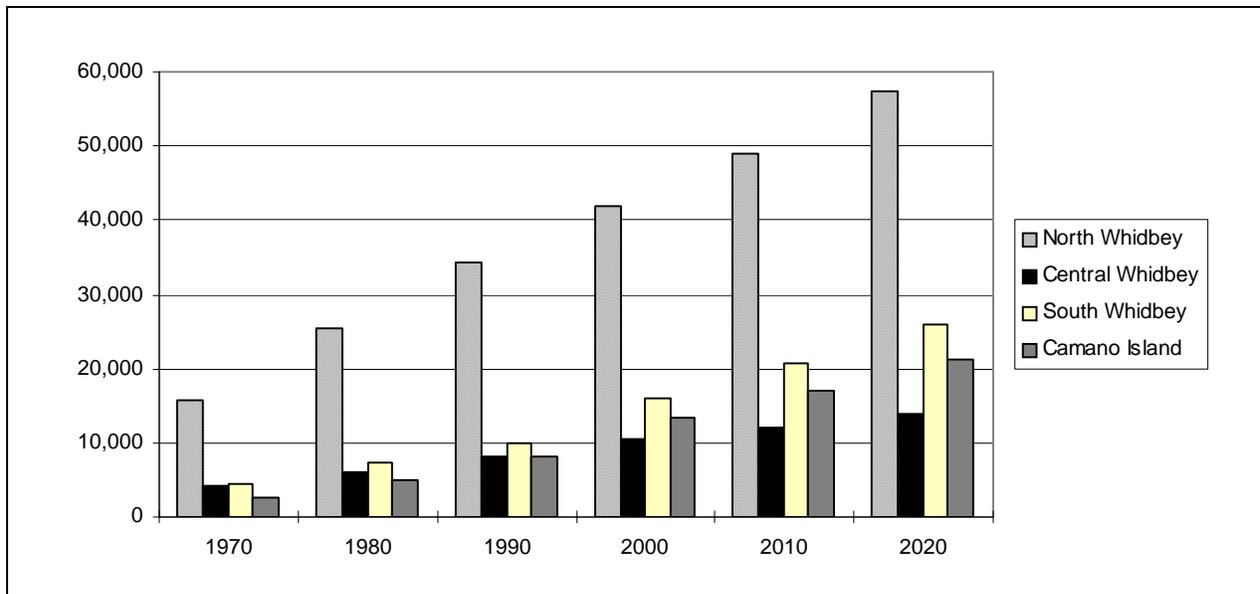
Table III-3 and Figure III-6 represent the population projections for each of the four planning areas based on the percentages of projected growth which are expected to occur as discussed in the previous section. The 10-year growth rates for each of the planning areas for the five decades encompassing 1970 to 2020 are displayed below in Table III-4.

**TABLE III-3
PLANNING AREA POPULATION DISTRIBUTION OF OFM HIGH SERIES
1970-2020**

Planning Area	YEARS						
	1970	1980	1990	1996	2000	2010	2020
North Whidbey	15,600	25,500	34,200	39,100	41,800	49,000	57,500
Central Whidbey	4,200	6,100	8,000	10,200	10,500	12,000	14,000
South Whidbey	4,500	7,300	10,000	13,600	15,900	20,700	26,000
Camano Island	2,600	5,100	8,000	12,000	13,300	17,000	21,300
Total	26,900	44,000	60,200	74,900	81,500	98,700	118,800

Source: Island County

FIGURE III-6
PLANNING AREA POPULATION DISTRIBUTION OF OFM HIGH SERIES
1970-2020



Source: Island County

TABLE III-4
PLANNING AREA POPULATION DISTRIBUTION 10-YEAR GROWTH RATES
1970-2020

Planning Area	10-YEAR GROWTH RATES				
	1970-1980	1980-1990	1990-2000	2000-2010	2010-2020
North Whidbey	63%	34%	22%	17%	17%
Central Whidbey	45%	31%	31%	14%	17%
South Whidbey	62%	37%	59%	30%	26%
Camano Island	96%	57%	66%	28%	25%
Total	64%	37%	35%	21%	20%

Source: Island County

The population distributions for each of the planning areas split into the amount which is projected to occur in the three urban growth areas and the amount in the remaining rural areas are displayed in Table III-5. The adopted Comprehensive Plans for Coupeville and Langley currently project their populations to the year 2010, while Oak Harbor is planning out to the year 2013. The additional population for the ten years (2010 to 2020) for Coupeville and Langley and seven years (2013 to 2020) for Oak Harbor have been arrived at by extending their current projections for the additional years at the same rate of growth. The 2020 benchmarks for population are contained in the County Wide Planning Policies.

**TABLE III-5
PLANNING AREA POPULATION DISTRIBUTION
BETWEEN URBAN GROWTH AREAS AND UNINCORPORATED AREAS
1970-2020**

Planning Area	1970	1980	1990	1996	2000	2010	2020	24-year Growth	Percent of Growth
North Whidbey	15,600	25,500	34,200	39,100	41,300	49,000	57,500	18,400	42%
Oak Harbor UGA	9,200	12,300	16,800	19,200	21,200	26,000	31,000	11,800	27%
Unincorporated	6,400	13,200	17,400	19,900	20,100	23,000	26,500	6,600	15%
Central Whibey	4,200	6,100	8,000	10,200	11,000	12,000	14,000	3,800	9%
Coupeville UGA	700	1,000	1,400	1,600	1,700	1,800	2,000	400	1%
Unincorporated	3,500	5,100	6,600	8,600	9,300	10,200	12,000	3,400	8%
South Whidbey	4,500	7,300	10,000	13,600	15,900	19,700	26,000	12,400	28%
Langley UGA	500	700	800	1,000	1,300	1,600	2,200	1,200	3%
Unincorporated	4,000	6,600	9,200	12,600	14,600	18,100	23,800	11,200	26%
Camano Island	2,600	5,100	8,000	12,000	13,300	18,000	21,300	9,300	21%
Island County	26,900	44,000	60,200	74,900	81,500	98,700	118,800	43,900	100%
UGAs	10,400	14,000	19,000	21,800	24,200	29,400	35,200	13,400	30%
Unincorporated	16,500	30,000	41,200	53,100	57,300	69,300	83,600	30,500	70%

Source: Island County

The overall 24-year population growth between 1996 and 2020 in Island County is expected to be approximately 43,900 persons, which represents a 58.6 percent increase in total population or an overall average compounded annual rate of approximately 1.94 percent over the 24-year period.

For the unincorporated portions of Island County, the total population increases by about 30,500 persons or a total of approximately 57.4 percent; while, the urban area of the county is expected to increase by about 13,400 persons or approximately 61.5 percent.

The population distribution for urban and rural for each planning area by percentage between 1970 and 2020 is presented in Table III-6.

EMPLOYMENT FORECASTS

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 by 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 recently revised these employment forecasts based on the use of the high OFM population projections and extended the planning period through the year 2020.

TABLE III-6
PLANNING AREA POPULATION DISTRIBUTION
PERCENT OF PLANNING AREA POPULATION
1970-2020

Planning Area	YEAR							24-year Growth
	1970	1980	1990	1996	2000	2010	2020	
North Whidbey								
Oak Harbor UGA	59%	48%	49%	49%	51%	53%	54%	64%
Unincorporated	41%	52%	51%	51%	49%	47%	46%	36%
Central Whibey								
Coupeville UGA	17%	16%	18%	16%	15%	15%	14%	11%
Unincorporated	83%	84%	83%	84%	85%	85%	86%	89%
South Whidbey								
Langley UGA	11%	10%	8%	7%	8%	8%	8%	10%
Unincorporated	89%	90%	92%	93%	92%	92%	92%	90%
Camano Island	100%	100%	100%	100%	100%	100%	100%	100%
Island County								
UGAs	39%	32%	32%	29%	30%	30%	30%	30%
Unincorporated	61%	68%	68%	71%	70%	70%	70%	70%

Source: Island County

Employment Distribution (Refer to Land Use Element for Detail)

The EDC's employment forecast through 2020 is summarized in Table III-7. The percent distribution of the total employment by planning area is shown on Table III-8. This forecast summary shows that total employment in Island County is expected to grow from 16,143 jobs in 1996 to approximately 22,850 jobs in 2020 or an increase of 11,756 new jobs over the 24-year planning period.

This 24-year increase in employment represents a 54.5 percent growth in new jobs within Island County. For the unincorporated portions of Island County the total employment increases by

about 4,227 jobs or a total of approximately 30.1 percent; while, the urban area of the county is expected to increase by about 5,729 jobs or approximately 99.9 percent.

The urban growth areas of Oak Harbor, Coupeville and Langley are expected to accommodate approximately 64 percent or 7,529 of these new jobs. The unincorporated portion of the County needs to plan for an anticipated 4,227 new jobs. Overall, the North Whidbey and South Whidbey planning areas are expected to absorb nearly 82 percent of these new jobs with 50 percent of them occurring in the Oak Harbor urban growth area.

TABLE III-7
PLANNING AREA EMPLOYMENT DISTRIBUTION SUMMARY, 1996-2020

Planning Area	Year				24-year Growth	Percent of Growth
	1996	2000	2010	2020		
North Whidbey	16,143	17,328	20,287	22,850	6,707	57%
Oak Harbor UGA	5,516	6,460	9,127	11,400	5,884	50%
Unincorporated Area	10,627	10,868	11,160	11,450	823	7%
Central Whidbey	2,287	2,419	2,910	3,551	1,264	11%
Coupeville UGA	1,537	1,656	2,072	2,378	841	7%
Unincorporated Area	750	763	838	1,173	423	4%
South Whidbey	2,708	2,967	4,191	5,634	2,926	25%
Langley UGA	486	584	872	1,290	804	7%
Unincorporated Area	2,222	2,383	3,319	4,344	2,122	18%
Camano Island	451	649	1,061	1,310	859	7%
Island County	21,589	23,363	28,449	33,345	11,756	100%
Urban Growth Areas	7,539	8,700	12,071	15,068	7,529	64%
Unincorporated Areas	14,050	14,663	16,378	18,277	4,227	36%

Source: Island County

TABLE III-8
PLANNING AREA EMPLOYMENT DISTRIBUTION
PERCENT OF PLANNING AREA EMPLOYMENT: 1996-2020

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Planning Area	Year				24-year Growth
	1996	2000	2010	2020	
North Whidbey					
Oak Harbor UGA	34%	37%	45%	50%	88%
Unincorporated Area	66%	63%	55%	50%	12%
Central Whidbey					
Coupeville UGA	67%	68%	71%	67%	67%
Unincorporated Area	33%	32%	29%	33%	33%
South Whidbey					
Langley UGA	18%	20%	21%	23%	27%
Unincorporated Area	82%	80%	79%	77%	73%
Camano Island	100%	100%	100%	100%	100%
Island County					
Urban Growth Areas	35%	37%	42%	45%	64%
Unincorporated Areas	65%	63%	58%	55%	36%

Source: Island County

The overall distribution of employment by service category and horizon forecast years for Island County is shown on Table III-9. Most of the employment growth in Island County is anticipated to occur in the service (3,693 jobs), retail trade (3,081 jobs), state and local government employees (2,211 civilian jobs) and manufacturing (1,162 jobs) employment categories.

TABLE III-9
EMPLOYMENT DISTRIBUTION BY SERVICE CATEGORY
1996-2020

Island County					
Employment Category	Year			24-year Growth / (Loss)	Percent of Total Growth
	1996	2006	2020		
Total	21,589	26,095	33,345	11,756	100.0%
Farm	227	198	188	(39)	-0.3%
Construction	690	872	1,130	440	3.7%
Manufacturing	643	1,073	1,805	1,162	9.9%
Transp., Comm., Public Utilities	388	598	970	582	5.0%
Wholesale Trade	90	135	220	130	1.1%
Retail Trade	3,113	4,455	6,194	3,081	26.2%
Finance, Insurance, & Real Estate	737	901	1,151	414	3.5%
Service	3,292	4,627	6,985	3,693	31.4%
Federal Civilian	1,554	1,530	1,527	(27)	-0.2%
State & Local	2,749	3,560	4,960	2,211	18.8%
Military	8,000	8,000	8,000	-	0.0%
Other	106	146	215	109	0.9%

expected to be in Central Whidbey with nearly 11 percent and on Camano Island with over 7 percent of the total Island County employment growth.

Source: Island County

Only two employment sectors are anticipated to see a decrease in the actual numbers of workers over the 24-year planning period. The anticipated overall employment for farming is projected to decrease by 39 jobs and federal civilian jobs are expected to fall by 27. It was also assumed that the military employment shall remain constant at 8,000 through the year 2020. This forecast of future employment in Island County will require special attention when allocating appropriate amounts of land during the formation of land use designation criteria and siting areas for new commercial, industrial and office development on the future land use map.

A breakdown of the employment forecast by category for each of the four planning areas is summarized in Table III-10. Employment in the North Whidbey is expected to accommodate over 57 percent of the total employment growth in Island County while South Whidbey will accommodate nearly 25 percent of the total employment growth. The remaining employment is expected to be in Central Whidbey with nearly 11 percent and on Camano Island with over 7 percent of the total Island County employment growth.

TABLE III-10
EMPLOYMENT DISTRIBUTION BY SERVICE CATEGORY
1996-2020

Employment Distribution By Service Category For North Whidbey and Central Whidbey Planning Areas										
Employment Category	North Whidbey					Central Whidbey				
	Year 1996	Year 2006	Year 2020	24-year Growth / (Loss)	Percent of Total Growth	Year 1996	Year 2006	Year 2020	24-year Growth / (Loss)	Percent of Total Growth
Total	16,143	18,880	22,850	6,707	57.1%	2,287	2,710	3,551	1,264	10.8%
Farm	90	85	85	(5)	0.0%	80	63	50	(30)	-0.3%
Construction	385	490	645	260	2.2%	75	85	100	25	0.2%
Manufacturing	335	640	1,150	815	6.9%	180	235	335	155	1.3%
Transp., Comm., Public Utilities	218	345	550	332	2.8%	32	42	55	23	0.2%
Wholesale Trade	45	75	115	70	0.6%	5	7	10	5	0.0%
Retail Trade	1,825	2,605	3,415	1,590	13.5%	280	350	534	254	2.2%
Finance, Insurance, & Real Estate	525	630	785	260	2.2%	35	40	50	15	0.1%
Service	2,150	2,975	4,200	2,050	17.4%	424	583	910	486	4.1%
Federal Civilian	1,521	1,480	1,450	(71)	-0.6%	18	22	32	14	0.1%
State & Local	996	1,480	2,350	1,354	11.5%	1,138	1,260	1,445	307	2.6%
Military	8,000	8,000	8,000	-	0.0%	-	-	-	-	0.0%
Other	53	75	105	52	0.4%	20	23	30	10	0.1%

Employment Category	South Whidbey					Camano Island				
	Year 1996	Year 2006	Year 2020	24-year Growth / (Loss)	Percent of Total Growth	Year 1996	Year 2006	Year 2020	24-year Growth / (Loss)	Percent of Total Growth
Total	2,708	3,660	5,634	2,926	24.9%	451	845	1,310	859	7.3%
Farm	32	30	28	(4)	0.0%	25	20	25	-	0.0%
Construction	125	155	210	85	0.7%	105	142	175	70	0.6%
Manufacturing	103	150	240	137	1.2%	25	48	80	55	0.5%
Transp., Comm., Public Utilities	112	158	265	153	1.3%	26	53	100	74	0.6%
Wholesale Trade	25	31	45	20	0.2%	15	22	50	35	0.3%
Retail Trade	950	1,255	1,895	945	8.0%	58	245	350	292	2.5%
Finance, Insurance, & Real Estate	95	126	166	71	0.6%	82	105	150	68	0.6%
Service	646	925	1,605	959	8.2%	72	144	270	198	1.7%
Federal Civilian	15	28	45	30	0.3%	-	-	-	-	0.0%
State & Local	575	760	1,070	495	4.2%	40	60	95	55	0.5%
Military	-	-	-	-	0.0%	-	-	-	-	0.0%
Other	30	42	65	35	0.3%	3	6	15	12	0.1%

Source: Island County

It should be noted that while Camano Island receives only 7 percent of the total growth, the amount of employment on Camano Island is expected to increase by 859 jobs or a 190 percent increase. This can be compared to a projected 42 percent increase in actual jobs in the North Whidbey area; a 55 percent increase in actual jobs in the Central Whidbey area; and a projected 108 percent in actual jobs in the South Whidbey area.

POPULATION AND EMPLOYMENTS FOR TRAVEL FORECASTING

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. To accomplish this, the County's 21 Block Numbering Areas (BNA's), which were developed as a part of the 1990 census, were used as a point of beginning. This zone structure was adopted as traffic analysis districts (TAD's) for this study. This TAD system was then subdivided into 48 traffic analysis zones (TAZ) on Whidbey Island and 13 TAZs on Camano Island. A listing of these BNAs and TAZs by planning area is shown on Table III-11.

The travel forecasting process applied to estimate the allocation of growth involved the distribution of the population and employment data to a finer zone structure in some areas to more accurately distribute travel on the existing roadway system in Island County. 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. A summary of the travel forecasting process is presented in Appendix B.

**TABLE III-11
BLOCK NUMBERING AREAS & TRAFFIC ANALYSIS ZONES BY PLANNING AREA**

PLANNING AREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	PLANNING AREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)
NORTH WHIDBEY	9701	1	CAMANO ISLAND	9714	1
		2			2
		3			13
		4			3
	9702	5		9715	4
		6			5
	9703	7			9716
		8		7	
		9		9717	8
	9704	10			9
		11			10
		44		11	
		12	12		
	9705	13	SOUTH WHIDBEY	9718	32
		45			33
		14			34
	9706	15		9719	35
	9707	16			36
	9708	17		9720	37
	9709	18			38
19		39			
20		40			
21		41			
CENTRAL WHIDBEY	9710	21	9721		42
		46		43	
		22	9711	23	
		47		24	
		48		25	
	9712	26			
		27			
	9713	28			
		29			
		30			
		31			

Insert Figure III-1 Land Use North Whidbey

Insert Figure III-2 Land Use Central Whidbey

Insert Figure III-3 Land Use South Whidbey

Insert Figure III-4 Land Use Camano Island

SECTION IV: LEVEL OF SERVICE STANDARDS

The 1990 Growth Management Act requires that level of service standards be established for all arterials and transit routes to serve as a gauge to evaluate the performance of the transportation system. These standards are used to determine if there are sufficient transportation improvements or strategies available to meet the requirements for proposed developments at the time of development or that financial commitments are in place to complete the improvements within six years. If the funded transportation system meets the level of service standards with the proposed development, then the system is "concurrent with the development". If the level of service standards are not met, then either additional funding must be generated to finance the needed system improvements, the level of service standards must be adjusted, or the development delayed until funds are available within a six year time frame.

The background behind the crafting of the GMA indicates that the legislative intent was to include state facilities within the scope of the Act. However, the 1990 Act was unclear about how specific state facilities would be treated in local comprehensive plans, how LOS standards would be set, and how concurrency requirements would be applied to state facilities. As a result of the continuing concerns for state system capacity over several years of debate, the 1998 Legislative Session approved SHB 1487, which requires that the State classify the state system.

In particular, SHB 1487 bill requires the Transportation Commission to identify transportation facilities of statewide significance and submit a list of such facilities for adoption by the 1999 Legislature. By the end of 1999, level of service standards for those facilities are to be established by WSDOT. This statewide significance system shall include, at a minimum, interstate highways and other statewide principal arterials that are needed to connect major communities across the state and support the state's economy. The counties and cities will then have until the end of the year 2000 to make appropriate changes in their local transportation plans. In Island County, SR 20 from the Keystone Ferry Terminal to Deception Pass Bridge and SR 525 from the Clinton Ferry Terminal to SR 20 as well as the Clinton to Mukilteo Ferry and the Port Townsend to Keystone Ferry routes are included in the list of transportation facilities of statewide significance.

With regard to local level of service standards, SHB 1487 also imposed the following level of service requirements to local transportation planning:

- ◆ Level of service standards should be established for all locally owned arterials and transit routes to serve as a gauge to judge performance of the system. These standards should be regionally coordinated; and
- ◆ For counties consisting of islands whose only connection to the mainland are state highways or ferry routes, the concurrency requirements do apply to transportation facilities and services of statewide significance. The purpose of reflecting level of service standards for state highways in the local comprehensive plan is to monitor the performance of the system, to evaluate improvement strategies, and to facilitate

coordination between the county's or city's six-year street, road, or transit programs and the Department of Transportation's six-year investment program.

Overall, the GMA process of establishing a level of service standards allows the community to: evaluate alternative policies before choosing one that best fits the goals, desires and financial resources of the community; establish a threshold against which the operation of the transportation system can be measured when impacted by new and existing developments; identify facilities that require improvements to satisfy existing or proposed demand; and provide direction on how the transportation system should operate.

In 1998 as part of Island County's Comprehensive Plan, the Island County Board of Commissioners approved a set of level of service standards, developed for county arterial roads and transit routes, and suggested level of service standards for all state highways, both regional and highways of statewide significance. The Skagit/Island RTPO is responsible for setting the level of service standards for regional state highways. These level of service standards must be agreed to by the Skagit/Island RTPO in the development of their Regional Transportation Plan. The State has the responsibility to set the level of service standards for highways of statewide significance.

Since the adoption of the County's Comprehensive Plan and as part of the current update to the Washington Transportation Plan (WTP), WSDOT has developed a new methodology for evaluating and rating the state highway system. This new "Travel Delay Methodology" is currently being developed and refined as part of the update to the WTP. The methodology is in support of the Washington State Transportation Commission adoption of a congestion relief policy that underlies the development of the WTP.

Level of service standards for ferry access to Whidbey Island were developed by Washington State Ferries and adopted for this Study. These level of service standards are summarized below.

HIGHWAY LEVEL OF SERVICE STANDARDS

For this update to the *Transportation Element* of the Island County's *Comprehensive Plan*, separate level of service standards are developed for county roads, arterials and transit routes and state highways. These highway level of service standards are summarized below.

County Arterials – Level of Service Standards

Since current congestion on county roadways is substantially less than the traffic on the state highway system in Island County, the traditional level of service methodology outlined in the *Highway Capacity Manual (Transportation Research Board's (TRB) Special Report 209)* will continue to be used to analyze traffic conditions on county roadways. The 1994 *Highway Capacity Manual* defines level of service for roadways as "a qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety". For the county two-lane highway system, three parameters are used to describe level of service. These roadway parameters are: average travel speed, percent time delay and capacity utilization.

Six level of service categories are used to describe the quality of the transportation system. For roadway sections, these level of service categories range from LOS 'A' through LOS 'F' with LOS

'E' being the point where the traffic demand on the roadway is equal to the capacity of the roadway. LOS "C" is a generally accepted level-of-service by transportation professionals for rural and low density urban areas. General definitions of the six level of service categories for rural highways are listed on Table IV-1.

**TABLE IV-1
LEVEL OF SERVICE DEFINITIONS
FOR RURAL 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 and would result in average speeds approaching 60 mph. Passing demand is well below capacity and there are almost no platoons of three or more vehicles. Motorists would be delayed no more than 30 percent of the time by slow moving vehicles.
LOS 'B'	This LOS allows motorists to maintain speeds of 55 mph on level terrain. Passing demand becomes significant and approximately equals passing capacity at lower boundary. Motorists are delayed up to 45 percent of the time by slow moving vehicles. The number of platoons forming in the traffic streams begins to increase dramatically.
LOS 'C'	Although average speeds remain high on level terrain (exceeding 52 mph), this LOS is characterized by a noticeable increase in platoon formation, platoon size, and frequency of passing impediments. While traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow-moving vehicles. Times of delay can reach 60 percent of the time.
LOS 'D'	At this LOS, traffic flow becomes unstable and passing becomes extremely difficult. Although speeds of 50 mph can be maintained under ideal conditions, 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 motorists are delayed approaches 75 percent.
LOS 'E'	At this LOS under ideal conditions, traffic speed falls below 50 mph and may fall as low as 25 mph on long uphill grades. Delay times are greater than 75 percent. Passing is virtually impossible. The highest traffic volume attainable under LOS 'E' defines the capacity of the highway.
LOS 'F'	This LOS represents heavily congested flow with traffic demand exceeding the capacity of the roadway. Volumes and speeds are

	lower than capacity caused by stoppages or other delays.
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Source: Transportation Research Board, Highway Capacity Manual, Special Report 209, Washington, D.C.,
Updated 1994

For general planning purposes, the average daily traffic (ADT) threshold volumes, listed in Table IV-2, represent the maximum volume at each level of service for county arterials and transit routes.

**TABLE IV-2
THRESHOLD ADT VOLUMES
FOR LEVEL OF SERVICE ON COUNTY ROADS**

TWO-LANE ROADWAYS

(Total Volumes In Both Directions)

DESCRIPTION	DESIGN SPEED	THRESHOLD SERVICE FLOW RATES AT LEVEL-OF-SERVICE (LOS)				
		A	B	C	D	E
County Arterial - Undivided (40% no-passing) - Rural	50 mph	1,650	4,350	8,000	11,900	22,800
County Arterial - Undivided (80% no-passing) - Urban	50 mph	950	3,450	6,850	10,550	22,300

MULTI-LANE ROADWAYS

(Total Volumes In Both Directions)

DESCRIPTION	DESIGN SPEED	LEVEL-OF-SERVICE (LOS)				
		A	B	C	D	E
County Arterial - Undivided Four-Lane – Rural	50 mph	*	32,600	45,600	54,300	68,800
County Arterial - Undivided Four-Lane – Urban	50 mph	*	30,700	43,250	51,300	65,000

* LOS "A" cannot be achieved for a design speed of 50 mph.

ASSUMPTIONS

- lane width = 11 feet
- rolling terrain
- truck percentage = 3% (typical 200# HP)
- no obstructions, average 4-foot shoulders
- K factor = 11.11 (used for purposes of ADT calculations - Peak hour = 9 % of ADT)
- regular users
- directional distribution = 55 / 45

Source: H. W. Lochner, Inc.

Reference: TRB Special Report 209 - Highway Capacity Manual, Updated 1994

The ADT threshold volumes were developed for typical Island County roadway, based on the procedures identified in the 1994 *Highway Capacity Manual* and the assumptions listed on the table. The ADT values are based on a peak hour analyses and converted to ADT using an average “K factor” of nine percent. Because of the general nature of these tables, these threshold volumes can vary for specific roadway sections due to changes in assumptions. Approximately a two percent range is being used in this study to classify the level of service is on the border between two service levels for a roadway section. For roadways that are below the adopted level of service standards, further analysis will be conducted using specific roadway characteristics.

The following are the approved level of service standards for county arterials and transit routes in Island County for the adopted *Comprehensive Plan*:

- ◆ the LOS standard for roads in rural areas would be LOS 'C';
- ◆ the LOS standard for roads in urban areas would be LOS 'D';
- ◆ Exceptions to these standards are as follows:
 - a) if the existing LOS on county arterials is presently below these standards, then the 1992 LOS would become the standard; and
 - b) the level of service on East Camano Drive between SR 532 and Camano Hill Road would be LOS 'E'.

Transit Routes - Level of Service Standards

GMA requires that level of service standards be established for transit routes. In this context, transit routes are defined as the various roadways, arterials and streets on which transit vehicles operate. It is the intent of these level of service standards to ensure that the various roadways, on which transit vehicles travel, function at acceptable service levels to facilitate reliable transit service at reasonable travel speeds.

The portion of the various transit routes that operates along state highways and County arterials will be governed by the previously adopted level of service standards for County arterials and intersections and the suggested level of service standards for state highways and intersections with the state highways. For non-arterial County roadways and intersections that are currently being used by transit routes, the following level of service standards will be applied:

- ◆ LOS standard for non-arterial roads with transit routes in rural areas would be LOS 'C';
- ◆ LOS standard for non-arterial roads with transit routes in urban areas would be LOS 'D'.

The urban areas to be used with these standards are defined by the proposed interim urban growth areas for Oak Harbor, Coupeville and Langley. In addition, various non-arterial County roads in the two commercial centers of Freeland and Clinton will utilize the urban area level of service standards.

Intersection - Level of Service Standards

The 1994 *Highway Capacity Manual* revised the methodology for determining level of service for unsignalized intersections and updated the process used for signalized intersections. For

unsignalized intersection, the 1994 *Highway Capacity Manual* uses average total delay instead of the reserved capacity approach used in the 1985 *Highway Capacity Manual*. This change in process can change the level of service assigned to the various intersections. The 1994 *Highway Capacity Manual* procedures for determining level of service for signalized and unsignalized intersections was used to set LOS standards and will continue to be used for intersection analysis and evaluation of new developments.

The December 1997 update of the *Highway Capacity Manual* made extensive changes to intersection analysis, particularly in the way that intersection capacity and level of service are calculated. For signalized intersections, the concept of “average control delay” is used in place of “average stopped delay”. This new concept of “control delay” incorporates a measure of the time it takes for vehicles to decelerate, time spent moving forward in a queue, stopped delay and acceleration delay. Similarly for unsignalized intersections, the 1997 *Highway Capacity Manual* introduces new critical gaps, follow-up times and weighting factors for conflicting flows. The new concepts and factors produce significantly different results from the 1994 analysis procedures. A new update to the *Highway Capacity Manual* is also expected in the Fall of 2000 that will make additional changes to the analysis of signalized and unsignalized intersections.

Since this is only a partial update of the Transportation Plan to comply with SHB 1487 and a detailed analysis of all intersections with the new 1997 procedures is not included in this update, this update will continue to use the 1994 *Highway Capacity Manual* procedures. The new capacity procedures from the expected 2000 *Highway Capacity Manual* will be incorporated in the future updates of the Transportation Plan.

The level of service criteria presented in Table IV-3 used the amount of average total delay to establish level of service for signalized and unsignalized intersections. According to the 1994 *Highway Capacity Manual*, “total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position.”

For intersection analyses, the following level of service standards were approved in Island County’s *Comprehensive Plan* and will continue to be used:

- ◆ County arterial intersections in rural areas would be LOS ‘C’;
- ◆ County arterial intersections in urban areas would be LOS ‘D’;
- ◆ County arterial intersections with State roads in rural areas would be LOS ‘D’;
- ◆ County arterial intersections with State, city, or town roads in urban areas would be LOS ‘E’.

Most of the critical intersections in Island County involve a county arterial with a state highway. These intersections are included in the Travel Delay Methodology for concurrency purposes. However, the LOS of these intersections will be evaluated during project environmental review to determine the development’s proportionate impact on intersection performance. For these intersection analysis, the approach or turning movement with the worse LOS or longest average delay time is used to rate the intersection. Overall average intersection delay is not used because

the volumes on the state highways generally overshadow the difficulty of traffic on a county road to cross or turn onto the state highway.

**TABLE IV-3
INTERSECTION LEVEL OF SERVICE CRITERIA**

SIGNALIZED INTERSECTIONS LEVEL OF SERVICE	AVERAGE TOTAL DELAY (SEC/VEH)
A	≤ 5
B	>5 and ≤ 15
C	>15 and ≤ 25
D	> 25 and ≤ 40
E	> 40 and ≤ 60
F	> 60

UNIGNALIZED TWO- WAY STOP-CONTROLLED INTERSECTIONS LEVEL OF SERVICE	AVERAGE TOTAL DELAY (SEC/VEH)
A	≤ 5
B	>5 and ≤ 10
C	>10 and ≤ 20
D	> 20 and ≤ 30
E	> 30 and ≤ 45
F	> 45

Source: TRB Special Report 209 - Highway Capacity Manual, Updated 1994, Pages 9-6 and 10-12

Level of Service Standards for Highways of Statewide Significance and Regional State Highways Using the WTP Travel Delay Methodology.

Until recently, state transportation professionals have relied on such measures as volume-to-capacity (V/C) and level of service (LOS) to describe how well or poorly roadways operate. These measures have proven useful before when evaluating roadway deficiencies and potential solutions. WSDOT had set service planning objectives and used the traditional LOS "C" as their level of service objective for state highway through rural areas. In urban areas, WSDOT had set their level of service objective at LOS "D".

In the *Transportation Element* of the 1998 *Island County Comprehensive Plan*, it was suggested that these level of service objectives for state highways in Island County be modified to better reflect the desires of the community. These revised planning objectives for state highways in Island County are set at LOS "D" through rural areas and at LOS "E" in urban areas.

In 1999, the Washington State Transportation Commission adopted a congestion relief policy which underlies the development of the WTP. It says that the WTP should: “... *improve travel time reliability and reduce travel delay for people and freight on the state highway system. These improvements should be measurable and noticeable to the public.*”

As part of the development of the WTP Update, WSDOT reviewed their current method of analyzing the highway system. They concluded that the previous V/C and LOS analysis methods, which used a peak hour analysis over a section of the various highways, do not convey the duration and extent of congestion. Drivers on many highway sections across the State are currently experiencing congestion which extend beyond the normal peak morning and afternoon hour. In some cases, congestion may last six hours or more. Knowing these shortcomings, other measures were sought to gauge the effectiveness of transportation programs in meeting the objectives of the congestion relief policy for the state highway system.

The WTP Travel Delay Methodology was developed to evaluate travel experiences on a 24-hour basis for the various highway sections as well as corridors. Delay can be reported as person-delay, vehicle-delay, and/or truck-delay, depending on data availability. The program specifically captures the following phenomena when calculating delay:

- ◆ Hourly and daily variations in traffic volumes and travel patterns
- ◆ Peak spreading (congested conditions occur over more hours of the day beyond simply the so-called peak hour), and,
- ◆ Slower travel speeds or lower roadway capacity when congestion exists.

The travel delay methodology begins with the “*Annual Average Daily Traffic (AADT)/Capacity Ratio*” (ACR) concept to describe system performance and ends with a whole gamut of system performance indicators. As noted, the annual average daily traffic (expressed in vehicles per day) using a roadway segment is divided by the maximum number of vehicles it is capable of serving (expressed in vehicles per hour). The resulting value represents the average vehicle demand and the duration of congested conditions on a roadway segment. These resulting values can then be averaged based on the segment length to develop overall corridor averages. What is appealing about this concept is that its basic indicators use readily available data, namely annual average daily traffic and roadway capacity.

For the general planning purposes of the WTP, WSDOT is using the ACR values of “10” for urban areas and “6” for rural areas as deficiency thresholds for state highways. Compared to traditional technical measures, the thresholds equate to approximately LOS “D” operation in urban areas and LOS “C” in rural areas. The threshold values for evaluating system performance at the level of a corridor or a subarea can be derived by extrapolating and adapting these ACR values to the subject geographic area and the appropriate roadway network.

For planning and analysis purposes, a deficient segment or corridor is one whose ACR value equals or is greater than the ACR threshold. Otherwise, the segment or corridor is considered not deficient.

For the concurrency purposes in Island County, as required by SHB 1487, and to be in accordance with the level of service objectives approved by the Board of Commissioners in the

Comprehensive Plan, the ACR deficiency threshold values for state highways of statewide significance were set at:

- ◆ ACR “12” for urban areas and heavy congested areas.
- ◆ ACR “10” for rural areas.

Compared to traditional technical measures, the thresholds equate to approximately LOS “E” operation in urban areas and LOS “D” in rural areas. These service levels are consistent with the standards approved in the recently adopted *Comprehensive Plan* for Island County.

These ACR values will be applied to the following corridors:

- ◆ ACR values = 10 (Rural Areas):
 - ⇒ SR 20 from the Keystone Ferry (MP 12.88) to the south urban boundary of Oak Harbor (MP 30.76).
 - ⇒ SR 525 from the Clinton Ferry (MP 8.72) to SR 20 (30.75).
- ◆ ACR values = 12 (Urban Areas and heavily congested areas):
 - ⇒ SR 20 through the urban boundaries of Oak Harbor (MP 30.76 to MP 34.61).
 - ⇒ SR 20 from the north urban boundary of Oak Harbor (MP 34.61) to Deception Pass (MP 41.79). This corridor is not the typical rural corridor and is more influenced by the Deception Pass State Park, the Naval Air Station and primary access highway to and from Oak Harbor.

The other state highway, SR 532, in Island County is not on the list of state highways with statewide significance and therefore not subject to concurrence requirements. However, for analysis purposes and consistency, it will also be analyzed using the WTP Travel Delay Methodology. An ACR value of “10”, which is consistent with the standards approved in the adopted *Comprehensive Plan*, will be used for this corridor that extends from East Camano Drive to west city limits of Stanwood.

These ACR values and corridors areas were discussed by the Island County Board of Commissioners, Island County Public Works, WSDOT Northwest Region Mount Baker Planning Area and Skagit/Island Regional Transportation Planning Organization Policy Board. These standards were preliminary accepted by the Island Subregional Transportation Planning Organization Policy Board.

The preliminary WTP Travel Delay Methodology will be used to identify deficiencies on state highways of statewide significance. Once identified, the deficient corridors will be further examined using such measures as per-person-delay and/or number of hours of congestion, among others. The same delay program will be used to evaluate the effectiveness of a solution or of solution sets -- involving multimodal actions.

Coordination

Intergovernmental coordination is a key element of the overall Growth Management Plan for the State of Washington. As part of the GMA, each jurisdiction must coordinate their activities with

neighboring jurisdictions. For Island County, meetings and coordination with other agencies have been an ongoing activity throughout the development of this Long Range Transportation Plan.

The above level of service standards have been reviewed with WSDOT's Northwest Region, Skagit-Island Regional Transportation Planning Organization (RTPO), Skagit County and/or Snohomish County, as well as the City of Oak Harbor, the Town of Coupeville, the City of Langley.

