Chapter 8: Transportation Element

CHAPTER 8: TRANSPORTATION ELEMENT

A VISION FOR TRANSPORTATION

The city will develop an effective multimodal transportation system that emphasizes access, direct circulation and safety for vehicles, freight, public transportation, cyclists and pedestrians locally and to the region.

INTRODUCTION

The city of Lake Stevens and its UGA connect to the greater region by several regional highways. The local transportation system consists of a dispersed network of roads. This type of road network is reflective of the suburban development pattern within the city and its surrounding area. SR-9 is the major north-south highway that transects the Lake Stevens UGA. It connects to major east-west routes, including US-2, SR-92, SR-204, and 20th St SE/Hewitt Ave. US-2 is a major route that connects Lake Stevens with the I-5 corridor and Everett. SR-92 defines the northern boundary of the city and provides an east-west route that extends from SR-9 eastward to Granite Falls. SR-204 serves as a connector between US-2 and SR-9. Machias Road is a major north-south collector extending north to S-92 and south to US-2, and defines the city's eastern boundary and the eastern boundary of the RUTA south of the city. With the exception of these major routes and a limited number of arterial type streets, the street pattern within the Lake Stevens UGA is largely discontinuous. This street pattern tends to concentrate traffic flows onto collector and arterial roads.

PLANNING CONTEXT

State Planning

The Transportation Element's objective is to guide development of the city's transportation system in a manner that supports the city's vision and goals. The city has developed this chapter in accordance with RCW 36.70A.070(6)(a) to address motorized and non-motorized transportation needs of the city of Lake Stevens. It represents the community's policy plan for the next twenty years. GMA encourages jurisdictions to develop efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans. The GMA also directs jurisdictions to incorporate the following items into their local comprehensive plans:

- Level of Service Standards that are consistent with state and regional transportation plans that reflect community goals for multimodal transportation facilities;
- 10-year forecast that reflects capacity needs based on land use assumptions;

- Needs projection consistent with state and local system needs to meet current and future demands;
- Pedestrian and Bicycle component that addresses pedestrian and bicycle facilities and corridors and promotes healthy lifestyles;
- Transportation Demand Management (TDM) strategies including ridesharing, vanpooling, bicycling, walking and use of public transportation, efficient parking and land use policies;
- Future funding analysis for new facilities and maintenance based on projected revenues;
- Multi-year financing plan based on the needs identified in the comprehensive plan;
- Shortfall strategy to fund adopted levels of service; and
- Intergovernmental coordination based on countywide planning policies.

Regional Planning

Vision 2040 provides a structure for consideration of transportation issues for freight, roads, transit, bicycles and walking across the Puget Sound to support the regional growth strategy. A key concept revolves around linking regional and local growth centers into the decision-making process. Vision 2040 also recognizes the environmental and climate challenges created by the state's transportation infrastructure and supports energy-efficient, sustainable and safe transportation options. Finally, it emphasizes a range of funding options to address transportation needs and promote prioritization criteria for funding.

Countywide Planning

> **The County and cities will work proactively with transportation planning agencies and service providers to plan, finance, and implement an efficient multi-modal transportation system that supports state-level planning, the Regional Growth Strategy, and local comprehensive plans.**

The countywide planning policies emphasize a coordinated, efficient transportation system that minimizes impact to the climate and employs adaptive management strategies to meet growth patterns throughout the county. The countywide planning goals also echo the state and regional perspective of establishing multimodal transportation linkages between growth centers and residential areas. Snohomish County suggests the countywide planning policies "are intended to guide transportation planning by the County and cities in Snohomish County and to provide the basis for regional coordination with the Washington State Department of Transportation (WSDOT), the Puget Sound Regional Council (PSRC), and transportation operating agencies." (Source: Countywide Planning Policies: Effective June 24, 2011)

Lake Stevens Planning

The Transportation Element considers the location and condition of the transportation system; the cause, scope and nature of transportation problems; future needs; and addresses Level of Service (LOS) Standards. The type and availability of transportation resources are major factors in development of land use patterns, while conversely, the way land is used greatly influences the need and location for new transportation facilities. The relationship between transportation and land use is one of continuous interaction and must be coordinated. The city's transportation plan integrates the assumptions from the Land Use Element and incorporates the state, regional and countywide principles for an effective transportation system.

Transportation Element information was initially derived from the Lake Stevens' Transportation Plan (July 19, 2005) and Snohomish County's Transportation Element (February 1, 2006) to update the street inventory, roadway classification map and the transportation improvement plan. In 2009, the "Southwest Annexation" was enacted and approximately 2,400 acres were annexed into the city. The annexation was roughly bound by Market Street to the north, by Lake Stevens to the east, by SR-204 to the west, and by 20th Street SE to the south. At the time of annexation, the County had identified 20th Street SE as a regionally significant transportation route and completed engineering design for the remainder of the corridor. Following the annexation, the County continued as the lead agency but the emphasis on the importance had diminished. In August 2011, the Lake Stevens City Council approved an agreement with Snohomish County where the city assumed the lead role.

INVENTORY AND ANALYSIS

The inventory presented in Appendix D provides information useful in the planning process. This Transportation Element addresses all arterial (major and minor) and collector roads located within the city of Lake Stevens and the Lake Stevens Urban Growth Area including those which are the responsibility of the Washington State Department of Transportation (State highway system), the county or the city. The city compiled existing roadway functional classifications, the most recently available traffic volume counts and accident frequency data. The analysis of this information is included in this section.

Traffic Circulation within the City

Roadways are classified by their intended function and desired service. The roadway functional classification is presented in the Roadway Classification section of this Element. The backbone of the city's transportation system is its highway and major arterial system. These streets provide mobility and access for a range of travel modes and users. Lake Stevens' major regional arterials are SR-9, SR-92, SR-204 and 20th Street SE.

Minor arterials generally provide circulation for local traffic movement. These include Lundeen Parkway, 20th Street NE, Grade Road, 91st Avenue NE/SE and Soper Hill Road (west

of SR-9). The traffic circulation system within downtown Lake Stevens is limited to north-south travel along Main Street (East Lake Shore Drive to the south and Grade Road to the north) and east-west on 20th Street NE. With the exception of Lundeen Parkway and Soper Hill Road, these roadways are two lane roads with limited pedestrian facilities and the appearance of a local residential street.

