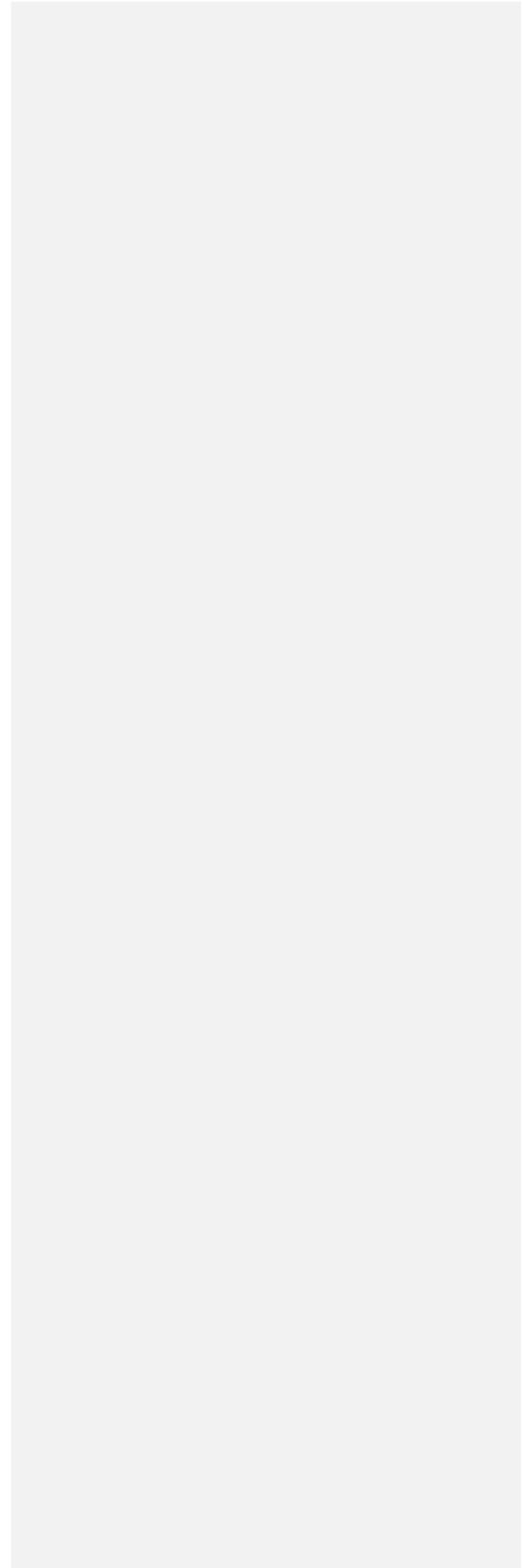




# Transportation Element

07 25 2017



# Transportation

This section describes the City of Langley’s transportation network.

## CONTEXT

The City of Langley is located in Island County on the south end of Whidbey Island. It is a primarily residential community with a population of 1,100 people (2015 estimate). The unincorporated community of Clinton, with its ferry terminal connecting the island to the mainland at Mukilteo, lies southeast of Langley. SR 20/SR 525, the major north-south state highway serving Island County, passes about three miles west of the town limits. There are four primary connections to Langley from SR 525 via Langley Road, Maxwellton Road, Coles Road, and Brooks Hill Road. **Figure T-1** shows Langley in its regional setting. The small village feel is enhanced by these natural, treed entranceways.

A multi-modal transportation system considers diverse transportation options such as walking, cycling, public transportation and the automobile and also accounts for land use factors affecting accessibility. To be a true multi-modal system these different transport options are effectively integrated to provide a high degree of accessibility for the various modes<sup>1</sup>. This element contains goals and policies to enable Langley to develop a robust multi-modal transportation system.

Langley is a walkable community due to its size, one square mile, and its small vibrant downtown offering most goods and services that one needs. Many of the streets are narrow keeping traffic speeds slow, the pedestrian network continues to improve and golf carts are permitted within the City limits. A free public transit system connects the City to the rest of the County. In 2012 the City adopted a Complete Streets ordinance. In 2014 2<sup>nd</sup> Street received a Complete Streets upgrade and in 2016 the City received a grant to undertake a Complete Street upgrade to 1<sup>st</sup> Street. These factors are all critical to building a multi-modal transportation system.