For WSDOT and county coordination, there are two highway connections between Island County and adjacent counties. These connections are:

- ◆ Along SR 20 at the Deception Pass Bridge between Whidbey Island and Skagit County. For this location, the WTP has set an ACR of 6 in Skagit County, which is different from the ACR of 12 that Island County is using as their standard for the corridor segment in Island County. Discussions with WSDOT, Island County, Skagit County, the Skagit/Island RTPO are being held to continue coordination for this issue as part of the Skagit/Island County RTPO's Regional Transportation Plan Update.
- ◆ Along SR 532 at the Davis Slough Bridge between Camano Island and Snohomish County. SR-532 is a regional highway and the LOS is to be set by the RTPO in coordination with WSDOT. Island County's recommendation is that the LOS be set at an ACR of 10, consistent with the rural corridor sections on Whidbey Island. Snohomish County has not yet incorporated the ACR rating in their Transportation Plan but generally use a LOS rating of E for rural areas to identify deficient areas.

There are also numerous connections with the City of Oak Harbor, the Town of Coupeville, and the City of Langley. The LOS standards for each of these communities are discussed below.

- ◆ In their Comprehensive Plan, the City of Oak Harbor has set their level of service standards at LOS "D" for city streets and intersections and LOS "E" for sections and intersections along state roads. These standards are similar to Island County LOS standards.
- ◆ In their 1997 update to the Transportation Element, the Town of Coupeville maintained their adopted LOS policy and has set LOS "C" as their standard for all city streets except county and state routes which will use the County's standards. This is consistent with the County's standard for rural areas which is the general land use of the surrounding county areas. As a result, Coupeville's LOS standards appear to be consistent with Island County's LOS policy.
- ◆ The City of Langley's adopted LOS policy has set LOS "C" as their standard. Although this LOS standard is higher (less congestion) than the County's standard for urban areas, it is consistent with the County's standard for rural areas which is the general land use of the surrounding county areas. As a result, the Langley's LOS standards appear to be consistent with Island County's LOS policy.

Overall, Island County's roadway LOS standards appear to be consistent and coordinated with the surrounding jurisdictions.

Island County Highway Level of Service Standard Summary

In following the GMA guidelines, the Island County Board of Commissioners has approved the highway and intersection level of service standards for county arterials as part of the adopted *Comprehensive Plan* and agreed on level of service standards for state highways. A summary of these level of service standards is listed in Table IV-4.

TABLE IV-4

SUMMARY OF LEVEL OF SERVICE (LOS) STANDARDS FOR ISLAND COUNTY

LEVEL OF SERVICE STANDARDS FOR STATEWIDE SIGNIFICANT HIGHWAY CORRIDORS IN ISLAND COUNTY:

- ◆ ACR values = 10 (Rural Areas):
 - ⇒ SR 20 from the Keystone Ferry (MP 12.88) to the south urban boundary of Oak Harbor (MP 30.76).
 - ⇒ SR 525 from the Clinton Ferry (MP 8.72) to SR 20 (30.75).
- ◆ ACR values = 12 (Urban Areas and heavily congested areas):
 - ⇒ SR 20 through the urban boundaries of Oak Harbor (MP 30.76 to MP 34.61).
 - ⇒ SR 20 from the north urban boundary of Oak Harbor (MP 34.61) to Deception Pass (MP 41.79).

LEVEL OF SERVICE STANDARDS FOR REGIONAL STATE HIGHWAYS IN ISLAND COUNTY:

- ◆ ACR values = 10 (Rural Areas):
 - ⇒ SR 532 from East Camano Drive to west city limits of Stanwood.

LEVEL OF SERVICE STANDARDS FOR COUNTY ARTERIALS AND TRANSIT ROUTES:

- ◆ **LOS STANDARDS FOR COUNTY ARTERIALS AND TRANSIT ROUTES:**
 - ⇒ LOS standard for roads in rural areas would be LOS 'C';
 - ⇒ LOS standard for roads in urban areas would be LOS 'D';
 - ⇒ Exceptions to these standards are as follows:
 - a) if the existing LOS on county arterials is presently below these standards, then the 1992 LOS would become the standard; and
 - b) the level of service on East Camano Drive between SR 532 and Camano Hill Road would be LOS 'E'.
- ◆ **LOS STANDARDS FOR COUNTY INTERSECTIONS:**
 - ⇒ County arterial intersections in rural areas would be LOS 'C';
 - ⇒ County arterial intersections in urban areas would be LOS 'D';
 - ⇒ County arterial intersections with State roads in rural areas would be LOS 'D';
 - ⇒ County arterial intersections with State, city, or town roads in urban areas would be LOS 'E'.

NOTE: The urban areas to be used with the above standards are defined by the proposed interim urban growth areas for Oak Harbor, Coupeville and Langley. In addition, the following roads and intersections in the Freeland and Clinton RAIDs (Rural Area of Intense Development) will utilize the urban area level of service standards:

- **ROADWAYS**
 - ⇒ SR 525 - (Scott Rd. to Cameron Dr.)
 - ◆ **Freeland**
 - ⇒ Main St./Scott Rd. - (SR 525 to SR 525)
 - ⇒ East Harbor Rd. - (Main St. to MP 0.75)
 - ⇒ Harbor Ave. - (SR 525 to Main St.)
 - ⇒ Honeymoon Bay Rd. - SR 525 to Bercot Rd.)
 - ◆ **Clinton**
 - ⇒ Deer Lake Rd. - (SR 525 to Anderson Rd.)
 - ⇒ Humphrey Rd. - (SR 525 to Berg Rd.)
 - ⇒ Bob Galbreath Rd. - (SR 525 to MP 0.25)

⇒ Commercial St. - (SR 525 to Deer Lake Rd.)

⇒ SR 525 - (Ferry to Bob Galbreath Rd.)

➤ INTERSECTIONS

◆ Freeland

- ⇒ SR 525 / Honeymoon Bay Rd.
- ⇒ SR 525 / Main St. / Fish Rd.
- ⇒ SR 525 / Harbor Ave.
- ⇒ SR 525 / Scott Rd.
- ⇒ Harbor Ave. / Main St.
- ⇒ East Harbor Rd. / Main St.

◆ Clinton

- ⇒ SR 525 / Deer Lake Rd.
- ⇒ SR 525 / Humphrey Rd.
- ⇒ SR 525 / Bob Galbreath Rd.
- ⇒ SR 525 / Commercial St.
- ⇒ Commercial St. / Deer Lake Rd.

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 3:00 PM to 7:00 PM.

Based upon the WSF's *System Plan for 1999 - 2018*, and the 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 85th 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 registered high occupancy vehicles (HOVs)/vanpools/carpools registered with the ferry system be accommodated on the next ferry at all times.

For Island County's Transportation Plan, the above level of service standards will be used for ferry service.

SECTION V: EXISTING CONDITIONS

Island County is comprised of Whidbey Island and Camano Island, as well as several smaller islands. Land connections to Island County are from Skagit County via SR 20 (Deception Pass Bridge) to Whidbey Island and SR 532 from the City of Stanwood in Snohomish County to Camano Island. Ferry service is provided to Whidbey Island by the Washington State Ferries at Clinton from the City of Mukilteo in Snohomish County and at Keystone from the City of Port Townsend in Jefferson County. In addition, several public and private airfields presently exist on both Whidbey Island and Camano Island.

The current transportation system in Island County consists of the following travel modes:

- ◆ roads and highways
- ◆ transit
- ◆ marine transportation
- ◆ air transportation
- ◆ non-motorized transportation.

No rail service presently exists within Island County, although freight terminals are within close proximity of Whidbey Island and Camano Island.

The following sections describe the existing conditions in Island County's unincorporated areas by each of the above noted travel modes.

ROADS AND HIGHWAYS

Travel on local roads and highways accounts for the largest single element of Island County's transportation system. SR 20 and SR 525 transect Whidbey Island and serve as the primary north-south facility for travel. These state highways connect Whidbey Island to the mainland at the Deception Pass bridge to Skagit County, through the Clinton ferry terminal to Mukilteo in Snohomish County and through the Keystone ferry terminal to Port Townsend in Jefferson County. Major and minor county arterials and local collector roads feed into these state highways and connect local neighborhoods, cities, towns and recreational areas.

On Camano Island, a series of major and minor county arterials circulate around the Island. These arterials connect to SR 532, which serves as the principal connection to the mainland across Davis Slough to the City of Stanwood in Snohomish County.

Transit service also operates over these state highways and county arterials as well as on a select set of county collectors on both Whidbey and Camano Island.

Over the past 12 years travel to and from Island County has been increasing. This is evident from the increase in annual average daily traffic at the Deception Pass entrance to Whidbey Island. Traffic across the Deception Pass bridge has grown from about 8,200 vehicles in 1987 to 14,200 in 1998 or by approximately 73 percent. At Davis Slough on SR 532, traffic to/from Camano Island has grown from about 7,700 vehicles in 1987 to 15,000 in 1998 or by

approximately 95 percent. The annual vehicle traffic growth on the State Ferry system to Island County has also increased by approximately 42 percent between 1987 and 1999.

Separate summaries for the county arterial system, the state highway system, other county roads that are used for fixed route transit services and intersections are presented below.

County Arterial System

Island County is responsible for approximately 594 miles of roads, including 79 miles of major rural arterials, 131 miles of minor rural arterials, 370 miles of other local rural roads and 14 miles of urban roads. All county roads are two-lane facilities and most have bituminous or asphalt concrete surfaces, with a few local roads having gravel surfaces.

The existing configuration of the county arterial system in the unincorporated areas of Island County is summarized on Table V-1. These roadways comprise the predominant routes of travel within Island County and include major and secondary county arterials, which are analyzed for capacity improvements in this transportation plan.

These principal county roadways are depicted in Figure V-1 along with the collector roadways and the state highways. Although County collectors are not subject to level of service analysis as the County arterials, they are shown in Figure V-1 to depict a more complete County network. County collectors are not included in Table V-1.

The information presented in Table V-1 includes the roadway name, limits, route number, segment lengths, number of lanes, predominant shoulder width, the 1996 average daily traffic (ADT) volume and corresponding 1996 level of service for County arterials. The ADT volumes represent the highest volume counted along the roadway section. The estimated 1992 level of service is also shown for comparison purposes.

In accordance with the level of service standards presented in Chapter IV, level of service values were calculated for the various county arterials. For general planning purposes, the ADT service flow threshold volumes for each level of service, listed in Chapter IV, were used in this analysis. The results of the 1996 level of service analysis are listed in Table V-1. These results are also depicted on Figure V-2.

From a review of Table V-1, 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. The 1992 level of service or other standard in accordance with the approved level of service standards, as described in Chapter 4 is shown in parenthesis.

- ◆ Ault Field Road - LOS 'E' - ('E')
- ◆ East Camano Drive (from SR 532 to Cross Island) - LOS 'D' - ('E')
- ◆ East Camano Drive (from Cross Island Road to Camano Hill Road) - LOS 'D' - ('E')
- ◆ Goldie Road (from Ault Field Road to Oak Harbor city limits) - LOS 'E' - ('E')

For these four arterial sections, the existing 1996 level of service meets the level of service standards approved by the Island County Board of Commissioners in 1994. As a result, no roadway capacity improvements are required for County arterials to meet GMA requirements.

**TABLE V-1
EXISTING 1996 COUNTY ROADWAY CONDITIONS IN ISLAND COUNTY**

ROAD NAME	FROM	TO	ROAD NUMBER	FROM MILEPOST	TO MILEPOST	LANES	SHLD WIDTH	SEGMENT LENGTH	1996 ADT	1996 LOS	1992 LOS
ARNOLD RD.	SR 20	Monroe Landing Rd.	95460	0.00	1.63	2 und	6 ft.	1.63 mi.	740	A	A
AULT FIELD RD.	Heller Rd.	SR 20	95030	9.43	11.55	2 und/part tw/tl	8 ft.	2.12 mi.	12,880	E ²	E ²
BAILEY RD.	French Rd.	Cultus Bay Rd.	07640	0.00	2.21	2 und	6 ft.	2.21 mi.	1,000	A	A
BANTA RD.	SR 20	Morran Rd.	67710	0.00	0.25	2 und	7 ft.	0.25 mi.	2,240	B	A
BAYVIEW RD.	Brooks Hill Rd.	SR 525	91030	0.00	2.44	2 und	7 ft.	2.44 mi.	3,810	B	B
BAYVIEW RD.	SR 525	Ewing Rd.	90130	3.83	6.11	2 und	3 ft.	2.28 mi.	1,220	A	A
BOB GALBREATH RD.	Surface Rd.	SR 525	11810	0.00	1.98	2 und	3 ft.	1.98 mi.	1,030	A	A
BROOKS HILL RD.	Bayview Rd.	Langley City Limits	91030	2.44	3.62	2 und	10 ft.	1.18 mi.	3,030	B	B
BUSH POINT RD.	SR 525	Smugglers Cove Rd.	92250	0.00	2.73	2 und	6 ft.	2.73 mi.	3,230	B	B
CAMANO HILL RD.	West Camano Dr.	East Camano Dr.	97300	0.00	3.42	2 und	6 ft.	3.42 mi.	2,670	B	A
CLOVER VALLEY RD.	Golf Course Rd.	Ault Field Rd.	95030	8069	9.43	2 und	7 ft.	0.74 mi.	2,180	B	B
CORNET BAY RD.	SR 20	Cornet	69180	0.00	1.12	2 und	4 ft.	1.12 mi.	950	A	A
CRESCENT HARBOR RD.	Regatta Dr.	Taylor Rd.	96030	1.72	3.57	2 und	6 ft.	1.85 mi.	6,920	C/D ²	C
CRESCENT HARBOR RD.	Taylor Rd.	Reservation Rd.	96160	0.00	1.62	2 und	5 ft.	1.62 mi.	2,690	B ²	B
CROSBY RD.	West Beach Rd.	Oak Harbor City Limits	95030/57820	6.44/0.00	7.67/0.76	2 und	5 ft.	1.99 mi.	1,710	B	B
CROSS ISLAND RD.	East Camano Rd..	West Camano Dr.	98120	0.00	2.51	2 und	5 ft.	2.51 mi.	2,450	B	B
CULTUS BAY RD.	Possession Dr.	French Rd.	90030	0.24	2.61	2 und	2 ft.	2.37 mi.	2,320	B	B
CULTUS BAY RD.	French Rd.	SR 525	90030	2.61	4.99	2 und	6 ft.	2.38 mi.	3,270	B	B
DALLMAN ROAD	West Camano Dr.	East Camano Dr.	70900	0.00	0.72	2 und	1 ft.	0.72 mi.	160	A	A
DEER LAKE RD.	Cultus Bay Rd.	SR 525	90100	0.00	2.27	2 und	6 ft.	2.27 mi.	2,070	B	B
EAST CAMANO DR.	SR 532	Cross Island Rd.	97190	0.22	1.23	2 und	8 ft.	1.01 mi.	11,660	D ³	D
EAST CAMANO DR.	Cross Island Rd.	Camano Hill Rd.	97190	1.23	2.63	2 und/tw/tl	8 ft.	1.40 mi.	10,080	D ³	C
EAST CAMANO DR.	Camano Hill Rd.	Monticello Dr.	97190	2.63	5.97	2 und	6 ft.	3.34 mi.	6,240	C ³	C
EAST CAMANO DR.	Monticello Dr.	Mountain View Ave.	97190	5.97	7.90	2 und	8 ft.	1.93 mi.	2,290	B	A
EAST CAMANO DR.	Mountain View Ave.	Dallman Rd.	97190	7.90	12.24	2 und	4 ft.	4.34 mi.	1,310	A	A
EAST HARBOR RD.	Main St.	Brainers Rd.	91250	0.21	5.49	2 und	2 ft.	5.28 mi.	3,280	B	B
ELGER BAY RD.	West Camano Dr.	Monticello Dr.	97190	5.97	7.90	2 und/tw/tl	9 ft.	1.93 mi.	2,750	B	B
ENGLER RD.	Keystone Ferry	SR 20 (Coupeville)	44780/45390	0.70/0.27	1.61/2.82	2 und	4 ft.	3.46 mi.	1,600	A/B	A

TABLE V-1 Continued
EXISTING 1996 COUNTY ROADWAY CONDITIONS IN ISLAND COUNTY

ROAD NAME	FROM	TO	ROAD NUMBER	FROM MILEPOST	TO MILEPOST	LANES	SHLD WIDTH	SEGMENT LENGTH	1996 ADT	1996 LOS	1992 LOS
EWING RD.	Bayview Rd.	Sills Rd.	90130	3.83	4.23	2 und	3 ft.	0.40 mi.	1,140	A	A
FAKKEMA RD.	SR 20	Taylor Rd.	63380	0.00	1.52	2 und	7 ft.	1.52 mi.	4,210	B	B
FORT NUGENT RD.	West Beach Rd.	Oak Harbor City Limits	95300	0.00	1.17	2 und	7 ft.	1.17 mi.	3,350	B	B
FRENCH RD.	Sills Rd.	Cultus Bay Rd.	90130	0.00	1.98	2 und	3 ft.	1.98 mi.	1,200	A	A
FROSTAD RD.	SR 20	Taylor Rd.	96030/65140	6.80/2.23	7.10/3.15	2 und	3 ft.	1.22 mi.	1,480	A	A
GOLDIE RD.	Ault Field Rd.	Oak Harbor City Limits	95890	1.21	1.97	2 und/tw/tl	4 ft.	0.76 mi.	11,150	E ²	E ²
GOLF COURSE RD.	Clover Valley Rd.	Crosby Rd.	95030	7.67	8.69	2 und	3 ft.	1.02 mi.	1,540	A	A
GOOD RD.	SR 532	Utsalady Rd.	98300	0.00	1.32	2 und	3 ft.	1.32 mi.	730	A	A
HARBOR AVE.	SR 525	Main St.	25950	0.00	0.14	2 und	8 ft.	0.14 mi.	2,740	B ²	B ²
HELLER RD.	Clover Valley Rd.	Oak Harbor City Limits	95650	0.92	2.67	2 und	8 ft.	1.75 mi.	7,560	D ²	D ²
HOUSTON RD.	SR 525	North Bluff Rd.	33670	0.00	2.58	2 und	4 ft.	2.58 mi.	230	A	A
JONES RD.	SR 20	Troxell Rd.	66920/96030	0.00/7.84	1.01/11.26	2 und	3 ft.	4.43 mi.	1,230	A	A
LANGLEY RD.	SR 525	Maxwelton Rd.	91190	0.00	2.58	2 und	5 ft.	2.58 mi.	3,180	B	B
LANGLEY RD.	Maxwelton Rd.	Langley City Limits	91190	2.58	2.89	2 und	6 ft.	0.31 mi.	4,680	C ²	C ²
LIBBEY RD.	SR 20	West Beach Rd.	95030	0.00	0.57	2 und	6 ft.	0.57 mi.	1,780	B	A/B
LOWELL POINT RD.	West Camano Dr.	Camano Island Park Rd	72130	0.00	0.66	2 und	3 ft.	0.66 mi.	350	A	A
MADRONA WY.	SR 20	Coupeville Town Limits	47200	0.67	3.43	2 und	2 ft.	2.76 mi.	1,580	A	A
MAIN ST. (Freeland)	Fish Rd.	Newman Rd.	91250/13860	0.00/1.78	0.21/2.16	2 und	8 ft.	0.59 mi.	6,010	C ²	C ²
MAXWELTON RD.	Langley Rd.	SR 525	91150	0.00	1.97	2 und	8 ft.	1.97 mi.	4,340	B/C	B
MAXWELTON RD.	SR 525	French Rd.	90150	1.16	4.73	2 und	5 ft.	3.57 mi.	1,230	A	A
MONROE LANDING RD.	SR 20	Arnold Rd.	54470	0.39	1.66	2 und	2 ft.	1.27 mi.	1,680	A/B	A/B
MONTICELLO DR.	West Camano Dr.	East Camano Dr.	74280	0.00	1.88	2 und	4 ft.	1.88 mi.	1,600	A/B	A
MOUNTAIN VIEW RD.	Elger Bay Rd.	East Camano Dr.	73120	0.06	0.82	2 und	4 ft.	0.76 mi.	1,350	A	A
NORTH BLUFF DR.	Houston Rd.	SR 525	33670	2.58	5.00	2 und	4 ft.	2.42 mi.	750	A	A
NORTH CAMANO DR.	SR 532	Sunrise Blvd.	88394	0.00	0.33	2 und	2 ft.	0.33 mi.	3,120	B	B
NORTH CAMANO DR.	Sunrise Blvd.	Arrowhead Rd.	97090	0.00	0.92	2 und	4 ft.	0.92 mi.	2,940	B	B
NORTH CAMANO DR.	Arrowhead Rd.	Maple Grove Rd.	97090	0.92	2.96	2 und	4 ft.	2.04 mi.	2,600	B	B
NORTH CAMANO DR.	Maple Grove Rd.	West Camano Dr.	97090	2.96	3.66	2 und	4 ft.	0.70 mi.	1,830	B	B

TABLE V-1 Continued
EXISTING 1996 COUNTY ROADWAY CONDITIONS IN ISLAND COUNTY

ROAD NAME	FROM	TO	ROAD NUMBER	FROM MILEPOST	TO MILEPOST	LANES	SHLD WIDTH	SEGMENT LENGTH	1996 ADT	1996 LOS	1992 LOS
OAK HARBOR RD.	Ault Field Rd.	Oak Harbor City Limits	95770	1.17	2.29	2 und	5 ft.	1.12 mi.	5,090	C ²	C ²
PARKER RD.	SR 20	Coupeville Town Limits	94380	0.00	1.64	2 und	6 ft.	1.64 mi.	790	A	A
POLNELL RD.	Reservation Rd.	Strawberry Point Rd.	96160	3.23	4.87	2 und	5 ft.	1.64 mi.	1,060	A	A
RESERVATION RD.	Crescent Harbor Rd.	Polnell Rd.	96160	1.67	3.23	2 und	4 ft.	1.56 mi.	1,350	A	A
SANDY POINT RD.	Langley Rd.	Wilkinson Rd.	13400	0.00	0.84	2 und	2 ft.	0.84 mi.	1,020	A	A
SARATOGA RD.	Amble Rd.	Langley City Limits	91190	4.28	8.76	2 und	2 ft.	4.48 mi.	1,340	A	A
SCOTT RD.	Newman Rd.	SR 525	25650	0.00	0.26	2 und	6 ft.	0.26 mi.	2,140	B	B
SILLS RD.	Ewing Rd.	French Rd.	90130	3.83	4.23	2 und	2 ft.	0.40 mi.	940	A	A
SILVER LAKE RD.	Taylor Rd.	Strawberry Point Rd.	64460	0.00	3.47	2 und	6 ft.	3.47 mi.	2,310	B	B
SMUGGLERS COVE RD.	SR 525	Bush Point Rd.	92250	2.26	9.29	2 und	6 ft.	7.03 mi.	2,560	B	B
STRAWBERRY POINT RD.	Silver Lake Rd.	Polnell Rd.	96160	4.87	7.12	2 und	2 ft.	2.25 mi.	420	A	A
SUNSET DR.	West Camano Dr.	West Camano Dr.	80470	0.00	3.92	2 und	4 ft.	3.92 mi.	750	A	A
SWANTOWN RD.	West Beach Rd.	Oak Harbor City Limits	95520	1.04	2.96	2 und	4 ft.	1.92 mi.	2,760	B	B
TAYLOR RD.	Crescent Harbor Rd.	Fakkema Rd.	96030	3.57	4.87	2 und	3 ft.	1.30 mi.	2,740	B	B
TAYLOR RD.	Fakkema Rd.	Frostad Rd.	96030	4.87	7.10	2 und	5 ft.	2.23 mi.	750	A	A
TROXELL RD.	SR 20	Jones Rd.	96030	11.26	14.64	2 und	5 ft.	3.38 mi.	1,170	A	A
UTSALADY RD.	Good Rd.	Arrowhead Rd.	96030	0.75	3.23	2 und	3 ft.	2.48 mi.	560	A	A
WEST BEACH RD.	Libbey Rd.	Hastie Lake Rd.	95030	0.57	2.88	2 und	5 ft.	2.31 mi.	1,280	A	A
WEST BEACH RD.	Hastie Lake Rd.	Fort Nugent Rd.	95030	2.88	4.42	2 und	5 ft.	1.54 mi.	2,030	B	B
WEST BEACH RD.	Fort Nugent Rd.	Crosby Rd./Swantown Rd.	95030	4.42	6.44	2 und	5 ft.	2.02 mi.	1,730	B	B
WEST CAMANO DR.	North Camano Dr.	Madrona Beach Rd.	97090	3.66	6.27	2 und	5 ft.	2.61 mi.	1,060	A	A
WEST CAMANO DR.	Madrona Beach Rd.	Camano Hill Rd.	97090	6.27	8.33	2 und	6 ft.	2.06 mi.	1,030	A	A
WEST CAMANO DR.	Camano Hill Rd.	Elger Bay Rd.	97090	8.33	13.34	2 und	5 ft.	5.01 mi.	1,160	A	A
WEST CAMANO DR.	Elger Bay Rd.	Dallman Rd.	97090	7.90	12.24	2 und	4 ft.	4.34 mi.	1,400	A	A
WILKINSON RD.	Sandy Point Rd.	Surface Rd.	12690	1.29	3.69	2 und	4 ft.	2.40 mi.	620	A	A
Abbreviations:			Notes:								
und = undivided road			LOS = Level of Service			1 Based on ARM (Actual Route Miles) from State Highway Logs.					
div = divided road			ADT = Annual Daily Traffic			2 Based on Urban area analysis; all other segments are based on Rural Area analysis.					
tw/ltl = two-way left turn lane						3 Based on detailed analysis of specific roadway characteristics.					

Transit Route Roadways

Island County has made an independent review of County roadways on which transit routes operate. The transit routes follow along sections of the state highways, County arterials and collectors. A summary of the various transit routes in Island County is shown in the transit portion of this section.

The analysis of County arterials and state highways was discussed previously. The following is a listing of the County non-arterials roadways on which transit operates:

- ◆ Admiral Drive from SR 525 to Byrd Road.
- ◆ Arrowhead Road from Cross Island Road to North Camano Drive
- ◆ Bakken Road from SR 525 to Day Road
- ◆ Blakely Avenue from Swede Hill Road to UnNamed Street
- ◆ Byrd Road from Admiral Drive to Halsey Drive
- ◆ Camano Ridge Road from Cross Island Road to Camano Hill Road
- ◆ Chapman Road from Camano Hill Road to West Camano Drive
- ◆ Day Road from Bakken Road to Lagoon Point Road
- ◆ Ducken Road from Monkey Hill Road to SR 20
- ◆ Glendale Road from Jewett Road to Cultus Bay Road
- ◆ Halsly Drive from Byrd Road to Perry Drive
- ◆ Howard Road from SR 525 to Bayview Road
- ◆ Jewett Road from Cultus Bay Road Glendale Road
- ◆ Koenig Lane from Perry Drive to SR 20
- ◆ Lagoon Point Road from Day Road to Smugglers Cove Road
- ◆ Lake Drive from Lakewood Drive to Aspen Drive
- ◆ Lakewood Drive from Lost Lake Drive to Lake Drive
- ◆ Lost Lake Road from Monticello Drive to Lakewood Drive
- ◆ Monkey Hill Road from Troxell Road to Ducken Road
- ◆ Mortland Drive from Swede Hill Road UnNamed Street
- ◆ Old Cornet Bay Road from Cornet Bay Road to SR 20
- ◆ Perry Drive from Halsly Drive to Koenig Lane
- ◆ Scatchet Head Road from Bailey Road to Swede Hill Road
- ◆ Swede Hill Road from Scatchet Head Road to Mortland Drive
- ◆ UnNamed Street from Mortland Drive to Blakely Avenue
- ◆ Vista Drive from West Camano Drive to Sunset Drive

Based on the independent review by County staff, all of these non-arterial roadways in the unincorporated portion of Island County currently meet the proposed level of service standards of LOS 'C' in rural areas and LOS 'D' in urban areas.

Figure V-1 Arterial Plan

Figure V-2 1996 Level of Service Summary

State Highways

In Island County, there are approximately 54 miles of state highways, of which approximately 51 miles pass through the unincorporated areas of the County and about three miles through the City of Oak Harbor. In the unincorporated area of the County, the state highways are generally two-lane facilities with less than two mile of multilane roadway near the Clinton Ferry Terminal. Most of the state highway system in the City of Oak Harbor is multilane with two-way left turn lanes or channelized intersections.

Segments of three state highways are used for local and regional travel within Island County. These state highways are:

- ◆ SR 20 from the Keystone Ferry Terminal (MP 12.88) to Deception Pass bridge (MP 41.79). The segment within the City of Oak Harbor extends from MP 30.67 just south of Swantown Road to MP 33.59 south of Case Road.
- ◆ SR 525 from the Clinton Ferry Terminal (MP 8.72) to SR 20 (MP 30.75).
- ◆ SR 532 from East Camano Drive (MP 0.00) to Davis Slough (MP 2.91).

Summary information for the state highway network in Island County is listed in Table V-2. Since this update primarily concerns the state highway network in response to SHB 1487 and to be compatible with other on-going state highway studies, updated traffic counts on the state highway network are listed in this table.

The information presented in Table V-2 includes the state highway number, segment limits, segment lengths, number of lanes, predominant shoulder width and annual average daily traffic (AADT) volumes. 1998 AADT are being used for the base year analysis of state highways in this update. In addition, the new AADT/Capacity Ratio (ACR), which is part of the WTP update using the new Travel Delay Methodology by WSDOT, is being used to analyze the state highway system and determine deficient segments of the highway system instead of the traditional level of service method. Various modifications were made to the preliminary total capacity developed by WSDOT to reflect existing conditions on state highways in Island County. These revised capacities by sections were compared to the 1998 AADT to calculate the 1998 ACR ratings.

From a comparison of the data contained in Table V-2 with the ACR threshold ratings for state highways in Island County, none of the segments exceeded the suggested threshold standards for state highways of "ACR-10" in rural areas and "ACR-12" in urban areas and heavily congested areas in 1998. As a result, no major roadway capacity improvements are required for the state highways in Island County to meet GMA requirements. However, SR 532 on Camano Island is approaching the ACR-10 threshold for rural areas with an ACR rating of 9.4.

The weighted average ACR ratings for the approved corridors in the unincorporated areas of Island County are listed below:

- ◆ SR 20 from the Keystone Ferry Terminal to Oak Harbor south city limits - ACR = 4.3
- ◆ SR 20 from Oak Harbor north city limits to the Deception Pass Bridge - ACR = 8.4
- ◆ SR 525 from the Clinton Ferry Terminal to SR 20 - ACR = 4.9
- ◆ SR 532 from East Camano Drive to Stanwood west city limits - ACR = 9.4

None of these corridors exceed the suggested threshold standards for state highways of “ACR-10” in rural areas and “ACR-12” in urban areas.

**TABLE V-2
EXISTING 1998 STATE HIGHWAY CONDITIONS IN ISLAND COUNTY**

ROAD NAME	FROM	TO	FROM MILEPOST ¹	TO MILEPOST ¹	SEGMENT LENGTH ²	URBAN / RURAL	LANES	LANE WIDTH ³	SHLD WIDTH ³	WTP CAPACITY	1998 AADT ⁴	1998 ACR ⁵
SR 20	Keystone Ferry Landing	SR 525 / Race Rd.	12.88	16.33	3.45	R	2 und	11 to 12	2 to 8	1,610	1,100	0.7
SR 20	SR 525 / Race Rd.	Parker Rd.	16.33	19.24	2.91	R	2 und	11 to 12	2 to 6	1,370	6,100	4.4
SR 20	Parker Rd.	West of Jacobs Rd.	19.24	20.65	1.41	R	2 und	11	3 to 6	1,590	7,600	4.8
SR 20	West of Jacobs Rd.	Main St. - Coupeville	20.65	21.74	1.09	R	2 und	11	6	1,690	7,600	4.5
SR 20	Main St. - Coupeville	Wind Dancer Pl.	21.74	22.60	0.86	R	2 und	11	6	1,900	9,400	5.0
SR 20	Wind Dancer Pl.	Libbey Rd.	22.60	25.23	2.63	R	2 und	11	6	1,870	10,100	5.4
SR 20	Libbey Rd.	Miller Rd.	25.23	29.61	4.38	R	2 und	11	6 to 8	1,870	9,600	5.2
SR 20	Miller Rd.	Oak Harbor South Limits	29.61	30.76	1.15	R	2 und	11	6 to 8	1,750	14,100	8.0
SR 20	Oak Harbor North Limits	South of Ault Field Rd.	33.96	34.61	0.65	U	2 und	11 to 12	8	1,860	17,500	9.4
SR 20	South of Ault Field Rd.	North of Sleeper Rd.	34.61	35.75	1.14	U	2 und	12	8	1,940	17,600	9.1
SR 20	North of Sleeper Rd.	South of Frostad Rd.	35.75	36.29	0.54	U	2 und	11	8	1,830	16,500	9.0
SR 20	South of Frostad Rd.	South of Jones Rd.	36.29	37.01	0.72	U	2 und	12	8 to 10	2,040	16,800	8.2
SR 20	South of Jones Rd.	South of Monkey Hill Rd.	37.01	37.63	0.62	U	2 und	12	8	1,930	14,300	7.4
SR 20	South of Monkey Hill Rd.	Troxell Rd.	37.63	39.67	2.04	U	2 und	11 to 12	4 to 8	1,680	13,800	8.2
SR 20	Troxell Rd.	Deception Pass Bridge	39.67	41.79	2.12	U	2 und	11 to 12	C to 8	1,740	14,200	8.1
SR 525	Clinton Ferry Landing	West of Conrad St.	8.72	8.92	0.20	U	5 und	11	C to 5	3,200	6,900	2.1
SR 525	West of Conrad St.	West of Cedar Vista Dr.	8.92	10.29	1.37	U / R	4 und	11 to 12	C - 6	4,700	9,100	1.9
SR 525	West of Cedar Vista Dr.	East of Campbell Rd.	10.29	10.46	0.17	R	3 und	11	4	3,540	9,000	2.5
SR 525	East of Campbell Rd.	Coles Rd.	10.46	12.96	2.50	R	2 und	11 to 12	4 to 8	1,840	9,400	5.7
SR 525	Coles Rd.	Scott Rd.	12.96	17.52	4.56	R	2 und	11	6 to 8	1,630	11,000	6.4
SR 525	Scott Rd.	Freeland Ave.	17.52	18.38	0.86	U	2 und	11 to 12	7 to 8	1,690	7,900	4.7
SR 525	Freeland Ave.	South of Bush Point Rd.	18.38	19.11	0.73	R	2 und	12	6 to 8	1,860	9,700	5.2
SR 525	South of Bush Point Rd.	Mohawk Dr.	19.11	24.69	5.58	R	2 und	11 to 12	1 to 10	1,570	8,400	5.4
SR 525	Mohawk Dr.	SR 20	24.69	30.75	6.06	R	2 und	11 to 12	1 to 8	1,600	6,100	3.8
SR 532	East Camano Dr.	County Line (Davis Slough)	0.00	2.91	2.91	R	2 und	11	6 to 8	1,600	15,000	9.4
Abbreviations: und = undivided road div = divided road twtl = two-way left turn lane c = curb		Notes: ¹ Based on ARM (Actual Route Miles) from State Route Log ² Expressed in miles. ³ Expressed in feet.		⁴ AADT = Annual Average Daily Traffic. ⁵ ACR = AADT/Capacity Ratio from the preliminary adopted Travel Delay Methodology being use in the update to the Washington Transportation Plan.								

Intersections

The level of service at intersections is often more critical than the level of service along roadway sections because of the possible delay to vehicles and drivers entering or crossing a major roadway from another roadway or to any left turning vehicle. To analyze this situation, 29 intersections with high volumes of through and turning traffic in the unincorporated area of Whidbey Island and on Camano Island were selected and analyzed to determine the 1996 levels of service. The procedures outlined in the 1994 *Highway Capacity Manual* were used for these analyses. These 29 intersections are shown on Figure V-3.

In 1996, only four intersections in the unincorporated area of Whidbey Island were signalized. These intersections were SR 525/Cultus Bay Road/Langley Road, SR 20/Main Street in Coupeville, Ault Field Road/Goldie Road/Charles Porter Avenue and Ault Field Road/Langley Boulevard. The Ault Field Road/SR 20 and the Maxwellton Road/SR 525 intersections were signalized in 1997. The SR 20/Cornet Bay Road was signalized in 1999. The SR 525/Main St./Fish Rd. intersection in the Freeland area and the East Camano Drive/Cross Island Road intersection on Camano Island are being signalized in 2000. The remaining intersections are non-signalized intersections with stop sign controls on the lower volume roadways. The traffic counts and turning movements were taken during 1994-1997. All counts were then revised to 1996 volumes, as necessary, based on historical growth rates for the particular area.

Using the 1994 Highway Capacity Manual procedures, 29 intersections were analyzed by Island County staff to determine 1996 level of service conditions. The results of these intersection analyses are presented on Table V-3. The LOS values shown on Table V-3 indicate the worst LOS for any approach or movement. All of the County only arterial intersections met the adopted level of service standards of LOS 'C' in rural areas and LOS 'D' in urban areas.

Only three state highway intersections in north Whidbey Island were below the suggested level of service standards of LOS 'D' in rural areas and lower than LOS 'E' in urban areas for intersections with the state highways. These intersections are:

- ◆ SR 20 / Banta Road LOS 'F'
- ◆ SR 20 / Frostad Road LOS 'E'
- ◆ SR 20 / Fakkema Road LOS 'F'

In all three cases, these level of service conditions reflect the county road movements through the intersections. To improve these intersection conditions, channelization improvement on Banta Road as well as an acceleration lane on SR 20 for left turning traffic from Banta Road to northbound on SR 20 or other similar improvements are required to improve the level of service conditions at this intersection to meet the approved level of service standard of LOS 'D'.

At Fakkema Road and Frostad Road intersections with the SR 20, channelization improvements will not be sufficient to meet level of service standards. At Fakkema Road, this is due to the high turning volumes onto SR 20 from Fakkema Road and the relatively high left turning traffic from southbound on SR 20 to eastbound on Fakkema Road which conflicts with the right and left turning traffic from Fakkema Road. As a result, a signal at the Fakkema Road/SR 20 intersection is recommended.