The city's truck routes are along SR-9, SR-204, SR-92 and 20th Street SE. Access to the city's industrial area in the northeast portion of the city is along collector roadways which are not considered truck routes.

Subarea Plans

In September 2012, the city adopted subarea plans for Lake Stevens Center and the 20th Street SE Corridor. As part of the environmental impact statement, the city determined transportation projects required for development of both subareas. The city also adopted a Planned Action Ordinance setting development thresholds for land use, developing available maximum trip thresholds for each subarea and identifying mitigation measures for development. The need to implement any of the identified transportation projects depends upon the pace of development within the two subareas.

As part of the subarea plans, the city modified existing Levels of Service (LOS) from an intersection LOS Standard "C" to a system LOS Standard "E" in each subarea. The system consists of key intersections and connecting roads servicing each subarea. Under this approach, the LOS analysis provides an accumulative average LOS from intersections within the transportation network, while excluding intersections on State Routes. For the 20th Street SE Corridor Subarea, this includes all intersections within the defined subarea boundaries with the exception of SR-9 intersections. For the Lake Stevens Center Subarea, this includes all intersections within the defined subarea boundaries excluding SR-9 and SR-204 intersections.

The subarea plans include discussion of a layered street network for the subareas that prioritize various types of travel on different roadways to reflect and emphasize the character of the neighborhood. The network includes state highways, boulevards, local streets, school connection streets and trail streets.

SR-9 at SR-204 System – The city identified this system as one of the city's major transportation needs in the Lake Stevens Center Subarea Plan. WSDOT completed a preliminary study and issued a design report in 2012. Lake Stevens is current seeking funding based upon those findings. This system consists of three intersections including:

1. SR-9/SR-204 – An improvement intended to promote safety and increase capacity. The currently proposed solution calls for a roundabout with improved egress from to Lake Stevens Center, a shopping complex, directly onto SR-9 and SR-204. Entering weekday PM Peak volume is 4,000 (2014).

2. SR-9/4th Street NE – An improvement intended to promote safety and support circulation for commercial areas east of SR-9. The project will add a new right turn pocket on SR-9. Entering weekday PM Peak volume is 1,800 (2014).
3. SR-204/91st Avenue NE – An improvement intended to promote safety, increase capacity and support circulation for future development in the area. A roundabout has been proposed as a solution to safety problems at this intersection. Entering weekday PM Peak volume is 2,640 (2014).

SR-9 at 24th Street SE (aka South Lake Stevens) – This project is identified in the Lake Stevens' 20th Street SE Subarea Plan. The city has proposed full intersection improvements to provide ingress/egress to a planned roadway arterial (24th Street SE). The city has coordinated with WSDOT on this intersection to ensure that a full access intersection can be developed when future development occurs to the east and west of SR-9.

SR-92 at Grade Road – Identified in the 2012 draft city of Lake Stevens Downtown Framework Plan. This is proposed to be a roundabout to improvement safety and operations.

Natural Traffic Barriers

The city has three common features that create natural barriers to the traffic circulation system: 1) critical slopes; 2) wetlands and 3) the lake, which is considered the largest natural barrier within the city. The lake is the largest single barrier within city limits.

On-Street Parking Facilities

On-street parking is typically limited with availability found primarily on local access and collector classification roadways. Along older street corridors, such as 20th Street NE, availability of parking is limited and the quality of the available parking spaces is low (typically graveled shoulder).

Generally the demand for on-street parking does not exceed the available parking areas within the city. On-street parking in residential areas is typically sufficient to handle vehicles that cannot be accommodated on private property. The primary exception is during special events and around Lake Stevens High School.

Mass Transit

Community Transit provides regional bus service with routes to Seattle, Granite Falls, Marysville and Everett. The Lake Stevens Transit Center, located at 9600 Market Place in the Lake Stevens Center subarea, provides bus =connections for active Community Transit bus routes. Consideration for a future Park and Ride in the 20th Street SE Corridor Subarea, near the intersection of SR-9 and 20th Street SE, is being discussed with Community Transit and Snohomish County. Community Transit has designated two park and rides for vanpools and carpools at Ebenezer Lutheran Church (2111 - 117th Avenue NE) and Holy Cross Lutheran Church (9613 - 20th Street SE).

Pedestrian/Bicycle Trails

Bicycle and pedestrian routes are discontinuous throughout the city having been constructed in a piecemeal manner over the years and include bicycle lanes, paved shoulders and shared-use paths. The Centennial Trail, a multi-mode (pedestrian, bicycle, horse, etc.) facility was built by Snohomish County and runs along the eastern border of the city. Picnic areas, bicycle racks and other amenities are provided. A trail head has been built in the northeast corner of the city by Snohomish County. Many of the older residential areas are not yet connected by trail to recreational areas, schools, or shopping areas. Chapter 5 presents a discussion of the trail system in Lake Stevens as part of the Parks and Recreation Plan. The Land Use Section discusses how the Centennial Trail can assist in bringing pedestrian and bicycle traffic to the downtown.

In 2000, a pedestrian/bike trail was dedicated along Hartford Road between 20th Street NE and Old Hartford Road. This was made possible by changing Hartford Road to a one-way street. This is a good example of how decisions have been made that blend land use, transportation and recreation. It represents a standard that the city intends to pursue in the future.

As a unifying road feature, bicycle facilities including dedicated lanes and shared lanes (e.g., sharerows), are proposed along several streets connecting the city's growth centers and adjacent neighborhoods.

Curbs, Sidewalks, Landscaping, and Street Lighting

City code requires new development projects to construct frontage improvements, including non-motorized facilities, landscaping and lighting improvements, in public right of way and internally as a part of the development approval. In 2014, the city performed an update to its Sidewalk Connectivity Plan (originally adopted in 2011). The Sidewalk Connectivity Plan is intended to identify gaps in pedestrian facilities for setting project priority needs and long term funding strategy. It estimated the city provides 119 miles of some type of pedestrian feature. The Sidewalk Inventory is shown on Figure 8.1.