~~The downtown area is located on a high bluff overlooking Saratoga Passage and Camano Island to the north. It contains primarily retail and commercial services for residents and tourists. The small boat harbor at the foot of Wharf Street below Cascade Avenue is a major feature of the downtown, and the relationship to the waterfront is a principal amenity of downtown Langley.~~

Commented [CPI]: redundant

## **Population Growth**

~~Between 2000 and 2015, Island County's population increased from 71,558 to 86,000. This represents a 20 percent increase in population, an increase in the rate of growth from the prior ten year period of 15 percent. This rate of increase is equivalent to the statewide rate of 20 percent for the same period.~~

~~The City of Langley experienced an 15 percent increase in population over the same fifteen-~~

<sup>1</sup> [http://www.vtpi.org/multimodal\\_planning.pdf](http://www.vtpi.org/multimodal_planning.pdf)

year period, growing from 959 in 2000 to 1,100 persons in 2015.

**Land Use Assumptions**

Travel demand estimates were based on land use assumptions derived from discussions among the planners for Island County, Coupeville, Oak Harbor, and Langley. Input from each jurisdiction was used to allocate growth to each area of the county. The results of this process are outlined in detail in the travel forecasts section of this chapter.

**Commented [CP2]:** There are no travel demand estimates in the previous version.

**Land Use and Transportation**

Land use and transportation are inextricably linked. Table No. 1 describes various land use factors that can affect travel behavior and population health.<sup>2</sup>

**Table No. 1 Land Use and Travel Impacts**

Factor	Definition	Travel Impacts
Density	People or jobs per unit of land area (acre or hectare).	Increased density tends to reduce per capita vehicle travel. Each 10% increase in urban densities typically reduces per capita vehicle miles traveled (VMT) by 1-3%.
Mix	Degree that related land uses (housing, commercial, institutional) are located close together.	Increased land use mix tends to reduce per capita vehicle travel, and increase use of alternative modes, particularly walking for errands. Neighborhoods with good land use mix typically have 5-15% lower vehicle-miles.
Regional Accessibility	Location of development relative to regional urban center.	Improved accessibility reduces per capita vehicle mileage. Residents of more central neighborhoods typically drive 10-30% fewer vehicle-miles than urban fringe residents.
Centeredness	Portion of commercial, employment, and other activities in major activity centers.	Centeredness increases use of alternative commute modes. Typically 30-60% of commuters to major commercial centers use alternative modes, compared with 5-15% of commuters at dispersed locations.
Network Connectivity	Degree that walkways and roads are connected to allow direct travel between destinations.	Improved roadway connectivity can reduce vehicle mileage, and improved walkway connectivity tends to increase walking and cycling.
Roadway design and management	Scale, design and management of streets.	More multi-modal streets increase use of alternative modes. Traffic calming reduces vehicle travel and increases walking and cycling.
Walking and Cycling conditions	Quantity, quality and security of sidewalks, crosswalks, paths, and bike lanes.	Improved walking and cycling conditions tends to increase nonmotorized travel and reduce automobile travel. Residents of more walkable communities typically walk 2-4 times as much and drive 5-15% less than if they lived in more automobile-dependent communities.

<sup>2</sup> <http://www.vtpi.org/tdm/tdm38.htm>

Transit quality and accessibility	Quality of transit service and degree to which destinations are transit accessible.	Improved service increases transit ridership and reduces automobile trips. Residents of transit oriented neighborhoods tend to own 10-30% fewer vehicles, drive 10-30% fewer miles, and use alternative modes 2-10 times more frequently than residents of automobile-oriented communities.
Parking supply and management	Number of parking spaces per building unit or acre, and how parking is managed.	Reduced parking supply, increased parking pricing and implementation of other parking management strategies can significantly reduce vehicle ownership and mileage. Cost-recovery pricing (charging users directly for parking facilities) typically reduces automobile trips by 10-30%.
Site design	The layout and design of buildings and parking facilities.	More multi-modal site design can reduce automobile trips, particularly if implemented with improved transit services.
Mobility Management	Policies and programs that encourage more efficient travel patterns.	Mobility management can significantly reduce vehicle travel for affected trips. Vehicle travel reductions of 10-30% are common.

## **TRANSPORTATION SYSTEM**

The City of Langley's transportation system is made up of the ~~includes the~~ following principal modes:

- Private automobile
- Public transit
- Active transportation that includes walking, cycling, skateboarding and other non-motorized modes
- Marine craft which tend to be tourist related
- Low speed vehicles such as golf carts and electric bicycles
- ~~Streets and roads~~
- ~~Pedestrian, golf carts, and bicycle facilities~~
- ~~Transit routes~~
- ~~Waterborne transportation~~

Commented [CP3]: These are not modes

~~The characteristics of each mode are discussed below.~~

## **EXISTING ROAD SYSTEM**

Three major arterial roads lead into the city of Langley. Langley Road is the principal connection between the City of Langley and SR 525 at Ken's Corner. Maxwelton Road, which intersects Langley Road just south of the Langley city limits, connects Langley with SR 525 to the west of Ken's Comer. As indicated in **Figure T-2**, Langley and Maxwelton Roads are two lane roads in good condition. Both have a 50 mph speed limit. Inside the city limits, Langley Road becomes Camano Avenue. All roadways in the city limits, including Camano, have a 25 mph posted speed limit. Brooks Hill Road leads westward to the Bayview community and outside of the City limits the speed limit is 40 mph.