**TABLE V-3
SUMMARY OF INTERSECTION LEVEL OF SERVICE
ISLAND COUNTY**

INTERSECTION	LOCATION	1996 LOS
1. SR 20 / Cornet Bay Road	Whidbey Island	C ³
2. SR 20 / Troxell Road	Whidbey Island	D
3. SR 20 / Banta Road	Whidbey Island	F
4. SR 20 / Frostad Road	Whidbey Island	E
5. SR 20 / Fakkema Road	Whidbey Island	F
6. Ault Field Road / Clover Valley Road / Heller Road	Whidbey Island	C
7. SR 20 / Monroe Landing Road	Whidbey Island	B
8. SR 20 / Arnold Road	Whidbey Island	C
9. SR 20 Madrona Way	Whidbey Island	B
10. SR 20 / Libbey Road	Whidbey Island	B
11. SR 20 / SR 525 / Race Road	Whidbey Island	B
12. SR 525 / Smugglers Cove Road.	Whidbey Island	B
13. SR 525 / Honeymoon Bay Road / Bush Point Road	Whidbey Island	C
14. SR 525 / Main Street (Freeland) / Fish Road	Whidbey Island	C ⁴
15. Main Street (Freeland) / East Harbor Road	Whidbey Island	C
16. SR 525 / Harbor Avenue	Whidbey Island	B
17. SR 525 / Scott Road	Whidbey Island	C
18. SR 525 / Bayview Road	Whidbey Island	D ⁵
19. SR 525 / Coles Road	Whidbey Island	B
20. SR 525 / Maxwellton Road	Whidbey Island	C ²
21. SR 525 / Cultus Bay Road / Langley Road	Whidbey Island	C ¹
22. SR 525 / Bob Galbreath Road	Whidbey Island	C
23. SR 525 / Deer Lake Road	Whidbey Island	C
24. Cultus Bay Road / Deer Lake Road / Log Cabin Road	Whidbey Island	B
25. Maxwellton Road / Langley Road	Whidbey Island	B
26. SR 532 / East Camano Drive / Sunset Boulevard	Camano Island	C
27. East Camano Drive / Cross Island Road	Camano Island	C ⁵
28. East Camano Drive / Camano Hill Road	Camano Island	B
29. East Camano Drive / Monticello Drive / Elger Bay Road	Camano Island	B

All intersection analyses are based on the procedures outlined in the 1994 Highway Capacity Manual using Highway Capacity Software release 2.1d.

Notes: 1. - existing signalized intersection.
2. - was signalized in 1997.
3. - was signalized in FY1999.
4. -. to be signalized in FY2000
5. -. to be signalized in FY2001.

Source: Island County & H. W. Lochner, Inc.

Figure V-3 Intersection Locations

For Frostad Road, the left turning volume from Frostad Road onto SR 20 requires a traffic signal to meet the level of service standards. However, a traffic signal warrant study must be completed before the signals can be installed. WSDOT has included traffic signals at Fakkema Road and Frostad Road as part of their safety improvement strategies outlined in their *State Highway System Plan: 1999-2018*. WSDOT is the lead agency for these improvements.

Safety

Besides capacity improvements, Island County consistently surveys the County roadway system for safety problems and maintains a list of these safety problems and associated improvements to correct these problems. These safety problems include high accident areas, sight distance problems due to horizontal and vertical curves, guardrails, shoulder widths, slide areas, lane widths and roadway stability. This information is used by County officials to determine where safety concerns exist, investigate the particular safety concern and develop the proper solutions.

As a result of these surveys and investigations, Island County has proposed a list of safety improvements to be implemented over the next six years. These improvements range from minor safety improvements, roadway and shoulder widenings, horizontal and vertical realignments, installation of guardrails and retaining walls, intersection channelization and signalization. Specific safety improvements are documented in Island County's 2001 - 2006 *Transportation Improvement Program (TIP)*.

WSDOT has also identified several safety improvements for state highways in Island County. These improvements are summarized in their *State Highway System Plan 1999-2018*.

Scenic Corridors and Highways

For many roadways in the State, scenic resources have already been identified through WSDOT's Scenic Highways Program. A total of 1,918 miles have been designated as scenic highways and another 1,360 miles have been determined to be eligible. The only legislative requirement for highways with Scenic and Recreational designation is on 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 as ordinances. In Island County, SR 20 and SR 525 have been designated as scenic highways by WSDOT. These state facilities are also included in WSDOT's *Heritage Corridor Program*, as defined in their April 1995 Report to the Washington State Legislature.

In addition to the state program, Island County has defined its Scenic Corridors Program. A scenic corridor pertains to the land on the sides of roadways that is generally visible to the public traveling on such roads and characterized by views and vistas of unusual natural significance in the County. A scenic corridor would allow for the full use of its right-of-way for road and utility purposes without restraints to design and safety standards. Capacity, safety and maintenance needs would not be compromised in the viewing of surrounding land/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. Design Guidelines

should be prepared for developments within scenic corridors with priority given to developments within designated historic districts or reserves.

Access Management and Roadside Buffers for the State Highway System

Access Management Program: The goal of the state highway Access Management Program is to minimize the impact of developments on the state highway system by managing the number of access points on to state highways. Access classification for all state highways have been established through negotiations with local jurisdictions in accordance with state law (RCW Chapter 47.50). The State has developed a five-point access management classification system in WAC 468-52 in addition to the “full” access control found on freeways and expressways. These classification levels are used to distinguish between different roadway functional characteristics and land use forms. Access management classes are numbered 1 to 5, with Class 1 being the most restrictive and Class 5 being the least restrictive.

In the case of Classes 1 and 2, if alternative access to properties via non-state highways is available, then no access is provided directly to the state highways. Classes 3, 4 and 5 progressively balance land use with the through-function of the state highways and allow more access points to the state highways. Classes 4 and 5 allow the most closely spaced access and generally apply to lower speed highways in urban areas, or areas that have been developed to relatively built-out condition.

In Island County, the following access classifications have been assigned to the state highways:

HIGHWAY	From MP	To MP	SECTION DESCRIPTION	ACCESS CLASS
SR 20	12.91	29.74	Keystone Ferry Terminal to Miller Rd.	2
SR 20	29.74	33.70	Miller Rd. to Oak Harbor North city limits	4
SR 20	33.70	41.00	Oak Harbor North city limits to Deception Pass State Park	2
SR 20	41.00	43.17	Deception Pass State Park	1
SR 525	8.36	10.32	Clinton Ferry Terminal to Campbell Rd.	4
SR 525	10.32	17.28	Campbell Rd. to Scott Rd.	2
SR 525	17.28	18.14	Scott Rd. to Freeland Ave.	Controlled
SR 525	18.14	24.29	Freeland Ave. to Greenbank	2
SR 525	24.29	25.64	Greenbank	3
SR 525	25.64	30.49	Greenbank to SR 20	2
SR 532	0.00	3.80	East Camano Dr. to Stanwood city limits	2

Source: WSDOT Northwest Region, Mount Baker Area

Roadside Buffer Program: The state highway Roadside Classification Plan provides information on the strategies and activities for the planning, construction and maintenance of state highway roadsides. The roadside classifications are divided into two categories: natural and built. Natural character includes forest and open. Built character includes rural, semiurban and

urban. The roadside classifications or buffers are based on the percentage of natural or built elements within a view from the highway. These various classes are briefly summarized below:

- ◆ A forest landscape is defined as predominately natural or naturalized forest with natural-appearing landforms.
- ◆ Open has natural-appearing landforms and low-growing native vegetation or agricultural crops associated with adjacent farming.
- ◆ A rural landscape is characterized by an intermix of built and natural or naturalized elements with the natural elements prevailing.
- ◆ The semi-urban landscape is transitional in character and has an intermix of built and natural or naturalized elements with a higher percentage of built elements than natural.
- ◆ The urban landscape is a predominately built environment with vegetation that is mostly non-native.

In Island County, the following roadway classifications have been assigned to the state highways:

HIGHWAY	From MP	To MP	ROADWAY CLASS	HIGHWAY	From MP	To MP	ROADWAY CLASS
SR 20	12.50	13.50	Rural	SR 20	30.84	31.34	Semiurban
SR 20	13.50	15.00	Open	SR 20	31.34	31.74	Urban
SR 20	15.00	17.92	Forest	SR 20	31.74	33.74	Semiurban
SR 20	17.92	23.33	Rural	SR 20	33.74	39.75	Rural
SR 20	23.33	25.23	Forest	SR 20	39.75	41.90	Forest
SR 20	25.23	30.84	Rural	SR 532	0.00	3.80	Rural
SR 525	8.36	9.46	Semiurban	SR 525	18.96	23.46	Forest
SR 525	9.46	13.76	Forest	SR 525	23.46	26.47	Rural
SR 525	13.76	18.96	Rural	SR 525	26.47	30.47	Forest

Source: WSDOT Northwest Region, Mount Baker Area

Truck Routes

As part of the 1995 statewide *Freight and Goods Transportation System (FGTS) Study* conducted by WSDOT in cooperation with Island County, several state and county roadways within Island County were identified as important freight roadways. These roadways are designated as part of the statewide freight and goods transportation system for the Washington State Transportation Commission.

These county arterials and state highways are classified as truck route classes T-1 through T-5 based on the annual gross tonnage hauled over the roadways in accordance to the following criteria established by the Transportation Analysis Group:

<u>Truck Route Class</u>	<u>Annual Gross Tonnage</u>
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

In Island County, the designated roadways/facilities include three state highways, two state ferry connections and 25 county roadways, as listed in Table V-4. The overall FGTS in Washington is currently being reviewed and updated by WSDOT and Island County.

**TABLE V-4
ROADWAY CLASSIFICATION FOR FREIGHT AND GOODS TRANSPORTATION**

ROAD NAME	FROM	TO	ROAD NUMBER	SEGMENT LENGTH	FGTS 'T' Class
STATE FACILITIES					
SR 20	Deception Pass	Oak Harbor Limits(N)	SR20	8.20 mi.	T-3
SR 20	Oak Harbor Limits(S)	SR 525	SR20	14.37 mi.	T-3
SR 20	SR 525	Keystone Ferry	SR20	3.42 mi.	T-4
SR 525	SR 20	Clinton Ferry	SR525	20.56 mi.	T-3
SR 532	East Camano Dr.	County Line	SR532	2.91 mi.	T-3
Mukilteo/Clinton Ferry (SR 525)	Mukilteo	Clinton	SR525	NA	T-3
Kingston/Pt. Townsend Ferry (SR 20)	Kingston	Port Townsend	SR20	NA	T-3
COUNTY FACILITIES					
AULT FIELD ROAD	SR 20	Langley Blvd.		2.12	T-3
BAYVIEW ROAD	Brooks Hill Rd.	SR 525		2.44	T-4
BROOKS HILL ROAD	Langley City Limits	Bayview Rd.		1.18	T-4
E. CAMANO ROAD	Sunrise Blvd.	Camano Hill Rd.		2.41	T-4
FAKKEMA ROAD	SR 20	Taylor rd.		1.00	T-4
GOLDIE ROAD	Oak Harbor City Limits	Ault Field Rd.		0.76	T-3
HELLER ROAD	Crosby Rd.	Ault Field Rd.		1.31	T-4
HENNI ROAD	Vanderwell Rd.	Imperial Lane		0.24	T-4
HOFFMAN ROAD	SR 20	0.26 mi. S. of Sleeper Rd.		0.37	T-5
IMPERIAL LANE	Jones Rd.	Henni Rd.		0.25	T-4
JONES ROAD	SR 20	0.30 mi. NE of SR 20		0.30	T-4
LANGLEY ROAD	SR 525	Langley City Limits		2.89	T-4
MAIN STREET	Fish Rd.	Newman Rd.		0.59	T-4
MAXWELTON ROAD	Langley Rd.	SR 525		1.97	T-4
N. CAMANO ROAD	W. Camano Dr.	E. Camano Dr.		3.99	T-4
OAK HARBOR ROAD	Oak Harbor City Limits	Ault Field Rd.		1.12	T-3
PATMORE ROAD	SR 20	0.20 mi. after Rhododendron Pl.		0.52	T-4
SCOTT ROAD	SR 525	Main St.		0.26	T-4
SLEEPER ROAD	SR 20	0.80 mi. after BMP of Road		0.32	T-4
SUNRISE BOULEVARD	E. Camano Rd.	N. Camano Rd.		0.22	T-4
TORPEDO ROAD	Crest Harbor Rd.	55 ft. SE of Auvil Rd.		0.40	T-4

VANDERWELL ROAD	Henni Rd.	0.10 mi. N of Henni Rd.		0.10	T-4
W. CAMANO ROAD	N. Camano Dr.	Sunset Dr.		0.18	T-4

Source: *Freight and Goods Transportation Systems Maps*, prepared by WSDOT in 1995

Freight Movements

As part of the Eastern Washington Intermodal Transportation Study (EWITS), a statewide freight truck origin and destination study was conducted to collect statewide freight data. This survey included 30,000 truck driver interviews at 20 separate locations across the state. The results of this survey indicated that the majority of truck traffic originating from or destined to Island County comes from the City of Oak Harbor.

Based on the survey data, total truck traffic to or from Island County ranges from 110 trucks per day in the spring to 65 trucks per day in the fall. It is important to note that short trips and trips that did not pass through the survey points are not included. Common freight categories include agriculture, food, furniture, general freight, lumber and wood, metal products and petroleum. The predominant route for all truck trips include SR 20, SR 525 and SR 532 for all or part of their trip within Island County.

TRANSIT

The Island County Public Transportation Benefit Area (PTBA) received a favorable vote in 1983 when the Oak Harbor and South Whidbey Island residents voted to pay an additional sales tax to fund public transportation. It was extended to include all of Whidbey Island in 1992. Camano Island residents voted to be included in the Island County PTBA in 1995.

On November 2, 1999, voters in the State of Washington approved Initiative 695, which eliminated all Motor Vehicle Excise Taxes (MVET) funding for Island Transit service and other services across the state. Prior to the passage of Initiative 695, MVET represented 60 percent of the annual fixed revenue sources for Island Transit. The dedicated sales tax of three tenths of one percent for transit represented the other 40 percent of annual fixed revenue. Beginning in 2001, Island Transit will no longer receive the sales tax equalization from MVET for system operations.

On May 16, 2000, the voters of Island County approved another three tenths of one percent sales tax for transit, which raised the total dedicated sales tax for Island Transit operations to six tenths of one percent. This vote was an overwhelming majority, supporting existing transit service with no more service cuts.

Island Transit's 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
- ◆ Route Deviation Service
- ◆ Paratransit Service
- ◆ Vanpool Program

- ◆ Ride Matching Programs

The current status of each of these services is presented below.

Fixed Route Service

Fixed Route service began on December 1, 1987 and carried 161 passengers on that first day. By mid May 1988, the average ridership had grown to 700 passengers per day and by mid June 1992, an average of 2,000 daily passengers were carried. Ridership has grown so rapidly that by the end of 1992, Island Transit was approaching the two million passenger mark. During 1999, Island Transit accommodated more than 888,000 unlinked passenger trips.

Basic coverage for Whidbey Island residents is by Island Transit's ten fixed bus routes. These routes are summarized on Figure V-4 and included;

- ◆ Route 1 - Northbound and southbound "spine" routes that connect Oak Harbor, Coupeville, Greenbank, Freeland, Bayview and the Clinton ferry terminal;
- ◆ Route 2 - A West Oak Harbor Loop
- ◆ Route 3 - An East Oak Harbor and;
- ◆ Route 4 - A Deception Pass-Oak Harbor Route;
- ◆ Route 5 - A West Beach Route, connecting Oak Harbor and Coupeville (Saturdays Only Service);
- ◆ Route 6 - A Keystone-Coupeville Route with connections to Oak Harbor along the West beach Route;
- ◆ Route 7 - Langley Northbound and Southbound Routes that connect Langley with Freeland and the Clinton ferry terminal;
- ◆ Route 8 - A Bayview Northbound and Scatchet Southbound Route, connecting Langley with Scatchet Head and the Clinton ferry terminal;
- ◆ Route 9 - An Oak Harbor City shuttle;
- ◆ Route 10 - An Oak Harbor City shuttle.

The main transfer point between all of these routes is Harbor Station, located in the northwest corner of the Bayshore Drive/Dock Street intersection. Generally, service is provided once every hour on most of these routes, except for the Oak Harbor City shuttle which provides half hour service. The service hours are from 3:45 am to 8:30 pm on Monday through Friday and from 7:15 am to 6:38 pm on Saturdays for the Northbound and Southbound Spine Routes and shorter hours for Routes 4 and 10. There is no Sunday or major holiday service. In general, the buses at the Clinton ferry terminal wait until the ferry has docked before departing for the northbound service.

There are also eight park and ride lots serving Whidbey Island. These park and ride lots are located at Ault Field on SR 20 & Hoffman Road; in Coupeville on SR 20 & Main Street; at the Trinity Lutheran Church in Freeland on SR 525 & Woodard Road; in Langley on 4th & Anthes; at Bayview on SR 525 & Bayview Road; on Deer Lake Road at SR 525 & Deer Lake Road; near the Clinton Ferry Terminal at 6372 Harding Avenue; and on Harding Avenue near SR 525.

Two routes are presently used to provide service on Camano Island to Stanwood in Snohomish County. Route 1 - West generally operates along West Camano Drive and North Camano Drive

on Camano Island and uses SR 532 to connect with Stanwood. Route 2 - East generally operates along East Camano Drive with a loop using Cross Island Road, Camano Ridge Road and

Figure V-4 Transit Routes

Camano Hill Road on Camano Island and also uses SR 532 to connect with Stanwood. Each of these routes provides two hour service between 6:55 am and 5:44 pm.

Island Transit's operating statistics and financial indicators for the past ten years are shown on Table V-5.

TABLE V-5
ISLAND TRANSIT OPERATING STATISTICS & FINANCIAL INDICATORS
FIXED ROUTE SYSTEM 1990 - 1999

ANNUAL OPERATING STATISTICS	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Revenue Vehicle Hours (thousands)	17.1	17.9	17.9	20.4	26.6	29.3	36.9	44.5	57.8	67.9
Revenue Vehicle Miles (thousands)	482.0	484.7	484.8	571.7	596.8	758.4	894.6	1,037.2	1,065.4	1,378.2
Unlinked Passenger Trips (thousands)	353.1	418.3	503.1	516.3	543.1	620.4	666.1	729.4	845.5	866.6
Employees (FTEs)	24	24	24	26	27	42.5	50	61	72	71
Passenger Trips/Vehicle Hour	20.7	23.4	28.2	25.3	20.4	21.1	18.1	16.4	14.6	12.8
Passenger trips/Vehicle Mile	0.73	0.86	1.04	0.90	0.91	0.82	0.74	.70	.79	.63
Vehicle Hours/Employee	711	744	744	783	986	691	738	729	802	956

FINANCIAL INDICATORS	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Annual Operating Costs (\$ millions)	\$923.5	\$1,160	\$1,291	\$1,282	\$1,368	\$1,646	\$2,097	\$1,706	\$2,174	\$2,216
Operating Cost/Vehicle Hour	\$54.12	\$64.97	\$72.28	\$62.93	\$51.40	\$56.10	\$56.84	\$38.35	\$37.63	\$32.64
Operating Cost/Passenger Trip	\$2.62	\$2.77	\$2.57	\$2.48	\$2.52	\$2.65	\$3.15	\$2.34	\$2.57	\$2.56
Farebox Revenues *	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Farebox Recovery Ratio *	NA									

* Note: Service on the Island Transit's fixed route system is fare-free.

Source: Island Transit

A review of this table indicates that Island Transit has been steadily increasing ridership while maintaining service levels. Overall, Island Transit's productivity, as measured by passenger trips per vehicle service hour, remained relatively stable between 1990 to 1995. However, in recent

years it has dropped to a low of 12.8 passengers per service hour in 1999 with service area expansions in 1993, 1995 and 1996. However, total operating costs have risen by approximately 140 percent between 1990 and 1999. This increase was primarily due to increased labor costs associated with the increase in service. This is evident from a comparison of the operating cost per vehicle hour factor for 1990 and 1999 which shows an approximate 40 percent decrease while the operating cost per passenger trip has remained relatively stable ranging from a high of \$3.15 per passenger trip in 1996 to a low of \$2.34 in 1997.

The typical make-up of Island Transit's fixed route passengers is dominated by the "youth" group, which comprises approximately 48 percent of the total ridership. This is followed by commuter riders at approximately 38 percent and by senior/disabled riders at approximately 14 percent. This data is based on operators' checks conducted in 1999.

Island Transit service also provides connections to other transportation services, including ferry service at the Clinton and Keystone ferry terminals, Oak Harbor Airpark and with Community Transit in Stanwood. In addition, Island Transit has installed bike racks on all buses for patrons to use on a first come first serve basis.

Route Deviation Service

With the passing of the Revenue Equity Bill in 1996, Island Transit received funds to provide rural route deviation service. This route deviation service began on February 12, 1996. For Island Transit, Route Deviation Service is defined as a fixed route structure designed to allow time for a transit vehicle to deviate upto three-fourths of a mile off the fixed route structure to accommodate eligible persons with disabilities.

Overall, route deviation has increased ridership on the fixed routes and reduced demand for special paratransit service. During weekdays, the following routes are capable of deviating to pick up or drop off eligible persons with disabilities:

- ◆ Route 3 - An East Oak Harbor Loop;
- ◆ Route 4 - A Deception Pass-Oak Harbor Route;
- ◆ Route 6 - A Keystone-Coupeville Park & Ride Route;
- ◆ Route 7 - Langley Northbound and Southbound Routes that connect Langley with Freeland and the Clinton Ferry Terminal;
- ◆ Route 8 - A Bayview Northbound and Scatchet Southbound Route, connecting Langley with Scatchet Head and the Clinton ferry terminal;
- ◆ Route 9 - An Oak Harbor City Shuttle; and
- ◆ Route 10 - An Oak Harbor City Shuttle.

On Saturdays, the following routes are capable of deviating to pick up or drop off eligible persons with disabilities:

- ◆ Route 1-A and 1-B - Spine Route from Clinton to Oak Harbor;
- ◆ Route 4-A - A Deception Pass to Oak Harbor Route; and
- ◆ Route 10 - An Oak Harbor City Shuttle.

Paratransit Service

On March 16, 1992, Island Transit began its paratransit service by providing curb-to-curb service for those persons who are unable, due to a disability or limitation, to use the regular fixed route service. The paratransit service is in compliance with the Americans with Disabilities Act (ADA), signed into law on July 26, 1990. Prior to providing this paratransit service, Island Transit contracted with Island County to provide "Demand Response" service for senior citizens and disabled residents of Island County.

Island Transit's paratransit service operates the same service schedule as their regular fixed route transit service within the PTBA service area. In order to determine eligibility for paratransit service, an application form, based upon criteria established by the federal governmental, must be filled out prior to receiving this service. Eligible riders must call between the hours of 8:00 am and 4:00 pm to arrange pick-up and drop-off, with a minimum of one day advance notice. An answering machine is available for passengers to schedule trips on Sunday for Monday service. Riders may arrange trips up to 14 days in advance. In December of 1992, the service area for paratransit service was expanded to include the northern portion of Whidbey Island.

After the first month of operation, Island Transit's paratransit service carried a total of 7 passengers. By the end of June 1992, the paratransit service carried 127 riders with an average daily ridership of 47 passengers. During 1999, Island Transit accommodated nearly 22,000 unlinked passenger trips on its paratransit service.

The 1992-1999 operating statistics and financial indicators for Island Transit's paratransit service are shown in Table V-6.

TABLE V-6
ISLAND TRANSIT OPERATING STATISTICS & FINANCIAL INDICATORS
PARATRANSIT SERVICE (1992 - 1999)

ANNUAL OPERATING STATISTICS	1992	1993	1994	1995	1996	1997	1198	1999
Revenue Vehicle Hours (thousands)	3.75	5.87	9.27	11.08	11.69	10.82	8.04	7.80
Revenue Vehicle Miles (thousands)	46.83	92.10	127.84	153.94	162.97	139.44	82.58	78.64
Unlinked Passenger Trips (thousands)	14.09	19.00	22.21	25.330	22.96	26.11	24.26	21.40
Employees (FTEs)	4.2	4.5	5.0	5.0	6.5	6.5	6.5	6.0
Passenger Trips/Vehicle Hour	3.8	3.2	2.4	2.3	2.0	2.4	3.0	2.7
Passenger trips/Vehicle Mile	0.30	0.21	0.17	0.16	0.14	0.19	0.29	0.27
Vehicle Hours/Employee	892	1,305	1,854	2,216	1,798	1,664	1,236	1,300

FINANCIAL INDICATORS	1992	1993	1994	1995	1996	1997	1998	1999
Annual Operating Costs (millions)	\$104.7	\$182.3	\$140.6	\$180.2	\$214.7	\$211.9	\$162.0	\$150.4
Operating Cost/Vehicle Hour	\$27.96	\$31.05	\$15.17	\$16.26	\$18.37	\$19.59	\$20.16	\$19.28
Operating Cost/Passenger Trip	\$7.43	\$9.60	\$6.33	\$7.12	\$9.35	\$8.11	\$6.68	\$7.03
Farebox Revenues	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Farebox Recovery Ratio	NA							

Source: Island Transit

Overall, Island Transit's 1999 productivity of paratransit service, as measured by revenue vehicle miles, increased by nearly 67 percent over the 1992 value. At the same time, the 1999 operating costs per vehicle hour has declined by approximately 31 percent as compared to the 1992 value while the operating cost per passenger trip has declines by five percent over 1992 values.

Vanpool Program

In 1988, Island Transit's Board of Directors adopted a vanpool administration policy modeled after the policy developed by the Municipality of Metropolitan Seattle's (Metro) Commuter Pool Program. This policy provides a clear schedule of reimbursements as well as comprehensive rider and driver agreements.

Currently, demand for the program has exceeded the supply and a waiting list for additional service has been prepared. The vanpool program is expected to provide sufficient revenue to meet operating expenses. The 1992-1999 operating statistics and financial indicators for Island Transit's vanpool program are shown in Table V-7.

TABLE V-7
ISLAND TRANSIT OPERATING STATISTICS & FINANCIAL INDICATORS
VANPOOL SERVICE (1992 - 1999)

ANNUAL OPERATING STATISTICS	1992	1993	1994	1995	1996	1997	1998	1999
Revenue Vehicle Miles (thousands of miles)	170.0	197.1	201.1	238.7	283.6	469.2	649.8	698.8
Unlinked Passenger Trips (thousands of trips)	46.1	45.7	43.6	51.8	56.3	86.1	115.6	116.2
Employees (FTEs)	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0
Vans in Operation	9	8	9	11	17	24	33	44
Passenger trips/Vehicle Mile	0.27	0.23	0.22	0.22	0.20	0.18	0.18	0.17

FINANCIAL INDICATORS	1992	1993	1994	1995*	1996	1997	1998	1999
Annual Operating Costs (thousands of dollars)	\$58.0	\$44.5	\$29.4	\$97.1	\$95.4	\$111.1	\$114.3	\$157.2
Operating Cost/Passenger Trip	\$1.26	\$0.97	\$0.67	\$2.01	\$1.690	\$1.29	\$0.99	\$1.35
Farebox Revenues (thousands of dollars)	\$52.4	\$62.2	\$62.2	\$69.3	\$78.2	\$108.2	\$150.0	\$178.5
Farebox Recovery Ratio	90.3%	140.0%	211.2%	71.3%	81.9%	97.4	131.2	113.5

Note: * Increase reflects payments made in 1995 for 1994 vanpool leases.

Source: Island Transit

In 1999, approximately \$178,500 was received in vanpool revenues from the users. This represents an increase of approximately 240 percent over 1992 revenues and amounted to a

monetary recovery ratio of operations of approximately 113.5 percent. Capital costs have not been included in these figures, which explains the high recovery ratio.

Transit Facilities

Island Transit capital facilities include a 6,000 square foot building which houses the administration, operations and regular maintenance functions, located on a 2.5 acre lot. Fueling is done off-site at a local supplier. In addition, there is one major transit station. This station, known as the Harbor Transit Station, is located in Oak Harbor and includes six bus bays, three covered passengers shelters, employee waiting area and restroom facilities, and a community staging area. There are also ten covered bus stops and eight authorized park-and-ride lots, located at the following sites:

- ◆ Clinton Ferry Terminal - 6372 Harding Avenue
- ◆ Clinton Park-n-Ride Lot - SR 525/Deer Lake Rd, with two shelters and 201 parking spaces.
- ◆ Bayview Park-n-Ride Lot - SR 525/Bayview Rd, with one shelter and 72 parking spaces.
- ◆ Freeland Park-n-Ride Lot - Trinity Lutheran Church with a shelter and 50 parking spaces.
- ◆ Greenbank Park-n-Ride Lot -
- ◆ Langley Park-n-Ride Lot - 4th Street/Anthes Avenue, with 15 parking spaces.
- ◆ Coupeville Park-n-Ride Lot - SR 20/S. Main Street, with one shelter and 37 parking spaces.
- ◆ Oak Harbor Park-n-Ride Lot - SR 20/Hoffman Road, with 20 parking spaces.
- ◆ Soundview Park-n-Ride Lot

Transit Vehicles

Island Transit has 38 passenger vehicles used for fixed route, route deviated and paratransit services as of February 2000. These vehicles range in age from two year to 13 years old. In general, vehicles used for regular transit and paratransit service have a useful life of approximately 16 years for fixed route service and 12 years for others.

As of February 2000, Island transit also owns about 20 vehicles for the vanpool fleet. These vanpool vehicles range in age from one year to 10 years old. The vanpool fleet is generally retired after 12 years. There are also about 20 vehicles leased by the State and are used for vanpool service in Island County. Island County also purchased 18 new vehicles for the vanpool fleet in August 2000.

MARINE TRANSPORTATION

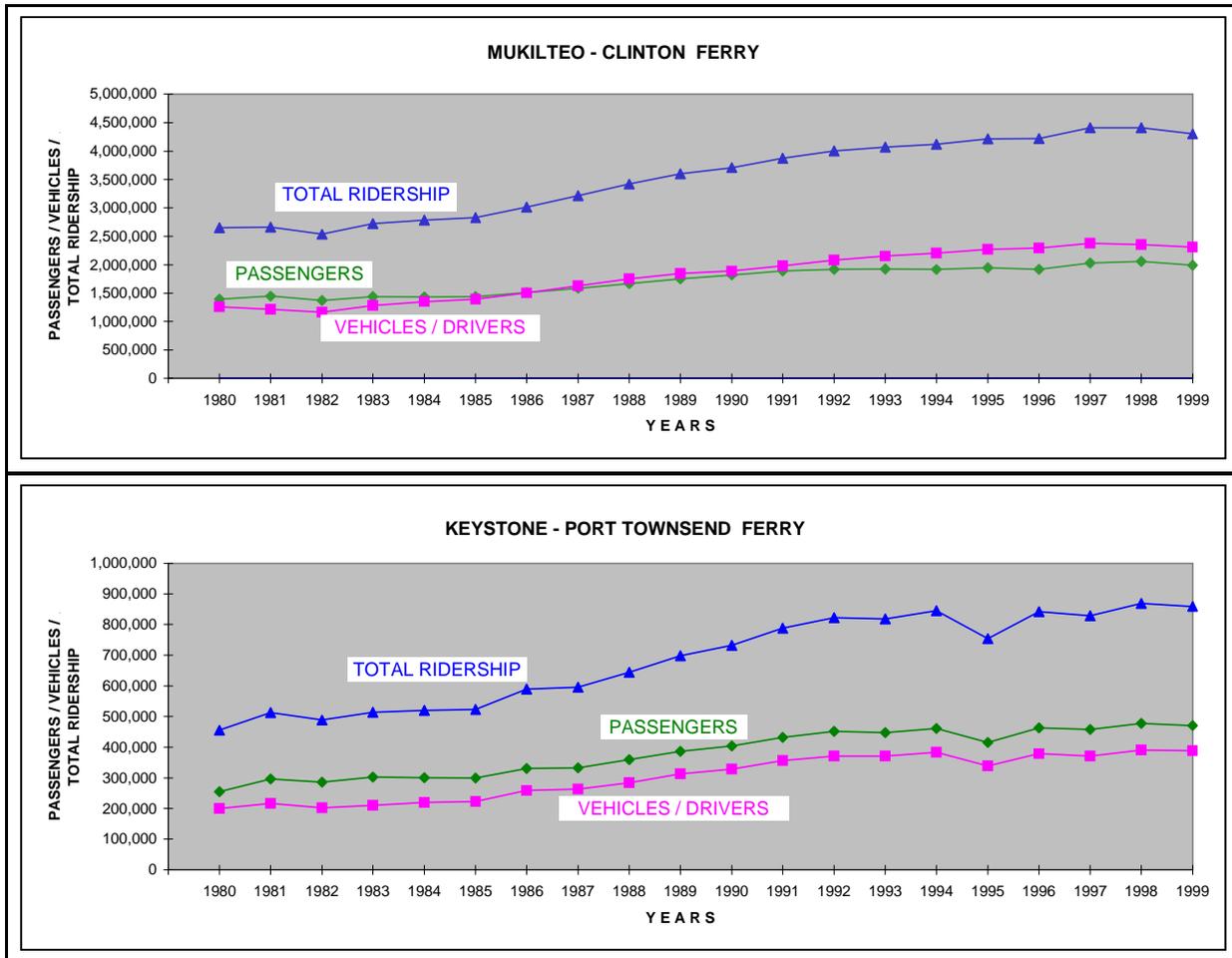
Scheduled ferry service to Island County is provided by the Marine Division of the WSDOT, generally referred to as the Washington State Ferries. This system provides two connections to Whidbey Island with:

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

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

These two routes serve several trip purposes, including recreational-related and tourist trips and commuter-related and business trips. The use of the ferry service to and from Whidbey Island, via the Clinton and the Keystone Terminals from 1980 to 1999, is illustrated on Figure V-5.

**FIGURE V-5
FERRY USE TO WHIDBEY ISLAND - 1980 TO 1999**



Source: Washington State Ferries

Over these 19 years, the vehicle usage has increased by about 83 percent on the Mukilteo - Clinton Ferry and over 93 percent on the Keystone - Port Townsend Ferry.

The total ridership has increased by over 62 percent on the Mukilteo - Clinton Ferry and over 88 percent on the Keystone - Port Townsend Ferry. Since 1986, ferry usage has been increasing at a relatively steady rate.

From a 1996 analysis of the operation of these ferry routes during the PM peak period in May 1996, the number of boat waits for the Clinton - Mukilteo Route and the Keystone - Port

Townsend Route were documented in the *Washington State Ferries Systems Plan for 1999 - 2018 Report*. For both routes, the average number of boat waits during the PM peak period in May 1996 was one or less. This meets the level of service standards for ferry service to Island County, as presented in Section IV.

Table V-8 provides the major physical characteristics of these two routes, including terminal locations, distance, crossing times, and fares.

**TABLE V-8
PHYSICAL CHARACTERISTICS FOR FERRY SERVICE TO WHIDBEY ISLAND**

CHARACTERISTICS	MUKILTEO – CLINTON ROUTE	KEYSTONE - PORT TOWNSEND ROUTE
1. Island Terminal	Clinton Terminal: Southeast Whidbey Island on SR 525 holding capacity – 90 vehicles served by Island Transit	Keystone Terminal: central Whidbey Island on SR 20 holding capacity – 100 vehicles served by Island Transit
2. Mainland Terminal	Mukilteo Terminal: 26 miles north of Seattle, exit # 189 on I-5 holding capacity – 110 vehicles served by Community Transit	Port Townsend Terminal: Northeast Olympic Peninsula on SR 20 holding capacity – 110 vehicles served by Jefferson Transit
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. Vessel Size	Two 130 vehicle boats	two 75 vehicle boats
6. Frequency	40 trips per day, at approximately 30 minute headways.	During the winter season: 8 trips per day, 10 weekends, at approximately 90 to 105 minute headways. During the summer season: 20 trips per day, at 45 to 75 minute headways.
7. Fares	\$4.25 per vehicle and driver \$2.40 per passenger (round trip), higher in peak season	\$6.25 per vehicle and driver \$1.80 per passenger, higher in peak season
8. Ridership (1996)	1,920,500 passengers 2,294,900 vehicles/driver 4,215,400 total ridership	463,500 passengers 378,800 vehicles/driver 842,300 total ridership

Source: Washington State Ferries

Whidbey - Camano Ferry Service

At the present time, there is no scheduled ferry service between Whidbey Island and Camano Island. Over the past decade, there have been discussions about operating both vehicle and passenger-only ferry service between the two islands. In May 1995, the Skagit/Island RTPO sponsored a study, entitled *Investigation of Ferry Service Between Whidbey and Camano Islands*.

This study concluded that there is a strong interest in ferry service to Camano Island. However, since SR 532 and the local county roadway system to potential ferry terminal sites on Camano Island does not support the anticipated increase of potential ferry service from outside Camano Island, the study recommends that no further analysis of vehicle ferry service be made at this time. The study further stated that there is justification for passenger-only ferry service between Whidbey and Camano Islands for inter-island business and governance.

Subsequent to the RTPO Study, a citizen's evaluation committee conducted an investigation into possible public docking sites for a passenger-only ferry terminal on Camano Island. This committee selected a site in the Camano Island State Park for possible joint usage of passenger-only ferry service and recreational docking facilities, as well as fire and safety activities. An important element of the terminal facility would be provisions for transit service to reduce parking needs. At present, the Washington State Parks Department and Island County are exploring this possibility.

In 1998-1999, WSDOT conducted a *North Whidbey Island Access Feasibility Study*. A Ferry Alternative to connect Whidbey Island and Camano Island was analyzed. This study concluded that all ferry alternatives with Camano Island would be fatally flawed without strong support from other modes. This supports the findings from the earlier studies that sited extensive roadway improvements are needed to connect a new terminal on Camano Island with I-5 which are not consistent with the Island lifestyle.

WSDOT is also exploring the possibility of passenger-only ferry service between Whidbey and Camano Islands as part of their *Least Cost Planning Study* of update to the *Island County Sub-Regional Transportation Plan*. Results from this study are not expected until early 2001.

