The Transportation Element of the Comprehensive Plan looks at existing transportation infrastructure, the effectiveness of that infrastructure, and new transportation improvements based on growth predictions.

Washington State Growth GMA requires transportation systems and land use plans to be coordinated. For example, most commercial uses generate more traffic than residential uses, and some land development patterns essentially mandate the use of a motor vehicle. What this means is when a new development is created, whether it is industrial, commercial, or residential, the developer is required to account for the extra traffic the project will generate.

This results in most new roads, sidewalks, and trails being constructed by private developers in order to make room for new employees or residents resulting from their project. The concept of having adequate transportation facilities in place at the same time as a new development is called concurrency. Concurrency ensures new developments do not result in traffic jams and overcrowding of roadways, without a financial plan to resolve the issue in the short term. However, not all transportation system expansions and improvements are provided or funded by new development. Some are developed by the City or in partnership with development projects.

There are six different types of roadway systems in Blaine. There are interstates, arterials, major, minor and local collector streets, as well as local access streets. Volume and rate of traffic decreases as one moves down in the classification from interstate to local access street.

Blaine consists of about 36 miles of public streets. About 44-percent of Blaine's street system consists of local access streets. Major collector streets comprise about 33-percent of Blaine's road system.

Other transportation systems include rail, transit, sidewalks and trails. The Peace Portal Community Trail provides residents accessibility to downtown, and multimodal trails exist along portions of Semiahmoo Parkway, Drayton Harbor Road, and Peace Portal Drive.

Blaine is served by two WTA bus routes, which run Monday through Saturday. Drayton Harbor includes two marinas. BNSF Railways owns a rail corridor that runs north/south through central Blaine which is shared with Amtrak passenger trains.

The GMA also requires cities to adopt levels of service (LOS) for their arterial streets. LOS is a system which ranks roadways on an "A" to "F" scale, based on the volume and speed of traffic during the busiest time of day. A LOS "A" ranked roadway would be a street with free flowing traffic and almost no delays. A LOS "F" roadway would be a street with extreme congestion and significant delays.

The City of Blaine has adopted a LOS "D" for locally owned streets. WSDOT has adopted the same rating for state owned facilities within the city. LOS "D" allows moderate levels of congestion and delay during the hour of peak demand, commonly referred to as the PM peak hour.

The City analyzed traffic growth for developments over the next twenty years using a regional travel demand model maintained by the WCOG. The projected annual growth of households in Blaine is 2.7 percent and 2.3 percent for employment. The majority of residential growth would occur in East Blaine and West Blaine (Semiahmoo), and employment within East Blane and Central Blaine.

The Transportation Element identifies 13 roadway and intersection improvements which would be desirable to be developed by 2036 to accommodate predicated traffic demands based on the above growth predictions. These improvements have an estimated cost of $29.7 million, and would be financed with taxes, state and federal grants, Local Improvement District funding if approved, and traffic impact fees collected from new developments. Not all of these projects are necessary to accommodate growth, but they are desirable to increase capacity as demand increases.

The City is also looking at expanding the transit service area by working with WTA to link Semiahmoo and East Blaine with the downtown core. Several trail and bike facility projects are planned for development by 2036. Eight trail projects and seven bicycle facility projects have been identified in the plan.

ACRONYMS USED IN THIS CHAPTER

AASHTO	American Association of State Highway and Transportation Officials
BNSF	Burlington Northern Santa Fe Railroad
FHWA	Federal Highway Administration
GMA	Growth Management Act
HCM2010	Highway Capacity Model (2010)
HOV	High Occupancy Vehicle
IJR	Interchange Justification Report
IMTC	International Mobility and Trade Corridor Program
LID	Local Improvement District
LOS	Level of Service
LAG	Local Agency Guidelines Manual
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
RCW	Revised Code of Washington
ROW	Right of Way
SEPA	State Environmental Policy Act
SRA	Semiahmoo Resort Association
TBD	Transportation Benefit District
TIA	Traffic Impact Assessment
TIF	Transportation Impact Fee
TDM	Transportation Demand Management
UGA	Urban Growth Area
VACIS	Vehicle and Cargo Inspection System
WCOG	Whatcom Council of Governments
WSDOT	Washington State Department of Transportation
WTA	Whatcom Transportation Authority

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CHAPTER 5 – TRANSPORTATION

A TRANSPORTATION SYSTEM FOR 2036

The City's transportation element is intended to preserve and enhance the City's transportation system so that mobility and accessibility is enhanced as the City grows in population and employment and as the City expands into the unincorporated UGA. A focus of the transportation element is to create a system that increases transportation options for users. The City seeks to encourage walking and cycling to promote a healthier lifestyle for residents by developing streets focused on people walking, cycling and driving rather than solely on vehicles.

Transportation includes many modes of travel. Walking, using a wheelchair, cycling, driving vehicles and trucks, and riding in trains, boats and busses are all ways people and goods move through and within the City. This plan is intended to support the development of a multimodal transportation system.

Multimodal
Multimodal refers to the varied ways that people and goods move or are moved. Pedestrians, cyclists, drivers, bus riders, ferry riders and train riders are all users of a multi-modal transportation system. In a multimodal system, facilities exist for all users and provide adequate transportation choices to accommodate the needs of all users efficiently.

The City's transportation system includes roads, sidewalks and trails maintained by the City and State. The two ports of entry managed by the federal government of Canada and the United States impact both the City and State roadways. The Port of Bellingham operates Blaine Harbor which serves both recreational boaters and marine industries. The Semiahmoo Marina is owned and operated by an association of boat slip owners. Burlington Northern Santa Fe Railroad (BNSF) owns a rail corridor used by freight and passenger trains. Ferry service between Blaine Harbor and Semiahmoo Spit is operated by Drayton Harbor Maritime. Other partners in the City's transportation system include Whatcom Transportation Authority and the Whatcom Council of Governments (WCOG). A substantial network of private streets serves the Semiahmoo community.

The City experiences a high volume of traffic for a small community. Interstate-5, SR-543 and the two ports of entry combine to generate an intensity of traffic well beyond what is typical for a 5,000 person community. Many trips pass through the City as people and goods move into and out of the United States. Easy access to services and goods in the community draw Canadians into Blaine from the Vancouver metro area. For context Table 5-1 shows that over 10 million border crossings occurred in 2014.

TABLE 5-1
Cross-Border Vehicle and Freight Trips – Annual 2005-2014

Year	Autos		Freight
	Peace Arch	Pacific Hwy	Pacific Hwy
2005	2,786,504	2,126,693	718,589
2006	2,868,238	2,234,440	719,485
2007	3,109,550	2,071,500	715,640
2008	2,928,445	2,411,123	687,575
2009	2,853,534	2,574,527	629,782
2010	3,736,738	2,900,300	666,532
2011	5,025,358	3,415,393	735,393
2012	5,557,528	3,805,537	715,256
2013	5,943,778	3,916,427	732,722
2014	5,836,536	3,743,707	765,387

Data Source: WCOG: http://theimtc.com/data/

LAND USE AND TRANSPORTATION CONNECTION

The Growth Management Act requires that transportation systems and land use plans are coordinated. The City has adopted land use designations for the incorporated and unincorporated portions of the UGA. These are included in the Land Use Element. The City has also adopted population and employment projections, which are consistent with the Whatcom County Comprehensive Plan (2016). The projections are included in the Population Element. The analysis included herein reflects the adopted land use plan.

The City evaluated two development patterns for future conditions. Both are based on the same population, employment and land use assumptions. They differ in how they allocate population and employment growth to different areas. The first scenario uses the land use allocations already in the 2036 Baseline WCOG model. The second scenario uses a reallocation of households and employment within the study area based on City staff analysis of current land use trends.

Land use decisions are fundamental to traffic volumes. For example, most commercial uses generate more traffic than residential uses, and some land development patterns essentially mandate the use of a motor vehicle. It is a function of our lifestyles that people move to and from places and that most of that movement occurs in motor vehicles, the largest portion of which is single-occupancy vehicles. Thus transportation system adequacy is oriented towards road network vehicle capacity and vehicle trip demand.