The pedestrian features include concrete sidewalk, paved shoulder, asphalt path, and dedicated gravel shoulders. It is estimated that approximately 63 percent of the frontage has some type of walkable pedestrian feature. Funding opportunities are sought in the form of grants from state and federal agencies to augment budget dollars for construction of improvements.

State Routes

The Washington State Department of Transportation (WSDOT) coordinates with the city of Lake Stevens on projects within the UGA and city limits.

SR-9 is a highway of statewide significance (HSS) running north-south parallel to Interstate 5 from Snohomish County/King County to the Arlington area.

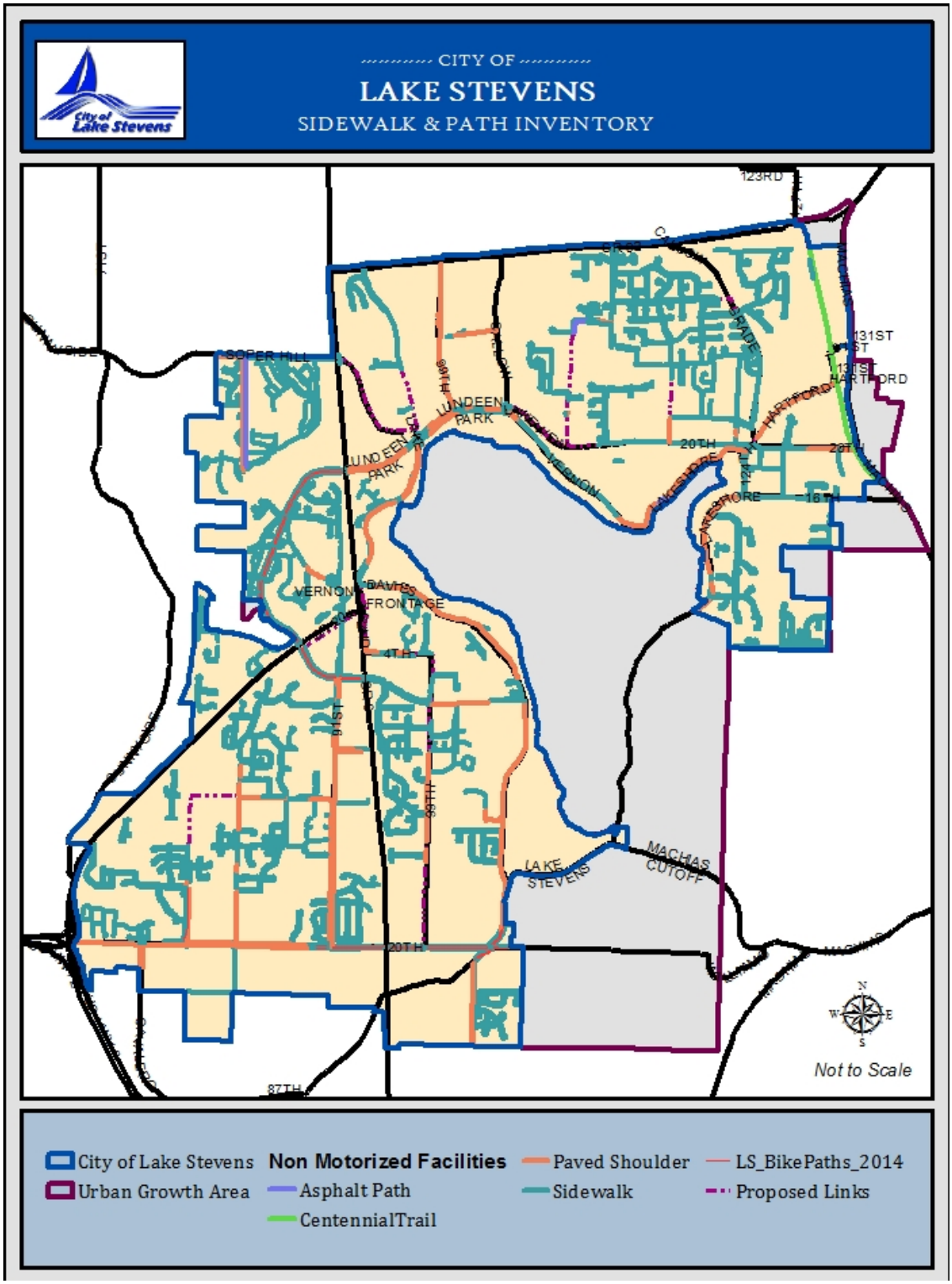

Figure 8.1 Sidewalk & Path Inventory

SR-9 within the city, begins approximately 0.1 miles south of 20th Street SE and ends on the north side of the SR-92 intersection. Approximately 3.6 miles lie within the city limits. This is a limited access roadway. The approximate weekday peak hour traffic volume is 2,900 (north of SR-204).

SR-204 is a regional connector route between US-2 and SR-9. Within the city, SR-204 begins at 71st Avenue SE and ends at SR-9. Approximately 1.8 miles are within the city limits. This is a limited access roadway. The approximate weekday peak hour traffic volume is 1,970 (between Market Street and SR-9).

SR-92 is a regional connector between SR-9 and the city of Granite Falls. Within the city, SR-92 begins at the SR-9 intersection and ends approximately 250 feet east of 127th Drive NE. This is not a limited access roadway and is under the right of way jurisdiction of the city. Approximately 2.4 miles are within the city limits. The approximate weekday peak hour traffic volume is 1,540 (between SR-9 and Lake Drive NE).

ASSESSING ROADWAY CAPACITY

Roadway Functional Classification

Roads in Lake Stevens are classified according to a hierarchy of function as follows:

1. Freeway/Expressway – state designated route, typically with limited access control. Road considered to have regional significance. Speeds range from 35 to 55 mph (typical).
2. Major Arterial – city designated route, typically highways and arterials with limited access and left turn movement is controlled. Roads considered to have regional significance. Speeds range from 30 to 35 mph (typical).
3. Minor Arterial – city designated route, typically connecting to highways, arterials, and collectors. Limited access is preferred. Roads considered to have local with some minor regional significance. Speeds range from 25 to 35 mph (typical).
4. Collector – city designated route, typically connecting neighborhoods to arterial roadways. Collectors may have direct access if no other alternative exists. These roads are considered to have local significance. Speeds range from 25 to 30 mph (typical).
5. +Local Access – city designated route, typically connecting neighborhoods to collectors. There is no access control. Roads considered to provide direct access to residences. Typical speed is 25 mph.