AIR TRANSPORTATION

Currently, there are eight active air facilities located in Island County. Two of these facilities are located on Camano Island and six are located on Whidbey Island. Three of the airfields are small private facilities, three airfields provide commercial services and two are naval airfields. The general characteristics of these facilities, as received from WSDOT's Aeronautics Division, are listed on Table V-9.

TABLE V-9
ISLAND COUNTY 1997 AVIATION FACILITY CHARACTERISTICS

FACILITY	CLASSIFICATION	PAVED RUNWAY	RUNWAY LENGTH (feet)	RUNWAY LIGHTS	INSTRUMENT APPROACH	ANNUAL 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	Military	Yes	5,400	Yes	No	~48,000	unavailable

Field							
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: Aeronautics Division, WSDOT

All of the private air facilities offer general aviation services. Scheduled commuter air service is only offered at Oak Harbor Airpark. Harbor Airlines operates scheduled air service out of this airpark and provides round trip service to Friday Harbor and East Sound airports located on the San Juan Islands and SeaTac Airport. Service to Port Angeles, Bremerton, Astoria and Tacoma Narrows Airport is provided through connecting flights at SeaTac Airport.

Harbor Airlines at Oak Harbor Airpark provides adequate commercial air transportation service to/from Island County. However, the growth in air transportation service is limited by the physical constraints surrounding the airport. The runway is bordered on the east by Scenic Heights Road and on the west by Monroe Landing Road. The north and south sides of the runway are 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, it is used exclusively by military aircraft. Coupeville's Naval Outlying Field is also used exclusively by military aircraft. It is often used by pilots practicing take-offs and landings.

NON-MOTORIZED TRANSPORTATION

Non-motorized transportation is generally comprised of bicycles, pedestrian and equestrian facilities. For the unincorporated areas of Island County, there are only a few separate facilities designed exclusively for non-motorized transportation. Hiking trails are provided in the state parks. There are no separate bicycles and equestrian facilities for general travel by residents and tourists within the unincorporated areas of Island County.

Island County analyzed the supply, demand and need for non-motorized trail development on a countywide basis, as part of their 1995 *Nonmotorized Trails Plan* and determined that there are approximately 323.8 miles of trail facilities in Island County. These facilities are operated and maintained by state, county and other local agencies. The state facilities include on and off road trails maintained by the Washington State Park and Recreation Commission, Department of Natural Resources and Department of Transportation.

The Island County facilities are maintained by the Island County Parks Department and the Public Works Department. Other agencies that maintain non-motorized facilities in Island County include the City of Oak Harbor, the City of Langley, the Town of Coupeville, the Port of South Whidbey and the Dugalla Bay Diking District.

A summary of the non-motorized facilities in Island County is listed in Table V-10.

Pedestrian/Hiking Facilities

Pedestrian movement as a mode of travel is largely limited to urban areas. However there are hiking trails, beach trails and walks along public tidelands that accommodate pedestrians primarily for recreational purposes. These facilities are mostly found in the state and county parks. As summarized in the inventory of non-motorized facilities, there are approximately 77 miles of trails in the various parks in Island County and along public tidelands.

Deficiencies still exist in commercial and urbanized areas where pedestrian facilities can be beneficial to support shopping and schools. In the designated Freeland Urban Growth Center

**TABLE V-10
NON-MOTORIZED FACILITIES IN ISLAND COUNTY**

NON-MOTORIZED FACILITIES		OPERATED/MAINTAINED BY			TOTAL MILES
		STATE	ISLAND COUNTY	OTHER AGENCY	
Walking on a Beach	Miles of public tideland	30.7	2.0	1.0	33.7
Walking in a Park	Miles of trails	40.0	0.4	0.3	40.7
Day Hiking on a Trail	Miles of trails	0.0	3.6	2.8	6.4
SUBTOTAL - WALKING/HIKING	Miles	70.7	6.0	4.1	80.8
Mountain Biking	Miles of trails/areas	35.3	3.6	0.0	38.9
Bicycling on a Trail	Miles of trails	3.0	3.6	3.1	9.7
Bicycling on a Road In a Designated Bicycle Lane	Miles	28.7	0.0	0.0	28.7
Bicycling on a Marked Road Shld.	Miles	16.0	52.9	0.0	68.9
Bicycling on a Marked Roadway	Miles	3.3	0.0	0.0	3.3
Bicycling on an Unmarked Rdwy.	Miles	3.1	76.8	23.6	103.5
SUBTOTAL - BICYCLING	Miles	89.4	136.9	26.7	253.0
EQUESTRIAN TRAILS	Miles of Marked Trails	0.0	0.0	0.8	0.8
TOTAL - NON-MOTORIZED FACILITIES	Miles	160.1	142.9	31.6	334.6

Source: Nonmotorized Trails Plan, Island County, Washington, March 28, 1995.

Deficiencies still exist in commercial and urbanized areas where pedestrian facilities can be beneficial to support shopping and schools. In the designated Freeland Urban Growth Center area, plans have been developed to provide sidewalks along major commercial streets. In addition, some pedestrian facilities at the ferry terminal are being planned in the Clinton Urban Growth Center. School children and pedestrians traveling to public schools located along Maxwellton Road have to use the highway shoulders. In other areas, better pedestrian access to bus stops needs to be developed.

Bicycle Facilities

As part of Island County's 1995 *Nonmotorized Trails Plan*, an inventory of existing bicycle facilities was conducted which indicated that there are approximately 245.8 miles of marked and/or unmarked facilities for bicyclists to use in Island County. Approximately 41 percent of these facilities are designated bicycle lanes or marked roadway shoulders; while more than 42 percent are located on unmarked roadways. Island County maintains and operates about 53 percent of the bicycle facilities on Whidbey and Camano Islands; while the state maintains approximately 36 percent and other agencies maintain the final 11 percent of these bicycle facilities.

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.
 - 1) 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 miles, and
 - e) West Camano Drive from North Camano to Camano Hill for 4.7 miles.
 - 2) On-road bicycle shoulders are provided on:
 - f) East Camano Drive from Camano Hill to Mountain View for 1.5 miles,
 - g) East Camano Drive from Mountain View to West Camano Drive for 7.4 miles,
 - h) Monticello Drive for 1.9 miles,
 - i) North Camano Drive for 4.2 miles, and
 - j) 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 lane, 38.3 miles of bicycle shoulder, and 11.3 miles of designated in-lane bicycle routes.
 - 1) 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 miles,
 - h) Goldie Road for 0.8 miles,
 - i) Heller Road for 1.3 miles,
 - j) Houston Road for 2.6 miles,
 - k) Main Street in Freeland for 0.6 miles, and
 - l) Maxwellton Road between Langley and SR 525 for 1.6 miles.
 - 2) On-road bicycle shoulders are provided on:
 - m) Bayview Road for 2.9 miles,
 - n) Clover Valley Road for 0.7 miles,
 - o) Cornet Bay Road for 0.3 miles,
 - p) Cultus Bay Road for 3.4 miles,
 - q) Honeymoon Bay Road for 3.7 miles,
 - r) North Bluff Road for 2.4 miles,
 - s) Oak Harbor Road for 1.3 miles,
 - t) Reservation Road for 1.6 miles,
 - u) Scott Road for 0.3 miles,
 - v) Silver Lake Road for 3.5 miles,
 - w) Swantown Road for 2.6 miles,
 - x) Troxell Road for 3.4 miles, and
 - y) West Beach Road for 5.9 miles.

- 3) In-lane bicycle routes are designated on:
z) Jones Road for 11.3 miles.

WSDOT has included four classes of bicycle facilities in their *Design Manual*, designed to serve bicyclists. These classes are:

- ◆ **Class I Bikeway (Bike Path)** - A separate trail for principal use for bicycle travel. Bike paths are used to serve corridors not served by streets and highways.
- ◆ **Class II Bikeway (Bike Lane)** - A portion of a highway that is designated with signs and/or pavement markings for preferential bicycle use. Bike lanes are established along streets where there is a significant demand to accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets.
- ◆ **Class III Bikeway (Bike Route)** - A highway that is designated with signs as a bicycle route and is shared with other transportation modes. Bike routes are shared facilities that serve to provide continuity to other bicycle facilities or to designate preferred routes through high bicycle demand corridors.
- ◆ **Class IV Bikeway (Shared Roadway With No Designation)** - A publicly maintained facility that is not designated with signs or pavement markings as a bikeway, but is accessible to bicyclists.

WSDOT has also identified SR 20 and SR 525 as part of their *Master Plan for Statewide Bicycle Corridors* and SR 20 is designated as part of the proposed *Designated Bicycle Touring Routes* in WSDOT's proposed *1993 State Systems Plan*. These plans generally incorporate expanded paved roadway shoulders as bicycle lanes.

During the past decade, signs have been posted on Whidbey Island, identifying the bicycle routes. Informational signs have also been installed at the county line which indicate that bicyclists may be found traveling on many roads throughout the County. In addition, as county and state roadway widening and resurfacing projects were designed and implemented, provisions for, at least, four-foot paved shoulders were included, wherever feasible. However, there are still many roads designated on the bicycle plans that still have minimal or no shoulders.

Equestrian Facilities

Currently, there are no public equestrian facilities located in the unincorporated areas of Island County; however, there is a multi-use Kettles Trail in Coupeville that permits equestrian, bicycle and pedestrian use. There are also some private riding facilities and trails throughout the County and Langley that have separated horseback riding trails, such as along Anderson and Baker Road rights-of-way and within a separate easement through Cedars Trail residential development. In addition, there are exercise and riding areas at the county fairground near Langley.

Many horse owners have asked for an equestrian facility to connect to the county fairground. Riding on the paved shoulders is not beneficial to the horses or the paved surface. A cinder, gravel or dirt trail along selected county roads could be provided for equestrian use.

SECTION VI: FUTURE CONDITIONS

Future year travel forecasts are to be used to provide information on the location, timing and capacity needs of future growth. GMA requires that traffic forecasts for at least ten years be based on the adopted land use plans. To estimate future conditions, Island County has selected year 2006 for analyzing six year improvement needs and year 2020 as its horizon year for future forecasts. Travel impacts for highway, transit and marine modes are discussed below.

ROADS AND HIGHWAYS

To develop future year conditions, a six year horizon (year 2006) and a long term horizon (year 2020) estimates of travel demand on the arterial network for Island County were made using growth factors developed from the socio-economic and land-use forecasts, presented in Chapter III and converted to highway vehicle trips using current trip generation rates. The vehicle trips were then distributed to the traffic analysis zones developed for Island County and assigned to the arterial network. The process used in forecasting future travel demand estimates is summarized in Appendix B. Information on county roads, state highways, other roads with transit routes and intersections is presented below.

County Roads and State Highways

The travel demand forecasting process uses the permanent population and employment estimates, previously presented. The results of the forecasting process indicate that average daily traffic growth on county roads and state highways in Island County will increase by approximately 28 percent between 1996 to 2006 and by approximately 70 percent by year 2020. These values represent average annual growth rates of approximately 2.5 percent and 2.2 percent per year over 1996 traffic.

During the summer months when seasonal population and tourist trips are most noticeable in Island County, traffic congestion increases considerably. However, seasonal traffic data is not available for all roadways in Island County. As a result, average daily traffic estimates were used to analyze the current and future year traffic conditions on a peak hour basis. For cases where the level of service rating is near the threshold values, the higher level of service rating was assigned to the roadway section during the analysis process since seasonal traffic congestion is higher than average daily traffic conditions.

County Roads: - The 1996, 2006 and 2020 average daily traffic and level of service ratings for county arterials in Island County are summarized on Table VI-1. In addition, 1992 level of service ratings are shown for comparative purposes. Displayed on Figures VI-1 and VI-2 are the expected 2006 and 2020 roadway level of service conditions on Whidbey and Camano Islands.

By 2006, there were three county roads with levels of service lower than LOS 'C' in rural areas and lower than LOS 'D' in urban areas. Of these roadways, only East Camano Drive between SR 532 and Camano Hill Road is expected to decrease its level of service rating between 1992 and 2006. However, the expected level of service rating for this roadway is not expected to be lower than the LOS 'E' standard adopted for this section of the roadway. The section of East Camano

Drive between Camano Hill Road and Monticello Drive is also expected to be at or near the level of service threshold by 2006.

**TABLE VI-1
EXISTING AND FUTURE COUNTY ROADWAY VOLUMES AND LEVEL OF SERVICE IN ISLAND COUNTY**

ROAD NAME	FROM	TO	LANES	SHLD WIDTH	SEGMENT LENGTH	1992 LOS	1996		2006		2020	
							ADT	LOS	ADT	LOS	ADT	LOS
ARNOLD RD.	SR 20	Monroe Landing Rd.	2 und	6 ft.	1.63 mi.	A	740	A	1,120	A	1,830	B
AULT FIELD RD.	Heller Rd.	SR 20	2 und/part twtlt	8 ft.	2.12 mi.	E ²	12,880	E ²	14,960	E ²	17,350	E ²
BAILEY RD.	French Rd.	Cultus Bay Rd.	2 und	6 ft.	2.21 mi.	A	1,000	A	1,010	A	1,080	A
BANTA RD.	SR 20	Morran Rd.	2 und	7 ft.	0.25 mi.	A	2,240	B	2,750	B	2,980	B
BAYVIEW RD.	Brooks Hill Rd.	SR 525	2 und	7 ft.	2.44 mi.	B	3,810	B	4,120	B/C	5,290	C
BAYVIEW RD.	SR 525	Ewing Rd.	2 und	3 ft.	2.28 mi.	A	1,220	A	1,440	A	1,990	B
BOB GALBREATH RD.	Surface Rd.	SR 525	2 und	3 ft.	1.98 mi.	A	1,030	A	1,430	A	2,240	B
BROOKS HILL RD.	Bayview Rd.	Langley City Limits	2 und	10 ft.	1.18 mi.	B	3,030	B	3,170	B	3,660	B
BUSH POINT RD.	SR 525	Smugglers Cove Rd.	2 und	6 ft.	2.73 mi.	B	3,230	B	4,260	B/C	6,140	C
CAMANO HILL RD.	West Camano Dr.	East Camano Dr.	2 und	6 ft.	3.42 mi.	A	2,670	B	3,200	B	4,260	B/C
CLOVER VALLEY RD.	Golf Course Rd.	Ault Field Rd.	2 und	7 ft.	0.74 mi.	B	2,180	B	3,450	B/C ²	4,480	C
CORNET BAY RD.	SR 20	Cornet	2 und	4 ft.	1.12 mi.	A	950	A	1,490	A	2,140	B
CRESCENT HARBOR RD.	Regatta Dr.	Taylor Rd.	2 und	6 ft.	1.85 mi.	C	6,920	C/D ²	7,630	D ²	8,560	D ²
CRESCENT HARBOR RD.	Taylor Rd.	Reservation Rd.	2 und	5 ft.	1.62 mi.	B	2,690	B ²	3,170	B ²	3,700	B ²
CROSBY RD.	West Beach Rd.	Oak Harbor City Limits	2 und	5 ft.	1.99 mi.	B	1,710	B ²	3,190	B ²	6,240	C ²
CROSS ISLAND RD.	East Camano Rd..	West Camano Dr.	2 und	5 ft.	2.51 mi.	B	2,450	B	3,530	B	5,180	C
CULTUS BAY RD.	Possession Dr.	French Rd.	2 und	2 ft.	2.37 mi.	B	2,320	B	3,520	B	4,820	C
CULTUS BAY RD.	French Rd.	SR 525	2 und	6 ft.	2.38 mi.	B	3,270	B	4,870	C	7,390	C
DALLMAN ROAD	West Camano Dr.	East Camano Dr.	2 und	1 ft.	0.72 mi.	A	160	A	200	A	340	A
DEER LAKE RD.	Cultus Bay Rd.	SR 525	2 und	6 ft.	2.27 mi.	B	2,070	B	2,760	B	3,540	B
EAST CAMANO DR.	SR 532	Cross Island Rd.	2 und	8 ft.	1.01 mi.	D	11,660	D ³	16,160	E ³	23,100	F ³
EAST CAMANO DR.	Cross Island Rd.	Camano Hill Rd.	2 und/twtlt	8 ft.	1.40 mi.	C	10,080	D ³	13,590	D/E ³	18,650	E ³
EAST CAMANO DR.	Camano Hill Rd.	Monticello Dr.	2 und	6 ft.	3.34 mi.	C	6,240	C ³	8,530	C ³	11,600	D ³
EAST CAMANO DR.	Monticello Dr.	Mountain View Ave.	2 und	8 ft.	1.93 mi.	A	2,290	B	3,280	B	4,430	B/C
EAST CAMANO DR.	Mountain View Ave.	Dallman Rd.	2 und	4 ft.	4.34 mi.	A	1,310	A	2,070	B	2,660	B
EAST HARBOR RD.	Main St.	Brainers Rd.	2 und	2 ft.	5.28 mi.	B	3,280	B	3,970	B	5,220	C
ELGER BAY RD.	South Camano Dr.	Monticello Dr.	2 und/twtlt	9 ft.	1.93 mi.	B	2,750	B	3,290	B	4,240	B
ENGLER RD.	Keystone Ferry	SR 20 (Coupeville)	2 und	4 ft.	3.46 mi.	A	1,600	A/B	2,080	B	2,820	B

TABLE VI-1 Continued
EXISTING AND FUTURE COUNTY ROADWAY VOLUMES AND LEVEL OF SERVICE IN ISLAND COUNTY

ROAD NAME	FROM	TO	LANES	SHLD WIDTH	SEGMENT LENGTH	1992 LOS	1996		2006		2020	
							ADT	LOS	ADT	LOS	ADT	LOS
EWING RD.	Bayview Rd.	Sills Rd.	2 und	3 ft.	0.40 mi.	A	1,140	A	1,240	A	1,530	A
FAKKEMA RD.	SR 20	Taylor Rd.	2 und	7 ft.	1.52 mi.	B	4,210	B	4,800	C	5,390	C
FORT NUGENT RD.	West Beach Rd.	Oak Harbor City Limits	2 und	7 ft.	1.17 mi.	B	3,350	B	4,310	B	5,640	C
FRENCH RD.	Sills Rd.	Cultus Bay Rd.	2 und	3 ft.	1.98 mi.	A	1,200	A	1,340	A	1,690	A/B
FROSTAD RD.	SR 20	Taylor Rd.	2 und	3 ft.	1.22 mi.	A	1,480	A	1,750	B	2,150	B
GOLDIE RD.	Ault Field Rd.	Oak Harbor City Limits	2 und/tw/lt	4 ft.	0.76 mi.	E ²	11,150	E ²	12,250	E ²	13,310	E ²
GOLF COURSE RD.	Clover Valley Rd.	Crosby Rd.	2 und	3 ft.	1.02 mi.	A	1,540	A	2,810	B	3,840	B
GOOD RD.	SR 532	Utsalady Rd.	2 und	3 ft.	1.32 mi.	A	730	A	1,240	A	2,490	B
HARBOR AVE.	SR 525	Main St.	2 und	8 ft.	0.14 mi.	B ²	2,740	B ²	4,040	C ²	6,080	C ²
HELLER RD.	Clover Valley Rd.	Oak Harbor City Limits	2 und	8 ft.	1.75 mi.	D ²	7,560	D ²	9,090	D ²	11,320	D ^{2,3}
HOUSTON RD.	SR 525	North Bluff Rd.	2 und	4 ft.	2.58 mi.	A	230	A	250	A	520	A
JONES RD.	SR 20	Troxell Rd.	2 und	3 ft.	4.43 mi.	A	1,230	A	1,550	A	1,840	B
LANGLEY RD.	SR 525	Maxwelton Rd.	2 und	5 ft.	2.58 mi.	B	3,180	B	4,230	B/C	5,380	C
LANGLEY RD.	Maxwelton Rd.	Langley City Limits	2 und	6 ft.	0.31 mi.	C ²	4,680	C ²	6,920	C/D ²	8,760	D ²
LIBBEY RD.	SR 20	West Beach Rd.	2 und	6 ft.	0.57 mi.	A/B	1,780	B	2,200	B	3,200	B
LOWELL POINT RD.	West Camano Dr.	Camano Island Park Rd	2 und	3 ft.	0.66 mi.	A	350	A	400	A	490	A
MADRONA WY.	SR 20	Coupeville Town Limits	2 und	2 ft.	2.76 mi.	A	1,580	A	1,690	A/B	1,860	B
MAIN ST. (Freeland)	Fish Rd.	Newman Rd.	2 und	8 ft.	0.59 mi.	C ²	6,010	C ²	6,570	C/D ²	7,760	D ²
MAXWELTON RD.	Langley Rd.	SR 525	2 und	8 ft.	1.97 mi.	B	4,340	B/C	5,910	C	7,570	C
MAXWELTON RD.	SR 525	French Rd.	2 und	5 ft.	3.57 mi.	A	1,230	A	1,520	A	1,940	B
MONROE LANDING RD.	SR 20	Arnold Rd.	2 und	2 ft.	1.27 mi.	A/B	1,680	A/B	2,450	B	4,170	B
MONTICELLO DR.	West Camano Dr.	East Camano Dr.	2 und	4 ft.	1.88 mi.	A	1,600	A/B	2,290	B	2,920	B
MOUNTAIN VIEW RD.	West Camano Dr.	East Camano Dr.	2 und	4 ft.	0.76 mi.	A	1,350	A	1,980	B	2,540	B
NORTH BLUFF DR.	Houston Rd.	SR 525	2 und	4 ft.	2.42 mi.	A	750	A	790	A	1,060	A
NORTH CAMANO DR.	SR 532	Sunrise Blvd.	2 und	2 ft.	0.33 mi.	B	3,120	B	5,060	C	6,730	C
NORTH CAMANO DR.	Sunrise Blvd.	Arrowhead Rd.	2 und	4 ft.	0.92 mi.	B	2,940	B	4,830	C	6,570	C
NORTH CAMANO DR.	Arrowhead Rd.	Maple Grove Rd.	2 und	4 ft.	2.04 mi.	B	2,600	B	3,430	B	4,860	C
NORTH CAMANO DR.	Maple Grove Rd.	West Camano Dr.	2 und	4 ft.	0.70 mi.	B	1,830	B	2,390	B	3,440	B

TABLE VI-1 Continued
EXISTING AND FUTURE COUNTY ROADWAY VOLUMES AND LEVEL OF SERVICE IN ISLAND COUNTY

ROAD NAME	FROM	TO	LANES	SHLD WIDTH	SEGMENT LENGTH	1992 LOS	1996		2006		2020	
							ADT	LOS	ADT	LOS	ADT	LOS
OAK HARBOR RD.	Ault Field Rd.	Oak Harbor City Limits	2 und	5 ft.	1.12 mi.	C ²	5,090	C ²	6,810	C/D ²	8,390	D ²
PARKER RD.	SR 20	Coupeville Town Limits	2 und	6 ft.	1.64 mi.	A	790	A	1,370	A	2,340	B
POLNELL RD.	Reservation Rd.	Strawberry Point Rd.	2 und	5 ft.	1.64 mi.	A	1,060	A	1,230	A	1,450	A
RESERVATION RD.	Crescent Harbor Rd.	Polnell Rd.	2 und	4 ft.	1.56 mi.	A	1,350	A	1,830	B	2,360	B
SANDY POINT RD.	Langley Rd.	Wilkinson Rd.	2 und	2 ft.	0.84 mi.	A	1,020	A	1,730	B	2,610	B
SARATOGA RD.	Amble Rd.	Langley City Limits	2 und	2 ft.	4.48 mi.	A	1,340	A	1,850	B	2,340	B
SCOTT RD.	Newman Rd.	SR 525	2 und	6 ft.	0.26 mi.	B	2,140	B ²	2,730	B ²	4,130	B ²
SILLS RD.	Ewing Rd.	French Rd.	2 und	2 ft.	0.40 mi.	A	940	A	1,000	A	1,460	A
SILVER LAKE RD.	Taylor Rd.	Strawberry Point Rd.	2 und	6 ft.	3.47 mi.	B	2,310	B	2,420	B	2,580	B
SMUGGLERS COVE RD.	SR 525	Bush Point Rd.	2 und	6 ft.	7.03 mi.	B	2,560	B	3,050	B	3,680	B
STRAWBERRY POINT RD.	Silver Lake Rd.	Polnell Rd.	2 und	2 ft.	2.25 mi.	A	420	A	440	A	490	A
SUNSET DR.	West Camano Dr.	West Camano Dr.	2 und	4 ft.	3.92 mi.	A	750	A	1,020	A	1,200	A
SWANTOWN RD.	West Beach Rd.	Oak Harbor City Limits	2 und	4 ft.	1.92 mi.	B	2,760	B ²	3,120	B ²	4,370	C ²
TAYLOR RD.	Crescent Harbor Rd.	Fakkema Rd.	2 und	3 ft.	1.30 mi.	B	2,740	B	3,210	B	3,530	B
TAYLOR RD.	Fakkema Rd.	Frostad Rd.	2 und	5 ft.	2.23 mi.	A	750	A	1,250	A	1,800	B
TROXELL RD.	SR 20	Jones Rd.	2 und	5 ft.	3.38 mi.	A	1,170	A	1,470	A	1,760	B
UTSALADY RD.	Good Rd.	Arrowhead Rd.	2 und	3 ft.	2.48 mi.	A	560	A	1,010	A	1,990	B
WEST BEACH RD.	Libbey Rd.	Hastie Lake Rd.	2 und	5 ft.	2.31 mi.	A	1,280	A	1,770	B	2,770	B
WEST BEACH RD.	Hastie Lake Rd.	Fort Nugent Rd.	2 und	5 ft.	1.54 mi.	B	2,030	B	2,470	B	3,410	B
WEST BEACH RD.	Fort Nugent Rd.	Crosby Rd./Swantown Rd.	2 und	5 ft.	2.02 mi.	B	1,730	B	2,670	B	4,570	C
WEST CAMANO DR.	North Camano Dr.	Madrona Beach Rd.	2 und	5 ft.	2.61 mi.	A	1,060	A	1,750	B	3,190	B
WEST CAMANO DR.	Madrona Beach Rd.	Camano Hill Rd.	2 und	6 ft.	2.06 mi.	A	1,030	A	1,630	A/B	2,730	B
WEST CAMANO DR.	Camano Hill Rd.	Elger Bay Rd.	2 und	5 ft.	5.01 mi.	A	1,160	A	1,810	B	2,690	B
SOUTH CAMANO DR.	Elger Bay Rd.	Dallman Rd.	2 und	4 ft.	4.34 mi.	A	1,400	A	1,700	A/B	2,420	B
WILKINSON RD.	Sandy Point Rd.	Surface Rd.	2 und	4 ft.	2.40 mi.	A	620	A	1,130	A	2,020	B

Abbreviations:

und = undivided road

div = divided road

twlwl = two-way left turn lane

LOS = level of service

ADT = annual daily traffic

Notes:

¹ Based on ARM (Actual Route Miles) from State Highway logs² Based on Urban Area analysis; all other segments based on Rural Area analysis.

³ Based on detailed analysis of specific roadway characteristics.
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Figure VI-1 - 2006 LOS

Figure VI-2 - 2020 LOS

By 2020, there were five county roadway segments with levels of service lower than LOS 'C' in rural areas and lower than LOS 'D' in urban areas. These areas are summarized below.

ROAD	FROM	TO	2020 LOS	LOS STANDARD
◆ Ault Field Rd.	Heller Rd.	SR 20	E	E
◆ E. Camano Dr.	SR 532	Cross Island Rd.	F	E
◆ E. Camano Dr.	Cross Island Rd.	Camano Hill Rd.	E	E
◆ E. Camano Dr.	Camano Hill Rd.	Monticello Dr.	D	C
◆ Goldie Rd.	Ault Field Rd.	Oak Harbor city limits	E	E

Of these roadway segments, only the two segments of East Camano Drive between SR 532 and Cross Island Road and between Camano Hill Road and Monticello Road do not meet the adopted LOS standards, as previously discussed. Improvements to these areas will be needed by 2020 to maintain the adopted level of service standards for county arterials.

State Highways - The 1998, 2006 and 2020 annual average daily traffic (AADT) and ACR ratings for various sections of state highways in Island County are summarized on Table VI-2. This data was developed by using the 1998 AADT traffic counts developed by WSDOT and adding the expected growth, adjusted to a 1998 base year, to each segment from the Island County travel forecasting model based on expected land uses.

ACR ratings for state highways on Whidbey Island and Camano Island were estimated using the *WTP's* Travel Delay Methodology. Various modifications were made to the preliminary total capacity developed by WSDOT to reflect existing and future year conditions on state highways in Island County. These modifications include lane width and shoulder width adjustments, existing and future signal locations and their impact area, green time levels and saturated flow rates. Additional changes were also made to reflect the capacity calculation procedures outlined in the *1994 Highway Capacity Manual* for two lane highways. The ACR ratings for the state highways are also displayed Figures VI-1 and VI-2 for years 2006 and 2020, respectively.

By 2006, only the SR 532 segment from East Camano Drive to the Island County limits is expected to exceed the level of service standards being used by Island County, as outlined in Section IV. These level of service standards are ACR-10 for rural areas and ACR -12 for urban and heavily traveled corridors.

The weighted average 2006 ACR ratings for the approved state highway corridors in the unincorporated areas of Island County are listed below:

- ◆ SR 20 from the Keystone Ferry Terminal to Oak Harbor south city limits - ACR = 5.2
- ◆ SR 20 from Oak Harbor north city limits to the Deception Pass Bridge - ACR = 10.6
- ◆ SR 525 from the Clinton Ferry Terminal to SR 20 - ACR = 6.1
- ◆ SR 532 from East Camano Drive to Stanwood west city limits - ACR = 12.2

Of these state highway corridors in the unincorporated areas of Island County, the SR 532 segment west of Stanwood is not expected to meet the ACR standard of 10 for rural area by

2006. Additional analyses of possible capacity improvements for SR 532 are needed to meet the level of service standards by 2006. WSDOT is the lead agency for these improvements.

**TABLE VI-2
EXISTING AND FUTURE STATE ROADWAY VOLUMES AND ACR RATINGS IN ISLAND COUNTY**

ROAD NAME	FROM	TO	FROM MP ¹	TO MP ¹	SEGMENT LENGTH ²	LANES	1998 SIGNAL	1998 CAPACITY	1998 AADT ³	1998 ACR ⁴	2006/20 SIGNAL	2006/20 CAPACITY	2006 AADT ³	2006 ACR ⁴	2020 AADT ³	2020 ACR ⁴
SR 20	Keystone Ferry Landing	SR 525 / Race Rd.	12.88	16.33	3.45	2 und	NA	1,610	1,100	0.7	NA	1,610	1,500	0.9	2,100	1.3
SR 20	SR 525 / Race Rd.	Parker Rd.	16.33	19.24	2.91	2 und	NA	1,370	6,100	4.5	NA	1,370	7,400	5.4	10,100	7.4
SR 20	Parker Rd.	West of Jacobs Rd.	19.24	20.65	1.41	2 und	NA	1,590	7,600	4.8	NA	1,590	8,800	5.5	11,200	7.0
SR 20	West of Jacobs Rd.	Main St. – Coupeville	20.65	21.74	1.09	2 und	1	1,690	7,600	4.4	1	1,690	9,000	5.3	11,500	6.8
SR 20	Main St. - Coupeville	Wind Dancer Pl.	21.74	22.60	0.86	2 und	NA	1,900	9,400	4.7	NA	1,900	11,600	6.1	15,500	8.2
SR 20	Wind Dancer Pl.	Libbey Rd.	22.60	25.23	2.63	2 und	NA	1,870	10,100	5.4	NA	1,870	12,300	6.6	16,200	8.7
SR 20	Libbey Rd.	Miller Rd.	25.23	29.61	4.38	2 und	NA	1,870	9,600	5.1	NA	1,870	11,600	6.2	14,900	8.0
SR 20	Miller Rd.	Oak Harbor South Limits	29.61	30.76	1.15	2 und	NA	1,750	14,100	7.5	NA	1,750	17,200	9.8	22,400	12.8
SR 20	Oak Harbor North Limits	South of Ault Field Rd.	33.96	34.61	0.65	2 und	NA	1,860	17,500	9.2	NA	1,860	20,300	10.9	23,800	12.8
SR 20	South of Ault Field Rd.	North of Sleeper Rd.	34.61	35.75	1.14	2 und	1	1,940	17,600	8.7	1	1,940	21,600	11.1	26,700	13.8
SR 20	North of Sleeper Rd.	South of Frostad Rd.	35.75	36.29	0.54	2 und	NA	1,830	16,500	9.0	NA	1,830	20,300	11.1	25,100	13.7
SR 20	South of Frostad Rd.	South of Jones Rd.	36.29	37.01	0.72	2 und	NA	2,040	16,800	8.2	NA	2,040	20,900	10.2	26,100	12.8
SR 20	South of Jones Rd.	South of Monkey Hill Rd.	37.01	37.63	0.62	2 und	NA	1,930	14,300	7.4	NA	1,930	18,100	9.4	23,000	11.9
SR 20	South of Monkey Hill Rd.	Troxell Rd.	37.63	39.67	2.04	2 und	NA	1,680	13,800	8.2	NA	1,680	18,100	10.8	23,500	14.0
SR 20	Troxell Rd.	Deception Pass Bridge	39.67	41.79	2.12	2 und	1	1,740	14,200	7.9	1	1,740	18,400	10.6	24,600	14.1
SR 525	Clinton Ferry Landing	West of Conrad St.	8.72	8.92	0.20	5 und	1	3,200	6,900	1.7	1	3,200	8,800	2.8	11,100	3.5
SR 525	West of Conrad St.	West of Cedar Vista Dr.	8.92	10.29	1.37	4 und	NA	4,700	9,100	1.8	NA	4,700	10,700	2.3	13,200	2.8
SR 525	West of Cedar Vista Dr.	East of Campbell Rd.	10.29	10.46	0.17	3 und	NA	3,540	9,000	2.5	NA	3,540	10,600	3.0	13,100	3.7
SR 525	East of Campbell Rd.	Coles Rd.	10.46	12.96	2.50	2 und	2	1,840	9,400	4.9	2	1,840	13,500	7.3	17,200	9.9
SR 525	Coles Rd.	Scott Rd.	12.96	17.52	4.56	2 und	NA	1,630	11,000	6.7	1	1,700	13,600	8.0	19,400	11.1
SR 525	Scott Rd.	Freeland Ave.	17.52	18.38	0.86	2 und	NA	1,690	8,500	5.0	1	1,810	10,900	6.0	16,300	9.0
SR 525	Freeland Ave.	South of Bush Point Rd.	18.38	19.11	0.73	2 und	NA	1,860	9,600	5.2	NA	1,900	12,500	6.6	16,700	8.8
SR 525	South of Bush Point Rd.	Mohawk Dr.	19.11	24.69	5.58	2 und	NA	1,570	8,400	5.4	NA	1,570	9,900	6.3	12,700	8.1
SR 525	Mohawk Dr.	SR 20	24.69	30.75	6.06	2 und	NA	1,600	6,100	3.8	NA	1,600	7,800	4.9	11,000	6.9
SR 532	East Camano Dr.	County Line (Davis Slough)	0.00	2.91	2.91	2 und	NA	1,600	15,000	9.4	NA	1,660	20,000	12.0	29,300	17.7
Abbreviations: und = undivided road div = divided road twl = two-way left turn lane		Notes: ¹ Based on ARM (Actual Route Miles) from State Route Log ² Expressed in miles. ³ AADT = Annual Average Daily Traffic. ⁴ ACR = AADT/Capacity Ratio from the preliminary adopted Travel Delay Methodology being use in the update to the Washington Transportation Plan.														

By 2020, the state highway segments that are expected to exceed the level of service standards outlined in Section IV in Table VI-3.

**TABLE VI-3
STATE HIGHWAY SEGMENTS EXPECTED TO EXCEED LOS STANDARDS BY 2020**

STATE HIGHWAY	FROM	TO	ACR	
			Rating	Standard
SR 20	Deception Pass	Troxell Rd.	14.1	12
SR 20	Troxell Rd.	South of Monkey Hill Rd.	14.0	12
SR 20	South of Jones Rd.	South of Frostad Rd.	12.8	12
SR 20	South of Frostad Rd.	North of Sleeper Rd.	13.7	12
SR 20	North of Sleeper Rd.	South of Ault Field Rd.	13.8	12
SR 20	South of Ault Field Rd.	Oak Harbor north city limits	12.8	12
SR 20	Oak Harbor south city limits	Miller Rd.	12.8	10
SR 525	Scott Rd.	Coles Rd.	11.1	10
SR 532	East Camano Dr.	Davis Slough	17.9	10

In addition, the SR 20 segment between South of Monkey Hill Rd and South of Jones Rd. is expected to have an ACR rating of 11.8 which is near the ACR-12 threshold for urban and heavily traveled corridors. Additional analyses of these segments are needed to determine the proper improvements to meet the level of service standards by 2020. WSDOT is the lead agency for these improvements. As part of their State Highway System Plan 1999-2018, WSDOT has indicated the need for improvements to improve SR 20 and SR 525 in Island County as summarized in Table VI-4. No improvements to SR 532 in Island County were included in the plan.

The weighted average 2020 ACR ratings for the approved state highway corridors in the unincorporated areas of Island County are listed below:

- ◆ SR 20 from the Keystone Ferry Terminal to Oak Harbor south city limits - ACR = 6.9
- ◆ SR 20 from Oak Harbor north city limits to the Deception Pass Bridge - ACR = 13.6
- ◆ SR 525 from the Clinton Ferry Terminal to SR 20 - ACR = 8.2
- ◆ SR 532 from East Camano Drive to Stanwood west city limits - ACR = 18.4

Of these state highway corridors in the unincorporated areas of Island County, the SR 20 segment north of Oak Harbor and the SR 532 segment west of Stanwood are not expected to meet the ACR standards by 2020. Additional analyses of these corridors are needed to determine the proper improvements to meet the level of service standards by 2020. WSDOT is the lead agency for these improvements.