COORDINATION WITH STATE AND REGIONAL PLANS

The City's transportation plan is required to be coordinated with state and regional plans. The City participates in the International Mobility and Trade Corridor Program (IMTC), the Whatcom Council of Governments (WCOG), and coordinates with Washington State Department of Transportation (WSDOT) on planning for state highways and interstates.

Across the state, WSDOT is currently engaged in a Corridor Sketch Initiative — evaluating multiple facets of state transportation facilities and their connections to regional systems. The City is coordinating with IMTC, WCOG, WSDOT and Federal Highway Administration (FHWA) on redeveloping the interchange at Exit 274. The Regional Transportation Improvement Plan currently has no projects located in Blaine for either SR-543 or SR-548.

DEVELOPING TRANSPORTATION FACILITIES

New roads, sidewalks, and trails are generally built by land developers in conjunction with projects for new homes and commercial uses. The City also develops new roads, but more often the City enhances and maintains existing facilities. Occasionally a state or federal agency will develop a transportation facility within the City.

Concurrency
Concurrency means that adequate transportation facilities are in place at the time of development approval or that a financial commitment is in place to complete adequate transportation facilities within six years.

The State has adopted a concurrency requirement that mandates that land uses cannot be approved unless the transportation facilities needed to support them are developed concurrently. This works to avoid unmitigated traffic jams caused by the traffic resulting from development. The City has adopted a concurrency policy and will adopt development regulations consistent with the policy.

Mitigation
Mitigation is the requirement to offset adverse impacts to the transportation system that result from project development or changes in land use. Mitigation is generally a requirement of review under the State Environmental Policy Act (SEPA) and may take the form of facility construction or payment of a transportation impact fee, or both.

In a concept similar to concurrency, SEPA (the State Environmental Policy Act) requires that if a development causes a failure of part of the transportation system the development must offset that impact. This is known as mitigation. Mitigation is sometimes triggered when an unexpected land use or unusually large development occurs.

STREET CLASSIFICATION

Street classification is a system of categorizing streets in a hierarchy dependent upon trip volume, system connectivity, and ownership. The City uses the

functional classification categories defined below, which are based on the Federal Functional Classification System.

TABLE 5-2
Functional Classification Categories

Interstates: Major transportation facilities owned and operated by Washington State Department of Transportation (WSDOT). Interstates are the highest classification of Arterials and were designed and constructed with mobility and long-distance travel in mind, and provide for international and intra-regional travel.
Principal Arterials: Principal Arterials are roads that have a primary function of carrying traffic to and from major traffic generators in the community and that provide major connections to the regional arterial system. SR 543 is the only Principal Arterial in the City and is owned and operated by WSDOT.
Major Collectors: Roads that provide for city-wide and regional access typically carrying large volumes of through traffic, with limited direct access to abutting properties.
Minor Collectors: Roads that connect neighborhoods and commercial areas to higher level streets. They provide access to major adjacent land uses and generally carry moderate volumes of traffic.
Local Collectors: Roads that collect and distribute traffic between neighborhoods, business areas, and the rest of the arterial system. They provide for easy and direct access to abutting properties and carry low to moderate volumes of traffic.
Local Access: These facilities provide direct access to abutting property and carry traffic to the arterial system. Local roads typically carry low volumes of traffic at low speeds.

EXISTING TRANSPORTATION SYSTEM

Facilities

City Streets

The City contains a little more than 36 miles of public streets excluding the interstate corridor. Mileage of the various classifications of streets is indicated in Table 5-3. A full inventory is included as an appendix to this Plan.

Table 5-3
Street Classification and Mileage

Street Classification	Miles
Local Access	16.02
Minor Arterial	0.73
Major Collector	12.02
Minor Collector	1.63
Local Collector	6.26

There are approximately 10.5 miles of private streets in Semiahmoo where neighborhoods are gated and most all residences are located on a private street. These streets are generally maintained by the Semiahmoo Resort Association (SRA) although maintenance of some facilities is shared among SRA and the individual homeowners associations. In addition to the Semiahmoo private street network there a several private streets located in other areas of the City.

State Highways

There are two state highways within the City limits included in the street classification, above. Those are SR-543 (Pacific Highway) and SR-548 (Peace Portal Drive/Blaine Road). SR-543 extends from Interstate-5 (Exit 275) to the Canadian border (1.03 miles). SR-548 enters Blaine from the south where it crosses Dakota Creek on Blaine Road, and continues north/northwest through the City on Peace Portal Drive, terminating at Interstate-5 (Exit 276) (2.27 miles).

Interstate

US Interstate-5 bisects Blaine with a north/south corridor. The interstate roughly parallels the east side of Drayton Harbor and passes just east of downtown Blaine (2.69 miles). Blaine is served by three interstate interchanges. However, only Exit 276 is a full-service, four-way interchange. Exit 275 has a southbound entry and northbound exit. It is designed as a "Y" connection between SR-543 and the interstate. Exit 275 serves primarily freight traffic entering and exiting the United States at the Pacific Highway Port of Entry. Exit 274 also has only a southbound entry and northbound exit. The limited access provided by two of the three interchanges in the City has an adverse impact on local acces and economic development.

Truck Corridors

Within the local and state street network there are 9.8 miles of truck routes. Truck routes include I-5, SR-543, SR-548, Ludwick Ave, Peace Portal Drive, Odell Road Bell Road, Marine Drive and portions of Boblett Street, D Street, and Hughes Ave.

Table 5-4
Truck Route Classification and Mileage

Route Classification	Miles
T-1	2.13
T-3	5.68
T-5	0.70

Truck route classification is based on a calculation of annual tonnage carried by a roadway. This calculation utilizes traffic counters which separate traffic into categories based on axle number and spacing of each vehicle. Passenger vehicles, including those with trailers, are separated from the traffic study and based on standard axle configurations, typical vehicle tonnages are multiplied by the truck counts in each category or classification to arrive at an annual tonnage for a road segment.

The Truck Route classification is based on the ranges of annual tonnage shown below. The T-5 classification is a seasonal classification for routes that only have a peak period in the year and lower freight activity for the bulk of the calendar year.

Table 5-5
Truck Route Classification Description

Truck Classification	**Annual Tonnage** (in 1,000s)
T-1	Over 10,000
T-2	4,000 – 10,000
T-3	300 – 4,000
T-4	100-300
T-5	Over 20 in 60 days

Truck route classification is often used as an element in funding criteria as part of gauging overall significance of identified projects. There are also federal funding sources that specifically target improvements to freight routes. Annual tonnage carried on a freight route is also a component of the design criteria incorporated into an improvement project to address the appropriate thickness and strength of the subgrade required to support heavy loads.

Trails and Sidewalks

The City has trails in the Monfort Park neighborhood that provide connectivity within the neighborhood. Trails are available in Lincoln Park that connect the neighborhoods to the north to the shopping area to the south. The Peace Portal Community Trail provides neighborhood connections to downtown. In West Blaine, the Semiahmoo Parkway, Semiahmoo Drive and Drayton Harbor Road Trails connect neighborhoods and provide pedestrian access to parks and

commercial facilities. Other trails are either park amenities or are noted below as multimodal facilities accommodating bicycles.

Sidewalks exist on many streets, but are missing from many others. In earlier decades prior to the 1980's it was not uncommon to develop new streets without sidewalks, or as dirt and gravel roads evolved into paved roads sidewalks were generally not part of the improvement plan. As a result many City streets lack adequate sidewalks.

Bicycle Facilities

Multimodal trails exist along portions of Semiahmoo Parkway, Drayton Harbor Road, Peace Portal Drive and Marine Drive. Bike lanes exist on portions of H Street and Peace Portal Drive. In other areas bicycles and drivers share the road. A network of future bicycle and pedestrian walkways connecting parks and other public facilities are included in the Non-Motorized Transportation Plan (2009).

Transit

The City of Blaine is within the Whatcom Transportation Authority (WTA) service area. Transit service includes two routes serving Blaine, Route 70X and Route 55.