Commented [CP4]: Maps are being replaced

Two secondary arterial roads and one collector enter the City of Langley. Coles Road is a two lane county road connecting Langley with SR 525 via Brooks Hill Road and Third Street. It is in excellent condition. Saratoga Road is a scenic highway along the Saratoga

Passage to the northwest of Langley. Saratoga Road is in ~~poor~~ poor condition. Sandy Point Road leads eastward to Wilkinson Road and provides an alternative route to the Clinton ferry and SR 525. It is in fair condition and has narrow shoulders.

Edgecliff Drive and Sandy Point Road serve the residential development in the eastern section of the city. Edgecliff Drive dead-ends just beyond the city limits as a result of a land slide.

The downtown streets (First, Second, etc.) are all two-lane streets, mostly with sidewalks and parking on both sides. Wharf Street, which connects downtown Langley with the harbor area at the foot of the bluff, is a very narrow street with a sidewalk on the eastern side.

### **Intergovernmental Coordination**

~~Langley's LOS (Level Of Service) standards were developed with a full understanding of Island County's LOS standards and are consistent with these standards. Langley LOS standards have no direct bearing on WSDOT standards.~~

**Commented [CP5]:** LOS is discussed in great detail on pages 8, 13-15.

### **Public Participation**

~~Extensive efforts were made to involve the public in the development of the Comprehensive Plan and Transportation Element. These are discussed in more detail on page 4 of the Comprehensive Plan.~~

**Commented [CP6]:** Public participation is located elsewhere. This statement also dates back to a much older version of the Comp Plan.

### **Functional Classification**

Classifying roadways by function provides a foundation for day-to-day decisions related to traffic operations, funding choices among competing road improvement projects and the long-range planning decisions related to land use and transportation needs. There are two primary functions of a roadway: mobility and land access. "Access" means the existence of driveways connecting the street with private property and the availability of part of the street for parking and loading. The movement or "mobility" function combines both the capacity to move quantities of vehicles or people along the street, and the ability to do so at a reasonable speed. The functions of access and mobility usually conflict with each other because access movements (i.e., left turns into and out of driveways or parking maneuvers) impede the smooth flow of traffic along the street.

**Commented [CP7]:** As written this is vehicular-centric and doesn't reflect the goal of a multi-modal transportation system

The entire functional classification system is based on the evaluation of certain parameters including the following:

- Trip Length;
- Traffic characteristics;
- Continuity of functional classification;
- Route feasibility;
- Location of travel generators;
- Geographical spacing of roads;
- Miles and travel classification controls;
- Integration of network with adjoining jurisdictions; and
- Ability of roads to serve other travel modes (i.e., bus, bicycle).

Functional classifications are generally divided into the following categories.

- **Arterial roads** provide the greatest degree of mobility and have the most

- limited access to adjacent land uses
- **Collector roads** generally provide equal mobility and land access.
- **Local access roads** provide more access to land than they provide mobility.

Table 1 defines the roadway classifications.

**Table 1 Roadway Classification**

<p><b><u>Principal Arterial</u></b> – provides traffic movements into, out of, and through a city. Principal arterials carry the highest amount of traffic volumes and provide the best mobility in the roadway network by limiting access and having few traffic control devices with high speed limits.</p> <p>Regional and inter-County bus routes are generally located on principal arterials, as well as transfer centers and park and ride lots.</p>
<p><b><u>Secondary Arterial</u></b> – connects with and augments principal arterials. Secondary arterials allow densely populated areas easy access to principal arterials. Because they provide more access to adjacent land uses (i.e., shopping, schools, etc.) than a principal arterial, these roadways have lower traffic flow rates.</p> <p>Secondary arterials also serve as local and inter-community bus routes.</p>
<p><b><u>Collector</u></b> – provides easy movement within neighborhoods and channel neighborhood trips onto the secondary and principal arterial street system. Collectors typically carry moderate traffic volumes, have relatively shorter trips than arterials, and carry very little through traffic.</p> <p>Local bus routes sometimes use collectors for passenger pickup.</p>
<p><b><u>Local Access Streets</u></b> – comprises all roadways and streets not otherwise classified. The main function of local access streets is providing direct access to abutting properties. Very often at the expense of traffic movement. Characteristics often associated with local streets are low speeds and delays caused by turning vehicles.</p> <p>Local streets are not generally designed to accommodate bus movements.</p>

Within the City of Langley, the functional classification according to WSDOT is divided into three categories.