**TABLE VI-4
STATE HIGHWAY SEGMENT IMPROVEMENTS NEEDED BY 2020**

LOCATION	FROM	TO	IMPROVEMENTS	ESTIMATED COSTS
SR 20	Deception Pass Bridge (MP 41.90)	SR 525 (MP 16.32)	North Island Access Study.	\$2.00m to \$2.60m
SR 20 ¹	Deception Pass Bridge (MP 41.90)	Cornet Bay Rd. (MP 40.81)	Widen to 4 lanes includes, 1/2 of the Deception Pass Bridge & new alignment.	\$64.79m to \$74.92m
SR 20	Cornet Bay Rd. (MP 40.81)	Henni Rd. (MP 38.63)	Widen to 4 lanes - NFS	\$30.89m to \$40.16m
SR 20	Henni Rd. (MP 38.63)	Cemetery Rd. (MP 33.38)	Widen to 4 lanes, improve Henni Rd. intersection - NFS (Passing lanes may be sufficient)	\$15.23m to \$19.04m
SR 20	Cemetery Rd. (MP 33.38)	Goldie Rd. (MP 32.94)	Widen to 4/5 lanes - NFS	\$3.83m to \$4.98m
SR 20	80th NW St. (MP 31.39)	Miller Rd. (MP 29.74)	Widen to 4 lanes - NFS	\$7.94m to \$10.32m
SR 525	Bayview Rd. (MP 14.66)	Bush Point Rd. (MP 18.92)	Passing lane in each direction, access management - NFS	\$0.99m to \$1.23m

Notes: 1. These state facilities improvements in Island County were excluded from the financially feasible plan.

It should be noted that funding sources have not yet been identified for all of these projects.

Source: *State Highway System Plan: 1999 - 2018*, prepared in January 1998.

Intersections

Traffic movements at the selected 29 intersections with high travel demand in Island County and outside the urban growth areas for the cities of Oak Harbor, Coupeville and Langley were forecasted and analyzed. The 1994 *Highway Capacity Manual* procedures were used to analyze these intersections. It should be noted that other intersections may have potential capacity problems and will be investigated as the situation arises. Of the 29 intersections selected for analysis, only one was signalized prior to 1996 (SR 525/Langley Road/Cultus Bay Road), one was signalized in 1997 (SR 525/Maxwelton Road), one was signalized in 1998 by the State Parks Department (SR 20/Cornet Bay Road), two are being signalized in 2000 (SR 525/Main Street/Fish Road in Freeland and East Camano Drive/Cross Island Road on Camano Island), one is to be signalized in 2001 (SR 525/Bayview Road) and one is to be signalized in 2002 (SR 532/East Camano Drive/Sunrise Boulevard). These improvements were considered in the 2006 and 2020 analyses of these intersections.

The future forecasts of years 2006 and 2020, as well as the 1996 results of the intersection analyses on Whidbey Island and Camano Island are summarized on Table VI-5. The locations of these 29 intersections are shown previously on Figure V-5.

The adopted level of service standards for county arterial and/or state highway intersections in Island County are listed below:

- ◆ County arterial intersections in rural areas would be LOS 'C';

- ◆ County arterial intersections in urban areas would be LOS 'D';
- ◆ County arterial intersections with State roads in rural areas would be LOS 'D';
- ◆ County arterial intersections with State roads in urban areas would be LOS 'E'.

In comparing these level of service standards with the results of the intersection analyses for 2006, the following five intersections do not meet the standards:

- ◆ SR 20 with Troxell Road, Banta Road, Frostad Road and Fakkema Road
- ◆ SR 525 with Bush Point Road/Honeymoon Bay Road

Improvements at these intersections will be needed over the next six years to meet and/or maintain the level of service standards. At Troxell Road, Banta Road, Frostad Road and Fakkema Road intersections with SR 20, traffic signals are required to meet level of service standards, especially if SR 20 is widened to a four lane roadway, as identified in WSDOT's *State Highway System Plan: 1999-2028*. However, traffic warrant studies are required. As part of their safety strategies in this plan, WSDOT has identified traffic signals at Jones Road, Frostad Road, Fakkema Road and Cemetery Road.

In comparing these level of service standards with the results of the intersection analyses for 2020, there are ten intersections do not meet the adopted intersection level of service standards. These intersections are not expected to meet level of service standards if no additional improvements are assumed between now and 2020 excepted for the scheduled signalization projects.

These intersections include the following:

- ◆ Troxell Road, Banta Road, Frosted Road and Fakkema Road with SR 20
- ◆ Bush Point Road, Scott Road, Coles Road and Bob Galbreath Road with SR 525
- ◆ Camano Hill Road with East Camano Drive
- ◆ Ault Field Road with Heller Road.

Improvements at these intersections will be needed over the next 20 years to meet and/or maintain the level of service standards in the 2020. At Troxell Road, Banta Road, Frostad Road and Fakkema Road intersections with SR 20, traffic signals are required to meet level of service standards, especially if SR 20 is widened to a four lane roadway, as identified in the financially constrained 20-year mobility strategies section of WSDOT's *State Highway system Plan: 1999-2018 Plan*. Traffic warrant studies will be required to finalize channelization requirements.

At SR 525/Bush Point Road/Honeymoon Bay Road intersection, a traffic signal is necessary to accommodate the expected left turning demand from Honeymoon Bay Road to southbound on SR 525. Similarly, at the Scott Road/SR 525 intersection, a traffic signal is necessary to accommodate the expected left turning demand from Scott Road to southbound on SR 525. At the SR 525/Coles Road intersection, an eastbound acceleration lane on SR 525 may improve the level of service for left turning traffic from southbound Coles Road to meet level of service standards. At SR 525/Bob Galbreath Road, a traffic signal is also needed to improve the left turning LOS from Bob Galbreath Road across and onto SR 525.

At East Camano Drive intersection with Camano Hill Road and Ault Field Road intersection with Heller Road, traffic signals are required to meet the intersection level of service requirement of LOS 'C' for county intersections in rural areas and LOS 'D' for county intersections in urban areas.

However, a traffic warrant study is required to determine if a signal is justified for more than just the peak hour.

**TABLE VI-5
SUMMARY OF INTERSECTION LEVEL OF SERVICE IN ISLAND COUNTY**

INTERSECTION	LOCATION	LOS STANDARDS	1996 LOS	2006 LOS	2020 LOS
1. SR 20/Cornet Bay Road	Whidbey Island	D	C ⁴	B ^{2,4}	D ^{2,4}
2. SR 20/Troxell Road	Whidbey Island	D	D	E	F
3. SR 20/Banta Road	Whidbey Island	D	F	F	F
4. SR 20/Frostad Road	Whidbey Island	D	E	F	F
5. SR 20/Fakkema Road	Whidbey Island	D	F	F	F
6. Ault Field Rd./Clover Valley Rd./Heller Rd.	Whidbey Island	D	C ⁸	D ⁸	F ⁸
7. SR 20/Monroe Landing Road	Whidbey Island	D	B	B	C
8. SR 20/Arnold Road	Whidbey Island	D	C	C	D
9. SR 20/Madrona Way	Whidbey Island	D	B	B	C
10. SR 20/Libbey Road	Whidbey Island	D	B	B	C
11. SR 20/SR 525/Race Road	Whidbey Island	D	B	B	C
12. SR 525/Smugglers Cove Road.	Whidbey Island	D	B	B	C
13. SR 525/Honeymoon Bay Rd./Bush Point Rd.	Whidbey Island	D	C	E	F
14. SR 525/Main Street (Freeland)/Fish Road	Whidbey Island	E	C ⁵	C ^{2,5,8}	D ^{2,5,8}
15. Main Street (Freeland)/East Harbor Road	Whidbey Island	D	C ⁸	C ⁸	C ⁸
16. SR 525/Harbor Avenue	Whidbey Island	E	B ⁸	C ⁸	E ⁸
17. SR 525/Scott Road	Whidbey Island	E	C ⁸	E ⁸	F ⁸
18. SR 525/Bayview Road	Whidbey Island	D	D ⁶	C ^{2,6}	C ^{2,6}
19. SR 525/Coles Road	Whidbey Island	D	B	C	E
20. SR 525/Maxwelton Road	Whidbey Island	D	C ^{2,3}	C ^{2,3}	C ^{2,3}
21. SR 525/Cultus Bay Road/Langley Road	Whidbey Island	D	C ^{1,2}	C ^{1,2}	C ^{1,2}
22. SR 525/Bob Galbreath Road	Whidbey Island	D	C	D	F
23. SR 525/Deer Lake Road	Whidbey Island	D	C	C	D
24. Cultus Bay Rd./Deer Lake Rd./Log Cabin Rd.	Whidbey Island	C	B	B	B
25. Maxwelton Road/Langley Road	Whidbey Island	C	B	B	C
26. SR 532/East Camano Dr./Sunset Blvd.	Camano Island	D	C ⁷	C ^{2,7}	C ^{2,7}
27. East Camano Drive/Cross Island Road	Camano Island	C	C ⁵	C ^{2,5}	C ^{2,5}
28. East Camano Drive/Camano Hill Road	Camano Island	C	B	C	F
29. East Camano Dr./Monticello Dr./Elger Bay Rd.	Camano Island	C	B	B	C

Notes: 1. - existing signalized intersection.
 2. - analyzed as signalized intersection.
 3. - signalized in 1997
 4. - signalized in 1998.
 5. - signalized in 2000.
 6. - to be signalized in 2001

7. - to be signalized in 2002
 8. - considered to be in urban area

All intersection analyses are based on the procedures outlined in the 1994 Highway Capacity Manual using Highway Capacity Software release 2.1d

Source: Island County & H. W. Lochner, Inc.

TRANSIT

Transit ridership in Island County has been steadily increasing since service began in December 1987. Overall, total transit ridership has been increasing at an average annual growth rate of approximately 10 percent between 1990 and 1999. This growth has been accentuated by service area expansions, increase in types of services offered and increases in amount of service hours on existing routes. Over the last six years with transit service to include all of Whidbey and Camano Islands and with the addition of paratransit service to the existing fixed route service, total ridership has increased between 1992 and 1999 by an average annual rate of approximately 7 percent.

Since all of Whidbey and Camano Island are already included in the service area, future transit growth is limited by the amount of additional coverage and service hours that can be provided based on current funding levels. Some additional increase in transit ridership is expected as the population in Island County increases. As a result, the forecast of annual average transit ridership growth over the next twenty years for Island Transit is estimated at approximately three to four percent per year for planning purposes without additional funding over the next 20 years. Applying this average annual planning growth rate to the base 1999 transit ridership of approximately 888,000 person trips annually, the projected annual 2020 transit ridership is estimated to be between 1.6 and 2.0 million person trips. To achieve this increase in ridership of approximately 86 to 128 percent over the next 20 years, additional transit capacity on existing routes and service expansions will be required to maintain the current transit level of service.

Local transit service expansion has been requested by the residents of various communities around Whidbey Island, including:

- ◆ Service connections between Oak Harbor and the Mount Vernon/Burlington area;
- ◆ Additional service connections between Camano Island and Stanwood
- ◆ Saratoga Road area;
- ◆ Sandy Point area;
- ◆ Admiral Heights area;
- ◆ Honeymoon Bay/Pines Point area;
- ◆ Cross Lake area;
- ◆ Greenbank area;
- ◆ Point Partridge area;
- ◆ Strawberry Point area;
- ◆ Woodridge/ Pine Terrace area;
- ◆ Sunrise Hills area;
- ◆ Freeland / Mutiny Bay / Useless Bay area;
- ◆ Bush Point / Lagoon Point area;
- ◆ Dugualla Bay area;
- ◆ Recreational areas, such as Deception Pass, Oak Harbor waterfronts, the Kennedy Lagoon to Coupeville, Fort Casey, Crockett Lane, South Whidbey State Park, Pass Lake area and Scenic Heights/Penn Cove area.

For these areas, local feeder service could consider the use of small buses to connect these areas to the 1A / 1B spine route, transversing the length of Whidbey Island. Schedules should be timed to provide convenient transfers. During lower demand midday hours, paratransit service may be considered as a demand response system.

MARINE TRANSPORTATION

Ferry ridership on the Clinton to Mukilteo Route is expected to increase by approximately 46 percent to a total of approximately 5.9 million riders by 2010, as documented in the *Concept Plan Report for the Clinton Ferry Terminal Improvement Study* prepared for the Washington State Ferries and Port of South Whidbey Island in August 1992. From this report, the average daily ridership demand in 2010 for the Clinton to Mukilteo Route is expected to consist of approximately 8,365 vehicles/drivers, 5,070 vehicle passengers, and 2,655 walk-on passengers for a total of 16,090 daily riders. The walk-on riders will consist of kiss-and-ride passengers being dropped off, park-and-ride passengers using nearby parking lots, and transit bus passengers. Washington State Ferries is updating these ridership and usage information, however, this information is not expected until Spring 2001.

To develop preliminary information, the current ridership forecasts were compared with the 1999 values. Based on this comparison, travel on the Clinton to Mukilteo Ferry Route is expected to increase at an approximate annual growth rate of 2.87 percent per year. Using this growth rate, a year 2006 forecast of ridership on the Clinton to Mukilteo Route would be at approximately 5.2 million riders and a 2020 forecast would be approximately 7.8 million riders.

Future year forecasts of the ferry ridership on the Keystone to Port Townsend Route are not currently available. To develop preliminary estimates of ridership for this route, the 1989 to 1999 data for the Keystone to Port Townsend Route was compared with historical and future forecasts for the Clinton to Mukilteo Route. Based on this comparison, a preliminary growth rate of 2.1 percent per year was selected. Using this growth rate and the 1999 estimate of approximately 859,200 riders, the year 2006 ridership of the Keystone to Port Townsend Route is estimated at 994,000 riders and a 2020 forecast of approximately 1.3 million riders.

To facilitate the increased demand on the Clinton to Mukilteo Ferry Route, Washington State Ferries has proposed improvements to the Clinton and Mukilteo terminals to provide two ferry slips at each terminal and add a third ferry to increase its hourly capacity. These improvements are expected to improve the future level of service for the Clinton to Mukilteo Route to the 1992 level.

For the Keystone to Port Townsend Route, ferry service is limited to only use 75 vehicle ferries due to the shallowness of the harbor at Keystone and the cross currents. As a result, redesign of the existing queuing area and/or roadway layout is required to facilitate access to the Keystone Terminal. To determine the extent of improvements required for the Keystone to Port Townsend Route, Washington State Ferries is developing more accurate forecasts for the expected usage of the ferry and identify terminal improvements. This new information is not expected until Spring 2001. Possible solutions to increase the capacity of the Keystone to Port Townsend Route would be to acquire a shallow draft vessel capable of handling more vehicles, or extend the terminal

facility outside the harbor with two ferry slips to allow the larger vessels to access the terminal from variable directions, due to the cross currents.

SECTION VII: PROPOSED IMPROVEMENTS

There will be an increased demand for improved mobility in Island County by the year 2020, as documented in the previous chapters. In accordance with the land use policy, Island County's population and employment are expected to grow by approximately 58.6 percent and 54.4 percent, respectively between 1996 and 2020. These increases, as well as the attractiveness of Island County for increased tourist activity, will reduce the quality of travel around Island County unless a balanced transportation improvement plan is implemented. This transportation plan will involve improvements to:

- ◆ Roads and Highways
- ◆ Transit
- ◆ Marine Transportation
- ◆ Air Transportation
- ◆ Non-motorized Transportation.

The recommended improvements for each of the elements of the transportation plan is summarized below.

ROADS AND HIGHWAYS IMPROVEMENTS

Improvements to the state highway and county roadway system are planned on an annual basis through the development of six-year Transportation Improvement Programs by WSDOT and Island County. In these six-year programs, emphasis is given to safety improvements 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. In the past, capacity improvements and the construction of new roads generally received a lower priority.

With the passage of GMA in 1990 and 1991, these work programs are also to include improvements and/or strategies to maintain and/or achieve specific level of service standards on the transportation system and to be concurrent with development demand. GMA requires local governments to establish LOS standards for all arterials and transit routes. From the requirements from SHB 1487, level of service standards for highways of statewide significance will be established by WSDOT in coordination with on the Skagit/Island RTPO. For other state facilities of regional significance, the level of service standards will be established by the Skagit/Island RTPO in coordination with WSDOT. During the 1999 Legislative Session, SR 20 and SR 525 in Island County were included on the list of state facilities of statewide significance.

Island County has developed this Transportation Plan together with a Capital Facilities Plan which identify projects and funding sources to achieve and/or maintain LOS standards for County arterials for the duration of the planning period. The Capital Facilities Plan also includes a "Concurrency Implementation and Monitoring System". This plan and ordinance has been updated to comply with the requirements of SHB 1487.

County Arterial Improvements

From the analysis of county arterials and transit routes as previously presented, no highway capacity improvements or strategies are required to meet the level of service standards for County arterials currently and in 2006. However, by 2020 highway capacity improvements or strategies will be required to meet the level of service standards along the following sections of East Camano Drive:

- ◆ SR 532 to Cross Island Road
- ◆ Camano Hill Road to Monticello Drive

To provide for consistent roadway design, improvements to East Camano Drive between Cross Island Road and Camano Hill Road are also recommended. These improvement strategies are listed in Tables VII - 1. The improvements to East Camano Drive between SR 532 and Monticello Drive are generally the responsibility of Island County. However, these improvements to East Camano Drive should be delayed until the State improves SR 532 and widens it to a four-lane section. Otherwise, a major bottleneck would occur at the junction with SR 532 where traffic on the proposed four lane section of East Camano Drive would meet with traffic on the two lane section of North Camano Drive and squeeze into the existing two lane section of SR 532.

An interim measure to meet GMA requirements would be to revise the level of service for these roadway sections to meet expected future year conditions with the provision that Island County will revise these standards back to the normal level of service within three years after the state has improved SR 532.

In addition to these capacity improvements, Island County has identified other safety and operational (non-capacity) improvements that should be constructed or studied over the next six years. These projects are summarized in Island County's Six Year Road Program. These improvements include the following types of improvements:

- ◆ planning studies
- ◆ intersections improvements
- ◆ construction overlays
- ◆ roadway widening/realignment
- ◆ roadway drainage improvements
- ◆ paths and trails
- ◆ roadway stabilization
- ◆ miscellaneous rights-of-way
- ◆ minor safety improvements

These improvements should be designed to a uniform set of design standards. In Table VII-2, 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 and construction projects.

**TABLE VII-1
2020 IMPROVEMENTS NEEDS TO MAINTAIN LEVEL OF SERVICE STANDARDS ON COUNTY ARTERIALS
ISLAND COUNTY**

ROADWAY	FROM	TO	LOS Standard	1996 Volume	1996 LOS	2020 Volume	2020 LOS	IMPROVEMENTS	ESTIMATED COST
E. CAMANO DR.	SR 532	Cross Island Rd.	E	11,660	D	23,100	F	Improvements required to maintain LOS 'C' – Install traffic signals and channelization improvements at Cross Island Rd. and SR 532 as programmed for 2000 and 2002. Widen roadway to four lanes with left turn pockets where necessary. Delay improvements until the State has widened SR 532 to avoid creating a major bottleneck. For interim measures, revise LOS standard to LOS 'F' with the provision that it will be reverted to standards levels when the State widens SR 532.	\$1.75m to \$2.0m (excludes intersection improvements at SR 532 and Cross Island Rd.)
E. CAMANO DR.	Cross Island Rd.	Camano Hill Rd.	E	10,080	D	18,650	E	Improvements required to maintain LOS 'C' - Widen roadway to four lanes with left turn pockets; add channelization at East Camano Dr./Camano Hill Rd. Delay improvements until the State has widened SR 532 to avoid creating a major bottleneck. For interim measures, maintain LOS standard of LOS 'E' with the provision that it will be reverted to standards levels when the State widens SR 532.	\$2.6m to \$3.0m
E. CAMANO DR.	Camano Hill Rd.	Monticello Rd.	C	6,240	C	11,600	D	Improvements required to maintain LOS 'C' - Widen roadway to four lanes with left turn pockets; add channelization at East Camano Dr./Monticello Dr. Delay improvements until the state has widened SR 532 to avoid creating a major bottleneck. For interim measures, revise LOS standard of LOS 'D' with the provision that it will be reverted to standards levels when the State widens SR 532.	\$5.6m to \$6.5m

Source: H.W. Lochner, Inc. and Island County

**TABLE VII-2
TYPICAL 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)

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, and utility locations. 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.

State Highway Improvements

Segment analysis and corridor analysis were conducted to analyze state highways in Island County, as described below.

Segment Analysis - This analysis follows the traditional investment strategy of solving the critical problems along the state highways because of the limited availability of existing funds. Using this approach, highway capacity improvements or strategies required to meet the level of service standards for state highways in 2006 were developed for each segment. These improvement strategies are listed in Table VII - 3. These improvements are based on the level of service standards listed in Chapter IV and the deficiencies identified in Chapters V and VI. Only improvements to the state highway system are expected to be required to meet the adopted level of service standards in 2006.

Additional mobility and safety improvements will be needed by 2020 to meet expected demands and level of service standards. The highway capacity improvements or strategies required to meet the level of service standards for state highways in 2020 by highway segment are listed in Table VII - 4. The costs associated with the state highway improvements are generally the

responsibility of WSDOT with some sharing of intersection improvement costs with Island County.

**TABLE VII-3
2006 IMPROVEMENTS NEEDS TO MAINTAIN LEVEL OF SERVICE STANDARDS ON STATE HIGHWAYS
ISLAND COUNTY**

ROADWAY	FROM	TO	LOS Standard	1998 Volume	1998 LOS	2006 Volume	2006 LOS	IMPROVEMENTS	ESTIMATED COST ²
SR 532	East Camano Dr.	County Line	ACR-10	15,000	ACR-9.4	20,000	ACR-12.0	Improvements required to reduce ACR rating to below the threshold standard of ACR-10 rating. - Widen roadway to four lanes with left turn pockets. (WSDOT does not specify capacity improvements in this area in its current 20 year mobility strategy plan.)	\$34 m to \$45 m ²

- Notes: 1. Cost estimates are derived from WSDOT's *State Highway System Plan 1999-2018*, prepared January 1998 and WSDOT's *State Highway System Plan 1997-2016* prepared March 1996 using similar sections for area improvements and escalated to year 2000.
2. Cost were escalated to year 2000 and rounded.

Source: H.W. Lochner, Inc., Island County and WSDOT.

**TABLE VII-4
2020 IMPROVEMENTS NEEDS TO MAINTAIN LEVEL OF SERVICE STANDARDS ON STATE HIGHWAYS
ISLAND COUNTY**

ROADWAY	FROM	TO	LOS Standard	1998 Volume	1998 LOS	2020 Volume	2020 LOS	IMPROVEMENTS	ESTIMATED COST ³
SR 20	Deception Pass	Troxell Rd.	ACR-12	14,200	ACR-7.9	24,6000	ACR-14.1	Due to the location of the state park and major reconstruction of the Deception Pass Bridge, it is recommended that this section of SR 20 remain as a two lane road through the state park. Widen SR 20 to 4 lanes from Cornet Bay Rd. to Troxell. (WSDOT has planned to provide four lanes from Cornet Bay Rd. to Oak Harbor in its <i>State Highway System Plan 1999-2018</i> and calls for further study of alternative access points to Whidbey Island.)	\$120m to \$140m for new Deception Pass bridge and widen road to Cornet Bay Rd.; \$17m to \$22m to widen from Cornet Bay Rd. to Troxell Rd. and \$2.1 to \$2.7m for new access study ¹
SR 20	Troxell Rd.	South of Monkey Hill Rd.	ACR-12	13,800	ACR-8.2	23,500	ACR-14.0	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets..	\$18.3m to \$23.6m ¹
SR 20	South of Monkey Hill Rd.	South of Jones Rd.	ACR-12	14,300	ACR-7.4	23,000	ACR-11.9	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets.	\$2m to \$2.5m ¹
SR 20	South of Jones Rd.	South of Frostad Rd.	ACR-12	16,800	ACR-8.2	26,100	ACR-12.8	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets.	\$2.2m to \$2.8m ¹
SR 20	South of Frostad Rd.	North of Sleeper Rd.	ACR-12	16,500	ACR-9.0	25,100	ACR-13.7	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets.	\$1.7m to \$2.1m ¹
SR 20	North of Sleeper Rd.	South of Ault Field Rd.	ACR-12	17,600	ACR-8.7	26,700	ACR-13.8	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets.	\$3.5m to 4.5m ³
SR 20	North of Sleeper Rd.	South of Ault Field Rd.	ACR-12	17,600	ACR-8.7	26,700	ACR-13.8	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets.	\$3.5m to 4.5m ³
SR 20	South of Ault Field Rd.	Oak Harbor north city	ACR-12	17,500	ACR-9.2	23,800	ACR-12.8	Improvements required to maintain an ACR-12 rating - Widen roadway to four lanes with left turn pockets. (Oak Harbor's Transportation Plan	\$6m to 7.8m ³

		limits						supports the widening of SR 20 to 4/5 lanes.)	
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TABLE VII-4 Continued
2020 IMPROVEMENTS NEEDS TO MAINTAIN LEVEL OF SERVICE STANDARDS ON STATE HIGHWAYS
ISLAND COUNTY

ROADWAY	FROM	TO	LOS Standard	1998 Volume	1998 LOS	2020 Volume	2020 LOS	IMPROVEMENTS	ESTIMATED COST ³
SR 20	Oak Harbor south city limits	Miller Rd.	ACR-10	14,100	ACR-7.5	22,400	ACR-12.8	Improvements required to maintain an ACR-10 rating - Widen roadway to four lanes with left turn pockets. (WSDOT has planned to provide four lanes from Oak Harbor to SR 525 in its <i>State Highway System Plan 1999-2018</i> and calls for further study. Oak Harbors' Transportation Plan supports the widening of SR 20 to 4/5 lanes inside the urban growth area.)	\$4.5m to 5.7m ³
SR 525	Scott Rd.	Coles Rd.	ACR-10	11,000	ACR-6.7	19,400	ACR-11.1	Improvements required to maintain an ACR-10 rating – Provide passing lanes in each direction. (WSDOT has planned to provide passing lanes in each direction between Bayview Rd. and Bush Point Rd. with access management in its <i>State Highway System Plan 1999-2018</i> and calls for further study.)	\$1.2m to 1.5m for passing lane. ³
SR 532	E. Camano Dr.	County Line	ACR-12	15,000	ACR-9.4	29,300	ACR-17.7	Improvements required to reduce ACR rating to below the threshold standard of ACR-10 rating. - Widen roadway to four lanes with left turn pockets. (WSDOT does not specify capacity improvements in this area in its current 20 year mobility strategy plan.)	\$34 m to \$45 m ²

- Notes:
1. Cost estimates are derived from WSDOT's *State Highway System Plan 1999-2018* prepared January 1998.
 2. Cost estimates are derived from WSDOT's *State Highway System Plan 1999-2018* prepared January 1998 and WSDOT's *State Highway System Plan 1997-2016* prepared March 1996 using similar sections for area improvements.
 3. Cost were escalated to year 2000 and rounded.

Source: H.W. Lochner, Inc., Island County and WSDOT.

The City of Oak Harbor in their *Comprehensive Plan Transportation Element* prepared in August 2000 also identified key SR 20 improvements. These improvements are not part of the Island County Transportation Plan but are included to show consistency with the Oak Harbor Transportation Plan. The key Oak Harbor urban growth area improvements for SR 20 include:

- ◆ *“Interconnect and optimize traffic signal timing patterns to improve traffic flow at all SR 20 intersections in the Urban Growth Area (UGA).*
- ◆ *Widen SR 20 to 5 lanes from Beeksma Drive south and west through the approach to the Swantown Road intersection.*
- ◆ *Add a second eastbound to northbound exclusive left turn lane and a second southbound to westbound exclusive right turn lane at the intersection of SR 20 with Pioneer Way.*
- ◆ *Widen SR 20 to 5 lanes from the existing 5 lane approach to Midway Boulevard north to Ault Field Road.*
- ◆ *Widen SR 20 south of Swantown Road to 4/5 lanes to the south City limits.*
- ◆ *Monitor traffic volumes and install a traffic signal, OR restrict peak hour access at the intersection of SR 20 with Scenic Heights Drive.*
- ◆ *Monitor traffic volumes and install a traffic signal when warranted at the intersection of SR 20 with Auvil Road” (page 43 of the City of Oak Harbor Comprehensive Plan Transportation Element - Final, August 2000)*

In addition to these capacity and mobility improvements, WSDOT has identified other safety and operational (non-capacity) improvements that should be constructed or studied over the next six years. These projects are summarized in the WSDOT’s *State Highway System Plan 1999-2018*. These improvements include the following types of improvements:

- ◆ planning studies
- ◆ intersections improvements
- ◆ construction overlays
- ◆ roadway realignment
- ◆ roadway drainage improvements
- ◆ sidewalks, paths and trails
- ◆ bicycle touring route improvements
- ◆ safety rest areas
- ◆ roadway stabilization
- ◆ park-and-ride facilities
- ◆ miscellaneous rights-of-way
- ◆ minor safety improvements
- ◆ environmental retrofit strategies

Corridor Analysis - Based on direction from the Washington Transportation Commission and its appointed a 23-member Congestion Relief Workgroup, the State is also pursuing a corridor improvement approach in identifying and prioritizing congestion relief investment needs. A corridor is broadly defined as a geographic space surrounding a highway of statewide significance that connects major travel markets. It may contain a number of transportation

facilities including streets and highways, rail lines and bus routes, and bicycle and pedestrian ways. The corridor improvement approach will:

- ◆ identify travel corridors based on travel market analysis;
- ◆ identify congestion problems within the corridor; and
- ◆ propose coordinated corridor improvements across modes and jurisdictions.

Corridor improvements may include all modes, and any combination of system, segment, and spot improvements that will contribute to the improvement of travel in the corridor. To help prioritize corridor needs and improvements, statewide and regional "critical corridors" will be designated based on consideration of levels of traffic congestion, the economic importance of the corridor, and other factors such as the corridor's impact on the area's quality of life.

Corridors are designated using a coordinated planning process. State facilities of statewide significant corridors were designated by the State in consultation with Regional Transportation Planning Organizations (RTPOs). Regional corridors will be designated in partnerships between the State and the RTPOs.

For the unincorporated area of Island County, the statewide significant corridors are:

- ◆ SR 20 from the Keystone Ferry Terminal to Oak Harbor south city limits
- ◆ SR 20 from Oak Harbor north city limits to the Deception Pass Bridge
- ◆ SR 525 from the Clinton Ferry Terminal to SR 20

For the unincorporated area of Island County, the only regional corridor is:

- ◆ SR 532 from East Camano Drive to Stanwood west city limits

In 2006, all of the statewide significant corridors in the unincorporated area of Island County meet the level of service criteria of ACR-10 for rural areas and ACR -12 for urban and heavily traveled corridors, as discussed in Section VI. Only the regional corridor of SR 532 with an ACR rating of 12.2 is expected to exceed the level of service standards. To improve this regional corridor, it is suggested that WSDOT widen SR 532 to 4 lanes and standard shoulders with left turning channelization at critical intersections from East Camano Drive to the Davis Slough bridge. With these improvements the overall corridor ACR rating will be improved to ACR-6.1. The estimated cost for these improvements based on previous work done by WSDOT and applied to the entire segment is between \$34 to \$45 million.

By 2020, the statewide significant corridor along SR 20 from Oak Harbor north city limits to the Deception Pass Bridge is not expected to meet the level of service standard of ACR-12. Without any improvements, the expected ACR rating for this corridor is approximately ACR-13.6. To improve this corridor, it is suggested that WSDOT widen SR 20 to 4/5 lanes with left turning channelization at critical intersections from the end of the 4-lane section in Oak Harbor (about MP 32.91) to north of Frostad Road (about MP 36.83) and add traffic signals at Fakkema Road and Frostad Road. With these improvements, the overall corridor ACR rating will be improved to ACR-10.9. The estimated cost for this improvement based on previous work done by WSDOT and applied to the entire segment is between \$23 to \$30 million. Although the overall corridor rating is expected to be below the level of service standard of ACR-12, traffic congestion can be expected by

year 2020 along SR 20 north of Frostad Road, especially through the state park area and near Monkey Hill Road, Banta Road and Troxell Road.

Oak Harbor in their recent *Comprehensive Plan Transportation Element* also recommended that WSDOT should widen SR 20 to 4/5 lanes within the urban growth area and that various intersections should also be signalized.

If no improvements are made to the regional corridor along SR 532 from East Camano Drive to Stanwood west city limits, an ACR rating of approximately ACR-17.9 showing extreme congestion can be expected. As previously suggested for the 2006 corridor improvements to SR 532, WSDOT should widen SR 532 to 4 lanes with left turning channelization at critical intersections from East Camano Drive to the Davis Slough bridge. With these improvements the overall corridor will be improved the 2020 ACR rating for this regional corridor to ACR-9. The estimated cost for this improvement based on previous work done by WSDOT and applied to the entire segment is between \$34 to \$45 million. By 2020, congestion along SR 532 east of the Davis Slough bridge and through Stanwood is expected to remain high if additional improvements are not made along these segments of SR 532 and the Davis Slough bridge and other bridges are not widened.

The costs associated with the state highway improvements are generally the responsibility of WSDOT with some sharing of intersection improvement costs with Island County and the City of Oak Harbor.

Intersections

In addition to the 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 preliminary list of intersection improvements was developed using available data and based on peak hour level of service analyses. This preliminary list of intersection improvements is listed in Table VII-5.

Based on the analysis conducted in Chapters V and VI, traffic signals at SR 20 with Banta Road, Frostad Road and Fakkema Road are needed now to improve the level of service for left turning traffic from the cross street onto the state highway to meet the suggested state standards. These improvements will also be required after the state widens the highway to four lanes as described in WSDOT's *State Highway System Plan 1999-2018*. By the year 2006, a signal will also be needed at the SR 20/Troxell Road intersection. WSDOT has included traffic signals at Jones Road, Frostad Road, Fakkema Road and Cemetery Road as part of their 20-year safety improvement strategies in the *State Highway System Plan 1999-2018*.

By 2020, additional traffic signals are also expected to be needed at the following intersections:

- ◆ Ault Field Road/Heller Road
- ◆ SR 525/Bush Point Road/Honeymoon Bay Road
- ◆ SR 525/Scott Road
- ◆ SR 525/Coles Road

- ◆ SR 525/Bob Galbreath Road
- ◆ East Camano Drive/Camano Hill Road

**TABLE VII-5
SUMMARY OF INTERSECTION LEVEL OF SERVICE
ISLAND COUNTY**

INTERSECTION	1996 LOS	2006 LOS	2020 LOS	Preliminary Improvements	New 2020 LOS
1. SR 20/Cornet Bay Road	C ⁴	B ^{2,4}	D ^{2,4}	None required	
2. SR 20/Troxell Road	D	E	F	Add signal - NFS	C ²
3. SR 20/Banta Road	F	F	F	Add signal - NFS	C ²
4. SR 20/Frostad Road	E	F	F	Add signal - NFS	C ²
5. SR 20/Fakkema Road	F	F	F	Add signal - NFS	C ²
6. Ault Field Road/Heller Road	C ⁸	D ⁸	F ⁸	Add signal - NFS	B ²
7. SR 20/Monroe Landing Road	B	B	C	None required	
8. SR 20/Arnold Road	C	C	D	None required	
9. SR 20/Madrona Way	B	B	C	None required	
10. SR 20/Libbey Road	B	B	C	None required	
11. SR 20/SR 525/Race Road	B	B	C	None required	
12. SR 525/Smugglers Cove Road.	B	B	C	None required	
13. SR 525/Bush Point Road	C	E	F	Add signal - NFS	C ²
14. SR 525/Main St. (Freeland) /Fish Road	C ⁵	C ^{2,5,8}	D ^{2,5,8}	None required	
15. Main Street (Freeland) /East Harbor Road	C ⁸	C ⁸	C ⁸	None required	
16. SR 525/Harbor Avenue	B ⁸	C ⁸	E ⁸	None required	
17. SR 525/Scott Road	C ⁸	E ⁸	F ⁸	Add signal - NFS	B ²
18. SR 525/Bayview Road	D ⁶	C ^{2,6}	C ^{2,6}	None required	
19. SR 525/Coles Road	B	C	E	Add signal - NFS	B ²
20. SR 525/Maxwelton Road	C ^{2,3}	C ^{2,3}	C ^{2,3}	None required	
21. SR 525/Cultus Bay Road / Langley Road	C ^{1,2}	C ^{1,2}	C ^{1,2}	None required	
22. SR 525/Bob Galbreath Road	C	D	F	Add signal - NFS	C ²
23. SR 525/Deer Lake Road	C	C	D	None required	
24. Cultus Bay Rd./Deer Lake Rd./Log Cabin Rd.	B	B	B	None required	
25. Maxwelton Road/Langley Road	B	B	C	None required	
26. SR 532/East Camano Dr./Sunrise Blvd.	C ⁷	C ^{2,7}	C ^{2,7}	Add signal - NFS	C ²
27. E. Camano Drive/Cross Island Road	C ⁵	C ^{2,5}	C ^{2,5}	Add signal - NFS	C ²
28. E. Camano Drive/Camano Hill Road	B	C	F	Add signal - NFS	C ²
29. E. Camano Dr./Monticello Dr./Elger Bay Rd.	B	B	C	None required	

Notes: 1. - existing signalized intersection.
 2. - analyzed as signalized intersection.
 3. - signalized in 1997
 4. - signalized in 1998.
 5. - signalized in 2000.
 6. - to be signalized in 2001

7. - to be signalized in 2002
 8. - considered to be in urban area

All intersection analyses are based on the procedures outlined in the 1994 Highway Capacity Manual using Highway Capacity Software release 2.1d

Source: Island County & H. W. Lochner, Inc.

Interim improvements, such as channelization, acceleration lanes and/or improved transit service may be required between 2006 and 2020. WSDOT is developing a “Least Cost Planning Methodology” to investigate alternative solutions that may delay or eliminate the need for higher cost solutions.