TABLE 5-6
WTA Bus Routes

Route 70X	Route 55
Monday through Friday	Monday through Saturday
Connects Blaine, Ferndale, Bellingham	Connects Blaine and Birch Bay
52,600 boardings in 2014 (6,500 within Blaine)	25,3000 boardings in 2014 (10,000 within Blaine)

Source: WTA

Marine

There are two boat harbors within the City of Blaine. Semiahmoo Marina is privately owned and operated. Blaine Harbor on Marine Drive is owned and operated by the Port of Bellingham. A seasonal passenger ferry service runs between Blaine Harbor and Semiahmoo Spit. The Ferry is operated by a non-profit organization partially funded by the City.

Rail

BNSF Railway owns a rail corridor that runs north/south through central Blaine. Significant amounts of freight move along the corridor. In addition to freight, the rail line is used by Amtrak passenger trains. Southbound rail traffic in Blaine is frequently delayed for inspection by the federally-owned VACIS facility. The VACIS requires that trains move very slowly to facilitate inspection of US-bound freight. This results in unusually long closures of at-grade rail crossings. This is a particular issue at Hughes Avenue and at Blaine Road.

INTERSTATE-5 EXIT 274 IMPROVEMENT

An Interchange Justification Report (IJR) was developed by Blaine and approved by FHWA in 2009 to expand Exit 274 into a full bi-directional interchange to serve destinations in southern Blaine, Semiahmoo and the surrounding area. These improvements will provide the needed road network connectivity for freight, as a direct connection will be constructed to the Odell Road/Sweet Road intersection. In addition to providing direct access to the Blaine industrial corridor, Sweet Road is the east/west regional connection to the alternate border crossings on SR 539 and SR 546 (Lynden and Sumas). This interchange project is currently unfunded. Without the added connectivity, it is unlikely that commercial development in this area will grow significantly beyond what is there today.

Project benefits:

- Provide alternative freight access to border during high volume delays,
- Improve direct access to the Blaine Industrial Area,
- Improve access to the Customs and Border Protection's Freight Secondary Inspection Facility on Boblett Street,
- Link the regional connection to Lynden and Sumas via Sweet Rd/Badger Rd (SR 546), and
- Provide full access to I-5 in south Blaine increasing opportunities for commerce and increasing connectivity to the community from both directions of interstate traffic.

EXISTING TRANSPORTION SYSTEM CONDITIONS

Traffic volumes in urban areas are typically highest during the weekday PM peak hour and the number of trips at that hour is the standard metric used for evaluating transportation system needs. This is reflective of the combination of commuter work trips, shopping trips, and other daily activities that result in travel during this time period. For the purposes of evaluating the needs of Blaine's system, the weekday PM peak hour conditions were used.

Blaine is also impacted by infrequent but notable peak volumes and delays related to cross-border traffic flows. American and Canadian holidays can both create significant delays on roads leading to the border. These traffic patterns particularly impact the Interstate-5/D Street interchange and the SR-543 corridor including both the Boblett Street and H Street intersections. Freight volumes and border delays can create notable impacts on the SR-543 corridor on weekdays. Delays at the border crossings are completely outside the City's control. The associated delays are accepted aspects of the City's location on the international boundary and are not considered deficiencies of the City's transportation network.

Traffic Volumes

Before evaluating transportation system needs for the next 20 years, it is useful to consider historical volume trends in the past 20 years. Table 5-7, following, highlights volumes on state highways where WSDOT has been recording average annual daily volumes nearly every year. As shown in Table 5-7, traffic volumes in the City of Blaine can be heavily influenced by changes in international border crossing restrictions, causing wide fluctuations in volumes over the past 20 years.

Table 5-7
Historic Daily Traffic Volumes on State Highways

Count Location	Count Reference	Daily Traffic Volumes			
		1994	2004	2014	Growth[1]
Peace Portal Dr (SR 548)	s/o Marine Dr	10,000	4,500	5,600	-2.9%
Interstate 5	s/o H St	9,800	5,800	10,000	0.1%
SR 543	n/o H St	10,000	11,000	13,000	1.3%
Blaine Rd (SR 548)	n/o Drayton Harbor Rd	5,700	7,100	7,100	1.1%

1 Annual Growth Rate (1994 to 2014)
Source: WSDOT Annual Traffic Reports

Traffic counts during the PM peak hour were collected at several locations throughout the City in July 2015. Table 5-8, following, shows the existing two-way PM peak hour roadway volumes. Estimates of daily volumes are also shown for reference. As shown in Table 5-8, the highest volumes are typically on state routes, with SR 543 showing volumes near 800 vehicles during the PM peak hour and SR 548 (Peace Portal Dr or Blaine Rd) showing volumes between 500 to 750 vehicles per hour.

Peak Hour Volumes
Impacts to the transportation are generally measured at the time of greatest traffic flow volumes. The greatest volume of vehicle trips occurs during one hour in the afternoon "rush hour." While this varies from place to place, the peak hour volume generally begins shortly before 5:00pm and ends shortly before 6:00pm.

Traffic Operations

Traffic operation analyses provide a quantitative method for evaluating how the transportation system is functioning. It is applied to existing and forecast conditions to assist in identifying issues and potential roadway improvements.

Intersection traffic operations evaluate the performance of signalized, stop-controlled, and roundabout intersections according to the industry standards set forth in the *Highway Capacity Manual* (Transportation Research

Board, 2010). Study intersections were identified by City staff and analyzed for the weekday PM peak hour using Synchro version 8.0 software for signalized intersections and SIDRA version 6 software for roundabouts[1]. Table 5-9, following, shows the LOS results for study intersections.

Table 5-8
Existing (2015) Two-Way Roadway Volumes: PM Peak Hour and Daily

Count Location	Count Reference	2015 PM Peak Hour	2015 Daily[1]
Marine Dr	w/o SB I-5 Ramps	140	1,400
Peace Portal Dr (SR 548)	s/o Marine Dr	525	5,600
D St	e/o NB I-5 Ramps	425	5,300
SR 543	n/o H St	830	13,000
H St	e/o Peace Portal Dr	210	2,100
H St	e/o Mitchell Ave	400	4,000
H St	e/o SR 543	600	6,000
H St	e/o Odell St	200	2,000
Peace Portal Dr	s/o H St	415	4,200
Mitchell Ave	s/o H St	220	2,200
SR 543	s/o H St	800	12,000
Odell St	s/o H St	90	1,100
Peace Portal Dr	n/o Hughes Ave	570	4,900
Hughes Ave	e/o Peace Portal Dr	70	900
Peace Portal Dr	s/o Hughes Ave	540	6,400
Blaine Rd (SR 548)[2]	n/o Drayton Harbor Rd	745	7,100
Drayton Harbor Rd[2]	e/o Semiahmoo Pkwy	435	4,400

Daily volumes were based on the 2014 WSDOT Annual Traffic Report if available, or estimated from the PM peak hour volumes. Counts at these locations were conducted in 2014.

[1] SIDRA settings were consistent with recommendations put forth in the Washington State Department of Transportation *WSDOT Sidra Policy Settings* brochure, November 2015.

Table 5-9
2015 PM Peak Hour Intersection Levels of Service

Intersection	Control Type[1]	LOS[2]	Delay[3]	
D Street/I-5 NB Ramps/2nd Street	Roundabout	A	2.4	
Peace Portal Drive/I-5 SB Ramps/Marine Drive	Roundabout	A	4.7	
SR 543/H Street	Signal	C	34.8	

1. "Signal" = typical traffic signal; "Roundabout" = one lane roundabout
2. Level of Service (A to F) as defined by the *Highway Capacity Manual* (TRB, 2010)
3. Average delay in seconds per vehicle.

As Table 5-9 shows, all study intersections operate at LOS C or better, with less than 35 seconds of delay at each intersection. All three intersections are along state routes and are under WSDOT jurisdiction. Both I-5 and SR 543 are classified as Highways of Statewide Significance and are urban highways, which have a standard of LOS D established by the City of Blaine.

Existing Level of Service Standards

Under the Growth Management Act (GMA), local governments are required to adopt level of service (LOS) standards for locally owned arterial streets to identify future system needs. The GMA does not mandate any LOS system or methodology, allowing local agencies to tailor the LOS standards or methods to their goals and policies.