1. Major Collector Streets
2. Minor Collector Streets
3. Local Access Streets

As indicated, streets listed below are designated as major collectors:

- Anthes Avenue (Second to Sixth)
- Brooks Hill Road/ Third Street
- Camano Avenue
- Sixth Street
- Cascade Avenue
- Second Street (to DeBruyn)
- DeBruyn Avenue (Third to Second)
- Park Avenue (Third to Sixth)

Seven streets are designated as minor collector streets:

- Park Avenue (First to Third)
- Edgecliff Drive (Camano to Decker)
- First Street (DeBruyn to Second/Cascade)
- Wharf Street (Cascade to End)
- Decker Avenue
- Sandy point Road
- Saratoga Road
- ~~Al Anderson Road~~
- ~~Fairgrounds Road~~

All other streets in Langley are classified as local access roads.

~~Stan has a replacement map for figure T-2B~~

### **Geometrics and Traffic Control**

~~Figure T 2B also summarizes current geometries (roadway and lane widths, right of ways etc.) for the key roadways in Langley.~~ Most roadways are two-lanes with 20 to 22 foot pavement widths and narrow gravel shoulders. The downtown streets are generally wider and have sidewalks and parking on one or both sides.

There are no traffic signals within the city. There are all-way stops at the intersections of Cascade Avenue/Sixth Street, First Street/Anthes Avenue, Second Street/Anthes Avenue, Third and Park, and 2nd and Cascade. All other intersections are controlled by stop signs on the minor street approach.

### **Traffic Operations**

Commented [CP8]: No it's not.

Commented [CP9]: We do not have this map.

A Level of service (LOS) analysis serves as an indicator of the quality of operation at an intersection. It is a measure that focuses almost exclusively on road capacity for vehicles. However, public transportation, bicycle and pedestrian paths, may meet a significant portion of a community's transportation needs. Programs to reduce demand or shift traffic away from rush hours, may reduce the need for new facilities. As a result, lower LOS may be justified for street capacity in dense urban areas even if streets are congested, if overall mobility is adequate<sup>3</sup>. The LOS grading ranges from A to F such that LOS A is assigned when no delays are present and low volumes are experienced. LOS E, on the other hand, represents the 'at capacity' condition-no more vehicles could be added to the intersection without a breakdown in traffic flow. LOS F is an unacceptable level of service and indicates long delays and/or strained traffic flows. A more detailed discussion of LOS can be found in Appendix XX, follows later this chapter.

~~Manual p.m. peak hour traffic volume surveys were conducted at two locations in Langley in 1993. Data were available for or were estimated at two other locations. These locations were selected for analysis because of their importance for traffic flow to and from Langley as a whole, and because they are recommended for monitoring to maintain the GMA level of service standards, when they are defined.~~

Commented [CP10]: Out of date

Table T-2 summarizes the existing levels of service for the four main intersections included in the traffic analysis.

**Table T-2: Existing Intersection Levels of Service**

Intersection	Existing Level of Service
Camano Avenue/ Sandy Point Road	A
Camano Avenue/ Edgecliff Drive	A
Sixth Street/ Cascade Avenue	A
Third Street/ DeBruyn Avenue	A

~~Levels of service of intersections and roadway sections within Langley are shown in Figure T-3. Roadway levels of service for county roads in the surrounding area are shown in Figure T-4.~~

Commented [CP11]: We don't have this.

Communities are starting to establish Level-of-Service ratings to walking, cycling and public transit, and to consider demand management strategies as alternatives to roadway capacity expansion. A multi-modal LOS system better reflects actual conditions and capacity as well as providing your community with the ability to improve LOS by implementing a wider variety of system upgrades. Motor vehicle LOS typically measure

<sup>3</sup> Source: <http://mrsc.org/Home/Explore-Topics/Planning/General-Planning-and-Growth-Management/Level-of-Service-Standards-in-Plain-English.aspx>

whether sufficient capacity is available in the system to accommodate vehicle demand. For other kinds of users, such as pedestrians, transit riders or bicyclists, LOS standards measure whether usable facilities are available at all, or they measure service quality when facilities do exist<sup>4</sup>. Moving forward the City plans to develop LOS for other modes of transportation.

