

CHAPTER 6 - Transportation

INTRODUCTION

A safe and efficient transportation system for the movement of people and goods is needed to support existing and future development. The purpose of the Transportation Element is to identify the types, location, and extent of existing and proposed transportation facilities and services. These include streets and highways, air, rail, transit systems, pedestrian, and bicycle uses.

RELATIONSHIP TO OTHER PLANS

Growth Management Act (GMA) Requirements

This Transportation Element has been developed in accordance with Section 36.70A.070 of the GMA to address transportation needs in Bayview Ridge. It represents the County's policy plan through ~~2015~~ 2025 and considers the location and condition of the existing traffic circulation system specifically, the projected transportation needs, and plans for addressing future transportation needs while maintaining established level of service standards. According to the GMA, this element must include:

Land use assumptions used in estimating travel.

An overview of facilities and service needs.

An analysis of funding capability and a multi-year financing plan to fund the needed improvements.

Intergovernmental coordination efforts.

Demand-management strategies.

Goal 3. Transportation – Encourage efficient multi-modal transportation systems that are based on regional priorities and coordinated with County and city comprehensive plans.

Countywide Planning Policies

Countywide Planning Policy 3 addresses transportation. The policy states:

- 3.1 *Multi-purpose transportation routes and facilities shall be designed to accommodate present and future traffic volumes.*
- 3.2 *Primary arterial access points shall be designed to ensure maximum safety while minimizing traffic flow disruptions.*
- 3.3 *The development of new transportation routes and improvements to existing routes shall minimize adverse social, economic, and environmental impacts and costs.*
- 3.4 *The Transportation Element of the Comprehensive Plan shall be designed to: facilitate the flow of people, goods, and services so as to strengthen the local and regional economy; conform with the Land Use Element of the Comprehensive Plan; be based upon an inventory of the existing Skagit County transportation network and needs; and encourage the conservation of energy.*
- 3.5 *Comprehensive Plan provisions for the location and improvement of existing and future transportation networks and public transportation shall be made in a manner consistent with the goals, policies, and land use map of the Comprehensive Plan.*
- 3.6 *The development of a recreational transportation network shall be encouraged and coordinated between state and local governments and private enterprises.*
- 3.7 *The Senior Citizen and Handicapped transportation system shall be provided with an adequate budget to provide for those who, through age and/or disability, are unable to transport themselves.*
- 3.8 *Level of service (LOS) standards and safety standards shall be established that coordinate and link with the urban growth and urban area to optimize land use and traffic compatibility over the long term. New development*

shall mitigate transportation impacts concurrently with the development and occupancy of the project.

3.9 *An all-weather arterial road system shall be coordinated with industrial and commercial areas.*

3.10 *Cost effectiveness shall be a consideration in transportation expenditure decisions and balanced for both safety and service improvements.*

3.11 *An integrated regional transportation system shall be designed to minimize air pollution by promoting the use of alternative transportation modes, reducing vehicular traffic, maintaining acceptable traffic flow, and siting of facilities.*

3.12 *All new and expanded transportation facilities shall be sited, constructed, and maintained to minimize noise levels.*

Other Transportation Related Plans

A number of regional, county, and local documents have been prepared that are relevant to the Bayview Ridge transportation system. This Subarea Plan incorporates relevant information contained in the following plans:

Skagit County Comprehensive Plan (~~July 2000~~October 2007)

Skagit County Capital Facilities Plan for ~~2001-2006~~2008-2013

Skagit County Transportation Improvement Program ~~2001-2006~~2008-2013

Skagit County Transportation Systems Plan (~~March 1997~~2003)

Skagit County Transportation Systems Plan – Review Final (June 2001)

Six-Year Transportation Improvement Plan (TIP) (2003-2008) (~~The Transportation Systems Plan is updated annually by the adoption of a new Six-Year TIP~~)

Skagit/Island Regional Transportation Plan (April 1996)

Skagit Regional Airport Master Plan Update, (~~June 1995~~)2005

Countywide Air, Rail, Water, and Port Transportation System Study (February 1996)

Skagit Non-Motorized Transportation Plan (~~draft August 2000~~2004)

Skagit County Comprehensive Transit Plan

SR 20: Sharpes Corner to SR 536 NEPA Pilot Project Dwelling Unit and Employment Forecasts for Transportation Analysis Zones, CH2M HILL (December 2001)

For transportation planning purposes, the Bayview Ridge Subarea and the abutting perimeter streets lie within the recently designated Skagit County “urban area” as adopted by the Federal Highway Administration.

MAJOR ISSUES

Safety

All citizens place considerable importance on the safety of the transportation system. Accidents are not only traumatic on a personal level but are also costly for society. Aircraft accidents may inadvertently threaten the preservation of the Skagit Regional Airport, and it is important to establish low intensity uses and adequate airport safety zones to minimize the impact of accidents. Maintaining and improving the Bayview Ridge transportation system should aid in reducing or preventing accidents.

Economic Development

Efficient movement of people, freight, and goods is important, because it enhances the economic vitality of the region. A study undertaken by CH2M HILL, in conjunction with transportation planning for SR 20, projects the increase in employment to 2015 and 2025 by UGA, *SR 20: Sharpes Corner to SR 536 NEPA Pilot Project Dwelling Unit and Employment Forecasts for Transportation Analysis Zones*, CH2M HILL, December 2001. Employment within the Bayview Ridge UGA is projected to increase from 1,456 in 1998 to 3,301 in 2015 and to 4,305 in 2025. ~~The 2000 Overall OEDP estimates that UGAs throughout Skagit County would need approximately 2,750 acres of industrial and commercial acreage for development through 2015. To meet this~~

~~forecasted need, 750 acres of industrial and commercial land are allocated to the Bayview Ridge UGA. The Countywide Planning Policies allocate 750 acres of new land for employment purposes through the year 2025.~~ Many of these new employees are expected to work in sectors that generate freight, such as manufacturing, communication, retail, and wholesale trade. Many businesses seeking to locate in Bayview Ridge are attracted by the efficient transportation system and the area's proximity to resources and markets. The existing transportation infrastructure represents a significant investment of capital and labor. To protect this investment, the capacity and condition of the system need to be maintained.