LOS
Level of Service (LOS) is a measure of the use of a facility (demand) compared to the capacity of the facility. The City measures LOS of roadways for motor vehicles. It is generally evaluated in the peak hour. LOS is ranked A-F, with "A" being best and "F" being worst.

Level of service is typically evaluated based on methodologies documented in the *Highway Capacity Manual* (Transportation Research Board, 2010). The *Highway Capacity Manual*, or HCM2010, is a nationally recognized method of measuring traffic operations. Criteria range from LOS A, indicating free-flow conditions with minimal vehicular delays, to LOS F, indicating extreme congestion and significant delays.

The City of Blaine's LOS standard is set at LOS D for weekday PM peak hour conditions. WSDOT has also set the LOS at D for all state-owned facilities within the City. The original methodology as outlined in the 1994 City of Blaine Transportation Element was based on the volume-to-capacity ratio thresholds to define the LOS for both intersections and roadway segments. Since that time, the *Highway Capacity Manual* has been updated to include more detailed ways to determine LOS. The City currently allows the HCM2010 methods to determine LOS for signalized and unsignalized intersections. Along

rural city roadways with minimal traffic controls, the City uses the HCM2010 "two-lane highway" methods.

Traffic Impact Assessments

Traffic Impact Assessments (TIAs) are studies conducted to understand the traffic impacts of new developments. Under the City's development review process, TIAs are required based on the direction of City Staff. There are no official TIA guidelines to direct how studies would be conducted. The City's Concurrency Ordinance provides guidance on what thresholds would trigger a need for a TIA.

Even if TIAs show that the LOS on City roads are acceptable, the City may still require street improvements based on street design standards. The City uses TIAs to understand the level of daily traffic volumes anticipated on city roadways. The City uses the latest version of the WSDOT *Local Agency Guidelines Manual* (or LAG Manual) as a basis for street design standards based on the daily traffic volumes. If the new development increases volumes above the thresholds in the LAG Manual, then roadway improvements would be required.

FORECAST TRANSPORTATION SYSTEM CONDITIONS

Land Use Forecasts

Travel forecasts are largely derived from the predicted changes in households and employment in the study area. In addition, the travel forecasts must incorporate growth in the volume of traffic entering and exiting the greater Blaine areas. The Citywide land use targets for 2036 were based on the county-wide land use assumptions for 2036.

The regional travel demand model maintained by the Whatcom Council of Governments (WCOG) was used to support the City's transportation planning efforts. The travel demand model provides a tool for forecasting traffic volumes based on the projected growth in housing and employment. The model is also useful in evaluating land use and transportation improvement alternatives.

Future land use allocations are based on projected changes to population and employment types and densities within City limits, the Urban Growth Area (UGA), and adjacent areas consistent with local comprehensive plans. The City of Blaine was divided into three districts to help summarize the data; the districts are generally defined as follows:

- **District 1: East Blaine/City Core** – this area represents the core area of housing and employment in the City as well as the eastern-most more rural areas, and is defined by the City boundary east of Drayton Harbor.
- **District 2: West Blaine/Semiahmoo** – this area encompasses Semiahmoo Spit and the surrounding City land, including the Semiahmoo

Golf & Country Club, and is defined by the City boundary west of Drayton Harbor.

- **District 3: Urban Growth Area** – this area is the eastern unincorporated UGA, consisting of lower-density land that is primarily undeveloped.

Two land use alternatives were analyzed for future conditions. The first scenario (2036 Baseline Scenario) was consistent with the land use allocations already in the 2036 Baseline WCOG model. The second scenario (2036 Alternative Scenario) included a reallocation of households and employment within the study area. In other words, citywide control totals remained the same for both scenarios.

2036 Baseline Scenario Growth

Table 5-10 shows the growth expected for the 2036 Baseline Scenario. The projected annual growth in households is 2.7 percent. The majority of the growth in households is expected to occur in District 2, with an increase of about 950 households. District 1 is also expected to grow by about 720 households. District 3 is expected to see some household growth as well, with an increase of about 230 households.

The projected annual growth in employment is 2.3 percent as shown in Table 5-10. The majority of the growth in employment is expected to occur in District 1, with an increase of about 1,760 employees. District 3 is expected to add about 340 employees, mostly in the eastern areas of the UGA. No employment growth is expected in District 2.

Table 5-10
Existing & Forecast Land Use: Baseline Scenario

	Households				Employment		
District[1]	2013	2036	Annual Growth Rate		2013	2036	Annual Growth Rate
1	1,636	2,358	1.6%		2,658	4,417	2.2%
2	399	1,344	5.4%		374	374	0.0%
3	187	420	3.6%		42	380	10.0%
TOTAL	2,222	4,120	2.7%		3,074	5,171	2.3%

1. District 1 is the eastern portion of the City (east of Drayton Harbor), District 2 is in the Semiahmoo area, and District 3 is the City's Urban Growth Area (UGA).

2036 Alternative Scenario Growth

The 2036 Alternative Scenario generally reflects a better estimate of where land use growth will likely occur, based on City staff experience. By design, the citywide growth for the 2036 Alternative Scenario is identical to the 2036 Baseline Scenario. Table 5-11 shows the revised land use totals by individual

districts. As shown in Table 5-11, annual growth rates for each district (households or employment) did not change dramatically. In general, more households and employment was shifted to UGA areas (District 3) under the 2036 Alternative Scenario.

Table 5-11
Existing & Forecast Land Use: Alternative Scenario

	Households				Employment		
District[1]	2013	2036	Annual Growth Rate		2013	2036	Annual Growth Rate
1	1,636	2,441	1.8%		2,658	4,331	2.1%
2	399	1,241	5.1%		374	374	0.0%
3	187	440	3.8%		42	466	11.0%
TOTAL	2,222	4,122	2.7%		3,074	5,171	2.3%

1. District 1 is the eastern portion of the City (east of Drayton Harbor), District 2 is in the Semiahmoo area, and District 3 is the City's Urban Growth Area (UGA).

Traffic Volumes

The 2036 Baseline WCOG model network was developed based on committed capacity improvement projects identified in prior plans and project lists prepared by WSDOT, Whatcom County, and the City of Blaine. Committed improvements are defined as improvements anticipated to be funded or are expected to be funded by 2036. The only committed capacity improvements identified and included in the study area was a new interchange at I-5 just south of SR 543 near Bell Road.[2] This interchange would provide access to and from I-5 in both directions and would therefore close the existing southbound interchange off Peace Portal Drive. This scenario provides a baseline for identifying future traffic operations deficiencies, which were then used to establish a framework for the Transportation Systems Plan.

Consistent with existing conditions, the weekday PM peak hour was used to evaluate future 2036 transportation system needs. A comparison of 2015 and 2036 PM peak hour two-way traffic volumes is shown in Table 5-12.

Table 5-12 shows various amounts of traffic growth throughout the City. The new interchange near Bell Road causes significant shifts in volumes for either scenario. For the 2036 Alternative Scenario, more land development is assumed in the vicinity of this new interchange, further shifting traffic within the city. In general, the 2036 Alternative appears to better distribute trips within the city as most of the roadway locations see lower traffic volumes despite citywide land use being constant between the two scenarios.

[2] At the time of conducting the analysis this improvement was included in the State funding program. Prior to adoption of this plan it was removed by the Legislature. The City continues to pursue the project.