Functional Classification Designation

The city's functional classification designations have been determined based on each route's regional significance and operational characteristics. The functional classification designations are shown on the map in Figure 8.2.

This information is used in determining access control, frontage improvements required for development, guides programming of roadway improvements, and determines maintenance service priority levels for emergency events such as snow and ice control.

For the Lake Stevens UGA, all roadways were classified by Snohomish County using the federal functional classification system. The major classifications of County roadways are principal arterial, minor arterial, collector and local access street.

LEVEL OF SERVICE (LOS) STANDARDS

The following table defines intersection LOS. The time shown is in seconds and is calculated for a specific intersection based on the average delay from all approaches over a one hour P.M. peak hour period.

The city of Lake Stevens has set a citywide standard of LOS E for major and minor arterials and collector roadways. Along the 20th Street SE corridor, LOS is determined as an average of all intersections from South Lake Stevens Roadway to Cavalero Road. On local access roadways the standard is LOS C. Figure 8.3 illustrates the pm peak hour traffic model for the city along major roads and intersections.

LEVEL OF SERVICE	SIGNALIZED INTERSECTION	UNSIGNALIZED INTERSECTION
A	≤10 sec	≤10 sec
B	10–20 sec	10–15 sec
C	20–35 sec	15–25 sec
D	35–55 sec	25–35 sec
E	55–80 sec	35–50 sec
F	≥80 sec	≥50 sec

Table 8.1 Intersection Level of Service

Roadway Design Standards

The city-adopted roadway design standards are depicted in the most current edition of the Engineering Design and Development Standards (EDDS - 2009).

Traffic Calming

Variations in roadway standards are often used for the purpose of calming or slowing traffic. Traffic calming consists of physical design and other measures installed on roadways for the purpose of reducing motor-vehicle traffic speeds as well as to improve safety for pedestrians and cyclists. Possible techniques include traffic circles, mini roundabouts, streetscaping, chicanes (roadway barriers) or road diets (reduction in lanes).

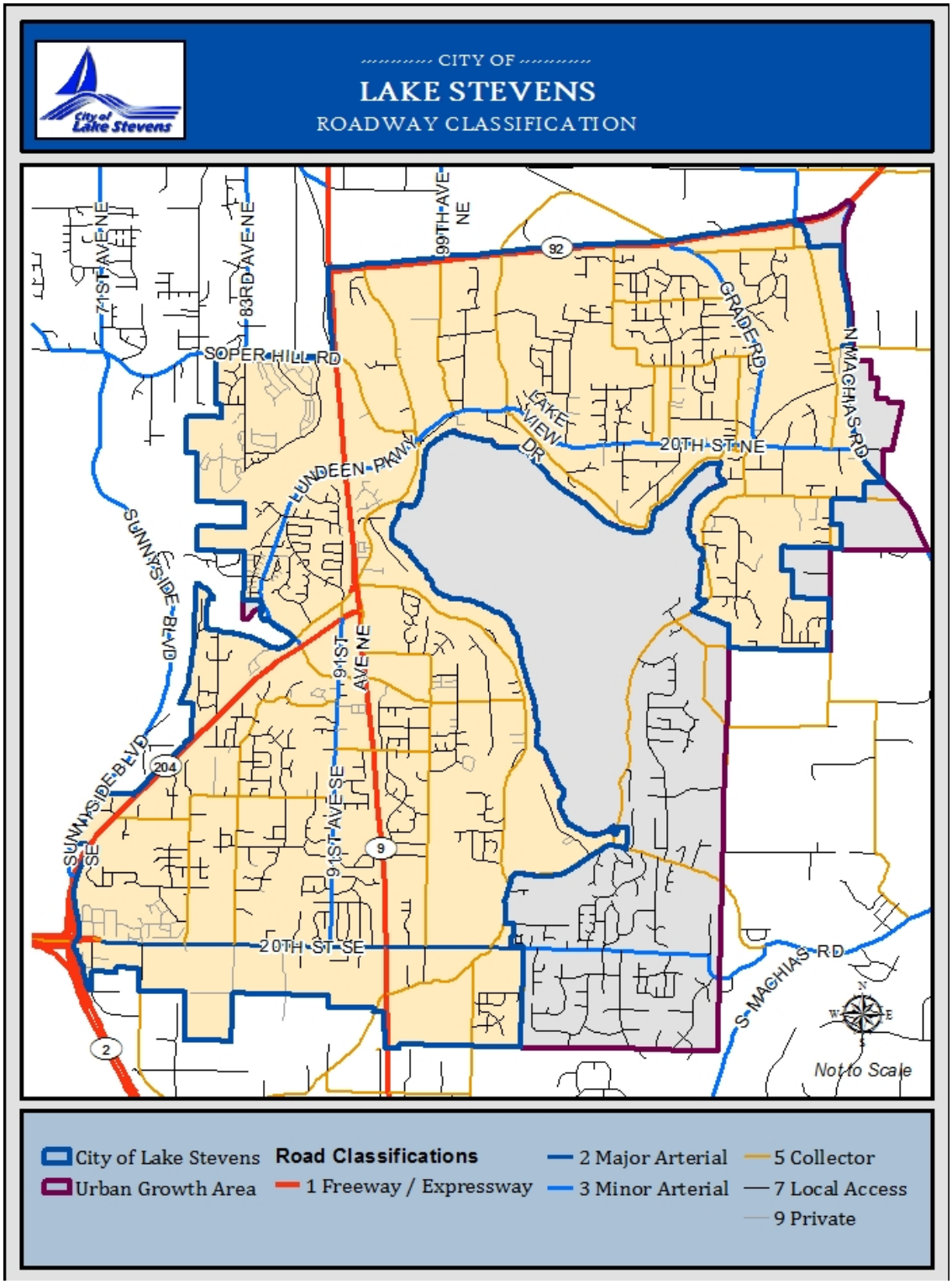

Figure 8.2 - Roadway Classifications

Truck Routes

In 2011, the city adopted, through Ordinance 863, a designated truck route system and established weight limits on all streets. The designated truck routes within the city are:

- State Route 9
- State Route 92
- State Route 204
- 20th Street SE between US 2 and the east city limits.