Alternative Modes

For most of this century, transportation improvements have emphasized the movement of motorized vehicles, especially automobiles and trucks. Alternative modes, such as bicycling and walking, have not been stressed. It is expected that the automobile will continue to account for the majority of transportation trips in the foreseeable future, both in the number of trips and in the distance traveled. With new residents and new employees expected by ~~2015~~2025, both parking and road congestion will become increasingly important issues. Transit will play a role in alleviating congestion and is recognized in the traffic model discussed later in this chapter.

The Parks, Recreation, and Open Space Program envisioned in this Plan recognizes the importance of development of paths and trails in Bayview Ridge. ~~The Skagit County Six-Year Transportation Improvement Plan (2001-2007) includes construction of 11.5 miles of pedestrian and bicycle paths connecting the north and south industrial areas of Port ownership.~~

—Encouraging non-motorized modes of transportation can lessen congestion, reduce maintenance of the built infrastructure, and reduce air pollution while providing health benefits to the users.

Neighborhood Needs

The transportation system provides significant benefits to both the general public and local neighborhoods. Neighborhood transportation projects can be designed to improve pedestrian facilities, traffic flow, and/or neighborhood safety. When transportation improvements are constructed, it is important to address the needs of the general public, individuals, properties, and neighborhoods affected by the project. Much of the area's residential development today is centered around the country club and golf course situated in the southeast quadrant of Bayview Ridge. Access to the area is limited to Ovenell, Avon-Allen, and Peterson Roads. To ~~improve connections within the UGA and to~~ facilitate provision of emergency services and convenient access to the area's future commercial district, a new north-south road with an east-west link into the country club is warranted. As the residential population increases, the importance of sidewalks and trails will increase. Using appropriate funding sources, Skagit County should work with local property owners to make local transportation improvements.

Transportation Demand Management

Most solutions to meeting transportation system demands involve increasing the system capacity. This method is appropriate in many circumstances. In some cases, however, the capacity of the system can be increased by reducing the demand on the system. With effective transportation planning, demand placed on the system by the adjacent land uses can be directed to corridors that have excess capacity or have future improvements planned.

Truck traffic serving the industrial district of the Bayview Ridge Subarea currently access SR 20 via Farm to Market Road (~~recently signalized~~), Higgins Airport Way, Avon Allen Road, or Peterson Road. The intersection of Higgins Airport Way and SR 20 is not signalized, and trucks turning left experience delays and dangerous conditions. A traffic fatality and high accident rates have resulted in the conversion of the SR 20 and Pulver Road intersection to right turn only, forcing trucks into the City Limits of Burlington, until signalized intersections are constructed. When used by trucks, the alternative route to SR 20 via Peterson Road adversely impacts the residential areas of both Bayview Ridge and the northwest quadrant of the City of Burlington. In this case, effective transportation planning means constructing the proposed improvements to SR 20 and to the Higgins Airport Way and Avon Allen Road intersections with SR 20, via the ~~upcoming-current~~ WSDOT SR 20 Fredonia to I-5 Interchange improvement project. Completion of this project ~~scheduled to begin in 2006~~, which began in 2007, should ease the problem of truck traffic passing through residential areas significantly.

When this project is completed, the Peterson Road access to the UGA should be developed as a primary residential gateway into the community. Traffic calming design should be used, such as a boulevard or other measures.

Through truck traffic should not be allowed, but should be diverted to Highway 20.

Funding

Growth is expected to continue in Bayview Ridge; and increased traffic volumes to, from, and within the UGA are a major issue facing the future build-out of the area. As financial resources constrain the number of potential transportation projects, each new development must be carefully evaluated to determine its impact on the transportation system. The County made specific funding and project timing assumptions with the adoption of the first *Bayview Ridge Urban Growth Area Comprehensive Transportation Plan*. As a result, a decision was made to not charge transportation impact fees for new development at ~~this~~ that time. A detailed infrastructure should be developed, along with detailed financing options, including voluntary payments, mitigation fees or impact fees.

-The County's *Capital Improvement Plan* and the *Skagit County Six-Year Transportation Improvement Plan (2001-2007)* are updated annually. It will be necessary to monitor this financing plan continuously together with development activity and level of service to determine whether impact fees may be warranted.

It is also important to use the funds available to Skagit County and Bayview Ridge in as efficient a manner as possible. In order to maximize transportation improvements, it is important to pursue all available funding opportunities, exercise fiscal prudence, and capitalize on innovative funding methods. Prioritization of projects permits the most important projects to be constructed first to better utilize limited available funds. Using a combination of these methods will increase the number of transportation projects Skagit County can provide for its citizens.

Concurrency

One of the goals of the GMA is to have transportation systems in place concurrent with development. This concept is known as concurrency. In Skagit County, concurrency means:

Transportation systems to serve development shall be in place before the use is occupied or ~~that~~ a financial commitment is made to provide the facilities within a six-year period of development; and

Such transportation systems have sufficient capacity to serve development without decreasing levels of service below minimum standards adopted in this Transportation Element.