Table 5-12
Existing (2015) and Future (2036) Two-Way Roadway Volumes

Count Location	Count Reference	Weekday PM Peak Hour – Two-Way				
		2015 Existing	2036 Baseline	Baseline Annual Growth	2036 Alternative	Alternative Annual Growth
Marine Dr	w/o SB I-5 Ramps	140	145	0.2%	140	0.0%
Peace Portal Dr (SR 548)	s/o Marine Dr	525	445	-0.7%	465	-0.5%
D St	e/o NB I-5 Ramps	425	555	1.2%	540	1.0%
SR 543	n/o H St	830	1,315	2.0%	1,240	1.8%
H St	e/o Peace Portal Dr	210	255	0.8%	275	1.2%
H St	e/o Mitchell Ave	400	430	0.3%	440	0.4%
H St	e/o SR 543	600	765	1.1%	760	1.0%
H St	e/o Odell St	200	345	2.4%	385	2.9%
Peace Portal Dr	s/o H St	415	250	-2.2%	250	-2.2%
Mitchell Ave	s/o H St	220	255	0.6%	240	0.4%
SR 543	s/o H St	800	970	0.8%	950	0.7%
Odell Rd	s/o H St	90	285	5.1%	310	5.5%
Peace Portal Dr	n/o Hughes Ave	570	610	0.3%	565	0.0%
Hughes Ave	e/o Peace Portal Dr	70	410	8.0%	60	-0.7%
Peace Portal Dr	s/o Hughes Ave	540	290	-2.7%	145	-5.6%
Blaine Rd (SR 548)[1]	n/o Drayton Harbor Rd	745	1,170	2.0%	1,160	1.9%
Drayton Harbor Rd [1]	e/o Semiahmoo Pkwy	435	335	-1.1%	540	0.9%

1. Existing counts at these locations were conducted in 2014.

Traffic Operations

As described in the Existing Conditions, intersection traffic operations evaluate the performance of signalized and stop-controlled intersections according to the industry standards set forth in the *Highway Capacity Manual 2010* (Transportation Research Board, 2010). Peak hour traffic operations were evaluated at existing controlled intersections based on LOS methodology, and evaluated using Synchro version 8.0 for signalized intersections and SIDRA version 6 for roundabouts. Table 5-13 shows a comparison of 2015, 2036 Baseline Scenario, and 2036 Alternative Scenario intersection operations. As shown in Table 5-13, all study intersections are expected to operate at LOS C or better under both 2036 scenarios.

Table 5-13
2015 and 2036 PM Peak Hour Intersection Levels of Service

Intersection	Control Type[1]	2015 Existing		2036 Baseline		2036 Alternative	
		LOS[2]	Delay[3]	LOS	Delay	LOS	Delay
D Street/I-5 NB Ramps/2nd Street	Roundabout	A	2.4	A	2.0	A	2.0
Peace Portal Drive/I-5 SB Ramps/Marine Drive	Roundabout	A	4.7	A	5.3	A	5.2
SR 543/H Street	Signal	C	34.8	C	33.3	C	33.3

1. "Signal" = typical traffic signal; "Roundabout" = one lane roundabout
2. Level of service, based on 2010 Highway Capacity Manual methodology.
3. Average delay in seconds per vehicle.

Roadway Capacity

In addition to the intersection operations, another metric to evaluate the transportation network needs is to consider the volume-to-capacity ratio of a roadway segment. The future 2036 volumes were compared to the WCOG travel demand model roadway capacities to identify if any segment was near or at the model capacity. Based on the review of these volume-to-capacity ratios, most roadway segments were well below capacities. The areas where volumes were greater than 60 percent of capacity (LOS D) were all on state routes, including the I-5 interchanges, along SR 548 south of Peace Portal Drive, and along SR 543. As new developments occur within the City, intersection operations within these areas should be closely monitored. In addition, good access management practices would increase the effective roadway capacities along existing City arterials.

Roadway Safety

While roadway capacity is a great way to evaluate needed improvements, another important element is roadway safety. Traffic volumes in Blaine are anticipated to grow to reflect more urban conditions. Along with these conditions

comes increased conflict between motorists, pedestrians and bikes. In addition, there is a high volume of truck traffic in Blaine that adds a complexity to these challenges. Roadway safety improvements will upgrade substandard roads to modern urban standards, including facilities for non-motorized uses.

FUTURE NEEDS

This Transportation Element identifies 13 roadway and intersection improvements which would be required by the year 2036 to meet the traffic demands generated by the forecast population (Table 5-14). These improvements have an estimated cost of $29.7 million. The proposed improvements will be financed with taxes, state and federal grants, Local Improvement District funding, and impact fees collected from new development. The City is in the process of developing a proposed Transportation Benefit District (TBD) for consideration by the voters. If approved, the TBD is another potential funding source.

Financing Transportation Improvements

With very few exceptions, all of the projects on the City of Blaine 6-year TIP and 20-Year TIP are safety and design related and not related to capacity (Level of Service) needs. Furthermore, RCW 36.70A.070(6)(a)(iii)(B) states:

> "Level of service standards 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"

This identifies LOS standards that are applied to arterials only. The City of Blaine street system is made up of collectors and local roads. While these serve as connections to state owned routes that are classified as arterials, they are not arterials themselves.

The capacity-related projects include six intersection improvements that have been identified as logical upgrades in the street network where the need for a signal or other intersection improvements may be warranted in the future; these intersections are identified as:

- Peace Portal Drive(SR 548) and Bell Road
- Mitchell Avenue and H Street
- Mitchell Avenue and Peace Portal Drive(SR 548)
- H Street and Peace Portal Drive (SR 548)
- H Street and Harrison Avenue
- Hughes and Peace Portal Drive (SR 548)

These intersections are at locations were city arterials and collectors meet. As city traffic growth along these roadways continue to increase, the City anticipates traffic signals or other intersection improvements would be needed

to facilitate more orderly traffic flows throughout the city as well as support safe non-motorized connectivity. The timing of these improvements would depend on meeting traffic signal warrants.

It is anticipated that only one or another of these projects would be triggered if a development caused a localized impact/need. It is unlikely that all of these signalization projects will be needed in the 20-Year timeframe. It is anticipated that approximately $0.5 to $3.0 million dollars of the identified projects may be triggered by overall growth in the city. The larger cost improvements identified below would be triggered by large Planned Unit Developments, primarily in east Blaine, and costs of those improvements would be funded in part through developer mitigation.

The City has successfully applied for and received an average of $800,000 per year in grant funds for transportation projects over the past seven years. Grants are the primary source of transportation revenue although there are other sources as well. It is also recognized that this is a competitive source of revenue and may not always be sustained at this level. Using this average as a model:

- Years 1-6 $4.8 million
- Years 7-13 $5.5 million
- Years 13-20 $5.6 million

This represents a potential total of $15.9 million dollars in grant revenue over 20 years. These funds are not guaranteed and cannot be fully relied upon. Neither can they be expected to satisfy all needs. Therefore, the City has identified other funding mechanisms including transportation impact fees (TIF), developer mitigation, street bonds, a transportation benefit district (TBD), a street levy, and general fund revenue (property tax). In the past the City has successfully used revenue bonds, and street levy's to fund street improvements in excess of $10,000,000.

Table 5-14
2036 Growth-Based Programmed Projects

	Project Description[1, 2]	**Planning Cycle Costs** Costs in $1,000s			**Potential Funding Sources**			
		1-6 Yrs	**7-12 Yrs**	**13-20 Yrs**	**Fed**	**State**	**Local**	**TIF**
A	D Street Improvements *SR 543 overpass to 16th*	$1,135				X	X	X
B	D Street/16th Ave Intersection	$165				X	X	X
C	H Street Reconstruction – Phase 2 *Terrace Ave to Harvey Rd*	$3,200			X	X	X	X

D	Peace Portal/Bell Rd Signal	$720			X	X	X	X
E	East Blaine Parkway Realignment *16th to Jerome*		$1,120			X	X	X
F	Mitchell Ave/ H Street Signal			$540	X	X	X	X
G	H Street / Peace Portal Drive Signal			$540	X	X	X	X
H	Mitchell Ave/ Peace Portal Signal			$540	X	X	X	X
I	Hughes Rd/ Peace Portal Signal			$700	X	X	X	X
J	H Street / Harrison Ave Signal			$700	X	X	X	X
K	Allan Street Improvements			$1,300			X	
L	North Harvey Rd Reconstruction H St to End			$2,000			X	
M	H street Reconstruction (Phased) *Harvey Rd to Valley View Rd*			$15,000	X	X	X	X
Total Cost (Combined $29.7M)		$5,220	$1,120	$23,320				

1 Projects A, B, C, E, K, L and M are non-capacity projects that are planned system expansion.
2 Projects D, F, G, H, I, J are capacity/LOS-driven projects.