The cost associated with adding a traffic signal varies by site requirements. Basic signal construction cost averages about \$ 200,000 plus right-of-way. For an intersection with additional channelization and traffic signal system, the construction cost averages about \$450,000 plus right-of-way. Extra environmental mitigation extensive wetlands, cultural and archeological studies can increase these costs.

Island County will be responsible for improvements at the East Camano Drive/Camano Hill Road and the Ault Field Road/Heller Road intersections. WSDOT and the County would share the costs to improve the County road intersections along SR 20, SR 525 and SR 532.

Speed Limits

Speed limits on state highways and county arterials will be set as a means to encourage safe and efficient use of the roadway system. Recommended criteria for establishing the speed limit on county roads are shown in Table VII-6. The criteria presented provide a link between the function and use of the road with travel speeds.

Speed limits on the arterial system can be reduced below these values only when an engineering and traffic investigation supports such a reduction.

**TABLE VII-6
ROADWAY SPEED LIMITS**

ROAD FUNCTION	SPEED LIMIT (mph)	CRITERIA FOR SPEED LIMIT
ARTERIALS - major - minor - collectors	50	a. generally meets geometric standards for 50 mph roadway. b. high traffic volumes. c. provides route continuity. d. low accident rate. e. few roadside obstacles. f. meets LOS standard. g. meets 85-percentile speed of 50 mph.
ARTERIALS - major - minor - collectors	35 - 40	a. urban or commercial areas. b. high accident rate. c. high deviation from design standards. d. falls below LOS standard. e. low travel speed. f. meets 85-percentile speed of 35-40 mph.
ACCESS ROADS	35	a. non-arterials. b. extreme deviation from design standards. c. low volumes.
NEIGHBORHOOD - streets - plat roads	25	a. non-arterials within plats. b. extreme deviation from design standards. c. low volumes.

Summary of Road and Highway Improvements

The need to preserve the County arterial system and state highways is of major importance to continue providing adequate levels of service within the County. Methods of preserving the arterial and highway system are noted in the following improvements and strategies:

- ◆ The existing capacity of the County arterial system must be preserved, enhanced, maintained and improved to provide long-term service by incorporating the improvements identified in Tables VII-1 and VII-5 and in Island County's Six Year Road Program.
- ◆ Encourage WSDOT to preserve, enhance, maintain and improve the capacity of the state highway system in Island County long-term service by incorporating the improvements identified in Tables VII-3, VII-4 and VII-5 and in WSDOT's *State Highway System Plan - 1999-2018*.
- ◆ Land use activities along state highways and County arterials should be maintained to avoid a proliferation of highway accesses and reduced level of service. Access points to these facilities should be minimized and common accesses, frontages roads and internal roads should be encouraged to provide access for new or expanded developments. Construction of new access roads and driveways to the state highway and major county arterials should be strongly discouraged unless necessary for overall circulation or for land-locked properties.
- ◆ A plan to preserve the arterial and highway system from deterioration due to encroachment onto the rights-of-way must be implemented and annually updated.
- ◆ Major traffic generators should be encouraged to establish transit usage policies, flex time and ridesharing programs to mitigate local traffic impacts.
- ◆ The arterial and highway system should have appropriate building setbacks to accommodate the design function of the roadway and allow for future expansion. Building setbacks, shown in Table VII-2, are intended to avoid encroachment by physical obstructions which may hinder the expansion of the roadway for future service.
- ◆ Clustering of commercial developments in existing areas in accordance with the approved land use plan should be encouraged.
- ◆ Developments must consider the transportation needs of the traveling public and mitigate impacts to the arterial/highway system caused by their developments. Similarly, new public facilities must consider site selection criteria that minimize impacts on the arterial/highway system.
- ◆ Reservation of property for roadway improvements and conveyance of property for right-of-way purposes will be considered whenever subdivisions or developments occur.
- ◆ Roadside hazards will be inventoried and priorities set for their elimination as part of roadway maintenance and construction programs.
- ◆ Construction of new roadways will be given the lowest priority rating. New roads should link and integrate roadway segments into a rational circulation system. The following planned rural roads should be considered with new developments:
 - ⇒ Connect Arnold Road to Balda Road

- ⇒ Connect Race Road to Houston Road
- ⇒ Ft. Casey Road to SR 20
- ⇒ Wallace Road to East Harbor Road
- ⇒ Crawford Road to SR 525
- ⇒ Bob Galbreath Road to Anderson Road
- ⇒ Crescent Harbor Road to Silver Lake Road
- ◆ A monitoring program of roadway conditions will be developed. The inventory should include physical characteristics of the roadways, service life of surfaces, capacities, annual daily traffic, average daily peak season traffic, and level of service rating.
- ◆ A truck route classification system will be established in conjunction with WSDOT, and cities and towns in Island County.

TRANSIT IMPROVEMENTS

Service development improvements for transit on Whidbey Island and Camano Island are planned for a six year period and approved by the Board of Directors for Island Transit. The six year plan is reviewed annually for policy and financial impacts and updated every three years by Island Transit. Due to a permanent loss of approximately 20 percent of Island Transit's operating funds due to the passage of Initiative 695, no service or facility improvements are planned through 2006.

This section of the County's Transportation Plan will be update in accordance with future recommendations of Island Transit's revised six-year comprehensive plan.

Fixed Route Transit Service

Local service expansion has been requested by the residents of the Bush Point/Lagoon Point as well as other communities. In reviewing the population and employment summaries, trip end summary data, ferry rider survey results, comments from interested citizens at a series of public meetings in 1997 - 1999 and discussions with Island Transit, the following area should be considered as candidates for local feeder service expansion:

- ◆ Service connections between Oak Harbor and the Mount Vernon/Burlington area;
- ◆ Additional service connections between Camano Island and Stanwood
- ◆ Saratoga Road area;
- ◆ Sandy Point area;
- ◆ Admiral Heights area;
- ◆ Honeymoon Bay/Pines Point area;
- ◆ Cross Lake area;
- ◆ Greenbank area;
- ◆ Point Partridge area;
- ◆ Strawberry Point area;
- ◆ Woodridge/ Pine Terrace area;
- ◆ Sunrise Hills area;
- ◆ Freeland / Mutiny Bay / Useless Bay area;

- ◆ Bush Point / Lagoon Point area;
- ◆ Dugualla Bay area;
- ◆ Recreational areas, such as Deception Pass, Oak Harbor waterfronts, the Kennedy Lagoon to Coupeville, Fort Casey, Crockett Lane, South Whidbey State Park, Pass Lake area and Scenic Heights/Penn Cove area.

Peak period service to these areas should be considered over the next two decade as demand increases and funds become available. This local feeder service would use small buses to connect to the 1A / 1B spine route, transversing the length of Whidbey Island. Schedules would be timed to provide convenient transfers. During midday hours, paratransit service would be available as a demand response system.

Fixed route transit service should be expanded to include Sundays, especially during summer months, when demand for improved access to recreational site is high for residents and visitors. This Sunday service expansion would also provide a link to the recently implemented Sunday service by Community Transit in Snohomish and the ferry service between Mukilteo and Clinton areas and potentially allow for the diversion of automobile trips to transit on Whidbey Island. In addition, there has also been an expressed desire for the extension of service hours on holidays and during the week, especially during the summer months when daylight hours are longer.

For six months in 1999, Island Transit and Skagit Transit did operate service from the Harbor Station in Oak Harbor to Skagit Valley College in Mount Vernon. Each transit agency operated to round trips daily. This service was terminated in December 1999 because of the lost of funding due to Initiative 695 passage in November 1999. This service can be re-initiated when funds become available and demand increases.

Commuter Service Improvements

Improvements for commuter transit service will focus on extension of express park-and-ride service between the Clinton ferry terminal and Oak Harbor, as well as future park-and-ride development opportunities with WSDOT.

As part of the expansion of the Clinton ferry terminal, Island Transit, in cooperation with WSDOT, should explore possible joint development opportunities for transit access and park-and-ride facilities at the Clinton terminal, as presented in the *Parking Management for the Clinton Terminal*, prepared in September 1990. Long term improvements recommended in this plan included a cooperative and coordinated park-and-ride development in Island County.

Island Transit should also work with WSDOT to site and design a park-and-ride lot near SR 532 and East Camano Drive on Camano Island as identified in the Financially Constrained 20 Year Mobility Strategies Section of WSDOT's *State Highway System Plan - 1999-2018*.

Paratransit Service Improvements

Paratransit service will be expanded as needed to comply with the Americans with Disabilities Act (ADA). Island Transit's paratransit service is a curb to curb service for those eligible persons, who are unable, due to a disability, to use regular fixed route transit.

Island Transit is considering a general Dial-a-Ride service in the future, especially in those areas where only peak period local service will be provided.

Supporting Programs

Supporting programs undertaken by Island Transit to improve transit service include:

- ◆ Continue acquisition and installation of bus shelters and benches, where ridership warrants.
- ◆ Continue to explore improvement alternatives to provide better intersystem service connections with SKAT and Community Transit.
- ◆ Continue to explore new market areas in Whidbey and Camano Islands, including recreational trips.
- ◆ Participate with the Island County and WSDOT in locating possible site for additional transit centers in Clinton, Freeland and on Camano Island, that are compatible with the County's comprehensive planning efforts.
- ◆ Continue community involvement program that includes periodic surveys to determine the public's attitudes and awareness concerning public transit and establish a speakers bureau to present transit news and updates to community groups as requested.
- ◆ Continue the current policy of requiring special event sponsors to fund transit service.
- ◆ Review comprehensive plan development in terms of policies and financial impacts on an annual basis and major plan update every three years.
- ◆ Maintain a performance review and monitoring program to ensure an efficient and effective transit system. Criteria to be used in this monitoring program include:
 - ⇒ Ensure that 95 percent of trips be within five minutes of scheduled departures.
 - ⇒ Maintain annual increases in operating costs per service hour at or less than the annual cost of living increases for Island County.
 - ⇒ Maintain a low accident rate with a goal of not exceeding a maximum of five non-preventable accidents per 100,000 vehicle miles and no preventable accidents.
 - ⇒ Maintain a low rate of road calls with a goal of not exceeding 30 calls per 100,000 vehicle miles.
 - ⇒ Maintain system cleanliness by cleaning vehicles daily.
 - ⇒ Maintain level of service data to monitor system performance for GMA purposes.

MARINE TRANSPORTATION IMPROVEMENTS

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 Route and the Keystone to Port Townsend Route. Island Transit provides transit service to the terminal facilities. Island County works with WSDOT in providing access

facilities to the ferries, as well as is investigating possible inter-island ferry service and marine freight facilities.

Clinton - Mukilteo Ferry Improvements

To facilitate the increased demand at the Clinton Terminal, Washington State Ferries and the Port of South Whidbey have proposed improvements, as described in their *Concept Plan Report for the Clinton Ferry Terminal Improvement Study* prepared in August 1992 and in the Washington State Ferries' *Clinton Ferry Terminal Design Report* prepared in September 1997. The following information was updated in 2000 based on actual terminal construction program:

◆ **Ferry Terminal Improvements**

- ⇒ expand the off highway vehicle queuing area to store at least 130 vehicles;
- ⇒ provide four toll booths to handle peak season traffic;
- ⇒ provide one new vehicle ferry slip with overhead passenger on the southeast edge; (One slip is currently included in their financially constrained plan; WSF is seeking additional funds for a second slip.)
- ⇒ retain the northeast ferry slip as it is today for adverse weather and emergency conditions; (Will be extended further north in later phases if additional funds become available.)
- ⇒ provide a public access pier on the north edge for the Port of South Whidbey;
- ⇒ provide an overhead passenger terminal to accommodate at least 200 peak hour passengers, as well as ticketing booths, waiting areas restrooms, and office space; (WSF is seeking additional funds for the overhead terminal and ramp.) and
- ⇒ provide an overhead loading ramp for access to the upper ferry deck. (WSF is seeking additional funds for the overhead terminal and ramp.)

◆ **Support Facility Improvements**

- ⇒ provide transit facilities with priority access to accommodate up to at least three buses, with a covered bus waiting area and direct access to the ferry terminal waiting area;
- ⇒ provide a separate kiss-and-ride parking area for at least twelve vehicles for passenger pick-up and drop-off;
- ⇒ WSDOT should work with Island Transit and Island County to develop new park-and-ride lots along SR 525;
- ⇒ provide a pedestrian walkway along the south side of the ferry dock to the ferry passenger waiting areas; (The overhead passenger terminal will include vertical access capable of meeting ADA requirements.)
- ⇒ provide intersection and channelization improvements. (These improvements include stripping and signage to reduce impacts to commercial and residential access during heavy queues.)

Construction on these new facilities started in 1998 at the Clinton Terminal with completion of phase 3 expected in 2006. Similar terminal and support facilities at the Mukilteo Terminal are scheduled to be completed by 2008.

Additional vehicle improvements for the Clinton to Mukilteo Ferry Route include a 75 vehicle ferry vessel in service starting between 2008, and a 130-vehicle ferry between 2007 and 2010.

With these improvements based on *Washington State Ferries System Plan for 1999-2018 Final Plan*, WSF can meet the anticipated demand and established level of service criteria of a one-boat wait during the PM peak period during the month of May.

In addition to these improvements, Island County, Island Transit, WSF and WSDOT should work together to provide:

- ◆ additional on-shore queuing areas to relieve impacts to commercial and residential areas along SR 525, especially during the peak tourist season;
- ◆ high occupancy vehicles with priority access and loading facilities, and bicycle storage lockers;
- ◆ a public access pier on the north edge of the terminal for the Port of South Whidbey and the passenger-only ferry;
- ◆ land support facilities to encourage high occupancy vehicle travel, including park-and-ride lots, ridesharing strategies, paratransit service and transit service; and
- ◆ support to the efforts of revising the Mukilteo terminal to be an all-weather facility and capable of handling two ferry vessels at the same time.

Keystone - Port Townsend Ferry Improvements

The future level of service on the Keystone to Port Townsend Route is expected to deteriorate, especially during the summer season over the next ten years. Possible solutions to increase the capacity of the Keystone to Port Townsend Route would be to acquire a shallow draft vessel capable of handling more vehicles, or extend the terminal facility outside the harbor with two ferry slips to allow the larger vessels to access the terminal from variable directions, due to the cross currents. Washington State Ferries should conduct a study to forecast the expected usage of the ferry and identify terminal improvements.

Based on the *Washington State Ferries System Plan for 1999-2018 Final Plan*, WSF is expected to have two new 110-car “maneuverable” class vessels constructed and assigned to the Keystone - Port Townsend Ferry Route in 2010 to meet the anticipated demand and maintain the level of service standard of a one-boat wait for this route.

In addition, Island County, Island Transit, WSF and WSDOT should work together to maintain the Keystone to Port Townsend Route as a valuable local and regional element of the transportation system.

Service at the Keystone Ferry Terminal should be capable of maintaining the 1992 level of service and meet the level of service standards listed in Chapter IV. Island County should work with the Washington State Ferries, WSDOT and Island Transit to provide:

- ◆ operational improvements to the Keystone to Port Townsend Route to maintain the level of service standards;

- ◆ highway improvements along SR 20 and Engle Road to improve access to the terminal, allow for convenient vehicle queuing, waiting and vehicle loading for ferry traffic;
- ◆ permanent facilities for additional vehicle holding areas to accommodate future increases; and
- ◆ a new multimodal terminal facility to encourage high occupancy vehicle travel and accommodate walk-on traffic from transit, kiss-and-ride, and park-and-ride passengers.

Camano Island - Whidbey Island and Other Linkages

Improvements to the transportation and communication systems between Camano Island and Whidbey Island are necessary to enhance community 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. A major limitation in providing a water connection between the two islands is the lack of a public wharf facility on Camano Island that could be used by public and private vessels.

To facilitate a water connection between Camano Island and Whidbey Island, Island County should work with Camano Island, Coupeville, Oak Harbor residents and state and local agencies to:

- ◆ investigate the feasibility of locating a public docking and/or wharf facility on Camano Island and identify facility needs, estimated usage, impacts and costs;
- ◆ investigate the type of passenger ferry, and operating entity, private or public; and
- ◆ identify the land support facilities required to facilitate the successful implementation of the water connection.

Oak Harbor is in the planning process for developing a *Downtown Pier Project* to facilitate a possible water connection between Oak Harbor, Coupeville, Langley, Camano Island and mainland locations, such as Everett, Edmonds and/or Seattle. Island County should work with these jurisdictions, the Skagit/Island RTPO, Island Transit and the Washington State Ferries to investigate opportunities for passenger-only ferry service.

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 vessel. However, there are a limited number of private pier facilities that can and do receive some special freight shipments. Island County and the Ports of South Whidbey, Coupeville and Oak Harbor should investigate the need, possible locations and impact of such a pier facility on the economy and environment of Island County.

AIR TRANSPORTATION IMPROVEMENTS

General aviation is a growing industry, which is an important component of Island County's transportation system. It has proven to be an energy efficient system and provides a means of rapid delivery of cargo and other services. Commuter aviation provides a complimentary service for passengers as well as carrying mail. Problems associated with air transportation include the limited space available for expansion of existing facilities or for new air facilities.

Improvements for the air transportation system that Island County should incorporate in their comprehensive planning, are:

- ◆ Air transportation facilities, as well as their approach and departure paths, should be protected from community encroachment with land use controls to minimize safety hazards and intrusions. Island County should evaluate the need for air space protection zoning and ordinances relating to the limit and control of the height of buildings and other structures.
- ◆ Island County should continue the requirement that sellers inform purchasers of property about the existence of noise contour zones around airports and require new buildings to meet noise level reduction criteria.
- ◆ Island County's Capital Facilities Plan, Capital Improvement Program, and Six-Year Road Construction Program shall consider transportation improvements to facilitate the delivery of goods and services to air transportation facilities.
- ◆ Commuter airlines and private air facilities should encourage high occupancy vehicle access to their terminals. These airlines and air facilities should work with Island Transit to provide convenient transit access facilities for loading and unloading potential passengers that meet ADA requirements.
- ◆ Island County should encourage State Park facilities to reserve informal heli-pad sites for emergency evacuations in remote areas.

NON-MOTORIZED TRANSPORTATION IMPROVEMENTS

Bicycle riding and walking/hiking are becoming more popular as a recreational activity in Island County. The rolling topography and numerous attractions around Island County has encouraged many residents and attracted many visitors from the surrounding metropolitan areas to bicycle and hike around the County. In addition, horse back riding and other equestrian activities have also become popular with some residents in South Whidbey Island and other areas of Island County.

In 1995, the existing non-motorized facilities in Island County were inventoried and analyzed. As part of this study recreational and commuter trail opportunities were investigated, trail demand was estimated and financial strategies were explored. The information was distributed and discussed at public workshops around the County and through a telephone survey of County residents. Based on the results of the analyses and public input, goals, objectives and standards were established and additional trail development plans were proposed. More detailed information about the non-motorized travel in Island County can be found in the *Nonmotorized*

Trail Plan - Island County, prepared in March 28, 1995. Some of the proposed multipurpose trails for hiking, bicycling and horseback riding where appropriate are summarized below:

- ◆ Multipurpose Trails
 - ⇒ Cama Beach/Elger Bay Road DNR/Camano Island State Park Loop Trail (3.2 miles)
 - ⇒ Camano Ridge Trail from Cranberry Lake to Maple Grove Park (9.1 miles)
 - ⇒ DNR Camano Ridge Road/Triangle Cove/Cavelero Beach County Park/Cranberry Lake Loop Trail (8.0 miles)
 - ⇒ Downtown Oak Harbor/Fort Nugent Park/Joseph Whidbey State Park (3.0 miles)
 - ⇒ Ethel Taylor/Deception Pass State Park/Hoypus Hill Addition/Dugualla Bay State Park/Downtown Oak Harbor (17.0 miles)
 - ⇒ Ebey Kettles Geological Area/Fort Ebey State Park/Point Partridge Beach/Ebey's Landing State Park/Coupeville/Ebey Blockhouse Trail (7.3 miles)
 - ⇒ Ebey's Landing State Park/Fort Casey State Park/Keystone Spit State Park/Crockett Lake Trail Extension (5.3 miles)
 - ⇒ Double Bluff Beach/Goss Lake/Langley/South Whidbey High School/Dave Mackie Park (38.0 miles)

Separate trail facilities proposed for bicycles, pedestrians and horseback riding activities are listed below.

Bicycle Facilities

As part of the county-wide non-motorized trail plan, Island County will be developing bicycle facilities. In addition, WSDOT has also identified SR 20 and SR 525 as bicycle corridors in their *Master Plan for Statewide Bicycle Corridors*. SR 20 is also proposed to be part of the proposed *Designated Bicycle Touring Routes* in WSDOT's draft *1993 State Systems Plan*.

Some of the County proposed on-road bicycle touring and commuter bicycle routes, as well as mountain trails identified in the *Nonmotorized Trail Plan - Island County*, prepared in March 28, 1995, are as follows:

- ◆ Bicycle Touring Routes
 - ⇒ SR 532 / East Camano Drive (10.4 miles)
 - ⇒ North / West Camano Drive (12.6 miles)
 - ⇒ East / South Camano Drive (14.6 miles)
 - ⇒ Deception Pass to Ala Spit (3.5 miles)
 - ⇒ Ala Spit to Dugualla Bay / Clover Valley (11.3 miles)
 - ⇒ Dugualla Bay to Strawberry Point to Oak Harbor (15.0 miles)
 - ⇒ Dugualla Bay / Clover Valley to Joseph Whidbey State Park (6.3 miles)
 - ⇒ Oak Harbor Marina to Joseph Whidbey State Park Loop Tour (4.2 miles)
 - ⇒ Joseph Whidbey State Park to Fort Ebey State Park (6.8 miles)
 - ⇒ Oak Harbor to Fort Ebey State Park (8.0 miles)
 - ⇒ Fort Ebey State Park to Coupeville (4.9 miles)
 - ⇒ Coupeville to Fort Casey State Park (4.5 miles)

- ⇒ Fort Casey State Park to Admiral's Cove to Coupeville (9.5 miles)
- ⇒ Fort Casey State Park/Crockett Lake Tour Loop (5.7 miles)
- ⇒ Crockett Lake to Coupeville (3.8 miles)
- ⇒ Admiral's Cove to Greenbank (6.8 miles)
- ⇒ Greenbank to South Whidbey State Park (4.5 miles)
- ⇒ South Whidbey State Park to Freeland (4.9 miles)
- ⇒ Double Bluff to Freeland (3.0 miles)
- ⇒ Freeland to Goss Lake to Langley (6.8 miles)
- ⇒ Freeland to Baby Island to Langley (13.3 miles)
- ⇒ Langley to Lone Lake to Maxwelton (8.3 miles)
- ⇒ Langley to Midvale Corner to Maxwelton (7.6 miles)
- ⇒ Maxwelton to Possession Beach Park (3.8 miles)
- ⇒ Langley to Possession Beach Park (8.3 miles)
- ⇒ Langley to Clinton (5.3 miles)
- ⇒ Clinton to Deer Lake to Cultus Bay to Maxwelton (7.6 miles)
- ⇒ Clinton to Glendale to Maxwelton (7.2 miles)
- ◆ Commuter Bicycle Routes
 - ⇒ SR 532 East Camano Drive / Elger Bay Road / South Camano Drive (11.4 miles)
 - ⇒ SR 20 / SR 525 Corridor (47.6 miles)
- ◆ Mountain Bike Trails
 - ⇒ Cama Beach/Elger Bay Road DNR/Camano Island State Park Loop Trail (3.2 miles)
 - ⇒ Elger Bay Road DNR
 - ⇒ Camano Ridge Trail from Cranberry Lake to Maple Grove Park (7.8 miles)
 - ⇒ Camano Ridge Road DNR
 - ⇒ Hoypus Hill Addition to Deception Pass State Park (3.2 miles)
 - ⇒ Dugualla Bay / Clover Valley Loop Trail (1.9 miles)
 - ⇒ Dugualla Bay state Park (1.3 miles)
 - ⇒ Ebey Kettles Geological Area / Point Partridge Beach Trails System
 - ⇒ Ebey's Landing State Park / Ebey Blockhouse Historic Site
 - ⇒ Goss Lake DNR
 - ⇒ Craw Road DNR

To implement these plans, Island County and WSDOT will consider:

- ◆ sign improvements that increases the awareness of the driving public regarding the increased number of bicyclists and pedestrians traveling along the roadways. Signs should be strategically located in corridor areas where lanes are narrow, shoulders are unavailable, and the roadway alignment is curving to heighten the awareness of potential conflicts with bicyclists, pedestrians and horse back riders.
- ◆ a separate bikeway along the roads illustrated in the various county and state biking plans. As a minimum, a four-foot paved shoulder should be provided for bicyclists. In areas

having steep grades, heavy traffic volumes, narrow traffic lanes, and / or poor sight distances, paved shoulders should be increased to five to eight feet.

- ◆ giving particular consideration for separate travel lanes for bicyclists from cars and pedestrians to serve schools and commercial areas. In these areas, street paint striping and signing should be used extensively. Intersection controls and curb parking should receive special attention in designing these bike lanes.
- ◆ cooperatively working with state and city agencies to develop a comprehensive program for bicycle improvements and focus on the requirements to implement the program. Assessments must be made regarding right-of-way, alignment, intersection controls, parking, and improved shoulder conditions. Costs and additional funding sources must also be identified.
- ◆ prioritizing bicycle improvements by focusing attention on corridor routes. An assessment of signing requirements should be followed by physical improvements coordinated with roadway improvements. Funds should continue to be appropriated for bicycle improvements within Island County's Six Year Capital Improvement Program.
- ◆ educate bicyclists and motorists about potential hazards via media, handouts, posters, signs and bicycle and vehicle safety programs in the schools. In addition, maps will be developed in conjunction with WSDOT, Island County, various parks departments and service organizations to delineate bicycle, pedestrian and equestrian route throughout Island County and distribute them at major entry and / or information points on the islands.
- ◆ encourage commercial developments and other traffic generators to provide bicycle parking facilities, removed from pedestrian movements.

Pedestrian Facilities

As part of the county-wide non-motorized trail plan, Island County will be developing pedestrian facilities. Some of the County proposed tideland and overland hiking and walking trails identified in the *Nonmotorized Trail Plan - Island County*, prepared in March 28, 1995, are as follows:

- ◆ Tideland Trails
 - ⇒ Davis Slough / English Boom (3.0 miles)
 - ⇒ Triangle Cove / Cavelero Beach (3.4 miles)
 - ⇒ Cama Beach / Camano Island State Park (2.0 miles)
 - ⇒ Camano Head (9.0 miles)
 - ⇒ Cranberry Lake / Cornet Bay (1.5 miles)
 - ⇒ Cornet Bay / Ala Spit (3.0 miles)
 - ⇒ Ala Spit / Dugualla Bay / Polnell Point (13.4 miles)
 - ⇒ Joseph Whidbey State Park / South Whidbey State Park (26.0 miles)
 - ⇒ Mutiny Bay / Double Bluff (2.5 miles)
 - ⇒ Oak Harbor / Coupeville (12.9 miles)
 - ⇒ Maxwelton / Scatchet Head / Cultus Bay (3.7 miles)
 - ⇒ Cultus Bay / Possession Point / Possession Sound (1.9 miles)

- ⇒ Possession Sound / Glendale (1.9 miles)
- ⇒ Saratoga / Langley / Sandy Point (3.9 miles)
- ◆ Overland Trails
 - ⇒ Camano Island State Park/Cama Beach State Park/Cavelero Beach County Park (2.7 miles)
 - ⇒ Cama Beach State Park / Camano Ridge Road (6.1 miles)
 - ⇒ DNR Camano Ridge Road / Triangle Cove / Cavelero Beach County Park / Cranberry Lake Loop Trail (8.0 miles)
 - ⇒ Dugualla Bay estuary / Clover Valley (2.7 miles)
 - ⇒ Swantown / Oak Harbor (3.8 miles)
 - ⇒ Crockett Lake Loop Trail (4.9 miles)
 - ⇒ Ebey Kettles Geological Area / Fort Ebey State Park / Point Partridge Beach / Ebey's Landing State Park / Coupeville / Ebey Blockhouse Trail (7.3 miles)
 - ⇒ Double Bluff Beach / Goss Lake / Langley / South Whidbey High School / Dave Mackie Park (38.0 miles)

To implement these proposed trails, the plans will:

- ◆ be developed in conjunction with schools, parks, and commercial area plans, as well as roadway improvements, to provide access to activity centers;
- ◆ be developed cooperatively with WSDOT, Oak Harbor, Coupeville, Langley, park departments, service organizations and concerned citizens;
- ◆ encourage residential developments within the urban growth boundaries to provide pedestrian paths and / or sidewalks;
- ◆ reserve rights-of-way in rural areas for pedestrian use;
- ◆ preserve trails that have been historically used for pedestrian movements;
- ◆ update the Parks and Recreation Plan to include a systematic assessment of pedestrian facility needs to integrate and connect recreational areas within the open space plan for Island County;
- ◆ include a process to review proposed commercial and residential developments and ensure that they include the appropriate pedestrian facilities;
- ◆ provide for a separation of pedestrian, bicycle and equestrian movements.

Equestrian Facilities

As part of the county-wide non-motorized trail plan, Island County will be developing pedestrian facilities. Some of the County proposed equestrian trails identified in the *Nonmotorized Trail Plan - Island County*, prepared in March 28, 1995, are as follows:

- ◆ Equestrian Trails
 - ⇒ Moran Beach Park / Ethel Taylor Property / Hoypus Hill / Ala Spit (4.2 miles)
 - ⇒ Ebey Kettles Geological Area / Fort Ebey State Park / Point Partridge Beach / Ebey's Landing State Park / Coupeville / Ebey Blockhouse Trail (7.3 miles)
 - ⇒ Ebey Kettles Geological Area / Fort Nugent Park (6.1 miles)

⇒ SR 525 between Greenbank and Bush Point (2.8 miles)

⇒ Double Bluff Beach / Goss Lake / South Whidbey High School (38.0 miles)

Equestrian facilities will:

- ◆ be developed in conjunction with parks, pedestrian and bicycle plans, as well as roadway improvements, to provide riding trails and access to equestrian activity centers;
- ◆ be developed cooperatively with WSDOT, Oak Harbor, Coupeville, Langley, park departments, service organizations and concerned citizens;
- ◆ develop standards for equestrian facilities;
- ◆ reserve rights-of-way in rural areas for equestrian use;
- ◆ include a systematic assessment of equestrian facility needs and integrate them with the open space plan for Island County;
- ◆ identify all public and private equestrian facilities;
- ◆ provide for a separation of pedestrian, bicycle and equestrian movements.

SECTION VIII: FINANCIAL ANALYSIS

GMA requires the development of a multi-year financing plan based on the County's transportation needs and associated improvements. The financing plan 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".

To develop the necessary financing plan for Island County, the capital costs associated with the improvements, as well as safety and administration costs, must be identified. In addition, the available revenue over the ten year analysis period must also be identified. If the funding resources do not meet the expected expenditures, then a discussion of how additional funding will be raised or how the land use assumptions will be reassessed to ensure, that the level of service standards will be met, is required.

The following sections present the expected revenues over the next ten 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

Island County transportation projects are funded by a mix of revenues from federal, state and local sources. The primary federal revenue source is from the Surface Transportation Program (STP) funds. State revenue sources include motor vehicle fuel tax, County Arterial Preservation Program (CAP) funds, Rural Arterial Program (RAP) funds, and CAPRON funds, which are generated from a special gas tax available for Island and San Juan Counties. Local revenue sources include property taxes, timber excise taxes, Department of Ecology Grants and other miscellaneous income from local permit fees, reimbursable work and other miscellaneous service fees. Revenues from these funding sources are available to Island County to implement its transportation program and cover the operating, administrative and maintenance expenses of the Island County Road Department.

The 2000 Island County Road Department budget, that was approved by the Board of County Commissioners, listed revenue values for the above revenue sources. These budget values were used to forecast revenues and expenditures over the 20 year financial analysis period. The base revenue values are listed on Table VIII-1.

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

- ◆ Motor fuel taxes and CAPRON funds were extended ahead by 3 percent annually;
- ◆ Property taxes were extended ahead by 8 percent annually;
- ◆ CAP funds were extended ahead by 2 percent annually;
- ◆ CAPRON Additional Correction is estimated at about \$725,000 for 2000 and 2001 and \$181,000 for 2002;

**TABLE VIII-1
BASE 2000 TRANSPORTATION REVENUES
ISLAND COUNTY**

DESCRIPTION	2000 BASE REVENUE (dollars)
Beginning Fund Balance	\$ 1,073,000
Motor Fuel Tax	\$ 1,900,000
Property Taxes	\$ 5,374,000
County Arterial Preservation (CAP)	\$ 234,000
CAPRON	\$ 2,874,000
CAPRON Additional Correction	\$ 725,000
FEMA	\$ 128,000
Department of Ecology Grants	\$ 922,000
Rural Arterial Program (RAP)	\$ 443,000
Surface Transportation Program (STP & RTPO)	\$ 426,000
Timber Excise Taxes	\$ 20,000
Miscellaneous Revenue	\$ 175,000
TOTAL BASE REVENUE	\$ 14,294,000

Source: Island County

- ◆ 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 annual 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 base 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;
- ◆ Miscellaneous revenues were extended ahead by 5 percent annually.

By applying these assumptions to the adopted 2000 revenue budget, the anticipated revenue estimates over the next 20 years were projected. These 2001 to 2020 projected revenues are summarized on Table VIII-2.

From a review of these revenue forecasts, approximately \$451 million in transportation revenue can be expected to be available over the next 20 years to cover the administration costs, operating costs, maintenance costs and capital expenditures for Island County's transportation system. These estimated are based on the 2000 approved budget.

**TABLE VIII-2
2000 - 2020 TRANSPORTATION REVENUE PROJECTIONS
ISLAND COUNTY**

SOURCE	REVENUE PROJECTIONS BY YEAR (in thousands of dollars)									
	2000 Budget	2001 Projected	2002 Projected	2003 Projected	2004 Projected	2005 Projected	2006 Projected	2001 to 2006 Projected	2007 to 2020 Projected	2001 to 2020 Projected
Use of Estimated Beg. Fund Balance	\$1,073	\$637	\$1,116	\$386	\$ 0	\$ 0	\$ 0	\$2,139	\$ 0	\$ 2,139
Motor Fuel Tax	\$1,900	\$1,957	\$2,016	\$2,076	\$2,138	\$2,203	\$2,269	\$12,659	\$39,927	\$ 52,585
Property Taxes	\$5,374	\$5,804	\$6,268	\$6,770	\$7,311	\$7,896	\$8,528	\$42,577	\$223,022	\$265,599
CAP	\$234	\$239	\$243	\$248	\$253	\$258	\$264	\$1,506	\$4,294	\$ 5,799
CAPRON	\$2,874	\$2,960	\$3,049	\$3,140	\$3,235	\$3,332	\$3,432	\$19,148	\$60,394	\$ 79,542
CAPRON Add. Correction	\$725	\$725	\$181	\$ 0	\$ 0	\$ 0	\$ 0	\$906	\$ 0	\$ 906
FEMA	\$128	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Department of Ecology Grants	\$922	\$130	\$140	150\$	\$160	\$170	\$180	\$930	\$3,570	\$ 4,500
RAP	\$443	\$762	\$1,384	\$1,310	\$1,300	\$500	\$1,390	\$6,646	\$19,359	\$ 26,005
STP	\$426	\$456	\$515	\$212	\$483	\$248	\$73	\$1,987	\$4,888	\$ 6,875
Timber Excise Tax	\$20	\$21	\$22	\$22	\$23	\$24	\$25	\$138	\$481	\$ 619
Miscellaneous	\$175	\$184	\$193	\$203	\$213	\$223	\$235	\$1,250	\$4,826	\$ 6,076
Total Revenues	\$14,294	\$13,874	\$15,127	\$14,518	\$15,117	\$14,855	\$16,395	\$89,885	\$360,761	\$450,646
<p>Notes:</p> <ul style="list-style-type: none"> ⇒ Motor fuel taxes and CAPRON funds were extended ahead by 3 percent annually; ⇒ Property taxes were extended ahead by 8 percent annually; ⇒ CAP funds were extended ahead by 2 percent annually; ⇒ CAPRON 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 annual 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 base 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; ⇒ Miscellaneous revenues were extended ahead by 5 percent annually. 										

Source: Island County and H. W. Lochner, Inc.

Improvements to the state highways and other state transportation facilities in Island County are primarily the responsibility of WSDOT. Their revenue forecasts are estimated on a biennial basis and subject to the approval of the State Legislature. Estimates of state funds for improvements to the state facilities in Island County over the next 20 years are undefined.

Questions regarding available funds for state transportation facilities and their improvements should be directed to WSDOT.

CAPITAL EXPENDITURES

The capital expenditures for the identified roadway capacity improvements to meet GMA requirements are summarized in Table VIII-3. These capacity improvements were identified to meet Island County's level of service standards. These improvements include several joint intersection projects with WSDOT and other agencies to increase the capacity at various locations in Island County. The cost of these projects is estimated at approximately \$13.65 to \$18.5 million plus additional funds for undetermined right-of-way requirements.