The GMA requires concurrency for transportation facilities. This transportation plan is designed to meet the adopted level of service standard discussed later in this chapter.

SYSTEM INVENTORY

This section of the Transportation Element describes the existing transportation system in Bayview Ridge. This inventory was used to identify and analyze existing and future transportation deficiencies, to analyze impacts of development upon the transportation system, and to identify transportation improvement projects needed to remedy deficiencies.

General System Description

Transportation facilities serving the Bayview Ridge Subarea include a state highway, county roads, the Skagit Regional Airport (an essential public facility), Skagit Transportation (SKAT), and the Burlington Northern Santa Fe Railroad. This Transportation Element focuses on facilities owned and operated by Skagit County.

The Bayview Ridge Subarea is located about 2 miles west of I-5, immediately north of State Route 20 (SR 20). I-5 is the major north and south corridor through Skagit County, connecting Mount Vernon and Burlington to Vancouver, B. C., Canada, and Seattle.

SR 20 is a partially controlled, limited access, east-west facility that connects the eastern and western portions of Skagit County. SR 20 is a designated "transportation facility of statewide significance." From Bayview Ridge, SR 20 provides access to Anacortes, Oak Harbor, and the San Juan Islands to the west and to I-5 and Okanogan via the North Cascades Highway on the east. The intersections with Farm to Market Road

and Avon-Allen Road are signalized. The intersection with Higgins Airport Way is stop-sign controlled.

County Roads

Description

The Skagit County road system within Bayview Ridge is comprised of approximately 20 miles of roadways. The system is comprised of an irregular pattern of arterials, collectors, and local streets. **Figure 9** shows the Subarea Roadway System.

Josh Wilson Road, along the northern boundary of the Subarea, connects the community of Bayview Ridge (to the west) to SR 11 and the city of Burlington. Peterson Road, an east-west major collector in the central portion of the Subarea, connects the Bayview Ridge area to the city of Burlington's northwest precinct, a residential neighborhood. Farm to Market and Avon-Allen Roads on the west and east, respectively, connect the Subarea to SR 20 and communities to the north and south. Ovenell Road provides an east-west connection between Farm to Market Road and Avon-Allen Road. Higgins Airport Way, in the central portion of the Subarea, provides direct access to the airport and the Port of Skagit County's Bayview Business and Industrial Park from both SR 20 and Josh Wilson Road. Local access streets within the Subarea serve the developed industrial and residential areas.

In March 1995, the State Transportation Commission designated various streets and highways within Washington as the State's Freight and Goods Transportation System (FGTS). The FGTS designations are based on estimates of annual gross tonnage hauled. Avon Allen Road, Peterson Road, Farm to Market Road, Josh Wilson Road and Ovenell Road, west of Higgins Airport Way received an FGTS classification of 300,000 to 5 million tons per year. SR 20 received an FGTS classification of more than 10 million tons per year.

Functional Classifications

The Bayview Ridge roadway system is divided into classes according to the function of each roadway segment as defined by the Federal Functional Classification System. A classification defines the major role of a road within the complete existing and future roadway network. The Federal Functional Classification System includes the following urban road classifications: Principal Arterial, Minor Arterial, Collector, and Local Access. Roads within the Bayview Ridge Subarea will be classified by the Skagit County Public Works Department consistent with federal standards for roadway systems.

Non-Motorized

Skagit County ~~drafted~~ adopted a *Non-Motorized Transportation Plan* (NMTP) ~~in August 2000~~ in 2004, which currently is undergoing further revisions. The NMTP focuses on non-motorized travel alternatives for Skagit County. These alternatives generally include bicycle, pedestrian, and equestrian facilities. Existing non-motorized facilities within Bayview Ridge consist of limited sidewalks. The Port of Skagit County has developed a ~~9.3~~ 10.4-mile trail system available to pedestrians, bicycles, and pets through the Port area. The trail system is a result of the Port's wetland mitigation plan that requires the use of open ditches rather than traditional curb, gutter, and sidewalk construction.

Non-County Public Transportation Systems

Description

Other service providers within the Bayview Ridge Subarea, including Washington State Department of Transportation, the Port of Skagit County, and the Skagit County Transit Authority, also maintain and operate public transportation systems. A brief description of these providers and their facilities follows.

State Highways

There is one state highway within the Bayview Ridge Subarea, SR 20. SR 20 borders the Subarea on the south and is the major east-west travel route for the County. It provides direct access from I-5 to Anacortes.

Public Transportation Providers

~~In November 1992, a Skagit County Public Transportation Benefit Area (PTBA) was established serving the cities of Mount Vernon and Burlington, and transit operations began in November 1993. In subsequent elections, the remaining majority of Skagit County was annexed into the PTBA. Skagit Transit (SKAT) services include 12 fixed routes and demand responsive service seven days per week. Until recent funding cuts, Route 513 served the southeast edge of the Bayview Ridge Subarea, along Avon-Allen Road. Route 513 operates Monday through Friday with four eastbound and four westbound trips between 7 a.m. and 6 p.m. The transit system is collecting fares to offset costs to assist in restoring service. Currently, Route 410 (WA State~~

~~Ferry/Anacortes to Burlington/Cascade Mall) serves the eastern and southern perimeters of the Subarea (i.e., along SR 20 and Peterson Road via Avon-Allen Road).~~

~~A new multi-modal station is planned for Mount Vernon. When the station is operational, Route 513 will be restored, providing service along Peterson Road and Higgins Airport Way and connecting to SR 20.~~

Airport Facilities

There are three public airports and several private airports in Skagit County: Anacortes, Concrete Municipal, and Skagit Regional. ~~Established as a military base in the 1940s,~~ Skagit Regional is the largest and most significant of the three public airports. It is located within the Bayview Ridge Subarea. It provides for industrial property, commercial passenger/cargo, and general aviation aircraft as identified in the *Skagit Regional Airport Master Plan*. The Port-owned Anacortes Airfield is located approximately 2 miles west of the city of Anacortes. It provides limited industrial property and primarily serves general aviation aircraft. The Concrete Municipal Airport is owned by the city of Concrete and also serves small general aviation aircraft.