Non-Roadway Future Needs

The following sections describe facility and service improvements that are not growth or capacity-driven. These are important components in the City's future transportation system. The City's plans and policies are designed to improve these facilities as the City grows in population during the planning period.

Transit

The City envisions a need for a future loop service within Blaine to link Semiahmoo and East Blaine growth areas with the downtown core. This could be an expansion of the Route 55 service or a separate service. Population needs to increase in real numbers and in density before this is expected to be feasible.

In 2016, WTA was beginning a Strategic Planning process. They will evaluate unmet needs for service in Blaine along with unmet needs throughout the county. Included in that evaluation will be "environmental scan" data regarding how Blaine and Birch Bay are growing.

Trails and Sidewalks

The City has identified a variety of improvements to pedestrian facilities that are desired to enhance non-vehicular mobility. These include facilities that need

upgrading along existing streets, new facilities along streets where none exist today, new facilities in unopened ROW that will be pedestrian only or multi-modal facilities not paralleling a street, and in other instances trails that are pedestrian links outside of the ROW, but still serving as important transportation linkages.

These are some of the more notable projects planned in the 20-year focus of this plan:

1. 7th Street Greenway Trail
2. Peace Portal Community Trail
3. Semiahmoo Spit Loop Trail
4. Blaine Athletic Trail
5. Cain Creek Trail
6. Mott's Hill Parkway Path
7. Coast Millennium Trail
8. Dakota Creek Trail

Bicycle Facilities

Similar to pedestrian facilities, the City has identified a variety of improvements to bicycle facilities that are desired to enhance non-motorized mobility. These include facilities that need upgrading along existing streets, new facilities along streets where none exist today, and new facilities in unopened ROW that will be multi-modal facilities not paralleling a street. These facilities are in some cases duplicates of the trail facilities noted above because they are multi-modal, and in other instances they are standalone bicycle facilities:

1. Peace Portal On-Street Bike Lane
2. 2nd Street On-Street Bike Lane (include cross-border connectivity)
3. Mott's Hill Parkway Path
4. D Street
5. H Street
6. Semiahmoo Parkway On-Street Bike Lane
7. Drayton Harbor Road On-Street Bike Lane

Ferry Service

At times, Drayton Harbor is seen as a barrier between the east and west sides of Blaine. However, the harbor is truly one of the unifying components of the City. Views of the harbor and access to the harbor are important aspects of many neighborhoods. Enhancing the connection across the harbor is valuable to the City. Although no specific plans exist at this time to increase ferry service, this chapter includes the goal of increased ferry service between Blaine Harbor and Semiahmoo Spit. This may include multiple approaches. It could include adding one or more boats to the existing summer service. It could include replacing the Plover with a larger boat. It could include increasing the length of the summer seasonal service.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation demand management is an effort to reduce vehicle trips. TDM encourages alternate modes of transportation to reduce the numbers of single-occupancy vehicles. The City has very low traffic volumes overall, and trip demand is less of an issue than in dense urban settings. However, the city encourages reduction of trips and shift of trips to non-vehicular modes. Polices are included herein address TDM.

TRANSPORTATION GOALS, POLICIES AND ACTIONS

To provide adequate mobility for all people, goods, and services in an efficient and economical manner, transportation facilities will be maintained and improved to meet all safety and design guidelines to the maximum extent feasible to better serve the public while supporting economic growth and development in coordination with the Comprehensive Plan Land Use Element.

Coordination Policies

These policies promote effective coordination between government entities, private enterprise, and the community. The City will facilitate effective use of the transportation system through coordination of the transportation facilities and services for all types of motorized and non-motorized transportation. These policies address a wide range of issues which affect the City such as:

- Multi-agency planning and coordination
- Planning for pedestrians and non-motorized vehicles
- Consistency of transportation programs among jurisdictions
- Coordination of construction projects
- Transit service within the City
- Changes to cross border traffic management

GOAL 1: Public Participation

To encourage and welcome public participation in the transportation planning process.

POLICIES:

1.1 Public participation in transportation planning is encouraged through open workshops and public hearings. Citizen engagement is encouraged during the design phase of project development.

1.2 Prior to bringing the transportation improvement program (six-year plan) to the City Council for a public hearing, transportation priorities shall be vetted before the Public Works Advisory Committee.

1.3 A public hearings shall be held on the transportation improvement program (six-year plan) which is prepared by the City and updated on an annual basis. Public hearings are required by law (*RCW 36.81.121*).

1.4 Prior to the initiation of major construction projects, adjacent property owners and area residents should be informed of the project and their input should be evaluated during the planning process. The intent is to provide the immediate neighbors with an opportunity to incorporate their input into the project.

GOAL 2: Intergovernmental Coordination

To coordinate efforts in planning, construction, and operation of transportation facilities with other agencies' programs as appropriate. This coordination will allow City efforts to support and complement the transportation functions of the State, Whatcom Council of Governments, Whatcom County, neighboring cities, Whatcom Transportation Authority (WTA), and other entities responsible for transportation facilities and services in City.

POLICIES:

2.1 The City should participate in planning and project funding activities with the Whatcom Council of Governments.

2.2 The city should work with other jurisdictions to plan, fund, and implement multi-jurisdictional projects necessary to meet shared transportation needs (including right-of-way preservation and acquisition).

2.3 The City will endeavor to make transportation planning decisions consistent with the plans and decisions of WSDOT, WCOG, and neighboring jurisdictions.

GOAL 3: Transit Coordination

To cooperate with Whatcom Transportation Authority (WTA) to provide facilities that will enhance and encourage transit use.

POLICIES:

3.1 The City will support the WTA in developing transit service between the urban centers.

3.2 The City will encourage demand-responsive service for City citizens with less transportation capability, such as children, elderly and people with disabilities

3.3 The City will encourage and work to facilitate transportation capability for access to essential services (i.e. medical, legal, social assistance).

GOAL 4: Utility Coordination

The City recognizes the effectiveness of coordinating utility services in transportation corridors and will strive to coordinate construction of utilities with existing and future transportation projects.

POLICIES:

4.1 The City will coordinate new utility construction with the City's six-year improvement plan.

4.2 The City will coordinate improvement programs being developed by utility agencies with the City transportation system.

4.3 The City will provide standards for repair and maintenance of utilities within the transportation corridor (i.e. the City road right-of-way).

GOAL 5: Special Interest Coordination

The City recognizes special interests that require use of the transportation system, and will work to support that use where it coordinates with the overall public good.

POLICIES:

5.1 The City will coordinate with the school districts to assist in providing safe and efficient school transportation. As appropriate, the City will work with the schools to enhance school bus routes, student walking routes, and crossings. Traffic signing will be provided in accordance with the MUTCD.

5.2 The City will provide for special events such as fairs, parades, athletic events, and large meetings by making appropriate provisions for safe traffic operations with the minimum effect on the general public. The cost of such provisions will be assessed to the organizers of such events as appropriate.

GOAL 6: Education/Public Information

The citizens and other users of the City transportation system will be provided information to enhance the users' safety and convenience. The City will appoint a public information representative from the Public Works Department to provide coordinated information to the general public and news media.

POLICIES:

6.1 The City will inform the public of traffic safety measures for both the road system and vehicles

6.2 The City will work to directly inform area residents about road projects planned for construction in their locality, through means such as direct mail, posting on/near the site, door hangers, website and other proactive approaches.

6.3 The City will work to inform specific neighborhoods about maintenance projects that will affect traffic flow.

6.4 The City will work to coordinate public information sharing with the Police Department as appropriate.

Design and Capacity Policies

The City's goal is to provide a safe, cost effective, comfortable, and reliable transportation system. The design and capacity policies are based on AASHTO, WSDOT, and other proven standards that define criteria for:

- Design,
- Maintenance,
- Safety standards,
- Roadway adequacy,
- Transportation system needs, and
- Demand management strategies.

GOAL 7: Road Adequacy

Road adequacy determines how transportation facilities support and balance the modes of travel they are intended to serve. City will strive to provide a safe road network which reflects the preference and needs of the community.