### Accidents and Safety

According to WSDOT the city of Langley experienced 8 accidents in 2013 per 1,100 populations. Two were minor and four involved property damage. It can be concluded that Langley's streets are safe.

Commented [CP12]: I have requested updated data.

### TRANSIT SERVICE

The Island County Public Transportation Benefit Area Transit, operating as Island Transit, serves the transit needs of the City of Langley and its residents. The City is a member of the PTBA. The agency's services include:

- Fixed route service
- Para-transit service
- A vanpool program
- Ride matching programs
- Park and Ride facilities

All of Island Transit's services are provided free to its users. The system is funded by a 0.9 percent of local sales tax revenue.

### Bus Routes

Routes ~~1SB A~~ (southbound) and 1NB (northbound) provide conventional fixed route transit along the SR 525 between the Clinton Ferry Docks to the city of Oak Harbor for Whidbey Island. This route serves Langley via stops at Kens Korner and Maxwellton Road.

~~Two route 57 and 58~~ directly serves the city of Langley, from the Clinton Ferry Docks connecting to Freeland, Monday through Friday. ~~Service hours in Langley are from 5:37 AM to 7:40 PM Monday through Friday.~~

~~Service hours in Langley are 5:36 a.m. to 7:27 p.m., Monday through Friday, and 8:36 a.m. to 7:27 p.m.~~ Currently, there is no weekend or holiday service though the city has expressed interest in the return of Saturday service and Island Transit has indicated that it is working towards offering Saturday service.

~~Buses run on approximately hourly headways (time between buses) in each direction. The major stop in Langley is located on Anthes Avenue and Third Street. Additional runs between Langley and the Clinton ferry terminal are provided in the morning and evening peak periods. For a complete list of routes and times refer to [www.islandtransit.org](http://www.islandtransit.org). All buses have bike racks.~~

<sup>4</sup> <https://deptofcommerce.app.box.com/s/erocgtpv3acyxv2m9bcb59c38s13qqjb>

### **Para-transit and other services**

Para-transit service has been offered to Langley residents since March 26, 1992. Riders must fill out an application form and be accepted for service based upon federal criteria for citizens covered by the Americans with Disabilities Act. Potential users must provide 24 hours notice of their trip to Island Transit in order to arrange for door-to-door service. Island Transit also offers subsidized vanpools and ride matching services for car/vanpools to all PTBA residents, including those in Langley.

### **AIR SERVICE**

Whidbey Island and the City of Langley are served locally by several air facilities. Regularly scheduled airline service is not currently offered on Whidbey Island. The primary airstrip serving the Langley area is the Langley Whidbey Airpark (Porter Airpark) on Crawford Road.

### **PEDESTRIAN AND BICYCLE FACILITIES**

The size of Langley makes it a very walkable community and the length of safe pedestrian routes in Langley increases every year. There are an increasing number of facilities available for non motorized travel within the City of Langley. An inventory of the pedestrian network is shown on Figure T-XX. The inventory is broken down by roads with sidewalks or separated walkways, paved shoulders or fog lines, unpaved shoulders and roads that lack pedestrian amenities that may or may not be safe for walking. This inventory will help to guide future pedestrian improvements. The trail or off-road network is also included in this element and Figure T-XX shows desired linkages between different areas in the City and Joint Planning Area. It is anticipated that in the future these connections will be made as properties move forward with development.

~~The sidewalks, alleys and walkways that exist in the commercial downtown area of Langley provide ample opportunities for non motorized travel and make this area truly walkable. A continuous walkway exists along the major traffic corridor from the Camano/Sandy Point intersection entrance to the city along Camano Avenue, 6<sup>th</sup> Street, Park Avenue, and 3<sup>rd</sup> Street to the Coles Road/Brooks Hill Road entrance to the city.~~

~~Although there are no dedicated bicycle facilities, bicyclists may safely use the existing roads and streets. Future additions to existing facilities will create an extensive network of interconnected walkways and trails that provide readily accessible alternatives to the use of motorized transit within Langley.~~

### **BICYCLE FACILITIES**

~~Although~~ There are no dedicated bicycle routes or lanes in Langley. There is also limited bicycling facilities such as dedicated bike parking or end of trip facilities. Facilities- Bicyclists may use the existing roads and streets, however some roads are safer than others due to their limited width and/or narrow shoulder. Future improvements to accommodate bicycling routes and facilities will be

welcome additions to Langley's multi-modal transportation system. existing facilities will create an extensive network of interconnected walkways and trails that provide readily accessible alternatives to the use of motorized transit within Langley.