Skagit Regional Airport

Skagit Regional, also called Bayview Airport, was built in 1933 as a joint project of the Public Works Administration and Works Progress Administration. The original facility was developed as a single-runway facility serving light aircraft. In 1943, the United States Navy constructed the present runway and taxiway as an alternate airfield for the Whidbey Island Naval Air Station. After World War II, the federal government continued to operate the airport until 1958 when the airport was transferred to Skagit County under the Surplus Property Act of 1944. In 1965, ownership of the airport was transferred to joint ownership between the Port Districts of Anacortes and Skagit County. In 1975, ownership was transferred solely to the Port of Skagit County.

Skagit Regional Airport is a General Aviation Facility with two runways:

10-28 – 5,475 feet long by 100 feet wide, with one instrument approach, Medium Intensity Runway Lights, and Visual Approach Slope Indicator (VASI) Navigational Aides for both approaches, and long-term plan for precision approach at both ends;

4-22 (crosswind) – 3,000 feet long by 60 feet wide, with visual approaches, Low Intensity Runway Lights, Precision Approach path Indicator (PAPI), and planned to host general aviation development.

~~Airside facilities also include parallel taxiways, aircraft apron, tiedowns, hangars, and a fuel distribution and storage system.~~ Airside facilities also include parallel taxiways, aircraft aprons, tie-downs, hangars, and two fuel tank farm pads that will each hold four 12,000 gallon tanks, one located on 10-28 side and one located on 04-22 side.

Landside facilities include the 7,000-square foot terminal and Port office building, maintenance and fire equipment buildings, an air cargo facility, and several fixed base operator (FBO) buildings. Over 70 persons are employed at the airport in both aviation and non-aviation businesses.

~~The *Skagit Regional Airport Master Plan Update* (June 1995~~ September 2007) includes a determination of the anticipated growth to be experienced at Skagit Regional Airport and an evaluation of the ability of the existing facilities to accommodate this demand. The master plan uses a 20-year planning period that extends through 2013-2025 and provides a recommended development plan showing the future needs of the airport.

The forecasts of future aviation activity show that the types of activity at the airport are not expected to change dramatically in the 20-year planning period. The airport will continue to function as the key aviation facility serving Skagit County. Aircraft operations are forecast to increase, ~~however, with general aviation aircraft operations increasing from 72,000 annual take-offs and landings today to 100,100 operations by 2013~~ at about 2% per year. Approximately ~~420-158~~ 420-158 aircraft are based at the airport at the present time. The composition of the aircraft fleet is expected to ~~continue to reflect national general aviation trends~~ increase in jet, turboprop and rotor aircraft usage. Future general aviation operations will continue to be dominated by business oriented flight, private transportation, flight training, or other forms of noncommercial activity using jet, turboprop, rotor aircraft and single- and multi-engine piston aircraft. The Skagit Regional Airport Master Plan includes plans for the extension of utilities, stormwater detention facilities, taxiway and apron to accommodate future growth.

Future plans for the airport include increasing development for general aviation and commercial uses along Runway 4-22. In addition, the Port plans to assist existing tenants along Runway 10-28 in expanding existing

operations. Few changes are expected to the runways themselves other than routine maintenance activities.— Changes in the FAA's policies toward security and precision approaches may result in some changes in these areas, however, plans include shifting Runway 04-22 by 430 feet to the southwest to alleviate safety concerns due to the close proximity of the two runways.

Air cargo operations are also forecast to increase from 4,300 operations in 1992 to 7,300 operations in 2013. Commercial passenger service is forecast to be feasible during the planning period, with airlines expected to offer about 13 flights per day to and from the Seattle-Tacoma International Airport by the year 2013.

The ~~1997-2002~~2008-2013 *Bayview Ridge UGA Capital Facilities Plan in Chapter 7* provides information on the Skagit Regional Airport, including a facility inventory, a level of service capacity analysis, summary of capital projects, and a financing plan. Complete information on the airport may be obtained in the Skagit Regional Airport Master Plan Update (~~June 1995~~September 2007).

Railway Facilities

Rail service within Skagit County is provided by Burlington Northern Santa Fe Railroad (BNSF). The BNSF main line generally parallels I-5. BNSF provides a secondary line from Sedro-Woolley to Sumas in Whatcom County and two branch lines originating in the city of Burlington—one traveling west to Anacortes and one traveling east to Sedro-Woolley. The Burlington Anacortes branch line travels through Bayview Ridge. Rail service passing through Bayview Ridge is limited to freight hauling operations. There are approximately 12 freight trains per day operating on the east-west Burlington branch lines.

LEVEL OF SERVICE (LOS), CAPACITY, AND NEEDS ASSESSMENT

Existing Skagit County Levels of Service and Capacity

The *Skagit County Transportation Systems Plan - Review Final* (June 28, 2001) addresses LOS and capacity issues within Skagit County through the year 2015. The Plan includes traffic forecasts through 2015 based on a county-wide modeling effort.