POLICIES:

General

7.1 The City recognizes the diverse users of the transportation system and will work to accommodate all users and fund projects in all categories, not focusing on projects that solely benefit vehicular trips over other modes.

7.2 The city will provide safe and functional residential streets while working to retain the elements of the right-of-way which enhance and support the unique character of the neighborhood.

Motor *Vehicles*

7.3 The City will construct and maintain the street network in accordance with safety standards established by the City's Development Guidelines and Public Works Standards, and from AASHTO, WSDOT, and the MUTCD where additional guidance is needed.

7.4 Upgrading existing street deficiencies will be accomplished on a priority evaluation that considers accident occurrence, traffic volumes, and compliance to design standards.

7.5 The City supports electric vehicle infrastructure, and will maintain land use regulations consistent with RCW 35.63.126.

Freight

7.6 The City strives to maintain safe, efficient, all-weather truck routes as these are important assets to the community.

7.7 Recognizing that the port-of-entry is both an asset and a liability for the City, the City will work to encourage responsible management of cargo traffic and temper the impacts of that traffic through the community.

7.8 The City will support freight movement and industrial needs in the appropriate land use zones and will strive to develop and maintain a roadway network that facilitates industrial and freight handling; thereby enhancing job growth.

Rail

7.9 The City should explore options for removing at-grade crossings in the City.

7.10 The City should explore future downtown location of a multimodal rail station.

7.11 The City should promote improved railroad operation and safety.

7.12 Relocating the VACIS[3] facility further south is a transportation priority for the City.

Public Transit

7.13 The City encourages transit service within the community and between Blaine and other urban centers.

7.14 The downtown core should be the focus of future expansion of services. The City seeks to increase frequency of trips and increase lines as feasible and as supported by ridership and development patterns.

7.15 Bus pull outs, stops and shelters, will be considered in arterial roadway improvement projects and large private development projects in consultation with Whatcom Transportation Authority. They should only be built or required when service is considered highly likely in the foreseeable future and when existing or proposed land use densities support transit.

Pedestrians

7.16 The City will enhance pedestrian connectivity where none currently exists through various sidewalk and shared use path projects.

7.17 The City will work to remove barriers that restrict mobility of individuals with disabilities, and will design and construct future facilities which meet the current Americans with Disabilities Act standards.

7.18 Where pedestrian facilities do not exist on the street system, sidewalks or shared use paths will be constructed as these streets are improved or reconstructed.

7.19 Improvements for non-motorized travel will be incorporated into programmed road improvement projects. The most appropriate design for these facilities will be determined on a case by case basis. In the Central Business District, the City will give significant weight to pedestrian and bicycle facility improvements when planning and developing transportation projects.

7.20 The City will explore opportunities to provide low-cost improvements within the existing public right-of-way that improves conditions for non-motorized travel modes as specific projects that are not part of full rebuilding of the road cross section.

Bicycles

[3] VACIS is a federal government facility that scans southbound incoming rail freight.

7.21 Facilities will be provided to every extent feasible, terrain permitting, on City streets designated as bikeways in the Non-Motorized Transportation Plan when these streets are improved or reconstructed.

7.22 The extent of the bicycle facilities will be dependent on the classification of the facilities as defined in the Non-Motorized Transportation Plan.

7.23 The City will work to create connectivity in the bicycle facility network to promote cycling as an alternative to motor vehicle travel. This includes properly signed and marked shared roadways, bike lanes, and shared use pathways.

GOAL 8: Functional Design

The City will work to ensure functional design that provides adequate and safe access to property via a system of public and private streets and roads.

POLICY

8.1 A range of design and construction standards are adopted in City of Blaine - Development Guidelines and Public Works Standards and the current edition of WSDOT *Standard Plans and Design Manual, and WSDOT's effort to* implement National Association of City Transportation Officials (NACTO) Urban Street Design Guidelines. These standards include roadway alignment and location, roadway sections, and right-of-way requirements. All roadway and street design will be coordinated with the City, Whatcom County, Washington State Department of Transportation, and the Federal Highway Administration to achieve compatible design standards when appropriate. These standards will be:

- linked to the level and type of land development served by the transportation facilities;
- consistent with the functional classification and type of use;
- compatible between jurisdictions; and
- in compliance with Federal and State design criteria.

GOAL 9: System Integration

To maintain an interconnected network of roads with appropriate pedestrian and bicycle facilities to serve the citizens' travel needs.

POLICIES:

9.1 The present road system is the foundation which meets the majority of the City's current transportation needs.

9.2 New arterials and collectors designed to serve either new development or to reduce congestion and conflicts will be established after thorough review of economic, environmental, and public interests.

9.3 Support implementation of National Association of City Transportation Officials (NACTO) Urban Street Design Guidelines where appropriate.

GOAL 10: Safety

The goal of the City is to provide a safe street system maximizing the use of existing facilities and giving special consideration to safety in prioritizing the improvement program.

POLICIES

10.1 Incorporate safety features into all facets of the transportation system; AASHTO, WSDOT Design Manual, LAG Manual, and ADA Guidelines will provide guidance in the application of these safety features.

10.2 Monitor high-accident locations and evaluate these areas to provide solutions for corrective action.

10.3 Pursue grants for safety improvements from State and Federal sources.

10.4 Monitor sign condition for compliance with the *Manual on Uniform Traffic Control Devices (MUTCD).*

GOAL 11: Aesthetic Design

The design and maintenance of the roadway system will include attention to aesthetic qualities.

POLICIES

11.1 Special consideration will be given to maintaining the natural and manmade amenities of the community.

11.2 Preserve the scenic character of road corridors with designs that follow as much of the old alignment as possible. Realignments and major changes to the original corridor will be topics specifically addressed with area residents in the planning phase of the project.

11.3 New roadway corridors should be designed to follow the contours of the land to have a lesser overall impact on the land. This can involve minimizing cut/fill and retaining unique natural features and affording scenic views.

11.4 Encourage the retention of trees and native vegetation in the non-paved right-of-way to develop a parkway setting as appropriate for the road corridor and surrounding uses.

11.5 Maintain standards for erosion control which encourage retention and restoration of native vegetation and naturally occurring landscaping for roadway projects.

GOAL 12: Transportation System Management

The City will promote efficient operation of the transportation system through TSM strategies which will maximize the efficient use of existing systems without major changes to the overall road configuration.

POLICIES

12.1 Access should be controlled for minor arterials and major collectors to minimize disruptions in traffic flow.

12.2 Geometric improvements should be considered to enhance traffic flow and capacity.

12.3 Traffic signalization and roundabouts should be considered to control traffic flow as these systems become warranted per the requirements in the MUTCD.

GOAL 13: Maintenance

The City will maintain the street network to provide safe, reliable, and effective movement of people and goods. The transportation system is a significant asset that facilitates much of the City's commerce and livability. Maintenance of the asset is a high priority.

POLICIES

13.1 Emergency repairs required for public safety will receive the highest priority.

13.2 Provide safe and reliable roadway surfaces through pavement patching, sealing and surface treatments.

13.3 Maintain visibility of traffic control and safety devices; for example, vegetation, physical sight obstructions, and favorable street geometry.

13.4 Maintain drainage facilities and minimize stormwater impacts to roadways.

13.5 Maintain roadside vegetation to meet safety requirements. If possible, this will be done in a manner compatible with the natural character of the land.

13.6 Provide traffic control for maintenance work in accordance with Part 6 of the *Manual on Uniform Traffic Control Devices (MUTCD).*

GOAL 14: Access

The City will provide (or limit) access to the road network in a manner consistent with the function and purpose of each roadway. The City will strive to consolidate access points on arterials and major collectors in order to reduce interference with traffic flow and discourage through traffic on local access streets and alleys.

POLICIES

14.1 The City supports the State's controlled access policy on State highway facilities within the City and UGA.

14.2 The City encourages and may assist landowners' cooperative efforts in preparing access plans that emphasize efficient internal circulation and discourage multiple access points to major roadways.

14.3 Special design features may be used to discourage excessive through traffic on local access roads such as geometrics (roadway layout), signing, traffic circles, and pavement treatment.