## **MARINE AND FERRY SERVICE**

### **Ferry Service**

Passenger and auto ferry services are provided by the Washington State Department of Transportation, Marine Division to the terminal at Clinton, south of Langley. This route connects with Mukilteo in Snohomish County, and links Whidbey Island with the Seattle- Everett metropolitan area. There is limited parking at the Clinton ferry terminal and no parking at the Mukilteo ferry which limits the ability of frequent ferry travelers to walk on and use public transit.

### **Port of South Whidbey Harbor at Langley (Marina)**

The Port of South Whidbey has been involved with the site's development since the Port was formed in 1961. In 2009 the Port took ownership of Marina. The Marina offers both long term and transient moorage for recreational and commercial vessels on its 200 linear feet of dock and 289 slips. The Marina offers additional services including pump out facilities, a restroom and showers, limited parking, boat ramp, beach access and fishing. In 2014 the Port installed a 400-foot breakwater that provides moorage for larger commercial vessels. As a result, the Victoria Clipper is now making Langley a destination in the off season as part of whale watching tours.

In 2004, the Port and City of Langley sponsored The Langley Boat Harbor and Environs Master Plan to examine opportunities to expand the marina and enhance the adjacent waterfront. In response, the ownership of adjacent properties and facilities were transferred from the City of Langley to the Port as part of an Interlocal Agreement (ILA). The Port intends to begin reviewing and updating the Harbor Master Plan in consultation with the City. This plan will guide future expansion of the facilities as well as how to finance the improvements.

In January 2014, the Port of South Whidbey adopted its Comprehensive Scheme 2013-2019<sup>5</sup>. The following issues were identified as limiting factors for the Langley Marina:

- Seasonal occupancy – High season occupancy of transient slips has recently hovered around 70-percent, but decreases to 18-percent in the shoulder season (June and October) and to 12-percent in the low season (November to May). Increasing occupancy would increase revenues and the economic benefits of the site without requiring significant additional capital investment.
- Steep slope and lack of connections to downtown Langley – The steep slope between the marina and downtown Langley limits the visual connections and acts as a barrier. Further, the slope is susceptible to erosion: a spring mud slide in 2013 temporarily closed the Wharf Street access.
- Limited parking – On-site parking is limited; off -site parking is needed for more than eight boat trailers. However, the one parking lot available for this purpose is

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<sup>5</sup> <http://www.portofsouthwhidbey.com/downloads/20161122%20PofSW-CompScheme%20Amend1.pdf>

not available on Sundays and Island Transit does not provide Sunday service. Limited parking inhibits the ability of commercial users, like whale watching businesses and charter boats, to embark from the South Whidbey Harbor, especially on Sundays. A recent purchase of an adjacent lot provides an additional 8 to 10 parking stalls.

- Small, older marina facilities – The restroom on site is older and undersized; the Port also lacks an adequate marina office and storage areas.
- Long term maintenance and replacement needs – Marinas are expensive facilities to operate and maintain over time. Best practices dictate maximizing occupancy and adopting a rate structure that generates funds that can be used for major maintenance projects. The core infrastructure of the marina is a 20-year old creosote pile stockade, and there is a limited life span remaining for this structure and the interior docks.

#### **Island Regional Transportation Planning Organization (IRTPO)**

The IRTPO was established in September 2016 but it evolved from the Skagit/Island RTPO to serve the needs of Island County residents. RTPOs are voluntary organizations made up of WSDOT, local governments and interested major employers with the mission to work collaboratively to address multi-modal transportation issues within and across Island County. The IRTPO adopts a Unified Planning Work Program on an annual basis to guide work activities and their related budgets. A Regional Transportation Plan is currently being prepared and has an expected completion date of Q4 2018.

#### **Whidbey Island/Seatac Shuttle**

Whidbey-SeaTac Shuttle is a locally owned and operated airport shuttle van service, serving all of Whidbey Island with transportation to Sea-Tac International Airport in SeaTac, Washington. The Shuttle identified a need for fast, convenient and direct transportation service. The operators offer approximately 11 return trips per day and will increase the frequency of services as demand increases.