As stated in the Plan, traffic volumes on county roads are low, and maintenance of the existing road system takes precedence over road construction. Because of this, road improvements rely more on the Priority Array than on LOS deficiencies. The Priority Array refers to a calculation that provides information on the safety and physical characteristics/deficiencies in individual roadway segments. The calculation combines and weighs factors, such as pavement condition, road geometrics, traffic levels, and accident rates.

—In addition to the Priority Array, Skagit County also uses a LOS methodology based on the Transportation Research Board's *Highway Capacity Manual* (2000-Edition). Prior to the 2001 *Skagit County Transportation Systems Plan*, the County used a unique methodology known as the "Birdsall Method," but it was determined that the Birdsall methodology was not as appropriate as that contained in the 2000 *Highway Capacity Manual* (HCM). Further, the Birdsall methodology was inconsistent with the HCM methodology used by all other local jurisdictions.

LOS ratings are a measure of the quality of service and efficiency provided by an area's roadways. Traditionally, LOS ratings for roadways are based on an A through F, quantitative measures of roadway capacity, as defined in the ~~1985~~ Highway Capacity Manual. These alphabetical ratings describe the quality of service provided at peak hours and average daily conditions. ~~The standard is based on the ratio of volume (V) to capacity (C).~~—In general, LOS A indicates free flow with no delays, while LOS F signifies very severe congestion with slow travel speeds. In the middle is LOS C, which represents a condition of stable flow with slightly reduced speeds and reduced maneuverability.

Based on the Highway Capacity Manual method, the ~~proposed~~ LOS' for Skagit County Roads and Intersections is ~~Levels D and E, respectively~~ are as follows:-

Level of Service Standards - The Level of Service (LOS) standard for County roads is C. LOS D is acceptable for all road segments that:

- a. Have Annualized Average Daily Traffic (AADT) greater than 7,000 vehicles; and
- b. Are NOT federally functionally classified as an 09-Local Access Road; and

c. Are designated as a County Freight and Goods Transportation Systems Route (FGTS).

The LOS standard for County road intersections is LOS D.

The Skagit County Department of Public Works monitors the LOS on county roads. When traffic volumes exceed the threshold of 7,000 Average Annualized Daily Traffic (AADT) on a road segment, the Department initiates further study of the roadway. This threshold is an indicator that a road segment may be approaching the LOS D limitations and should be studied in depth for potential improvements.

LOS ratings have also been developed for intersections. These alphabetical ratings describe the quality of service provided at peak hours and average daily conditions. The standard is based on seconds of delay for signalized intersections or reserve capacity for unsignalized intersections as shown in **Table 6-1**.

**Table 6-1
Level of Service Ratings for Intersections**

| LOS | Type of Intersection | |
|-----|---|---|
| | Signalized Control Delay per Vehicle (Sec/Veh) | Unsignalized Average Control Delay (Sec/Veh) |
| A | < 10 | < 10 |
| B | > 10 – 20 | > 10 – 15 |
| C | > 20 – 35 | > 15 – 25 |
| D | > 35 – 55 | > 25 – 35 |
| E | > 55 – 80 | > 35 – 50 |
| F | > 80 | > 50 |

Source: *Highway Capacity Manual*, 2000 Edition

The proposed LOS standard for intersections in Skagit County, based on the Highway Capacity Manual, is LOS D. LOS analyses for intersections within the Bayview Ridge Subarea were conducted in 2000; all intersections were at LOS A or B.

State Highways

LOS standards for most state highways are set through the Regional Transportation Planning Organizations (RTPOs). The Skagit-Island RTPO has established LOS C as the standard for all rural highways and LOS D as the standard for all urban highways, with SR 20 through Anacortes designated as LOS C. All designations are based on the Highway Capacity Manual (HCM) methodology.

The LOS for state highways of statewide significance (i.e., SR 20) is established by the Washington State Department of Transportation (WSDOT). The standard set for SR 20 is LOS C for rural areas and LOS D for urban areas.

The 2003 **Traffic Report** prepared in conjunction with the WSDOT SR 20 – Fredonia to I-5 Interchange project includes year 2001 LOS analyses for both individual highway segments and the SR 20/Higgins Airport Way and SR 20/Avon-Allen Road intersections. The SR 536 to Higgins Airport Way and Higgins Airport Way to Avon Allen segments are at LOS B. The intersection at Higgins Airport Way was at LOS D for southbound traffic (on Higgins) and LOS A for east-bound traffic turning left on SR 20. The intersection at Avon-Allen Road is at LOS B.

High traffic volumes on state routes can cause delays on intersecting county roads. Skagit County and

WSDOT coordinate regarding SR 20, although they are not in total agreement regarding the SR 20 intersection needs. The county believes further corridor studies are necessary to properly plan for short-and long-term intersection improvements.

Transit

SKAT does not have level of service standards, but rather focuses on providing basic service and expanding the areas receiving basic service.

Subarea Capacity and Levels of Service

The LOS standards that are adopted in this Plan will be maintained through upkeep of the existing circulation system and expansion of transportation services where needed. The *Bayview Ridge Subarea Plan* adopts the LOS standards for streets and intersections as adopted in the *Skagit County Comprehensive Plan*. These standards currently are ~~LOS C for streets and LOS D for intersections~~ as follows:

Level of Service Standards –

The Level of Service (LOS) standard for County roads is C. LOS D is acceptable for all road segments that:

- a. Have Annualized Average Daily Traffic (AADT) greater than 7,000 vehicles; and
- b. Are NOT federally functionally classified as an 09-Local Access Road; and
- c. Are designated as a County Freight and Goods Transportation Systems Route (FGTS).