Truck route exceptions are provided for repair, pickup, delivery and for businesses that operate trucks from within the city. (This does not apply where a residence is also a place of business.)

State Route LOS Standards

SR-9 and US-2 are considered highways of statewide significance, while SR-92 and SR-204 are considered highways of regional significance in the transportation inventory. The city will use the LOS methodology, defined in the *Highway Capacity Manual* to determine concurrency on state routes. WSDOT sets the LOS standards for Highways of Statewide Significance based on a congestion index that is calibrated as LOS D in urban areas and LOS C in rural areas. The Puget Sound Regional Council measures the LOS standards for Regionally Significant State Highways based on a one-hour p.m. peak period. These are further divided into tiers based on proximity to urban areas. The LOS standards for state routes are shown in Table 8.2.

STATE ROUTE	HIGHWAY CATEGORY	LEVEL OF SERVICE
US-2	Highways of Statewide Significance	Urban LOS D
SR-9	Highways of Statewide Significance	Urban LOS D
SR-92	Highways of Regional Significance	Tier 2 LOS D
SR-204	Highways of Regional Significance	Tier 1 LOS E Mitigated

Table 8.2 Level of Service Standards for State Routes

Snohomish County LOS Standards

The city is surrounded by county roads and there are county roads which traverse through the city. The county's LOS standards are based upon travel times on arterial segments, which form corridors throughout unincorporated Snohomish County. The LOS for urban areas is LOS E to maintain an average speed of 10 miles per hour.

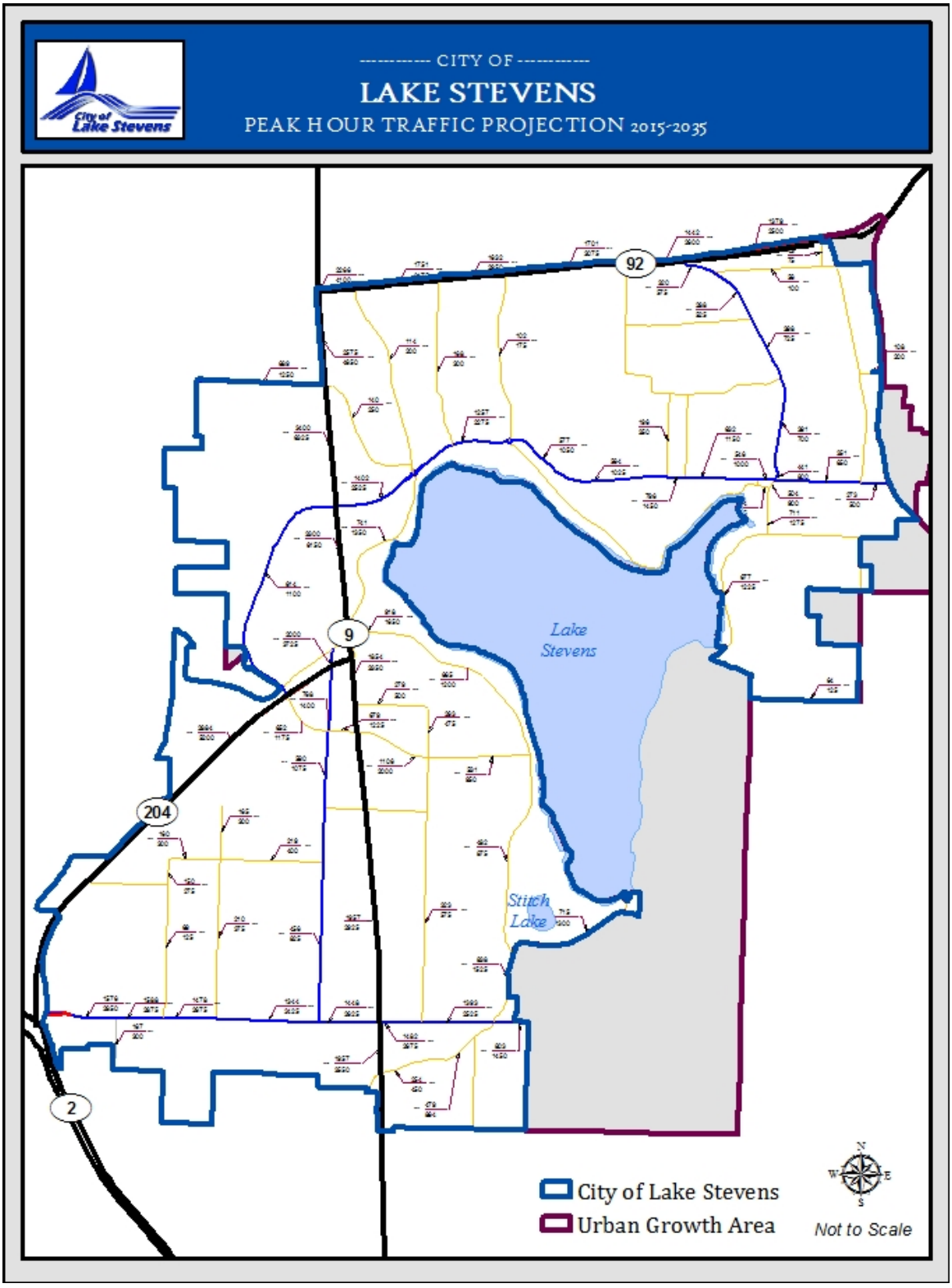

Figure 8.3 – PM Peak Hour Traffic Model

Transit LOS Standards

While the city has not adopted a LOS standard for transit, the city has coordinated land use and transportation goals and policies with Community Transit's standards to ensure that the community can be supplied with adequate transit services. Goals and policies requiring specific design, density and review for transit-friendly development have been included in the Land Use Element Goals and Policies. Community Transit has designated 20th Street SE and State Route 9 as "transit emphasis corridors" in Community Transit's Long Range Transit Plan for consistency with Countywide Planning Policy TR-12. The city is also designating 20th Street SE and State Route 9 through the city as "transit emphasis corridors" for consistency with Community Transit's plan and the Countywide Planning Policies.