~~The section regarding South Whidbey Planning area will reference to Island County's updated Transportation Plan with emphasis on South Whidbey~~

#### **Concurrency**

The Growth Management Act (GMA) requires concurrency for transportation facilities. For transportation, concurrency means “improvements or strategies are in place at the time of development, or that commitment is in place to complete the improvements or strategies within six years.”<sup>6</sup> The purpose of concurrency is to ensure that the public facilities and services necessary to support development are adequate to serve that development at the time it is available for occupancy and use, without decreasing service levels below locally established minimum standards<sup>7</sup>. Concurrency ensures consistency in land use approval and the development of adequate public facilities as plans are implemented, and it prevents development that is out of sync with the public facilities

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<sup>6</sup> RCW 36.70A.070(6)(b)

<sup>7</sup> RCW 36.70A.020 (12)

necessary to support the development. The concurrency management system is the combination of comprehensive plan policies, implementing development regulations, and the day-to-day operations that meter and monitor the achievement of concurrency<sup>8</sup>.

## **TRANSPORTATION IMPROVEMENT PROGRAM**

Local jurisdictions are required to prepare and keep current a Six-Year Transportation Improvement Program (TIP). These programs identify capital transportation projects, prioritize them, indicate project costs and identify funding sources for each project. Langley will continue to prepare TIPs every year in a manner consistent with the general guidance of the comprehensive plan and to implement its goals and policies. Langley's current TIP, adopted September 2016, is incorporated herein by reference.

<b>Transportation Improvement Program 2017-2022</b>				
<b>Project</b>	<b>Fiscal Year</b>	<b>Funding Source</b>	<b>Local Match</b>	<b>Total Cost</b>
Overlay Second Street (Anthes to DeBruyn) <ul style="list-style-type: none"> <li>Separated walkway extruded curb</li> </ul>	2017	STP Grant *applied 9/30/16	\$77,625	\$575,000
De Bruyn Avenue and First Street sidewalk	2017	TIB SCSP Grant and TA Grant *applied 9/30/16	\$24,500	\$245,000
First Street (Wharf to DeBruyn Ave) <ul style="list-style-type: none"> <li>Milling, Overlay, Sidewalk and ADA improvements</li> </ul> Not eligible for STP grant	2018	TIB complete Streets grant possibility Not STP Grant Eligible		\$575,000
DeBruyn Street Overlay (2 <sup>nd</sup> Street to 3 <sup>rd</sup> Street)	2018	STP Grant Eligible	\$175,000	\$23,625
Anthes Reconstruction (1 <sup>st</sup> Street to 2 <sup>nd</sup> Street)	2019	Not STP Grant Eligible		\$600,000
Park Avenue milling and overlay (3 <sup>rd</sup> Street to 4 <sup>th</sup> Street)	2020	STP Grant Eligible	\$60,750	\$200,000
Third Street Overlay (DeBruyn to Brooks Hill Road)	2021	STP Grant Eligible	\$60,750	\$450,000
Edgecliff Reconstruction and Widening (Decker to Camano)	2022			\$880,000
Saratoga Road Reconstruction <ul style="list-style-type: none"> <li>guardrail and widening</li> </ul>	Future			\$1,250,000
Sandy Point Reconstruction and	Future			\$1,200,000

<sup>8</sup> <https://deptofcommerce.app.box.com/s/erocgtpv3acyxv2m9bcb59c38s13qjib>

Widening				
Edgecliff Reconstruction and Widening • Decker to City Limits	Future			\$500,000
Trail System Improvements • Noble Creek, Middle School, Highlands to 6 <sup>th</sup> Street	Future			\$500,000

**Transportation Improvement Program 2016-2021**

	<b><u>Estimated Cost</u></b>	<b><u>Local match</u></b>
<b><u>2017</u></b>		
Cascade Avenue Reconstruction Sixth St. to Wharf STP R grant awarded	\$310,000.00	\$42,000.00
<b><u>2018</u></b>		
Overlay Second Street STP R grant eligible	\$325,000.00	N/A
<b><u>2019</u></b>		
Anthes Reconstruction First St. to Second St. STP R grant eligible	\$600,000.00	N/A
<b><u>2020</u></b>		
Park Avenue milling and overlay First St. to Third St. STP R grant eligible	\$250,000.00	N/A
<b><u>2021</u></b>		
Third Street overlay Debruyne to Brook Hill	\$300,000.00	N/A
<b>Out Years</b>		
Saratoga Road Reconstruction Guardrail/widening	\$1,250,000.00	N/A
Sandy Point Reconstruction Widening	\$1,200,000.00	N/A
Edgecliff Reconstruction Widening	\$1,200,000.00	N/A
Trail System Improvements	\$500,000.00	N/A
Second Street walkway Melson Alley to Debruyne	\$550,000.00	N/A

### Concurrency

Under the GMA, concurrency is one of 14 goals local governments must consider in land use planning. Concurrency is intended to ensure public facilities and services are adequate to serve new development at the time of occupancy without decreasing service levels below locally established minimum standards.