The LOS standard for County road intersections is LOS D.

The WSDOT *State Highways System Plan* has ~~begun two a two-phase~~ improvement projects ~~planned for~~ SR-20.

~~Resurfacing from the Spur to the “Y” – February 2003~~

SR 20 Fredonia to Interstate 5 Project

Widening (adding one lane in each direction) from the intersection with SR 536 to I-5 and intersection modifications at I-5 to increase safety and reduce congestion. The project is funded for \$76.5 million. Phase one is scheduled to be advertised for bid in 2006 ~~began in 2007~~.

While all Bayview Ridge arterials currently demonstrate adequate capacity, the public may consider some deficient based on their physical condition. A capacity-based analysis supplemented with a condition-based analysis may yield a more accurate assessment of roadway system deficiencies.

Such a condition-based analysis could consider factors such as:

Lane width

Roadway width

Pavement width

Accident severity

Surface rating

Vertical/horizontal alignment adequacy

Pedestrian/bicycle facilities

Freight and goods mobility

Transit routes

Destination routes for airport and rail freight

For this Plan, the county will use only a capacity-based system of establishing LOS. As part of an annual Plan amendment process, the county may elect to devise a condition-based LOS and analysis model. The analysis model could include some or all of the factors listed above, depending on the data available and routinely maintained by the Skagit County Public Works Department.

Average weekday traffic (AWDT) and PM peak hour counts were collected for the Skagit County arterial network, including Bayview Ridge, during 1998, 1999, and 2000. The counts were provided by the WSDOT, Skagit County Public Works, and Skagit Council of Governments. Where AWDT counts were not available, peak hour counts were factored to estimate AWDT volumes using area specific relationships between daily and peak hour volumes. These count-based volumes (V) were divided by functional classification capacities (C) obtained from the 1985 Highway Capacity Manual to determine existing levels of service.

Table 6-2 illustrates the traffic counts for some of the most highly traveled segments of county and state facilities within the Bayview Ridge Subarea.

Table 6-2
Base-Line Traffic Counts

| <i>Roadway</i> | <i>Year Counted</i> | <i>Average Weekday Traffic (AWDT)</i> | | <i>PM Peak</i> |
|---|---------------------|---------------------------------------|--------------|----------------|
| | | <i>Directional</i> | <i>Total</i> | |
| Pulver N/O SR 20 @ MP 3.30 | 1999 | 582N/518S | 1100 | 181 |
| Pulver S/O SR 20 @ MP 3.43 | 1998 | 223N/111S | 334 | 38 |
| Avon Allen Road @ MP 6.32 S/O Cook | 1998 | 921N/843S | 1764 | 250 |
| Avon Allen Road @ MP 6.49 N/O Cook | 1998 | 324N/218S | 542 | 77 |
| Farm to Market @ MP 0.5 N/O SR 20 | 1999 | 1343N/1256S | 2599 | 295 |
| Farm to Market @ MP 1.24 N/O Ovenell | 2000 | 1208N/1087S | 2295 | 224 |
| Farm to Market @ MP 2.0 N/O Bayview | 2000 | 1248N/1125S | 2373 | 249 |
| Farm to Market N/O Marihugh S/O Josh Wilson | 1998 | 1258N/1186S | 2444 | 288 |
| Farm to Market N/O Josh Wilson | 2000 | 752N/760S | 1512 | 157 |
| Higgins Airport Way N/O SR 20 | 1998 | 845N/742S | 1587 | 251 |
| Avon Allen Road N/O SR 20 | 1998 | 1156N/1053S | 2209 | 203 |
| Avon Allen Road N/O Ovenell | 1998 | 1051N/1020S | 2071 | 169 |
| Avon Allen S/O Peterson | 2000 | 1032N/965S | 1997 | 201 |
| Peterson Road E/O Pulver Road | 1998 | 2386W/2487E | 4873 | 487 |
| Peterson Road E/O Avon Allen | 1998 | 1890W/1960E | 3850 | 418 |
| Peterson Road W/O Avon Allen | 1999 | 1286W/1586E | 2872 | 331 |
| Peterson Road E/O Higgins Airport Way | 2000 | 703W/867E | 1570 | 253 |
| Josh Wilson W/O SR 11 | 1999 | 1574W/1655E | 3229 | 387 |
| Josh Wilson E/O Farm to Market | 2000 | 1249W/1299E | 2548 | 283 |
| Josh Wilson W/O Farm to Market | 2000 | 493W/440E | 933 | 93 |
| Ovenell Road E/O Higgins Airport Way | 2000 | 84W/113E | 197 | 26 |
| Ovenell Road W/O Avon Allen | 2000 | 536W/548E | 1084 | 106 |
| Ovenell Road E/O Farm to Market | 2000 | 323W/353E | 676 | 58 |