Capacity of the Circulation System

Capacity of the roadway network is determined by LOS at collector and higher functional classification intersections.

FUTURE NEEDS AND ALTERNATIVES

Analysis of Needed Roadway Capacity Improvements

A citywide transportation needs analysis was performed in 2011/2012 with traffic volumes and projections updated in August 2015. This original analysis was performed as part of the city's development of its GMA base Traffic Impact Fee program, the Lake Stevens Center, 20th Street SE Corridor Subarea plan and the Downtown Framework plan.
Updates include PM Peak Hour counts conducted between the 2012 study and August 2015 as well as projections of 2012 volumes up to 2015 and 2035 levels. The city used a conservative three percent annual growth rate for future projections. The 20 year Peak Hour Traffic Projection Map is shown on Figure 8.3.

The findings were that the city's transportation system currently meets or exceeds the adopted LOS standards. However, the 20 year projected analysis indicated a need for system improvements to meet future land use growth demands. These projects have been identified and are included in the 20 year Capital Facility Plan.

Analysis of Needed Roadway Safety Improvements

The intersection of SR-9/SR-204 had been identified by WSDOT as the highest accident location in the SR-9 Route Development (Corridor) Plan. The city and WSDOT have worked together on the development of alternatives to improve this condition with system improvements that include the SR-9/SR-204, SR-204/91st Ave NE, and SR-9/4th Street intersections. In 2012, a Final Pre-design Report was released. The city is currently seeking funds for design and construction based upon the findings of this report.

No other high accident frequency areas were identified within the city. When a safety concern is identified, the area of concern is investigated and action may be taken if an engineering analysis determines that an action is warranted and resources are available.

Analysis of Multimodal Improvements

Pedesdtrian Facilities – Pedestrian connectivity between residential areas and schools, commercial centers, trail systems and public parks is a high priority for the city, specifically in the city's growth centers and subareas. In 2011 the city adopted a Sidewalk Connectivity Plan. This plan's intent was to identify the needs for pedestrian improvements to fill gaps in the existing sidewalk system to provide for a contiguous pedestrian system outside of residential neighborhoods. The final plan resulted in a comprehensive list of pedestrian projects that are included in the 20 year Capital Facility Plan. This plan was most recently updated in 2014 to include both completed and active projects while updating the proposed project list.

The Lake Stevens Center Subarea Plan and the 20th Street SE Corridor Subarea Plan both include the inclusion of sidewalks on many existing and future streets, some trail streets with a large paved trail on one side of the street, and the development of a trail along the power lines between the two subareas. These identified projects are also included in the 20 year Capital Facilities Plan. Additional pedestrian improvements will be defined for Downtown Lake Stevens.

Bicycle Facilities – Providing continuity in a pedestrian and bicycle system can result in greater comfort and ease for its users. The city is striving to create a fully integrated system for non-motorized transportation, yet recognizes the need to prioritize locations where it expects heavy use, such as routes connecting residential areas to recreational facilities (including the Centennial Trail) and schools.

The city is in the process of developing a Bicycle Route Development Plan which is expected to identify key bicycle routes that will connect residential areas with centers, parks and trails. The Plan is expected to be adopted in 2016.

As mentioned earlier, it is a priority of the city to develop a multimodal infrastructure for pedestrian and bicyclists citywide to meet safety and mobility needs in additional to creating healthy communities. At this point, the city has not adopted a specific service level to require expansion of non-motorized facilities. However, as new commercial and residential development occur, non-motorized facilities are typcially constructed with the project to meet general concurrency and zoning code requirements based on adopted engineering and design standards. In addition, the Parks and Recreation Element identifies citywide trail connections that serve a dual purpose to provide recreation and non-motorizded transportation. The Pedestrian Plan supplements development activity to provide connections between existing non-motorized facilities, prioritized by need, cost, route-directness and opportunity.

Transportation Improvement Plan

The Transportation Improvement Plan (TIP) is the result of an iterative process that balances the goals of all comprehensive plan elements. The TIP contains both funded and unfunded projects. Maintaining a list of priority projects helps the city monitor needs and pursue funding sources.

The policies in the Transportation Element have been prepared recognizing that not all projects in the TIP can be considered in the Capital Facilities Element at this time. Financial planning for transportation must use the same process as the financial planning for other capital facilities. However, the timing and funding for transportation are restricted by the concurrency requirement and the binding nature of LOS standards. The city is required to create a six-year financing plan for both transportation and capital facilities with reviews and amendments annually. In addition, the city is required to provide such transportation services concurrently with new development.

The city will use the annually updated Six-Year TIP to re-evaluate the priorities and timing of all transportation projects. Projects are completed and priorities change throughout the planning period. It may be necessary to update the TIP more than once a year. Also, the TIP update process may not coincide with the yearly comprehensive plan update process. Therefore, the TIP is not included in the Comprehensive Plan, but is an important associated document. The most recently approved TIP is included in Appendix E; however, it is not adopted as part of this Comprehensive Plan.

Maintenance, Preservation, and Operation

The multicounty planning policies and Transportation 2040 emphasize efficient maintenance, preservation and operation of the transportation system as a cost-effective means to ensure current assets continue to function and sustain regional mobility. Following this regional strategy, the city will continue to look at options for maintenance, preservation and operational improvements to the existing road network as an essential component of the transportation plan and capital facilities decision-making process.

Safety and Emergency Managment

Safety issues address the design and operation of the system, as well as threats from harmful acts and natural disasters. Areas of primary concern are vehicle-related deaths and injuries, as well as pedestrian and bicyclist deaths and injuries. A safe and secure regional transportation system pays careful attention to design and operation of facilities, as well as multiagency coordination and communication. The city coordinates regionally on transportation issues with partner agencies. It also coordinates locally with the Fire Department, School District and Police to ensure a safe and effective street network for motorists, cyclists, pedestrians and emergency service providers.