**TABLE VIII-3
ISLAND COUNTY'S ESTIMATED CAPITAL COSTS
FOR IMPROVEMENTS TO MAINTAIN LEVEL OF SERVICE STANDARDS
2001 to 2020**

ROADWAY / INTERSECTION	FROM	TO	IMPROVEMENTS	COUNTY'S ESTIMATED COST
E. Camano Drive	SR 532	Cross Island Rd.	Widen to 4 lanes	\$1.75m to 2.0m
E. Camano Drive	Cross Island Rd.	Camano Hill Rd.	Widen to 4 lanes	\$2.6m to \$3.0m
E. Camano Drive	Camano Hill Rd.	Monticello Dr.	Widen to 4 lanes	\$5.6m to 6.5m
Ault Field Rd./Heller Rd.			Signalization and/or Channelization	\$0.3m to \$0.5m plus additional r-o-w
E. Camano Dr./ Cross Island Rd			Signalization and/or Channelization	Improvement are in progress during 2000
E. Camano Dr./ Camano Hill Rd.			Signalization and/or Channelization	\$0.3m to \$0.5m plus additional r-o-w
County share of four intersections along SR 20			Signalization and/or Channelization County share ~ 20%	\$1.1m to \$2.2m plus additional r-o-w
County share of five intersections along SR 525			Signalization and/or Channelization County share ~ 20%	\$1.4m to \$2.7m plus additional r-o-w
County share of SR 532 / E. Camano Dr. / Sunrise Blvd. intersection			Signalization and/or Channelization County share ~ 40%	\$0.6m to \$1.1m plus additional r-o-w
Total				\$13.65m to \$18.5m plus additional r-o-w

Source: H.W. Lochner, Inc. and Island County

As part of their County's Six Year TIP, Island County has included \$35,725,000 for several capacity improvements between 2001 and 2006 as well as expenditures for the safety and operational improvements. These improvement projects, as outlined by Island County in their Six-Year TIP, are summarized in Table VIII-4.

**TABLE VIII-4
CAPACITY, SAFETY AND OPERATIONAL IMPROVEMENT COSTS
ISLAND COUNTY 2001 to 2006**

TYPES OF IMPROVEMENTS	ESTIMATED COSTS
1. Planning Studies	\$ 208,000
2. Paths and Trails	974,000
3. Intersection Improvements	3,935,000
4. Roadway Stabilization	2,155,000
5. Construction Overlays	3,600,000
6. Miscellaneous Right-of-Way	300,000
7. Roadway Widening / Realignment	18,508,000
8. Minor Safety Improvements	1,060,000
9. Roadway Drainage	3,460,000
10. Transit Improvements	1,525,000
TOTAL	\$ 35,725,000

Source: Island County's Six Year Transportation Improvement Program: 2001-2006, adopted June 26, 2000

These capital expenditures include improvements to nine county intersections and the county share for six intersections with the state highways in Island County. Improvements to 17 county roads and the county's share for improvements to SR 20 south of Oak Harbor are also included in the County's Six Year TIP. Funds are also budgets for non-motorized facilities such as the Cedars Trail, Rhody Trail and Camano Parks trails and for transit improvements including the Camano Island transit Center and park-and-ride improvements.

In addition to these capital expenditures, planning/design studies and the construction of other transportation improvements should be developed over the next twenty years to :

- ◆ analyze with WSDOT, the Skagit/Island Regional Transportation Planning Organization (RTPO), Skagit County all potential transportation alternatives and strategies that could help alleviate current and projected system capacity problems at the vehicular entry points to Whidbey and Camano Islands. The study should evaluate all feasible options such as additional car/passenger ferry service, additional bridge and highway facilities, ride-sharing programs, rate incentives, additional park and ride lots, HOV lanes, non-motorized transportation alternatives, etc. County's cost for this study is estimated at \$20,000.
- ◆ conduct traffic warrant studies with WSDOT based on current and projected traffic levels at the following intersections: SR 20/Troxell Road, SR 20/Banta Road, SR 20/Frostad Road,

SR 20/Fakkema Road, SR 525/Honeymoon Bay Road; SR 525/Scott Road, SR 525/Coles Road; SR 525/Bob Galbreath and SR 532/East Camano Drive/Sunrise Boulevard. The County should conduct their own traffic warrant studies at Camano Hill Road/East Camano Drive and Ault Field Road/Heller Road. County's share of the nine traffic warrant studies with WSDOT is estimated at \$50,000 and the cost for the three County traffic warrant studies is \$20,000.

- ◆ investigate safety improvements at the following locations: Ault Field Road with Oak Harbor Road, Crescent Harbor Road with Reservation Road and Torpedo Road, Jones Road, Monkey Hill Road near Henni Road, and Camano Hill Road. Cost for these investigations is estimated at \$50,000.
- ◆ investigate level of service improvements for Ault Field Road, Goldie Road, Heller Road, and Oak Harbor Road with the City of Oak Harbor; and level of service improvements to SR 20, north of the city limits to Deception Pass Park and south of the city limits to Main Street (Coupeville), SR 525 between Bush Point Road and Coles Road, and SR 532 between East Camano drive and Davis Slough with WSDOT. Cost of these investigations is estimated at \$50,000.
- ◆ finalize the analysis, design and reconstruction the phased improvements to Crawford Road between Brooks Hill Road/Bayview Road and SR 525 to support the redevelopment of the Porter Field (Langley-Whidbey Airpark) as an "Industrial Park" as identified in the Land Use Element. The capital cost for the improvement to Crawford Road is estimated at approximately \$2.0 to \$2.5 million. Funding for this project is included in Island County's TIP and assumes a combination of funds for county revenues and funds from a Road Improvement District (RID) or a Transportation Improvement District (TID). Funds have been included in County's TIP.

A summary of the anticipated County transportation related expenditures, including the capacity, safety and operational improvements in its transportation program over the next 20 years, is presented on Table VIII-5. These program expenditures are based on the approved 2000 expenditure data by the Board of County Commissioners and the following assumptions for growth:

- ◆ 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 2006, 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.
- ◆ Transfers to other Fund are not considered reoccurring expenses.
- ◆ Miscellaneous expenditures were extended ahead by 4% annually through 2006, then by 7% through 2020.

Overall, the Island County's Six-Year TIP has allotted approximately \$88.3 million for transportation related expenses. Road construction projects, including capacity, safety and operational improvements account for approximately \$30 million or about 34 percent of the transportation budget for the years 2001 through 2006. County administration costs are estimated at approximately \$17 million or about 19.2 percent of the six year transportation budget. Maintenance & operation expenses are the second largest percentage of the six year transportation budget at approximately 33.2 percent or \$29.3 million. The other items, including allocations, debts, transfer to other funds and miscellaneous expenses amount to approximately 13.6 percent or \$12 million.

**TABLE VIII-5
SUMMARY OF 2000 TO 2020 TRANSPORTATION EXPENDITURE PROJECTIONS
ISLAND COUNTY**

SOURCE	EXPENDITURE PROJECTIONS BY YEAR (in thousands of dollars)									
	2000 Budget	2001 Projected	2002 Projected	2003 Projected	2004 Projected	2005 Projected	2006 Projected	2001 to 2006 Projected	2007 to 2020 Projected	2001 to 2020 Projected
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
Total Costs	\$14,294	\$13,874	\$15,127	\$14,518	\$14,815	\$14,795	\$15,219	\$88,346	\$355,539	\$443,885

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 2006, 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.
- ⇒ Transfers 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 and H.W. Lochner, Inc.

WSDOT has also identified certain mobility strategies including roadway and intersection capacity improvements, safety improvement strategies, bicycle touring route strategies, heritage corridors strategies and environmental retrofit strategies in their *1999 - 2018 State Highway System Plan*, prepared in January 1998. Some of these improvement strategies were included in their financially constrained 20 year plan while other improvements, although important, were excluded from the constrained plan because of funding limitations. WSDOT's mobility strategies for state facilities in Island County and their estimated costs are listed in Table VIII-6. WSDOT's safety improvement strategies for state facilities in Island County and their estimated costs are listed in Table VIII-7. It should be noted that the state has not yet identified specific funding sources for all of these projects.

**TABLE VIII-6
IDENTIFIED STATE MOBILITY STRATEGIES BY WSDOT
ISLAND COUNTY**

LOCATION	FROM	TO	IMPROVEMENTS	ESTIMATED COSTS
SR 20	SR 525 (MP 16.32)	Deception Pass Bridge (MP 41.90)	North Island Access Study. (Initial study started)	\$2.00m to \$2.60m
SR 20	SR 525 (MP 16.00)	Main St. (MP 21.83)	Widen to 4 lanes (Passing lanes may be sufficient).	\$14.63m to \$19.02m
SR 20	Main St. (MP 21.83)	Main St. (MP 21.83)	Coupeville Park & Ride Lot - NFS	\$0.50m to \$0.65m
SR 20	Main St. (MP 21.83)	Arnold Rd. (MP 26.73)	Widen to 4 lanes and or realign NFS (Passing lanes may be sufficient).	\$10.76m to \$13.44m
SR 20	Arnold Rd. (MP 26.73)	Miller Rd. (MP 29.74)	Widen to 4 lanes and or realign - NFS (Passing lanes may be sufficient).	\$6.27m to \$7.84m
SR 20	Miller Rd. (MP 29.74)	80th NW St. (MP 31.39)	Widen to 4 lanes – NFS (Partially included in County’s TIP and Oak Harbor’s <i>Comprehensive Plan.</i>)	\$7.94m to \$10.32m
SR 20	Goldie Rd. (MP 32.94)	Cemetery Rd. (MP 33.38)	Widen to 4/5 lanes - NFS (Partially included in Oak Harbor’s <i>Comprehensive Plan.</i>)	\$3.83m to \$4.98m
SR 20	Cemetery Rd. (MP 33.38)	Henni Rd. (MP 38.63)	Widen to 4 lanes, improve Henni Rd. intersection – NFS (Passing lanes may be sufficient)	\$15.23m to \$19.04m
SR 20	Henni Rd. (MP 38.63)	Cornet Bay Rd. (MP 40.81)	Widen to 4 lanes – NFS	\$30.89m to \$40.16m
SR 525	Cedar Vista Dr. (MP 9.99)	Bayview Rd. (MP 14.68)	Widen to 4 lanes to Langley Rd. (MP 11.1) - NFS	\$9.69m to \$12.16m
SR 525	Bayview Rd. (MP 14.66)	Bush Point Rd. (MP 18.92)	Passing lane in each direction, access management - NFS	\$0.99m to \$1.23m
SR 525	Bush Point Rd. (MP 18.92)	Christenson Rd. (MP 24.29)	Passing lane in each direction, access management - NFS	\$5.37m to \$6.72m
SR 525	Christenson Rd. (MP 24.29)	SR 20 (MP 30.49)	Passing lane in each direction, access management - NFS	\$3.32m to \$4.89m
SR 532	(MP 1.10)	(MP 1.10)	Construct Park & Ride Lot (50 stalls). (Partially included in County’s TIP.)	\$0.50m to \$0.65m
SR 20 ¹	Cornet Bay Rd. (MP 41.81)	Deception Pass Bridge (MP 41.90)	Widen to 4 lanes includes, 1/2 of the Deception Pass Bridge & new alignment.	\$64.79m to \$74.92m

Notes: 1. These state facilities improvements in Island County were excluded from the financially feasible plan. It should be noted that funding sources have not yet been identified for all of these projects.

Source: *State Highway System Plan: 1999 - 2018*, prepared in January 1998. WSDOT is currently updating their highway system plan and expected it to be completed in 2001.

**TABLE VIII-7
IDENTIFIED STATE SAFETY STRATEGIES BY WSDOT
ISLAND COUNTY**

LOCATION	FROM	TO	IMPROVEMENTS	ESTIMATED COSTS
SR 20	0.31 miles North of Libbey Rd. (MP 25.00)	Scenic Heights Rd. (MP 31.00)	3 horiz. & 1 vert. curves realign, flatten ditch slopes for 4,900 ft., guardrail for 800 ft., signal at Libbey Rd. .	\$9.19m to \$10.68m
SR 20	MP 25.21	MP 25.40	realign horizontal curve (0.2 miles)	\$0.40m to \$0.50m
SR 20	MP 25.58	MP 26.53	realign horizontal curves	\$2.05m to \$2.56m
SR 20	MP 26.65	MP 26.91	realign horizontal curve.	\$0.52m to \$0.65m
SR 20	MP 27.24	MP 27.56	culvert end treatment	\$0.00m to \$0.00m
SR 20	MP 29.62	MP 30.21	realign vertical curve	\$0.50m to \$0.63m
SR 20	MP 30.31	MP 30.39	4 warning signs	\$0.00m to \$0.00m
SR 20	0.19 miles North of NE Narrows Rd. (MP 33.00)	Deception Pass (MP 41.90)	add of guardrail - 5,500 ft., flatten ditch slopes and add clear zone - 5,000 ft., signals at Cemetery Rd., Fakkema Rd., Frostad Rd, and Jones Rd., and realign SR 20 near Troxell Rd. add left and right turn lanes. (Some work completed in 1998-2000.)	\$1.34m to \$1.54m
SR 20	MP 35.25	MP 35.57)	extend guardrail (0.1 miles)	\$0.01m to \$0.01m
SR 525	MP 8.95	MP 9.99	install 1,200 ft. of guardrail.	\$0.03m to \$0.04m
SR 525	MP 10.08	MP 10.32	install 400 ft. of guardrail.	\$0.01m to \$0.01m
SR 525	Maxwelton Rd. (MP 12.00)	Claw Rd. (MP 13.00)	install signal at Maxwelton Rd. & safety features, including flattening vertical crest at Maxwelton Rd., install left turn pockets at Coles Rd. (Some work completed in 1997-98)	\$1.56m to \$2.03m
SR 525	Kramer Rd. (MP 14.00)	Marsh Rd. (MP 15.00)	Bayview Rd. Signalization & channelization, realign horiz./vertical curve, access control. (Partially included in County's TIP.)	\$1.56m to \$2.00m
SR 525	Scott Rd. (MP 17.50)	Honeymoon Bay Rd. (MP 19.00)	realign Cameron Rd. I/S, flatten ditches (1,500 ft.), guardrail (2,500 ft.), cut 10 ft. high hill (1,000ft.), clear zone, left turn pockets.	\$0.67m to \$0.84m

Note: It should be noted that funding sources have not yet been identified for all of these projects and that some of these projects have been completed between 1997 through 2000.

Source: *State Highway System Plan: 1999 - 2018*, prepared in January 1998. WSDOT is currently updating their highway system plan and expected it to be completed in 2001.

WSDOT's bicycle touring route strategies, heritage corridors strategies and environmental retrofit strategies for state facilities in Island County and their estimated costs are listed in Table VIII-8. These projects are in addition to and complements Island County's Non-motorized Plan.

**TABLE VIII-8
IDENTIFIED STATE BICYCLE TOURING ROUTE, HERITAGE CORRIDOR &
ENVIRONMENTAL RETROFIT STRATEGIES BY WSDOT
ISLAND COUNTY**

LOCATION	FROM	TO	IMPROVEMENTS	ESTIMATED COSTS
SR 20 ¹ Bicycle Touring Strategies	MP 14.99 MP 18.93 MP 19.53 MP 31.50 MP 32.08 MP 32.69	MP 18.40 MP 19.28 MP 20.45 MP 31.96 MP 32.15 MP 32.80	widen shoulder to 4 ft. minimum for bicycle touring route.	\$2.12m to \$2.49m \$0.22m to \$0.26m \$0.58m to \$0.68m \$0.29m to \$0.34m \$0.04m to \$0.05m \$0.27m to \$0.32m
SR 20 Heritage Corridor Strategies	MP 12.90	MP 41.90	S&R CMP improvements	NA
SR 525 Heritage Corridor Strategies	MP 8.50	MP 30.50	S&R CMP improvements	NA
SR 20 Environmental Retrofit Strategies	MP 32.32		construct noise wall	\$0.13m to \$0.17m

Notes: 1. These state facilities improvements in Island County were excluded from the financially feasible plan.

Source: *State Highway System Plan: 1999 - 2018*, prepared in January 1998. WSDOT is currently updating their highway system plan and expected it to be completed in 2001.

COMPARISON OF ROADWAY EXPENDITURES AND REVENUE ESTIMATES

Island County has estimated that approximately \$450.6 million will be available to fund their transportation improvement program, including capacity, safety and operational improvements for roads, transit coordination, marine transportation support, air transportation support and non-motorized transportation facilities between 2001 and 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

From a comparison of the County's revenues (Table VIII-2) and expenditures (Table VIII-5), approximately \$2,139,000 will be taken out of the reserve fund to cover anticipated expenditures between 2001 and 2006. Between 2007 and 2020, a surplus of approximately \$5,222,000 in revenue funds are expected to replenish the cash reserves and cover unforeseen expenses.

Based on this analysis, sufficient funds should exist to finance the \$13.6 to \$18.5 million in the anticipated GMA capacity improvements along East Camano Drive and various intersection

improvements, previously identified, out of the approximately \$145.9 million expected for roadway capacity and safety construction over the next 20 years.

In reviewing the *State Highway System Plan: 1998-2018*, WSDOT has identified approximately \$111.9 to \$143.7 million for several mobility strategy improvements and approximately \$ 17.8 to \$21.5 million in safety improvements for state highway facilities in Island County. There are also approximately \$64.8 to \$74.9 million in other mobility strategies excluded from their financially constrained system plan. The proposed mobility and safety improvements in the WSDOT's *State Highway System Plan: 1998-2018* are sufficient to improve travel conditions on the highway corridors of statewide significance (SR 20 and SR 525) in Island County to meet the level of service standards through 2020.

Since improvements to the Deception Pass Bridge are undefined and are excluded from WSDOT's financially feasible plan, WSDOT will need additional funds to implement any improvement for the Deception Pass Bridge. However, with the implementation of proposed improvements in the financially feasible plan for SR 20, the overall SR 20 corridor from Oak Harbor north city limits to the Deception Pass Bridge will have an ACR rating below the level of service standard threshold of ACR-12 and meet GMA requirements.

The widening of SR 532 is also excluded from WSDOT's financially feasible plan. WSDOT will need additional funds to implement these improvements for SR 532. However, at the present time SR 532 is not on the list of highways of statewide significance and thus is not included in concurrency analysis. Because of the lack of anticipated state revenues to fund SR 532 improvements, it is recommended that the level of service standard for this state roadway segment be revised to reflect the anticipated 2006 conditions for the near term. In the longer term, it is recommended, that Island County work with WSDOT to raise the priority of this state roadway segment and increase state and federal funding for their transportation programs. As additional state funds become available for capacity improvements, Island County should encourage the WSDOT to include this highway improvement project in their State Highway System Plan for implementation.

Since the capacity improvements on SR 532 are not expected to be funded over the next 20 years, it would be preferred that the capacity improvements to East Camano Drive also be delayed until WSDOT widens SR 532 to four lanes. As a result, the level of service standards for the segment of East Camano Drive from SR 532 to Camano Hill Road should be revised to LOS 'E' in the short term.

TRANSIT REVENUE AND OPERATING COST SUMMARY

The six year revenue and operating cost projections for Island Transit between 2000 and 2006 are summarized on Table VIII-9. These revenue and cost projections were based on the actual 1999 Island Transit's values and on their 2000 *Transit Development Plan*.

From a review of these projections, Island Transit should be able to maintain the existing transit service, as well as increase transit capacity to maintain the current transit level of service on existing routes and service. However, additional revenue will be needed to expand local transit

service to other neighborhood areas on Whidbey and Camano Islands, as requested by area residents.

TABLE VIII-9
2000 - 2006 TRANSIT REVENUE AND OPERATING COST PROJECTIONS
ISLAND TRANSIT

	2000	2001	2002	2003	2004	2005	2006
REVENUE							
Beginning Balance	\$3,074.3	\$2,512.6	\$2,228.9	\$2,328.1	\$2,397.0	\$2,542.2	\$2,576.9
Gen. Operating Fund	\$3,218.1	\$2,696.4	\$2,175.3	\$2,178.4	\$2,318.2	\$2,271.0	\$2,374.8
Add. Capital Revenue	\$685.0	\$1,598.4	\$176.0	\$234.0	\$55.2	\$505.6	\$360.0
Total Revenue.	\$6,977.4	\$6,807.4	\$4,580.2	\$4,740.5	\$4,770.4	\$5,318.8	\$5,311.7
EXPENSES							
Operating Expenses	\$3,529.3	\$2,540.0	\$2,014.1	\$2,012.5	\$2,147.2	\$2,094.9	\$2,193.5
Capital Obligations	\$935.5	\$2,038.5	\$238.0	\$331.0	\$81.0	\$647.0	\$465.0
Total Expenses	\$4,464.8	\$4,578.5	\$2,252.1	\$2,343.5	\$2,228.2	\$2,741.9	\$2,658.5
YEAR END BALANCE	\$2,518.6	\$2,228.9	\$2,328.1	\$2,397.0	\$2,542.2	\$2,576.9	\$2,653.2

NOTES:

- ⇒ Based on 1999 Actual Revenues and Operating Expenses.
- ⇒ Years 2000 through 2006 are based on Island Transit's Seven Year Financial Forecasts.

Source; Island Transit

To expand local transit service, additional revenues will be required. One possible source of funds for local transit service would be to increase the local sales tax dedicated to transit from the current 0.6 percent to the allowable maximum of 0.9 percent. Island Transit is exploring various operating and funding scenarios to provide these service expansions.

SECTION IX: TRAVEL DEMAND MANAGEMENT

Travel Demand Management (TDM) strategies have become a recognized method to reduce congestion and improve air quality and are alternatives to more costly capacity improvement projects in urban and suburban areas. In these high density areas, commute trip reduction (CTR) legislation has been passed that requires any employer, with more than 100 employees in a single location, to increase the average vehicle occupancy rate. These employers have begun offering incentives and developing action programs to encourage their employees to use alternative modes of travel other than driving alone. These incentives and action programs have included financial incentives, flexibility in employee work hours to reduce their travel during peak commuting hours, and the option of tele-commuting.

Island County 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, certain demand management strategies that may improve travel in Island County are evaluated and successful strategies implemented. The rural nature of Island County is inherently different than the more urbanized areas of the state and requires different TDM strategies. For example, in Island County, large portions of the Island's residents are retired or work out of the County. In addition, there are only a few large employers in the County that could offer financial incentives to reduce employee travel during peak commuting hours or reduce the use of single occupant vehicles. As a result, TDM strategies for Island County's residents should provide more convenient and attractive travel alternatives rather than financial incentives. It should be noted, however, that Island County has instituted a commute trip reduction program for County employees. The County encourages employee utilization of public transportation, van and carpools, bicycles, and walking in order to reduce parking demands and traffic congestion.

Some of the possible TDM strategies that could be continued or implemented in Island County include: expansion of park-and-ride lots and ridesharing programs, development of non-motorized transportation facilities, expansion of the transit system, implement high occupancy vehicle (HOV) lanes or bypass lanes in high congestion areas and promote employer-based programs.

PARK-AND-RIDE LOT PROGRAM

Island Transit currently operates six authorized park-and-ride lots on Whidbey Island and is exploring joint opportunities for future park-and-ride development with WSDOT. Island County should be involved with the planning of these future park-and-ride facilities to ensure that they provide adequate service to the residents of Island County. In addition, Island County should work with WSDOT to identify, plan and implement similar park-and-ride facilities on Camano Island to reduce the congestion on East Camano Drive and SR 532. In locating these park-and-ride lots, consideration should be given to access to residential areas, transit vehicle turning requirements and convenient access for carpools and vanpools. WSDOT and Island Transit are currently planning for an extension to the Coupeville park-and-ride and along SR 532 on Camano Island. Other possible locations for future park-and-ride lots are in the vicinity of Henni Road or Troxell Road along SR

20 in north Whidbey Island, in the City of Oak Harbor near the proposed transfer center, and a second location on Camano Island.

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. 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 order to reduce parking demands and traffic congestion. A guaranteed ride home is available to all County employees who participate in the program. In addition, Island County, in conjunction with Island Transit, continues to encourage other county residents to rideshare for work, shopping and other trips.

NON-MOTORIZED TRANSPORTATION PROGRAM

Island County has adopted a non-motorized transportation plan. This plan includes 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.

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 transit service to include Camano Island with connections to Stanwood in Snohomish County. In addition, paratransit service was begun by Island Transit 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. Paratransit service was also expanded to include Camano Island in 1995.

Island County should continue to work with Island Transit to encourage Whidbey Island and Camano 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, if necessary, that meet ADA requirements, 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 transit service. A transfer facility somewhere on Fidalgo Island would enable residents of both counties seamless bus service between the two counties.

HIGH OCCUPANCY VEHICLE (HOV) LANES

HOV lanes can be used to allow carpools with two-or-more or three-or-more persons, vanpools and transit vehicles to bypass congested areas. Generally, these improvements are incorporated along major transportation routes. In Island County, the major transportation routes that can be considered for HOV lanes include SR 20, SR 525 and SR 532. As a result, Island County should work with WSDOT to investigate the benefit derived from implementing HOV lanes along congested sections of the state highways. Consideration should be given to all day and/or peak period HOV restrictions. Possible locations for these HOV lanes include: SR 20 south of Deception Pass State Park to Ault Field Road; SR 525 approach to the Clinton ferry terminal, in conjunction with priority boarding of the ferries; SR 525 from the vicinity of the Bayview Road park-and-ride lot; and along SR 532 from East Camano Drive to Davis Slough and possible along SR 532 to I-5.

EMPLOYER-BASED PROGRAMS

Employers in Island County can also participate in the commute trip reduction program by offering their employees increased work choices, such as tele-commuting opportunities, flexible schedules, compressed work schedules, multiple shifts and prior parking for vanpools and carpools. Island County should promote these employer activities, provide public information and sponsor other education and public awareness programs to peak hour congestion and reduce the number of single occupant vehicles on county and state highways.

APPENDIX A

**FORECASTING PROCEDURES FOR
POPULATION AND EMPLOYMENT**

ISLAND COUNTY

1996 - 2020

FORECASTING PROCEDURES FOR POPULATION AND EMPLOYMENT IN ISLAND COUNTY FOR 1996 - 2020

INTRODUCTION

Island County is currently subdivided into four major planning subareas that include North, Central and South Whidbey Island, and Camano Island. Existing population estimates for 1996 and for the year 2003 were developed by County staff, based on 1990 census data and forecasts obtained from the State of Washington. In addition, County staff allocated population forecasts for 2000, 2010 and 2020 obtained from the State of Washington to each of these subareas, based on the land use planning assumptions.

Employment forecasts for 2000, 2010 and 2020 were prepared by the Island District Economic Development Council (IDEDC) from data obtained from the Washington State Department of Employment Services (WSDDES). County staff, in cooperation with the Island District Economical Development Council, allocated the employment forecast to the four subareas.

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 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 (TAD's) for this study. The TADs were then further subdivided into traffic analysis zones (TAZ) in order to assign traffic to the refined highway network. Figure A-1 indicates the location of the BNAs and TAZs.

POPULATION FORECASTING PROCEDURE

The following procedure identifies the steps used to obtain population forecasts for the horizon period 2003, and 2020 in each BNA as used in the Transportation Element of the 1998 *Island County Comprehensive Plan*. The steps are as follows:

1. Identify the County's 1996 existing, 2000, 2003, 2010 and 2020 population forecasts by County subareas to include North Whidbey, Central Whidbey, South Whidbey, and Camano Island.
2. Allocate 1996 existing population for each of the four subareas to each BNA based on a specific BNA's 1996 proportional share of the 1996 subarea total.
3. Allocate 2000, 2010 and 2020 population forecasts for each of the four subareas to each BNA based on a specific BNA's 1990 proportionate share of the 1990 subarea total.
4. Verify population allocations by comparing with location of building permits issued from 1990 to 1997.
5. Establish 2003 population forecasts for each BNA by interpolating between 2000 and 2010.
6. Subdivide the BNAs into traffic analysis zones (TAZ). This allocation was based on the area and population of the zone, a review of decisions made in the 1994 ITP 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 planning staff, and representatives from the Cities of Oak Harbor, Coupeville and Langley. Lastly, the Island County Planning Director reviewed these allocations to ensure coordination with the land use forecasts.

For this 2000 update of the Transportation Element, the follow step was also used to obtain the population forecast for the 2006 horizon period in each BNA.

- ◆ Establish 2006 population forecasts for each BNA by interpolating between 2003 and 2010.

The results of these analyses are presented in Table A-1. The total population for Island County in 1996 is estimated at approximately 74,900 persons, at approximately 87,450 persons in 2003, at approximately 92,100 persons in 2006 and at approximately 118,800 in 2020.

EMPLOYMENT FORECASTING PROCEDURE

The following procedure identifies the steps used to obtain employment forecasts for the horizon periods 2003 and 2020. Again, the forecasts were established on a BNA basis. The steps of the process are as follows:

1. Review process developed in the employment distribution for the 1994 ITP.
2. Forecast employment for the four subareas and the three incorporated areas as prepared by the IDEDC. Factor employment data for each Standard Industrial Code classification within each BNA to obtain employment forecasts for 1996, 2003 and 2020. Allocate employment to the BNAs and TAZs by county staff in cooperation with IDEDC. Strong overview by the City of Oak Harbor was provided for employment allocation in TAZs within the Oak Harbor UGA.
3. Subdivide the BNAs into traffic analysis zones. This allocation was based on the area and population of the zone and general knowledge of the existing and proposed land use types that exist within the zone

For this 2000 update of the Transportation Element, the follow step was also used to obtain the employment forecast for the 2006 horizon period in each BNA.

- ◆ Establish 2006 employment forecasts for each BNA by interpolating between 2003 and 2020.

The total employment for Island County in 1996 is estimated at approximately 21,589 jobs, at approximately 24,889 jobs in 2003, at approximately 26095 jobs in 2006 and at approximately 33,345 jobs in 2020. The result of the process is represented in Table A-2.

TABLE A-1: PERMANENT POPULATION DISTRIBUTION - ISLAND COUNTY (As of 3/06/98 HIGH RANGE)

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	EXISTING - 1996		PROJECTED - 2003		PROJECTED - 2006		PROJECTED - 2020	
			PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS
NORTH WHIDBEY	9701		10%	3,910	9.6%	4,242	9.4%	4,299	8%	4,809
		1	5%	195	5%	212	5%	215	5%	240
		2	55%	2,151	55%	2,333	55%	2,364	55%	2,646
		3	30%	1,173	30%	1,273	30%	1,290	30%	1,443
	9702	4	10%	391	10%	424	10%	430	10%	480
			11%	4,301	10.4%	4,558	10.1%	4,603	8%	4,809
		5	60%	2,581	60%	2,735	60%	2,762	60%	2,640
	9703	6	40%	1,720	40%	1,823	40%	1,841	40%	1,760
			9%	3,519	8.6%	3,790	8.4%	3,837	7%	4,208
		7	30%	1,056	30%	1,137	30%	1,151	30%	1,262
		8	20%	704	20%	758	20%	767	20%	842
	9704	9	50%	1,759	50%	1,895	50%	1,919	50%	2,104
			11%	4,301	12.3%	5,399	12.9%	5,894	15%	8,756
		10	10%	430	9%	449	8.6%	460	6%	495
		11	19%	800	19%	973	19%	1,120	18%	1,478
		44	11%	490	11%	596	11%	648	10%	832
	9705	12	60%	2,581	61%	3,381	61.4%	3,666	66%	5,951
			12%	4,692	13.5%	5,912	14.2%	6,512	17%	9,618
		13	18%	821	17%	993	16.6%	1,081	15%	1,428
		45	32%	1,525	31%	1,845	30.6%	2,006	30%	2,900
9706	14	50%	2,346	52%	3,074	52.8%	3,425	55%	5,290	
		19%	7,429	18.5%	8,143	18.3%	8,486	18%	10,450	
	15	100%	7,429	100%	8,143	100%	8,486	100%	10,450	
9707		6%	2,346	5.8%	2,572	5.7%	2,693	6%	3,300	
	16	100%	2,346	100%	2,572	100%	2,693	100%	3,300	
9708		8%	3,128	8.4%	3,686	8.6%	4,003	10%	5,500	
	17	100%	3,128	100%	3,686	100%	4,003	100%	5,500	
9709		14%	5,474	12.9%	5,657	12.4%	5,793	11%	6,050	
	18	0%	0	0%	0	0%	0	0%	0	
	19	30%	1,642	29%	1,657	28.6%	1,668	28%	1,694	
	20	70%	3,832	71%	4,000	71.4%	4,125	72%	4,356	
NORTH WHIDBEY	TOTAL			39,100		43,960		46,120		57,500

TABLE A-1 Continued
PERMANENT POPULATION DISTRIBUTION - ISLAND COUNTY (As of 3/06/98 HIGH RANGE)

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	EXISTING - 1996		PROJECTED - 2003		PROJECTED - 2006		PROJECTED - 2020		
			PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS	
CENTRAL WHIDBEY	9710		43%	4,386	42.4%	4,643	42.1%	4,811	41%	5,740	
		21	16%	702	16%	716	16%	726	13%	759	
		46	24%	1,052	23%	1,074	22.6%	1,082	20%	1,139	
		22	48%	2,106	48%	2,255	48%	2,342	51%	2,920	
		47	6%	263	6%	285	6%	305	7%	423	
		48	6%	263	7%	313	7.4%	356	9%	499	
	9711			26%	2,652	24.8%	2,716	24.3%	2,770	22%	3,080
		23	30%	796	30%	815	30%	831	30%	924	
		24	50%	1,326	50%	1,356	50%	1,360	45%	1,386	
	9712			10%	1,020	9.7%	1,062	9.6%	1,072	8%	1,120
		26	50%	510	48%	516	47%	512	47%	524	
		27	50%	510	52%	546	53%	560	53%	596	
	9713			21%	2,142	23.1%	2,529	24.0%	2,747	29%	4,060
		28	10%	214	10%	253	10%	275	10%	406	
		29	40%	857	34%	860	31.4%	884	24%	956	
		30	10%	214	10%	253	10%	275	10%	406	
		31	40%	857	46%	1,163	48.6%	1,313	56%	2,292	
	CENTRAL WHIDBEY	TOTAL		10,200		10,950		11,400		14,000	

TABLE A-1 Continued
PERMANENT POPULATION DISTRIBUTION - ISLAND COUNTY (As of 3/06/98 HIGH RANGE)

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	EXISTING - 1996		PROJECTED - 2003		PROJECTED - 2006		PROJECTED - 2020	
			PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS
CAMANO ISLAND	9714		28%	3,360	29.4%	4,469	30.0%	4,769	32%	6,816
		1	52%	1,747	50%	2,235	49.2%	2,356	47%	3,204
		2	10%	333	10%	447	10%	486	11%	750
		13	20%	675	21%	938	21.4%	1,011	22%	1,499
		3	18%	605	19%	849	19.4%	916	20%	1,363
	9715		27%	3,240	26.6%	4,043	26.4%	4,230	26%	5,538
		4	50%	1,620	49%	1,981	48.6%	2,043	45%	2,492
		5	20%	648	20%	809	20%	854	21%	1,163
		6	30%	972	31%	1,253	31.4%	1,333	34%	1,883
	9716		14%	1,680	14.0%	2,128	14.0%	2,236	14%	2,982
		7	47%	790	49%	1,043	49.9%	1,111	53%	1,580
		8	53%	890	51%	1,085	50.1%	1,125	47%	1,402
	9717		31%	3,720	30.0%	4,560	29.6%	4,735	28%	5,964
9		8%	298	8%	365	8%	379	8%	477	
10		40%	1,488	40%	1,823	40%	1,894	40%	2,385	
11		26%	967	26%	1,186	26%	1,231	26%	1,551	
12		26%	967	26%	1,186	26%	1,231	26%	1,551	
CAMANO ISLAND		TOTAL		12,000		15,200		15,970		21,300

TABLE A-1 Continued
PERMANENT POPULATION DISTRIBUTION - ISLAND COUNTY (As of 3/06/98 HIGH RANGE)

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	EXISTING - 1996		PROJECTED - 2003		PROJECTED - 2006		PROJECTED - 2020	
			PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS	PERCENT	PERSONS
SOUTH WHIDBEY	9718		22%	2,992	24.3%	4,214	25.3%	4,752	30%	7,800
		32	40%	1,196	37%	1,559	35.7%	1,701	30%	2,340
		33	30%	898	36%	1,517	38.6%	1,825	50%	3,900
		34	30%	898	27%	1,138	25.7%	1,226	20%	1,560
	9719		22%	2,992	21.4%	3,711	21.1%	3,972	20%	5,200
		35	60%	1,796	57%	2,115	55.7%	2,216	50%	2,600
		36	40%	1,196	43%	1,596	44.3%	1,756	50%	2,600
	9720		30%	4,080	28.9%	5,025	28.5%	5,332	26%	6,760
		37	35%	1,428	37%	1,886	37.9%	1,994	39%	2,636
		38	20%	816	21%	1,057	21.4%	1,141	23%	1,555
		39	15%	612	14%	694	13.6%	736	13%	879
		40	15%	612	14%	694	13.6%	736	13%	879
		41	15%	612	14%	694	13.5%	725	12%	811
	9721		26%	3,536	25.4%	4,390	25.1%	4,724	24%	6,240
		42	35%	1,238	35%	1,539	35%	1,677	38%	2,370
		43	65%	2,298	65%	2,851	65%	3,047	62%	3,870
SOUTH WHIDBEY		TOTAL		13,600		17,340		18,780		26,000

Source: Island County

**TABLE A-2
EMPLOYMENT DISTRIBUTION**

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	TOTAL 1996		TOTAL 2003		TOTAL 2006		TOTAL 2020	
			Percent	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs
NORTH WHIDBEY	9701		3%	439	3%	520	3%	544	3%	684
		1	24%	104	24%	127	25%	134	25%	171
		2	20%	86	19%	97	18%	99	17%	113
		3	32%	142	33%	169	33%	179	34%	236
		4	24%	107	24%	127	24%	132	24%	164
	9702		33%	5,336	29%	5,309	28%	5,310	24%	5,336
		5	60%	3,218	60%	3,204	60%	3,201	60%	3,193
		6	40%	2,118	40%	2,105	40%	2,109	40%	2,143
	9703		1%	138	1%	161	1%	164	1%	196
		7	30%	42	30%	50	31%	51	31%	60
		8	25%	35	25%	40	24%	40	24%	48
		9	45%	61	45%	71	45%	73	45%	88
	9704		7%	1,162	10%	1,761	10%	1,908	12%	2,814
		10	20%	228	21%	374	22%	415	23%	655
		11	19%	219	27%	478	28%	542	34%	945
		12	15%	173	13%	234	13%	247	11%	323
		44	46%	542	39%	675	37%	704	32%	891
	9705		1%	183	1%	272	2%	300	2%	491
		13	19%	34	15%	41	14%	43	12%	57
		14	51%	94	50%	162	61%	183	65%	321
		45	30%	55	25%	69	25%	74	23%	113
	9706		8%	1,309	10%	1,735	10%	1,969	12%	2,726
		15	100%	1,309	100%	1,735	100%	1,969	100%	2,726
	9707		12%	1,866	13%	2,406	13%	2,506	16%	3,652
		16	100%	1,866	100%	2,406	100%	2,506	100%	3,652
	9708		4%	743	5%	998	6%	1,089	7%	1,634
		17	100%	743	100%	998	100%	1,089	6536%	1,634
	9709		31%	4,967	28%	5,054	27%	5,090	23%	5,317
		18	0%	-	0%	-	0%	-	0%	-
		19	10%	480	10%	512	10%	514	10%	520
		20	90%	4,487	90%	4,542	90%	4,576	90%	4,797
NORTH WHIDBEY	Totals		100%	16,143	100%	18,216	100%	18,880	100%	22,850