Table 6.2 RECENT TRAFFIC COUNTS *

| Roadway | Year | Ave Weekday Traffic (AWDT) | | PM Peak |
|--|------|----------------------------|-------|---------|
| | | Directional | Total | |
| - | - | - | - | - |
| Avon Allen Road N of SR20 | 2006 | 1415N / 1452S | 2867 | 265 |
| Avon Allen Road N of Ovenell | 2004 | 1150N / 1080S | 2230 | 200 |
| Avon Allen Road S of Peterson | 2006 | 1161 N / 852S | 2013 | 217 |
| Farm to Market Road N of SR20 | 2006 | 2135N / 2060S | 4195 | 418 |
| Farm to Market Road S of Josh Wilson | 2006 | 1747N / 1650S | 3397 | 389 |
| Farm to Market Road N of Josh Wilson | 2006 | 885N / 1094S | 1979 | 211 |
| Higgins Airport Way N of SR20 | 2006 | 865N / 736S | 1601 | 151 |
| Higgins Airport Way N of Ovenell | 2006 | 936N / 763S | 1699 | 187 |
| Higgins Airport Way N of Peterson | 2006 | 864N / 776S | 1640 | 171 |
| Josh Wilson Road W of Avon Allen | 2006 | 2628E / 2612W | 5240 | 574 |
| Josh Wilson Road E of Farm to Market | 2006 | 1748E / 1794W | 3542 | 377 |
| Josh Wilson Road W of Farm to Market | 2006 | 527E / 623W | 1150 | 110 |
| Ovenell Road E of Higgins Airport Way | 2006 | 188E / 166W | 354 | 47 |
| Ovenell Road W of Higgins Airport Way | 2006 | 567E / 529W | 1096 | 113 |
| Peterson Road E of Avon Allen | 2004 | 2226E / 2089W | 4315 | 488 |
| Peterson Road W of Avon Allen | 2006 | 1965E / 1873W | 3838 | 362 |
| Peterson Road E of Higgins Airport Way | 2004 | 873E / 812W | 1685 | 173 |

** 2007 counts not used due to SR20 construction*

The present roadway system within the Subarea operates reasonably well. Congestion and delay measured at primary roadway and intersections indicate levels of service are acceptable throughout the regional system.

Currently, the primary issue for Bayview Ridge traffic is access to SR 20, a "Highway of Statewide Significance." Access at the intersections with Avon-Allen Road, Higgins Airport Way, Pulver Road, and Farm to Market Road can be very difficult for traffic needing to turn left onto SR 20, heading east toward Burlington, Mount Vernon, or I-5. Only the intersections with Farm to Market Road and Avon-Allen Road are signalized. As the industrial traffic increasingly tries to avoid the unsignalized intersections (i.e., SR 20/Pulver Road and SR 20/Higgins Airport Way), some of this traffic, including trucks, travels east via Peterson Road into the city limits of Burlington past Pulver Road due to the right turn only at Pulver Road that was installed after accidents. This results in truck traffic passing through both the Bayview Ridge residential area and rural residential areas between Bayview Ridge and Burlington. The WSDOT, Skagit County, the city of Burlington, and the Port of Skagit County are actively working to address this issue.

~~—The WSDOT State Highways System Plan has two improvement projects planned for SR 20:~~

~~Resurfacing from the Spur to the “Y”, February 2003.~~

~~SR 20 Fredonia to I-5 Interchange Project — Widening (adding one lane in each direction) from the intersection with SR 536 to I-5, intersection improvements, and intersection modifications at Interstate 5 to increase safety and reduce congestion. The project is funded for \$76.5 million and is scheduled to be advertised for bid in 2006.~~

Forecast of Traffic

Changes in traffic volume are dependent primarily on changes in population and employment, which in turn are dependent on growth in the housing market and regional industries. ~~As detailed in Chapter 5, population projections for the Bayview Ridge Subarea expect the population to reach 3,444 in 2015. The population allocation for the Bayview Ridge UGA is 3,600 in 2025.~~

In order to systematically estimate future travel demands on the Bayview Ridge road network, a computerized travel forecast model was developed for the Subarea by the Skagit Council of Governments in 2000. This model was based on employment forecasts available at that time, but these forecasts greatly overstate 2015 employment (the model used a forecast of 7,347 total employees by 2015, versus the 3,301 now estimated). Given significant change in the basic employment assumptions, the modeling is no longer considered applicable. The 2000 study did determine, however, that even with the higher employment estimates, traffic circulation within the Subarea will meet or exceed adopted LOS standards, assuming the new north-south collector is constructed.

Transportation System Analysis

~~As described in previous sections, the residential population and employment sectors of Bayview Ridge are predicted to increase steadily over their current levels. There will be an increase in travel to, from, and within the Subarea. There will also be an increase in travel on SR 20 by vehicles traveling from I-5 to the eastern portion of Skagit County. The most significant issue for traffic from Bayview Ridge through 2015-2025 will continue to be the safety and capacity of the Farm to Market Road, Higgins Airport Way, Pulver Road, and Avon-Allen Road intersections with SR 20. Projected levels of service within the Subarea itself are not anticipated to fall below adopted LOS standards.~~

SR 20 will be widened to four lanes from the intersection with SR 536 (Fredonia), east to I-5. Intersection improvements at Higgins Airport Way and Avon-Allen Road are also included in the project. The SR 20 improvements are designed to maintain an LOS of “C” or better along the corridor and at intersections through the year 2026. This project is funded and ~~scheduled to go to bid in 2006~~ began in 2007.

Because traffic volumes will increase over existing levels, the additional traffic will be noticeable to local residents. Within the Subarea, new access streets will also be constructed to accommodate new residential, community center, and industrial development. It is important that these new streets accommodate the new traffic while providing a streetscape consistent with the character of the community.

As individual development projects within Bayview Ridge are proposed, a determination will be made on a case-by-case basis as to whether a detailed traffic study will be required as part of the SEPA project-level review.

The *Bayview Ridge Subarea Plan* proposes a new north-south ~~collector arterial road system~~ connecting Ovenell Road with Peterson Road and Jensen Lane, and signalization of the Higgins Airport Way intersections with SR 20 and Josh Wilson Road. The new north-south ~~system collector~~ is needed to provide connections between new residential areas and the community center and employment areas. It will also help meet urban fire and emergency response times and improve access to existing residential areas, primarily for access between the new Peterson Road community center/proposed Fire District No. 6 Fire Station to meet urban fire response times and the existing Skagit Golf and Country Club residential development. The southern portion of this road system proposed arterial also will also provide new industrial development with access to Ovenell Road, rather than via thus reducing the potential for truck traffic on Peterson Road.