Air/Water Quality and Transportation

Air quality in Lake Stevens is considered relatively clean with no major freeway running in close proximity. However, during peak hours in the vicinity of SR-9 and SR-204 and 20th Street SE, congestion can result in high vehicle emissions. In addition, US-2 is located to the south and west of the current UGA.
As population growth continues to increase so does traffic congestion and the associated vehicle emissions. The city's focus is to help counter this air quality impact through the reduction in automobile use and the increase in mass transit use.

Planned methods to reduce vehicle trips are to provide more living wages jobs within the city, provide high density housing near employment centers and utilize mixed use facilities. This will allow for fewer miles traveled, opportunities for non-motorized travel to places of employment and shopping, and provide the density necessary to support transit services.

Another method that the city has incorporated is to provide lower emissions roadway design standards. Roundabouts have been used at several locations within the city which have resulted in less congestion. This, in turn, results in lower vehicle emissions from starting, stopping and idling at intersections. More roundabouts are in future plans.
Air pollution contributes to water pollution when rainwater picks up air pollutants and runs off into local creeks, streams and Lake Stevens. Tree preservation is an integral part of protecting air quality. Trees improve air quality by intercepting particles and removing gaseous pollutants. These pollutants include nitrogen dioxide (NO2), sulfur dioxide (SO2), carbon monoxide (CO) and particulate matter. Therefore, the city should take a lead role in reducing transportation-related air quality impacts to protect Lake Stevens' water quality.

GOALS AND POLICIES

GOAL 8.1 UPDATE TRANSPORTATION ELEMENT OF THE COMPREHENSIVE PLAN TO VERIFY THE EXISTING ROAD INVENTORY AND UPDATE WITH NEW INVENTORY GENERATED FROM ANNEXED AREAS.

Policies

8.1.1 The city will perform a review of the existing Street Inventory (Appendix D). Corrections and additions regarding the names and locations of streets will be made to make the inventory current.

8.1.2 The city will perform a field evaluation to update and verify the classifications and conditions for all the roads in the Street Inventory in an effort to obtain current and accurate information.

GOAL 8.2 PROVIDE A ROADWAY NETWORK WHICH MEETS ADOPTED LEVEL OF SERVICE STANDARDS.

Policies

8.2.1 For traffic levels of service, the city adopts LOS C or better at peak hour traffic for residential areas and LOS E along arterials and collectors in other areas at peak hour. As part of the subarea plans, the Level of Service for the subareas has been modified from an intersection LOS Standard "C" or "E" to a system LOS Standard "E" for each subarea. The system would consist of key intersections and connecting roads servicing each subarea. Under this approach, the LOS analysis would take the accumulative average LOS from intersections within the transportation network, while excluding intersections with State Route facilities.

8.2.2 Provide a safe, convenient and efficient transportation system.

8.2.3 Manage truck traffic with a Truck Route Ordinance and appropriate signage.

8.2.4 Consider developing a level of service standard for pedestrian and bicycle facilities to measure safety, availability, connectivity and service quality of facilities.

8.2.5 The creation of private streets is discouraged. Existing private streets will be accepted by the city for ownership and maintenance only if they are consistent with current design standards or can be brought to current design standards for new streets, and they can be shown to be a benefit to the city.

8.2.6 Develop criteria for the signing of streets, with the goal of providing a smooth, efficient transportation system.

8.2.7 Adopt the transit levels of service used by Community Transit.

8.2.8 The city shall adopt the same Level of Service standards for Highways of Statewide Significance and Highways of Regional Significance as adopted by the Puget Sound Regional Council and the Washington State Department of Transportation.

GOAL 8.3 PROVIDE AN AFFORDABLE LEVEL OF SERVICE FOR THE ROADWAY NETWORK.

Policies

8.3.1 The city will maintain a list of annually updated road improvement priorities.

8.3.2 Upon the annual date of adoption, the city's concurrency management system may be revised as part of the annual review and amendment of the Comprehensive Plan.

8.3.3 The city will coordinate with the PSRC Regional Transportation Planning Organization to ensure consistency and compatibility between transportation plans.

8.3.4 In order to preserve the character of neighborhoods, City Council may adopt reduced road standards for built neighborhoods where necessary for the provision of safer pedestrian access.

8.3.5 In city road projects, the City Council may choose to install temporary safety improvements (such as widened asphalt shoulders, etc.) in lieu of full improvements where they are able to make at least the following findings:

a. There is a significant overwhelming public need to improve pedestrian safety along the road on which the project is proposed, and the project will substantially do so.

b. The project is intended to be a temporary solution until a full street improvement project can be funded.

c. The project is designed in such a way as to not preclude eventual full-standard development.

d. If the full street improvement project is listed on the city's 6-year Transportation Improvement Plan, it will not be removed from the TIP because of the temporary improvements.

GOAL 8.4 PROVIDE A TRANSPORTATION SYSTEM THAT SUPPORTS EXISTING LAND USES AND ACCOMMODATES ANTICIPATED GROWTH.

8.4.1 Modeling of the city's transportation system shall be at an arterial and collector level and be updated at least on even years (i.e., 2018, 2020, etc.)

8.4.1 Except in cases of overriding public interest or physical constraints, new roads shall be routed to avoid traversing publicly-owned natural preserves, parks/recreation areas and areas identified as wildlife habitat.

8.4.1 The city will coordinate with its' metropolitan organization, state and county on projects of regional significance to help ensure that outside city traffic impacts are considered in project planning and design.

8.4.1 Traffic impact fee plan shall be maintained to address growth and concurrency needs.

GOAL 8.5 ENSURE THAT THE TRANSPORTATION SYSTEM IS ADEQUATE TO SERVE ALL EXISTING AND FUTURE LAND USES. IN ADDITION, THE CITY WILL DEVELOP A CONCURRENCY MANAGEMENT SYSTEM, EXPLORE ALTERNATIVES FOR DEMAND MANAGEMENT, AND SECURE ADEQUATE FINANCING FOR TRANSPORTATION.

Policies

8.5.1 The city coordinates with the Washington Department of Transportation in the selection of the criteria used to establish future right-of-way cross sections of the state highway system.