14.4 The City works to encourage access to private developments through a system of collectors and local access streets, thus limiting direct access onto the arterial City network.

14.5 The City encourages consolidation of access in developing commercial and higher density residential areas through frontage roads, shared use driveways, and local access streets which intersect with arterials at moderate to long spacing.

GOAL 15: Private Roads

The City may permit construction of private roads in appropriate circumstances, as approved by the Public Works Director.

POLICIES

15.1 The City requires private roadways to meet the minimum design standards outlined in the Development Guidelines and as required by the Fire Marshal per the current Fire Code.

15.2 Private roads which are proposed for dedication into the City's road system must meet the minimum public road standards found in the Development Guidelines.

15.3 The City shall require that the proponent demonstrate the capacity to own, maintain and operate a private road in perpetuity through a homeowners' association or other organization.

GOAL 16: Emergency Response Needs

The City will coordinate and integrate emergency response needs into the transportation program. Police, fire protection, and medical response services are critical uses of the roadway system.

POLICIES

16.1 The City will coordinate maintenance and construction work with emergency response agencies.

16.2 The City will review elements of the roadway system that support emergency response services to help determine where improvements can serve to enhance emergency response capabilities.

GOAL 17: Transportation Demand Management (TDM)

The City will implement a TDM system to reduce vehicle trips, as mandated by Washington State law. TDM encourages alternate modes of transportation to reduce the numbers of single-occupancy vehicles.

POLICIES

17.1 Encourage the use of high-occupancy vehicles (HOV)—bus, carpool, car share, and vanpool programs—through both public and private programs.

17.2 Encourage and support non-motorized travel through construction of facilities, and furnishing information about the City's non-motorized facilities.

17.3 As feasible allow flexible work schedules within the City government organization to encourage use of transit, carpools, or vanpools.

17.4 Encourage employers to provide TDM measures in the work place through such programs as preferential parking for HOVs, improved access for transit

vehicles, and employee incentives for using HOVs. This will coordinate with the Washington State law considering trip reduction programs for major employers.

Goal 18: Land Use

The City transportation system is a critical component of land use planning. The relationship between the transportation system and land use is based on mobility and access needs. Land use creates the transportation demand that the road network serves to provide circulation between various land uses. Compatibility between transportation services and land uses is critical to the success of the City's Comprehensive Plan.

POLICIES

18.1 The City will strive to complete road designs that emphasize safe road networks that are applicable to the nature of land use and zoning.

18.2 The transportation system shall support the City's needs resulting from population and employment growth

18.3 Critical right-of-way corridors shall be designated and identified in the Comprehensive Plan

18.4 To meet future travel needs, critical transportation corridors shall be preserved by obtaining sufficient right-of-way through land use entitlement review required by dedication or through purchase in advance of land use permitting requests and controlling access to the road network.

Goal 19: Environmental

The design of transportation facilities within the City should minimize adverse environmental impacts resulting from both their construction and operation.

POLICIES

19.1 Environmentally sensitive areas should be protected and, if unavoidable impacts occur, appropriate mitigation shall be implemented pursuant to the City's Critical Areas Ordinance and Shoreline Master Program. Special attention will be given to wetlands, aquifer recharge areas, fish and wildlife habitat, floodplains, and geological hazard areas.

19.2 The construction and maintenance of the roadway system should strive to be compatible with the natural characteristics of the area. Erosion control,

water quality, and revegetation methods will be applied in a means appropriate to the location and environment.

19.3 Water quality should meet the currently adopted DOE Stormwater Management Manual Western Washington.

GOAL 20: Economic Development

The transportation system shall be compatible with the economic development element of the City's Comprehensive Plan, and should be designed and developed to support the goals therein.

POLICIES

20.1 Priority will be given to safe and convenient service to existing business and industry which minimizes impacts to residential areas.

20.2 City street improvements and development of new roadways will be aligned with economic and private development growth to ensure safe and efficient access and use of the transportation system.

20.3 The City will pursue grants and other funding sources and work to develop projects that create and improve transportation service to undeveloped and underdeveloped industrial and commercial lands so as to enhance job growth.

20.4 The City shall establish and maintain a process to assess the traffic impacts of new development and manage the appropriate mitigation of those impacts

Prioritization and Financing Goals and Policies

The City will continue to develop a transportation system that distributes costs and benefits equitably to the citizens. The maximum return from expenditures of City funds will be accomplished through efficient use of the limited resources (such as land, funding, and staffing). The City has the responsibility and challenge to make the best use of the limited funds available to finance transportation projects. It is the intent of the City to secure funding and allocate these funds in a consistent and equitable method.

GOAL 21: Establishing Project Priority

A standardized, well documented, and objective process shall be used to establish priorities for transportation expenditures.

POLICY

21.1 The prioritization process shall include as a minimum the following factors:

- Traffic Volumes
- Traffic Accident Rate
- Roadway Geometry
  - Roadway Width
  - Horizontal Curvature
  - Grade
  - Sight Distance
- Fund Leveraging Ability
- Surface Condition (Pavement Management System)
- Drainage Adequacy
- Support for Planned Land Use

Note: These considerations are not listed in order of importance.

GOAL 22: Financing

It is the City's goal to maximize funding opportunities through the use of a wide variety of funding sources and capitalize on outside funding sources whenever available. However, internal funding by taxpayers, fees for new development, special programs, bonds and benefit districts are all considered aspects of the City's financing program.

POLICIES

22.1 Maximize the available funding from Federal, State, and other programs.

22.2 Require traffic impact mitigation from new development in accordance with the City's concurrency management policy.

22.3 Develop a Transportation Benefit District (TBD) within the City to leverage sales tax funding from transportation system users who are passing through or visiting the City.

22.4 Maximize use of special gas tax available to border jurisdictions for capital improvements and maintenance operations.

22.5 Utilize local street bond measures for the transportation improvements when appropriate.

22.6 Utilize Local Improvement Districts (LIDs) funded by property owners to upgrade localized area streets to meet City standards where appropriate.

22.7 Maintain a capital improvement program that balances expenditures for the transportation system with available funding resources.

GOAL 23: Concurrency Management

The City will comply with the *Washington State Growth Management Act*, through a concurrency program (*RCW 36.70A.070.6e*). Mitigation measures are required to be implemented concurrently with a proposed development to offset the impacts which the proposed development may have on public facilities. If impacts cannot be properly mitigated, the new development may be denied. Concurrent is defined per the RCW allowance for a 6-year construction timeline.

POLICIES

23.1 New development should be required to ensure that traffic impacts do not reduce the level of service (LOS) or safety below the City's adopted standards.

23.2 The City has established Traffic Impact Fees that are intended to mitigate for overall cumulative impacts to the transportation system. Such fees are intended to fund a portion of the costs for projects identified in the 6-Year TIP. Where a required mitigation results in physical improvements to a project listed on the 6-Year TIP, credit will be given for applicable traffic impact fees.

23.3 Level of service (LOS) for the road system is based upon definitions in the current edition of the Highway Capacity Manual.

23.4 The City has adopted LOS D for peak hour flow (congestion) on all City streets as defined elsewhere in this chapter.

23.5 The City shall adopt a concurrency ordinance to ensure compliance with RCW 36.70A.070.6e.

TRANSPORTATION ELEMENT MAP SET

Map TR-1 Functional Classification Central Blaine 2103
Map TR-2 Functional Classification West Blaine 2013
Map TR-3 Functional Classification Citywide 2036
Map TR-4 Selected Pedestrian Facilities and Bikeways 2013-2036
Map TR-5 WTA Public Transportation
Map TR-6 Average Daily Trips Central Blaine 2013
Map TR-7 Average Daily Trips West Blaine 2013
Map TR-8 Projected Average Daily Trips Central Blaine 2036
Map TR-9 Projected Average Daily Trips West Blaine 2036
Map TR-10 Level of Service Citywide 2013
Map TR-11 Level of Service Citywide 2036
Map TR-12 20-Year Capital Improvement Projects
Map TR-13 Interstate-5 Exit 274, Option 3 of Interchange Justification Report