TABLE A-2 Continued

EMPLOYMENT DISTRIBUTION

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	TOTAL 1996		TOTAL 2003		TOTAL 2006		TOTAL 2020	
			Percent	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs
CENTRAL WHIDBEY	9710		61%	1,402	59%	1,508	58%	1,572	55%	1,942
		21	5%	67	5%	76	5%	80	6%	107
		22	86%	1,209	85%	1,287	85%	1,338	84%	1,629
		46	6%	78	6%	88	6%	93	6%	123
		47	3%	48	4%	57	4%	61	4%	83
	9711		24%	547	26%	668	27%	725	29%	1,016
		23	67%	371	69%	460	69%	500	69%	709
		24	10%	55	9%	61	9%	64	8%	77
		25	3%	14	2%	15	2%	15	2%	17
		48	20%	107	20%	132	20%	146	21%	213
	9712		2%	45	2%	52	2%	54	2%	83
26		13%	6	12%	6	13%	7	14%	12	
27		87%	39	88%	46	87%	47	86%	71	
9713		13%	293	13%	338	13%	359	14%	510	
	28	6%	19	6%	21	6%	21	5%	28	
	29	12%	36	12%	42	13%	47	15%	76	
	30	10%	29	10%	35	10%	36	10%	52	
	31	72%	209	72%	240	71%	255	7000%	354	
CENTRAL WHIDBEY	Totals		100%	2,287	100%	2,566	100%	2,710	100%	3,551

**TABLE A-2 Continued
EMPLOYMENT DISTRIBUTION**

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	TOTAL 1996		TOTAL 2003		TOTAL 2006		TOTAL 2020	
			Percent	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs
CAMANO ISLAND	9714		24%	106	21%	163	20%	167	16%	216
		1	31%	33	39%	62	39%	62	31%	68
		2	12%	13	10%	17	10%	17	12%	25
		3	44%	47	39%	64	39%	67	42%	91
		13	13%	13	12%	20	12%	21	15%	32
	9715		37%	168	45%	345	46%	395	52%	678
		4	55%	92	54%	184	54%	195	53%	360
		5	6%	11	4%	17	4%	17	4%	25
		6	39%	65	42%	144	42%	183	43%	293
	9716		17%	78	16%	124	16%	135	16%	206
		7	47%	37	45%	56	45%	61	43%	89
		8	53%	41	55%	68	55%	74	57%	117
	9717		22%	99	18%	141	18%	148	16%	210
		9	23%	23	23%	32	23%	33	22%	47
		10	55%	54	51%	73	51%	77	49%	103
		11	11%	11	13%	18	13%	19	15%	31
		12	11%	11	13%	18	13%	19	14%	29
CAMANO ISLAND	Totals		100%	451	100%	773	100%	845	100%	1,310

**TABLE A-2 Continued
EMPLOYMENT DISTRIBUTION**

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)	TOTAL 1996		TOTAL 2003		TOTAL 2006		TOTAL 2020	
			Percent	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs
SOUTH WHIDBEY	9718		12%	326	12%	401	12%	433	12%	655
		32	18%	58	19%	77	19%	84	22%	142
		33	42%	138	42%	167	42%	180	40%	264
		34	40%	130	39%	157	39%	169	38%	249
	9719		21%	567	19%	648	19%	709	19%	1,086
		35	12%	70	13%	87	13%	94	13%	144
		36	88%	497	87%	561	87%	615	87%	942
	9720		58%	1,561	60%	1,976	60%	2,183	60%	3,403
		37	31%	486	35%	688	35%	790	40%	1,393
		38	14%	221	14%	283	14%	313	14%	491
		39	42%	661	38%	762	38%	813	35%	1,104
		40	10%	153	10%	191	10%	209	9%	321
		41	3%	40	3%	52	3%	58	2%	94
	9721		9%	254	9%	309	9%	335	9%	490
		42	78%	197	76%	236	76%	254	74%	363
		43	22%	57	24%	73	24%	81	26%	127
SOUTH WHIDBEY	Totals		100%	2,708	100%	3,334	100%	3,660	100%	5,634
ISLAND COUNTY	TOTAL			21,589		24,889		26,095		33,345

Reserve for Figure A-

APPENDIX B

**TRAVEL DEMAND FORECASTING
PROCEDURES**

ISLAND COUNTY

TRAVEL DEMAND FORECASTING PROCEDURES

INTRODUCTION

The purpose of this project is to update and finalize Island County's Interim Transportation Plan, prepared in 1994, to include revised land use data and projections for a twenty year horizon in accordance with the latest Growth Management Act (GMA) requirements. Note that this model is an update and extension to a previously prepared traffic forecast model which developed a 10 year horizon year forecast of travel demand based on a 1992 validated existing model. Base year data will be updated to 1996 levels. Future year forecasts will reflect anticipated 2020 demands. An interim year 2006 analysis will be included to prioritize projects for the financial analysis.

The transportation network and zonal system will be updated to reflect 1996, 2006 and 2020 horizon year estimates of travel demand on the Island County arterial network using data developed from the socioeconomic forecasts for each of the four Island County subareas; North Whidbey, Central Whidbey, South Whidbey and Camano Island. The model will be validated using the procedure utilized for the Interim Transportation Plan.

Due to the natural boundaries of Island County, it was necessary to model Whidbey Island and Camano Island separately since they function completely independent of one another.

PROCESS

The transportation model used for this study was developed using software developed by Professional Solutions, Inc. entitled "TMODEL2" (TM2). The effectiveness of TM2, and the validity of the data that it produces, is contingent on data inputs that are used. In this regard, data from Island County and WSDOT was used for most of the pertinent data required to develop this transportation model.

The model network developed for Island County incorporates all major and secondary arterials as well as state route facilities.

TRAFFIC ANALYSIS ZONES (TAZ'S)

Internal Zones

Island County consists of four subareas including North Whidbey, Central Whidbey, South Whidbey, and Camano. Each subarea consists of several pre-defined Census Tract boundaries entitled Block Numbering Areas (BNA). For purposes of traffic model development, each BNA was divided into smaller Traffic Analysis Zones (TAZ). In some circumstances, the BNA was small enough such that it did not warrant division.

In general, a TAZ is a specific geographic area that has specific land use data associated with it. The fundamental task a TAZ performs in the model is to generate vehicle trip ends at the TAZ. The land use data pertinent to a TAZ determines the number of trips that TAZ either produces or attracts. In summary, trip generation to and from each TAZ in the network is based on number of

persons within households, type of household, number of employees and type of employment in each TAZ. See Population and Employment discussion below for land use estimates.

In order to be able to adequately load vehicle trips onto all links in the network, it was necessary to incorporate a large number of TAZ's into the network. The TAZ structure, which was developed in 1992, was developed to coincide with the BNA structure within Island County which facilitates the acquisition of population and employment data. The BNA-TAZ zone correspondence is shown in Table B-1.

As shown in Table B-1, there are 48 defined TAZ's within the confines of Whidbey Island. However, due to the introduction of several new arterial link segments introduced into the arterial network, it was deemed necessary to further expand the TAZ structure. These additional TAZ splits are discussed in detail in the Travel Demand Forecasting Technical Report

External Zones

There are 3 external zones surrounding the Whidbey Island study area numbered 63, 64, and 65. These zones are designed to incorporate trips that are generated to and/or from points outside the network. Base year vehicle trips to and from each external zone are determined from actual traffic counts. These external zones are defined as follows:

- ◆ Zone 63: SR 20 at Deception Pass
- ◆ Zone 64: SR 20 at Keystone Ferry Landing
- ◆ Zone 65: SR 525 at Clinton Ferry Landing

There is one external zone associated with the Camano Island study area, numbered 38.

- ◆ Zone 38: SR 532 east of Stanwood

TRIP GENERATION RATES

PM peak hour trip generation rates for all population and employment data were based on the *Institute of Transportation Engineers (ITE) Trip Generation Report (Fifth Edition)*. The number of trips that a TAZ generates is a function of applying trip generation factors to the land use data applicable to that TAZ. The trip rates that were used are shown in Table B-2.

Note that the trip rate for the single-family residential category on Camano Island was reduced from 0.28 to 0.25 to account for a presumed abnormally high ratio of retirement and recreation homes compared to "normal" single family homes.

TRIP END SUMMARIES

Internal Zones

A trip end summary table, Table B-3, summarizes trip end totals for the county by island for 1996, 2006 and 2020.

As shown in Table B-3, the overall trips generated within Whidbey Island are estimated to increase 25 percent or 8,721 PM peak hour trips from 1996 to 2006. Likewise, from 1996 to 2020, the overall trips generated are estimated to increase 66% or 22,570 PM peak hour trips.

Table B-1
Zone Correspondence (BNA/TAZ)

SUBAREA	BLOCK NUMBERING AREA (BNA)	TRAFFIC ANALYSIS ZONE (TAZ)
NORTH WHIDBEY	9701	1
		2
		3
		4
	9702	5
		6
	9703	7
		8
		9
	9704	10
		11
		44
	9705	12
		13
		45
		14
	9706	15
		9707
		16
		9708
17		
9709	18	
	19	
	20	
CENTRAL WHIDBEY	9710	21
		46
		22
		47
	9711	48
		23
		24
	9712	25
		26
	9713	27
		28
		29
		30
		31
SOUTH WHIDBEY	9718	32
		33
	9719	34
		35
		36
	9720	37
		38
		39
		40
	9721	41
		42
43		
CAMANO ISLAND	9714	1
		2
		13
		3
	9715	4
		5
		6
	9716	7
		8
	9717	9
		10
		11
12		

Table B-2
Trip Generation Rates (PM Peak Hour)

Category	Independent Variable	Total PM PK	Origin	Dest.
Single-Family Residential	Persons	0.28	0.10	0.18
Multi-Family Residential	Persons	0.42	0.13	0.29
Agriculture	Employee	0.42	0.37	0.05
Construction	Employee	0.39	0.21	0.18
Manufacturing	Employee	0.39	0.21	0.18
TCU	Employee	0.72	0.63	0.09
Wholesale Trade	Employee	0.26	0.22	0.04
Retail Trade	Employee	2.00	1.00	1.00
FIRES	Employee	0.40	0.34	0.06
Services	Employee	1.14	0.74	0.40
Government	Employee	0.70	0.69	0.22
Other	Employee	0.50	0.40	0.10
Military	Employee	0.39	0.16	0.23

TCU: Transportation, Communications, Utilities

FIRES: Finance, Insurance, Real-Estate Services

Table B-3
Internal Zone Trip End Summaries (Vehicles, PM Peak Hour)

	Year 1996	Year 2006	Growth	Year 2020	Growth
<i>Whidbey Island</i>					
Origins	17,016	21,352	25%	28,240	66%
Destinations	17,194	21,579	26%	28,538	66%
Total	34,210	42,931	25%	56,778	66%
<i>Camano Island</i>					
Origins	1,295	1,946	50%	2,720	110%
Destinations	1,751	2,557	46%	3,636	108%
Total	3,046	4,503	48%	6,356	109%

Source: William Popp & Associates, Inc.

In addition, the overall trips generated within Camano Island are estimated to increase 48 percent or 1,457 PM peak hour trips from 1996 to 2006. Likewise, from 1996 to 2020, the overall trips generated are estimated to increase 109% or 3,310 PM peak hour trips.

External Zones

Average weekday and PM peak hour traffic counts, as well as annual ferry terminal counts where appropriate, were collected for the 4 external locations; 3 on Whidbey and 1 on Camano. Growth at each external zone is shown in Table B-4.

Table B-4
Total Growth at Externals

	1996 PM Peak	2006 PM Peak	Growth ¹	2020 PM Peak	Growth ¹
<i>Whidbey Island</i>					
Zone 63: SR 20 at Deception Pass	1,540	1,916	24%	2,504	63%
Zone 64: SR 20 at Keystone Ferry	100	139	39%	187	87%
Zone 65: SR 525 at Clinton Ferry	610	782	28%	1,028	68%
<i>Camano Island</i>					
Zone 38: SR 532 e/o Stanwood	1,350	1,801	33%	2,696	100%

¹ Total growth from 1996

Source: William Popp & Associates, Inc.

Growth at the two ferry terminals was based on annual total ridership figures from 1977 to 1996. The forecast was assumed to be a linear trend from 1996. The growth estimates at the two bridge crossings were based on internal trip end growth within the respective island.

MODEL CALIBRATION

In order to most confidently assess the impacts of increased traffic demand and/or increased capacity, i.e., roadway/intersection improvements, it was necessary to ensure that the existing year model produces valid representations of real traffic volumes and patterns. In order to do this, existing model link volumes were compared to available actual traffic volumes throughout the network. An extensive calibration effort was necessary to achieve proper results.

The full extent of the model calibration development consisted of approximately 25 model loadings entailing loading and reloading the model, reviewing screenline results for each loading, reviewing critical individual links within the network, adjusting network attributes (link capacities, link speeds, node capacities), adjusting internal zone tripends where appropriate, and testing various gravity model exponent combinations. Once a valid model was developed, it was then possible to project future traffic volumes with a relatively high level of confidence in the traffic forecast vis-a-vis the project land use impacts.

As this procedure pertains to Camano Island, the calibration process was carried one step further due to some links and screenlines not quite closing on allowable limits. Therefore, a subroutine within the TModel2 program known as the Willumsen's Method was incorporated to fine-tune the model.

Screenlines

In this study, ten screenlines were used for the calibration effort for the Whidbey Island model. Four screenlines were used for the calibration effort for the Camano Island model. These screenlines are defined below:

◆ **Whidbey Island**

- Screenline 1: SR 20 n/o Cornet Bay Rd
- Screenline 2: Golf Course Rd s/o Ault Field Rd
Heller Rd s/o Ault Field Rd
Oak Harbor Rd s/o Ault Field Rd
Goldie Rd s/o Ault Field Rd
SR 20 s/o Ault Field Rd
Taylor Rd s/o Ault Field Rd
- Screenline 3: West Beach Rd s/o Fort Nugent Rd
SR 20 s/o Fort Nugent Rd
Scenic Heights Rd s/o Fort Nugent Rd
- Screenline 4: SR 20 s/o Libbey Rd
Madrona Way s/o Libbey Rd
- Screenline 5: Engle Rd n/o Keystone Ferry Terminal
SR 20 n/o Keystone Ferry Terminal
- Screenline 6: SR 525 n/o Houston Rd
- Screenline 7: SR 525 s/o Bush Point Rd
- Screenline 8: SR 525 w/o Coles Rd
- Screenline 9: Saratoga Rd s/o City of Langley
Brooks Hill Rd s/o City of Langley
Langley Rd s/o City of Langley
Wilkinson Rd s/o City of Langley
- Screenline 10: Bob Galbreath Rd w/o Clinton Ferry Terminal
SR 525 w/o Clinton Ferry Terminal
Deer Lake Rd w/o Clinton Ferry Terminal

◆ **Camano Island**

- Screenline 11: SR 532 e/o Good Rd
- Screenline 12: North Camano Dr e/o Camano Ridge Rd
Cross Island Rd e/o Camano Ridge Rd
- Screenline 13: Camano Hill Rd e/o Camano Ridge Rd
Monticello Dr e/o Camano Ridge Rd
West Camano Dr e/o Camano Ridge Rd
- Screenline 14: East Camano Dr s/o Monticello Rd
West Camano Dr s/o Monticello Rd

All 1996 screenline results are tabulated and compared with the maximum allowable deviations specified within the National Cooperative Highway Research Report (NCHRP) #255; the standard used to evaluate model generated traffic assignments.

To calibrate the model, an assignment of the 1996 trip ends to the roadway network is compared against the 1996 traffic counts. If the assignment does not compare favorably with the existing counts, appropriate adjustments are made until they do. Such adjustments may include travel

time on the network or capacity on a link. These same adjustments are incorporated into the model structure for use in the future year analysis.

The results of the calibration effort are shown in Table B-5. For the 10 screenlines within Whidbey Island, the model is averaging only 2% over existing traffic which is quite good. Note that on an individual screenline basis the screenlines are all within allowable deviation ranges; the majority of the screenlines are well within allowable ranges.

Table B-5
1996 PM Peak Hour Screenline Summaries

Screenline #	Model Volume	Actual Volume	Percent Difference	Allowable Deviation ^a
<i>Whidbey Island</i>				
1	1,531	1,540	-1%	22
2	4,085	4,256	-4%	15
3	1,850	1,540	20%	21
4	1,168	1,075	9%	24
5	237	250	-5%	42
6	753	600	26%	30
7	808	830	-3%	26
8	919	945	-3%	25
9	1,049	860	22%	26
10	854	1,080	-21%	24
Total	13,254	12,976	2%	n/a
<i>Camano Island</i>				
11	1,365	1,350	1%	22
12	1,254	1,116	12%	23
13	592	514	15%	32
14	627	530	18%	32
Total	3838	3510	9%	n/a

a Maximum allowable deviation from Figure A-9 of NCHRP 255

Source: William Popp & Associates, Inc.

For the 4 screenlines within Camano Island, the model is averaging 9% over existing traffic which is acceptable. Note that on an individual screenline basis the screenlines are all within allowable deviation ranges.

FUTURE RESULTS

County Arterial Link Segments

Upon completion of the existing model calibration process, interim year 2006 and long range horizon year 2020 traffic forecasts were developed for each island. The traffic forecast outputs from the model are in the PM peak hour format. The County arterial volumes were converted to ADT for purposes of assessing and identifying level-of-service values and deficiencies. Note that the final County arterial ADT volumes presented in Tables B-6 and B-7 have been adjusted from the model outputs. These adjusted volumes were determined based on the following:

- ◆ Each link segment defined within Tables B-6 and B-7 is generally comprised of one or more model links. The PM peak hour model volume is averaged over the entire link segment.

TABLE B-6
COUNTY ARTERIAL ADT VOLUMES ON WHIDBEY ISLAND

Link No.	ROAD NAME	FROM	TO	Classi- fication	ADT			Growth from 1996	
					1996 ^a	2006 ^b	2020 ^c	2006	2020
1	ARNOLD RD.	SR 20	Monroe Landing Rd.	major	740	1,120	1,830	51%	147%
2	AULT FIELD RD.	Heller Rd.	SR 20	major	12,880	14,960	17,350	16%	35%
3	BAILEY RD.	French Rd.	Cultus Bay Rd.	minor	1,000	1,010	1,080	1%	8%
4	BANTA RD.	SR 20	Morran Rd.	minor	2,240	2,750	2,980	23%	33%
5	BAYVIEW RD.	Brooks Hill Rd.	SR 525	major	3,810	4,120	5,290	8%	39%
6	BAYVIEW RD.	SR 525	Ewing Rd.	minor	1,220	1,440	1,990	18%	63%
7	BOB GALBREATH RD.	Surface Rd.	SR 525	minor	1,030	1,430	2,240	39%	117%
8	BROOKS HILL RD.	Bayview Rd.	Langley City Limits	major	3,030	3,170	3,660	5%	21%
9	BUSH POINT RD.	SR 525	Smugglers Cove Rd.	major	3,230	4,260	6,140	32%	90%
11	CLOVER VALLEY RD.	Golf Course Rd.	Ault Field Rd.	major	2,180	3,450	4,480	58%	106%
12	CORNET BAY RD.	SR 20	Cornet	minor	950	1,490	2,140	57%	125%
13	CRESCENT HARBOR RD.	Regatta Dr.	Taylor Rd.	major	6,920	7,630	8,560	10%	24%
14	CRESCENT HARBOR RD.	Taylor Rd.	Reservation Rd.	minor	2,690	3,170	3,700	18%	38%
15	CROSBY RD.	West Beach Rd.	Oak Harbor City Limits	major	1,710	3,190	6,240	87%	265%
17	CULTUS BAY RD.	Possession Dr.	French Rd.	major	2,320	3,520	4,820	52%	108%
18	CULTUS BAY RD.	French Rd.	SR 525	major	3,270	4,870	7,390	49%	126%
20	DEER LAKE RD.	Cultus Bay Rd.	SR 525	minor	2,070	2,760	3,540	33%	71%
26	EAST HARBOR RD.	Main St.	Brainers Rd.	minor	3,280	3,970	5,220	21%	59%
28	ENGLE RD.	Keystone Ferry	SR 20 (Coupeville)	major	1,600	2,080	2,820	30%	76%
29	EWING RD.	Bayview Rd.	Sills Rd.	minor	1,140	1,240	1,530	9%	34%
30	FAKKEMA RD.	SR 20	Taylor Rd.	major	4,210	4,800	5,390	14%	28%
31	FORT NUGENT RD.	West Beach Rd.	Oak Harbor City Limits	major	3,350	4,310	5,640	29%	68%
32	FRENCH RD.	Sills Rd.	Cultus Bay Rd.	minor	1,200	1,310	1,690	9%	41%
33	FROSTAD RD.	SR 20	Taylor Rd.	minor	1,480	1,750	2,150	18%	45%
34	GOLDIE RD.	Ault Field Rd.	Oak Harbor City Limits	major	11,150	12,250	13,310	10%	19%
35	GOLF COURSE RD.	Clover Valley Rd.	Crosby Rd.	major	1,540	2,810	3,840	82%	149%
37	HARBOR AVE.	SR 525	Main St.	major	2,740	4,040	6,080	47%	122%
38	HELLER RD.	Clover Valley Rd.	Oak Harbor City Limits	major	7,560	9,090	11,320	20%	50%
39	HOUSTON RD.	SR 525	North Bluff Rd.	minor	230	250	520	9%	126%
40	JONES RD.	SR 20	Troxell Rd.	minor	1,230	1,550	1,840	26%	50%
41	LANGLEY RD.	SR 525	Maxwelton Rd.	major	3,180	4,230	5,380	33%	69%
42	LANGLEY RD.	Maxwelton Rd.	Langley City Limits	major	4,680	6,920	8,760	48%	87%

TABLE B-6 Continued
COUNTY ARTERIAL ADT VOLUMES ON WHIDBEY ISLAND

Link No.	ROAD NAME	FROM	TO	Classi- fication	1996 ^a	ADT 2006 ^b	2020 ^c	Growth from 1996	
					2006	2020	2006	2020	
43	LIBBEY RD.	SR 20	West Beach Rd.	major	1,780	2,200	3,200	24%	80%
45	MADRONA WY.	SR 20	Coupeville Town Limits	major	1,580	1,690	1,860	7%	18%
46	MAIN ST. (Freeland)	Fish Rd.	Newman Rd.	minor	6,010	6,570	7,760	9%	29%
47	MAXWELTON RD.	Langley Rd.	SR 525	minor	4,340	5,910	7,570	36%	74%
48	MAXWELTON RD.	SR 525	French Rd.	minor	1,230	1,520	1,940	24%	58%
49	MONROE LANDING RD.	SR 20	Arnold Rd.	minor	1,680	2,450	4,170	46%	148%
52	NORTH BLUFF DR.	Houston Rd.	SR 525	minor	750	750	1,060	0%	41%
57	OAK HARBOR RD.	Ault Field Rd.	Oak Harbor City Limits	major	5,090	6,810	8,390	34%	65%
58	PARKER RD.	SR 20	Coupeville Town Limits	minor	790	1,370	2,340	73%	196%
59	POLNELL RD.	Reservation Rd.	Strawberry Point Rd.	minor	1,060	1,230	1,450	16%	37%
60	RESERVATION RD.	Crescent Harbor Rd.	Polnell Rd.	minor	1,350	1,830	2,360	36%	75%
61	SANDY POINT RD.	Langley Rd.	Wilkinson Rd.	minor	1,020	1,730	2,610	70%	156%
62	SARATOGA RD.	Amble Rd.	Langley City Limits	minor	1,340	1,850	2,340	38%	75%
63	SCOTT RD.	Newman Rd.	SR 525	major	2,140	2,730	4,130	28%	93%
64	SILLS RD.	Ewing Rd.	French Rd.	minor	940	1,000	1,460	6%	55%
65	SILVER LAKE RD.	Taylor Rd.	Strawberry Point Rd.	minor	2,310	2,420	2,580	5%	12%
66	SMUGGLERS COVE RD.	SR 525	Bush Point Rd.	major	2,560	3,050	3,680	19%	44%
67	STRAWBERRY POINT RD.	Silver Lake Rd.	Polnell Rd.	minor	420	420	490	0%	17%
69	SWANTOWN RD.	West Beach Rd.	Oak Harbor City Limits	minor	2,760	3,120	4,370	13%	58%
70	TAYLOR RD.	Crescent Harbor Rd.	Fakkema Rd.	major	2,740	3,210	3,530	17%	29%
71	TAYLOR RD.	Fakkema Rd.	Frostad Rd.	minor	750	1,250	1,800	67%	140%
72	TROXELL RD.	SR 20	Jones Rd.	minor	1,170	1,470	1,760	26%	50%
74	WEST BEACH RD.	Libbey Rd.	Hastie Lake Rd.	major	1,280	1,770	2,770	38%	116%
75	WEST BEACH RD.	Hastie Lake Rd.	Fort Nugent Rd.	major	2,030	2,470	3,410	22%	68%
76	WEST BEACH RD.	Fort Nugent Rd.	Crosby Rd./Swantown Rd.	major	1,730	2,670	4,570	54%	164%
81	WILKINSON RD.	Sandy Point Rd.	Surface Rd.	minor	620	1,130	2,020	82%	226%
					149,330	187,520	242,540	26%	62%

Notes a: actual ADT as provided by County
b: net model growth added to base year [(2006 model - 1996 model) + 1996 base]
c: net model growth added to base year [(2020 model - 1996 model) + 1996 base]

TABLE B-7
COUNTY ARTERIAL ADT VOLUMES ON CAMANO ISLAND

Link No.	ROAD NAME	FROM	TO	Classification	1996 ^a	ADT 2006 ^b	2020 ^c	Growth from 1996	
								2006	2020
10	CAMANO HILL RD.	West Camano Dr.	East Camano Dr.	major	2,670	3,200	4,260	20%	60%
16	CROSS ISLAND RD.	East Camano Rd.	West Camano Dr.	major	2,450	3,530	5,180	44%	111%
19	DALLMAN ROAD	West Camano Dr.	East Camano Dr.	minor	160	200	340	25%	113%
21	EAST CAMANO DR.	SR 532	Cross Island Rd.	major	11,660	16,160	23,100	39%	98%
22	EAST CAMANO DR.	Cross Island Rd.	Camano Hill Rd.	major	10,080	13,590	18,650	35%	85%
23	EAST CAMANO DR.	Camano Hill Rd.	Monticello Dr.	major	6,240	8,530	11,600	37%	86%
24	EAST CAMANO DR.	Monticello Dr.	Mountain View Ave.	major	2,290	3,280	4,430	43%	93%
25	EAST CAMANO DR.	Mountain View Ave.	Dallman Rd.	minor	1,310	2,070	2,660	58%	103%
27	ELGER BAY RD.	West Camano Dr.	Monticello Dr.	minor	2,750	3,290	4,240	20%	54%
36	GOOD RD.	SR 532	Utsalady Rd.	minor	730	1,240	2,490	70%	241%
44	LOWELL POINT RD.	West Camano Dr.	Camano Island Park Rd	minor	350	400	490	14%	40%
50	MONTICELLO DR.	West Camano Dr.	East Camano Dr.	minor	1,600	2,290	2,920	43%	83%
51	MOUNTAIN VIEW RD.	Elger Bay Rd.	East Camano Dr.	major	1,350	1,980	2,540	47%	88%
53	NORTH CAMANO DR.	SR 532	Sunrise Blvd.	major	3,120	5,060	6,730	62%	116%
54	NORTH CAMANO DR.	Sunrise Blvd.	Arrowhead Rd.	major	2,940	4,830	6,570	64%	123%
55	NORTH CAMANO DR.	Arrowhead Rd.	Maple Grove Rd.	major	2,600	3,430	4,860	32%	87%
56	NORTH CAMANO DR.	Maple Grove Rd.	West Camano Dr.	major	1,830	2,390	3,440	31%	88%
68	SUNSET DR.	West Camano Dr.	West Camano Dr.	minor	750	1,020	1,200	36%	60%
73	UTSALADY RD.	Good Rd.	Arrowhead Rd.	minor	560	1,010	1,990	80%	255%
77	WEST CAMANO DR.	North Camano Dr.	Madrona Beach Rd.	major	1,060	1,750	3,190	65%	201%
78	WEST CAMANO DR.	Madrona Beach Rd.	Camano Hill Rd.	major	1,030	1,630	2,730	58%	165%
79	WEST CAMANO DR.	Camano Hill Rd.	Elger Bay Rd.	major	1,160	1,810	2,690	56%	132%
80	WEST CAMANO DR.	Elger Bay Rd.	Dallman Rd.	minor	1,400	1,700	2,420	21%	73%
					60,090	84,390	118,720	40%	98%

Notes a: actual ADT as provided by County

b: net model growth added to base year [(2006 model - 1996 model) + 1996 base]

c: net model growth added to base year [(2020 model - 1996 model) + 1996 base]

- ◆ The averaged County arterial PM peak hour volume is then factored to an ADT volume based on the pre-determined K-factor of 9%. Note that this County arterial ADT represents an average along the link segment between the two termini.
- ◆ The future County arterial ADT link volume (for each of the link segments presented in Tables B-6 and B-7) was calculated based on the net ADT model growth (future model less existing model ADT) added to the existing 1996 ADT volumes received from the County.

The final future ADT values for each of the pre-defined County arterial segments are presented in Tables B-6 and B-7 for Whidbey and Camano Island, respectively.

As shown in Tables B-6 and B-7, from a global perspective, county arterial traffic volumes on Whidbey Island are estimated to increase 26% by year 2006 and 62% by year 2020. Likewise, traffic volumes on Camano Island are estimated to increase 40% by year 2006 and 98% by year 2020.

State Highway Link Segments

Upon completion of the existing model calibration process, interim year 2006 and long range horizon year 2020 traffic forecasts were developed for each island. The traffic forecast outputs from the model are in the PM peak hour format. The State highway volumes were converted to AADT for purposes of assessing and identifying level-of-service values and deficiencies. Note that the final AADT volumes presented in Table B-8 have been adjusted from the model outputs. These adjusted volumes were determined based on the following:

- ◆ Each link segment defined within Table B-8 is generally comprised of one or more model links. The PM peak hour model volume is averaged over the entire link segment.
- ◆ The averaged PM peak hour volume is then factored to an AADT volume based on the pre-determined K-factor of 9%. Note that this AADT represents an average along the link segment between the two termini.
- ◆ For State highways, the future growth was determined by taking the future model volumes and subtracting the existing model 1996 volumes. This growth was adjusted from a 1996 base to a 1998 base volume by subtracting two years growth assume at a rate of 2.6% per year or 5.2 % for two years. (A growth rate of 2.6% was used because it represents an average growth rate for all links in Island County between 1996 and 2006.)
- ◆ The future AADT link volume (for each of the link segments presented in Table B-8) was calculated based on the adjusted net AADT model growth and added to the existing 1998 AADT developed by WSDOT.

The final future AADT values for each of the pre-defined link segments are presented in Table B-8 for Island County.

As shown in Table B-8, from a global perspective, State highway traffic volumes on Whidbey Island are estimated to increase 23% by year 2006 and 54% by year 2020. Likewise, State highway traffic volumes on Camano Island are estimated to increase 33% by year 2006 and 95%

by year 2020. Overall, Traffic growth on State highways in Island County is expected to grow by approximately 23% by year 2006 and by 55% by year 2020.

TABLE B-8
STATE HIGHWAYS AADT IN ISLAND COUNTY

Link No.	ROAD NAME	FROM	TO	AADT			Growth from 1998	
				1998 ^a	2006 ^b	2020 ^c	2006	2020
82	SR 20	Deception Pass (MP 41.79)	Troxell Rd. (MP 39.67)	14,200	18,400	24,600	30%	73%
83	SR 20	Troxell Rd. (MP 39.67)	South of Monkey Hill Rd. (MP 37.63)	13,800	18,100	23,500	31%	70%
84	SR 20	South of Monkey Hill Rd. (MP 37.63)	South of Jones Rd. (MP37.01)	14,300	18,100	23,000	27%	61%
85	SR 20	South of Jones Rd. (MP37.01)	South of Frostad Rd. (MP 36.29)	16,800	20,900	26,100	24%	55%
86	SR 20	South of Frostad Rd. (MP 36.29)	North of Sleeper Rd. (MP 35.75)	16,500	20,300	25,100	23%	52%
87	SR 20	North of Sleeper Rd. (MP 35.75)	South of Ault Field Rd. (MP 34.61)	17,600	21,600	26,700	23%	52%
88	SR 20	South of Ault Field Rd. (MP 34.61)	Oak Harbor Limits(North) (MP 33.96)	17,500	20,300	23,800	16%	36%
89	SR 20	Oak Harbor Limits(South) 30.76	Miller Rd. (MP 29.61)	14,100	17,200	22,400	22%	59%
90	SR 20	Miller Rd. (MP 29.61)	Libbey Rd. (MP 25.23)	9,600	11,600	14,900	21%	55%
91	SR 20	Libbey Rd. (MP 25.23)	Wind Dancer Place (MP 22.60)	10,100	12,300	16,200	22%	60%
92	SR 20	Wind Dancer Place (MP 22.60)	Main St. – Coupeville (MP 21.74)	9,400	11,600	15,500	23%	65%
93	SR 20	Main St. – Coupeville (MP 21.74)	West of Jacobs Rd. (MP 20.65)	7,600	9,000	11,500	18%	51%
94	SR 20	West of Jacobs Rd. (MP 20.65)	Parker Rd. (MP 19.24)	7,600	8,800	11,200	16%	47%
95	SR 20	Parker Rd. (MP 19.24)	SR 525 / Race Rd. (MP 16.33)	6,100	7,400	10,100	21%	66%
96	SR 20	SR 525 / Race Rd. (MP 16.33)	Keystone Ferry (MP 12.88)	1,100	1,500	2,100	36%	91%
97	SR 525	SR 20 (MP30.75)	Mohawk Dr. (MP 24.69)	6,100	7,800	11,000	28%	80%
98	SR 525	Mohawk Dr. (MP 24.69)	South of Bush Point Rd. (MP 19.11)	8,400	9,900	12,700	18%	51%
99	SR 525	South of Bush Point Rd. (MP 19.11)	Freeland Ave. (MP 18.38)	9,700	12,500	16,700	29%	72%
100	SR 525	Freeland Ave. (MP 18.38)	Scott Rd. (MP 17.52)	7,900	10,900	16,300	38%	106%
101	SR 525	Scott Rd. (MP 17.52)	Coles Rd. (MP 12.96)	11,000	14,200	19,400	29%	76%
102	SR 525	Coles Rd. (MP 12.96)	East of Campbell Rd. (MP 10.46)	9,400	12,500	17,200	33%	83%
103	SR 525	East of Campbell Rd. (MP 10.46)	West of Cedar Vista Dr. (MP 10.29)	9,000	10,600	13,100	18%	46%
104	SR 525	West of Cedar Vista Dr. (MP 10.29)	West of Conrad St. (MP 8.92)	9,100	10,700	13,200	18%	45%
105	SR 525	West of Conrad St. (MP 8.92)	Clinton Ferry (MP 8.72)	6,900	8,800	11,100	28%	61%
TOTAL ON WHIDBEY ISLAND				436,400	537,000	672,200	23%	54%
106	SR 532	East Camano Dr. (MP 0.00)	County Line (Davis Slough) (MP 2.91)	15,000	20,000	29,300	33%	95%
TOTAL ON CAMANO ISLAND				15,000	20,000	29,300	33%	95%
ISLAND COUNTY TOTALS				451,400	557,000	701,500	23%	55%

Notes: a: actual AADT as provided by WSDOT.

b: net model growth added to base year [(2006 model -1996 model and adjusted to 1998 base)+1998 base].

c: net model growth added to base year [(2020 model -1996 model and adjusted to 1998 base)+1998 base]

SUMMARY

The assumptions, methodologies and travel forecasting results are identified in the Technical Report for the Traffic Modeling Element for Island County's Transportation Plan and summarized in this Appendix. These assumptions and results include the following:

- ◆ The travel demand forecast was prepared using population and employment forecasts for 2006 and 2020 adopted by Island County. The TModel2 battery of computer programs was used to develop and assign trips to the highway and arterial network identified by County staff.
- ◆ The results of the forecast process were shown to be acceptable for planning decision purposes.
- ◆ The 1996 calibrated model volumes are within 2 to 9 percent of the 1996 ground counts for Whidbey and Camano Islands, respectively.
- ◆ County arterial traffic on Whidbey is expected to increase by approximately 26% by 2006 and approximately 62% by 2020.
- ◆ County arterial traffic on Camano Island is expected to increase by approximately 40% by 2006 and approximately 98% by 2020.
- ◆ State highway traffic on Whidbey is expected to increase by approximately 23% by 2006 and approximately 54% by 2020.
- ◆ County arterial traffic on Camano Island is expected to increase by approximately 33% by 2006 and approximately 95% by 2020.
- ◆ Overall, traffic on County arterials and State highways in Island County are expected to increase by approximately 25% by 2006 and approximately 61% by 2020.