FINANCE PLAN

Skagit County is required under the GMA to prepare a plan for financing the transportation improvements included in this Transportation Element. The Transportation Improvements Program (TIP) identifies transportation revenue sources that are available for undertaking the maintenance, administration, operation, and improvement of the county's transportation system. Included in the TIP is a listing of transportation improvement projects, a schedule of program expenditures, and a summary of revenue sources (local, state, and federal) available to fund the identified costs.

No additional improvements are needed in order to continue providing the adopted level of service. Even so, the county remains committed to providing its citizens with the best transportation system possible within funding capabilities. While no capacity projects are proposed, safety, structural, and preservation projects are necessary.

GOALS, OBJECTIVES, AND POLICIES

Goal 6A Ensure that the transportation system functions at a reasonable level of service internally throughout the Subarea and coordinate the links to the regional transportation network.

Objective 6A-1 To provide a level of service on the transportation system that accommodates the needs of both motorized and non-motorized travel and provides a network of streets and trails for ease and variety of travel.

Policy 6A-1.1 The planned level of service is not to exceed level of service standards for streets and intersections as adopted in the Skagit County Comprehensive Plan. The concurrency requirements do not apply to transportation facilities and services of statewide significance. State Route 20 is a Highway of Statewide Significance (HSS).

Policy 6A-1.2 Proposed projects that decrease the level of service below the planned level, because of their traffic contribution, shall be denied unless concurrent improvements are made to prevent a decrease in level of service below the planned level for that location. Improvements shall be in place before the use is occupied, except as follow:

~~*(a) Sites located where regional improvements are the only means to improve or maintain the level of service existing prior to the development may be developed if the proponents make a fair share contribution to the regional improvement, when the improvement is planned for construction within five years; or sign an agreement to perform at a future date when the County sees needed improvements that are not possible under the Washington State Department of Transportation Warrant System.*~~

~~*(b) Essential public facilities may be constructed subject to a commitment to contribute to the regional improvement at a future date, as funding becomes available from the public entity, including police, fire stations, transfer stations, and the like.*~~

~~*(c) Other exceptions may be authorized by the County Engineer if consistent with the policy intent.*~~

Policy 6A-1.3 The County shall take advantage of existing public lands and right-of-way in the development of the non-motorized transportation system.

Policy 6A-1.4 The County shall work toward linking public transportation to the non-motorized system.

Objective 6A-2 To provide for the continued maintenance and improvement of the transportation system.

Policy 6A-2.1 Complete the construction and upgrading of the arterial street network to maximize circulation and level of service within the community.

Policy 6A-2.2 Implement detailed standards for needed upgrades to residential streets so that the changes will enhance, rather than adversely affect, the character of the area, whether initiated by the county or required to mitigate the impacts of developing a site.

Objective 6A-3 To ensure that transportation planning and other comprehensive planning efforts for the County and the Bayview Ridge Subarea are coordinated.

Policy 6A-3.1 Coordinate the Skagit County Six-Year Transportation Improvement Plan and the Transportation Element of the annually updated Bayview Ridge Capital Improvement Plan with the Land Use, Utilities, and other relevant plan elements to ensure a balanced program that is adequately funded and responsive to community interests.

Policy 6A-3.2 Coordinate the Capital Improvement Plan with regional non-motorized travel plans, including bicycle and pedestrian.

Policy 6A-3.3 Continue to co-ordinate with WSDOT regarding improvements to SR 20.

Policy 6A-3.4 Continue to coordinate with SKAT to identify needed route changes and transit-related street improvements.

Objective 6A-4 To reduce demand on the transportation system during peak travel times.

Policy 6A-4.1 Implement programs to encourage the use of flextime, carpooling and transit as traffic levels increase.

Policy 6A-4.2 The County shall promote the use of flexible work schedules that can be coordinated with public transit schedules.

Policy 6A-4.3 The County shall employ Transportation Demand Management (TDM) and Transportation System Management (TSM) measures as an additional mitigation measure.

Objective 6A-5 Develop design standards for street and trails that reflect the needs and character of the Bayview Ridge Subarea.

Policy 6A-5.1 Create a safe, appropriate neighborhood street system in a network configuration that provides easy access but does not allow rapid or high volume traffic to disrupt residential neighborhoods.

Policy 6A-5.1 Peterson Road should be designed as the major residential entryway to the UGA from the east and incorporate traffic-calming design such as a boulevard with through truck traffic disallowed.

Policy 6A-5.23 Design standards should encourage the use of street trees and landscaping.

Policy 6A-5.34 Street and trail projects should minimize impacts to sensitive natural areas and preserve significant trees and vegetation.

Policy 6A-5.45 Streets within the community center area should be especially sensitive to pedestrian needs.

Policy 6A-5.56 Any existing streets constructed to less than the full urban standard, provision shall be made for future improvement to the urban standard.

Policy 6A-5.67 A network of bicycle and pedestrian paths should be provided between Bayview Ridge's employment and residential areas and community facilities such as parks and schools. Connections should also be planned or provided to regional bicycle and pedestrian paths such as the Port Trail, Padilla Bayshore Trail, Padilla Bay Interpretive Center and the City of Burlington.

Policy 6A-5.7 Require bicycle lanes on new collector streets within the Subarea.