**Level-of-service (LOS) standards are measures of the minimum amount of a public facility which must be provided to meet that community's basic needs and expectations. LOS measures are typically expressed as ratios of facility capacity to the number of users. For example, a community may set a standard for how many park acres are needed per 1000 population. Once a community establishes LOS, they are used to measure whether existing facilities and services are adequate to serve its citizens, or whether there are deficiencies that should be corrected. They also serve as yardsticks to measure whether existing capacity is adequate to handle new development, or to determine what facility improvements will be required to avoid overloading existing facilities. As the community grows in population, LOS assure that facilities and services will keep pace with that growth.**

**The Growth Management Act (GMA) requires jurisdictions to establish LOS for transportation-related facilities ([RCW 36.70A.070\(6\)\(a\)](#)). The GMA requires denial of a proposed development if its impacts on the local transportation system would result in LOS dropping below adopted standards.**

**Many communities have focused almost exclusively on road capacity standards to address traffic congestion. However, public transportation, bicycle and pedestrian paths, may meet a significant portion of a community's transportation needs. Programs to reduce demand or shift traffic away from rush hours, may reduce the need for new facilities. As a result, lower LOS may be justified for street capacity in dense urban areas even if streets are congested, if overall mobility is adequate.**

Source : <http://mtrsc.org/Home/Explore-Topics/Planning/General-Planning-and-Growth-Management/Level-of-Service-Standards-in-Plain-English.aspx>

Multi-modal LOS <http://www.vtpi.org/tm/tm129.htm>

### **LEVEL OF SERVICE STANDARDS**

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The 1990 Washington State Growth Management Act requires Langley to establish level of service (LOS) standards for roadways and transit. The standard is a determination of the maximum level of congestion allowed on a roadway before improvements should be made. For example, if the established level of service for a specific roadway is LOS D, improvements should be made to that roadway if its level of service falls below LOS D (more congestion) or if projected growth would cause the road to exceed the LOS D standard. Level of service standards must be coordinated with the county.

Level of service standards will help ensure that the transportation system can adequately serve expected growth and development. In addition, the service level policy can become the basis for establishing a traffic impact mitigation fee system to provide "fair share" funding of needed transportation improvements. The level of service policy can also be used as an environmental impact review criteria under the State Environmental Policy Act (SEPA) as a basis for conditioning or denying proposed developments.

### **LEVEL OF SERVICE DEFINITIONS**

Level of service standards is a qualitative measure describing both the operational conditions within a traffic stream and the perception of these conditions by motorists and/or passengers. Each level of service describes traffic conditions in objective terms such as speed, travel time, or vehicle density (i.e., the number of vehicles per mile). The conditions are also qualitatively described in terms of a drivers' ability to change lanes, safely make turns at intersections and choose his/her own travel speed. Six level of service are defined. Each level is given a letter designation from A to F, like school grades. LOS A represents the best operating conditions and LOS F the worst. The six levels of service are summarized in Table 9.

Congestion is measured in terms of delay, which can be categorized into levels of service. Delay is a measure of mobility and access, and it considers the excess travel time accrued by motorists due to less than ideal traffic conditions. Congestion can also be measured by vehicle density and average travel speed. While these measures involve different calculations, their influence on travel behavior remains the same. Delay is a convenient measure of congestion at intersections, while average travel speed or vehicle density is a

better indicator of congestion on long roadway sections or freeways.

**Table 9: Arterial Level of Service Definitions**

<i>Level-of-Service A</i> describes primarily free flow operations at average travel speeds usually about 90 percent of the free flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal
<i>Level-of-Service B</i> represents reasonably unimpeded operations at average travel speeds usually about 70 percent of the free flow speed or the arterial class. The ability to maneuver within the traffic stream is only slightly subjected to appreciable tension.
<i>Level-of-Service C</i> represents stable operations. However, ability to maneuver and change lanes in mid-block locations may be more restricted than in LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of the average free flow speed for the arterial class. Motorists will experience an appreciable tension while driving.
<i>Level-of-Service D</i> borders on a range in which small increases in flow may cause substantial increases in approach delay and, hence, decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40 percent of free flow speed.
<i>Level-of-Service E</i> is characterized by significant approach delays and average travel speeds of one-third the free flow speed or lower. Such operations are caused by some combination or adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.
<i>Level-of-Service F</i> characterizes arterial flow at extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with high approach delays resulting. Adverse progression is frequently a contributor to this condition.
<i>Source:</i> 1985 Highway Capacity Manual, Special Report 209, page 11-4.

For Langley, levels of service were calculated both at key intersections and along key arterial segments.