8.5.2 Traffic impact fees shall be assessed through the an areawide GMA based impact fee program, which shall be evaluated for every project to determine concurrency.

GOAL 8.6 STRIVE FOR CONTINUOUS AND LONG TERM EXPANSIONS TO THE TRAIL AND PEDESTRIAN SYSTEMS.

Policies

8.6.1 In most cases, private property owners shall be required to install new right-of-way improvements, including curbs, gutters, sidewalks and planting strips, for all new development projects.

8.6.2 Adopt sidewalk regulations consistent with state guidelines for the maintenance responsibility of sidewalks and planting strips by adjacent property owners.

8.6.3 The city will continue to incorporate regular and routine consideration of bicycles in accordance with the Washington State Department of Transportation, and the American Association of State Highway and Transportation Officials (AASHTO) standards in all transportation improvements.

8.6.4 Where appropriate, the city will install or cause to be installed, budget permitting, new sidewalks on existing city streets considered by the city to be high priority areas generally within two years of identification.

GOAL 8.7 PROMOTE PEDESTRIAN AND BICYCLE ACCESS TO PUBLIC FACILITIES AND CENTERS.

Policies

8.7.1 Pedestrian connections take first priority over other means of non-motorized connection.

8.7.2 Pedestrian and bicycle routes will be designated on arterial and collector roadways except for designated school access routes.

8.7.3 Land under transmission lines should be used for multi-use, non-motorized pathways.

8.7.4 Pedestrian route priority must take transit connections into consideration.

8.7.5 Bicycle facilities should be considered when roadway improvements are performed on arterial and collector roadways.

8.7.6 Widened outside travel lanes of 14 feet should be considered where possible to provide a shared bicycle and vehicle lane.

8.7.7 Shared use path links located on steep slopes should be avoided when possible.

8.7.8 A comprehensive sidewalk/walkway/trail plan should be developed to provide alternative routes to employment centers, shopping areas, transit stops, schools and public and recreational facilities.

GOAL 8.8 ESTABLISH MECHANISMS TO REDUCE THE DEMAND FOR TRANSPORTATION FACILITIES SUCH AS CAR/VAN POOLS, AND STAGGERED WORK HOURS.

Policies

8.8.1 In the central business district, integrate both the access and movement within the district for motorized and non-motorized traffic.

8.8.2 Land use and density of development will be coordinated with transportation centers within the city to support and encourage the use of transit. Clustering and other development techniques will be encouraged near transit access area.

8.8.3 Work with Community Transit to identify the best routes, stops and scheduling to best serve the community, encourage use and maximize the efficiency of public transportation.

8.8.4 Encourage developers to consider public transportation in transportation plans submitted as part of preliminary plat consideration.

8.8.5 Coordinate public transportation corridors with Community Transit and neighboring communities.

8.8.6 Encourage and plan for "pedestrian-scale" neighborhoods and centers to enhance access and mobility for public transportation users.

8.8.7 Continue to coordinate with all agencies and neighboring jurisdictions involved with public transportation, whether they be bus, HOV lanes, light rail, heavy rail, ride sharing, van pooling, or other forms, to identify what is of best use to the citizens of the city and participate in those ventures and proposals which are of general and/or specific benefit to the citizens of the city.

GOAL 8.9 DEVELOP ALTERNATIVE TRANSPORTATION SOLUTIONS TO REDUCE CONGESTION WITH MINIMUM INFRASTRUCTURE INVESTMENT.

Policies

8.9.1 Pursue the use of Traffic Demand Management (TDM) strategies as a means to reducing traffic congestion.

8.9.2 Support land use patterns that reduce the quantity and length of trips by single occupant vehicles.

8.9.3 Pursue the use of TDM strategies as an alternative or supplement to roadway capacity improvements.

8.9.4 Work with Community Transit to implement employer outreach programs to promote the use of alternative transportation modes and other worksite-based strategies such as alternative work schedules.

8.9.5 In the activity and regional employment centers, encourage compact and mixed use development to reduce vehicle trips and to encourage transit use.

8.9.6 Encourage new employers locating to the city to have or develop TDM plans to help reduce demand on the transportation system.

8.9.7 Consider mobility choices for people with special transportation needs, including persons with disabilities, the elderly, the young and low-income populations when considering new projects, maintenance and modification to the street network.

8.9.8 Evaluate existing facilities, policies, and programs for discrimination and develop a modification or transition plan that is consistent with ADA requirements.

GOAL 8.10 TRANSPORTATION IMPROVEMENTS SHALL BE PRIORITIZED AND FINANCED CONSISTENT WITH THE CAPITAL FACILITIES ELEMENT, AND ALL POSSIBLE AVENUES OF PAYING FOR THE IMPROVEMENTS SHOULD BE EVALUATED FOR AVAILABILITY AND FAIRNESS.

Policies

8.10.1 The city may investigate and consider creating a street utility district to share the cost of capital street improvements over all users.

8.10.2 Continue to require developers to pay for improvements related to the impacts of their developments.

8.10.3 Keep transportation improvement cost estimates current to collect appropriate shares from developers and users as established.

8.10.4 The city will investigate alternative methods of obtaining financing for transportation improvements, including: local option taxes, bonding, Local Improvement Districts, combining efforts with other agencies, investigate all possible grant and loan opportunities such as the Public Works Trust Fund, Intermodal Surface Transportation Efficiency Act funding and interlocal agreements for mitigation costs with Snohomish County.

GOAL 8.11 ENSURE NEW DEVELOPMENT PAYS ITS PROPORTIONATE SHARE OF TRAFFIC IMPACT FEES TOWARD TRANSPORTATION CAPACITY NEEDS OUTSIDE THE BOUNDARIES OF THE NEW DEVELOPMENT THAT BENEFIT THE CONTRIBUTING DEVELOPMENT.

Policies

8.11.1 Offsite improvements (non-frontage) performed by a developer on identified Capital Facilities Plan projects that are part of the impact fee cost basis are eligible for offsets, but offsets cannot exceed the amount of the impact fee the development activity is required to pay.

8.11.2 Traffic impact fees shall be pooled to ensure that the fees are expended or encumbered for permissible uses within ten years of receipt.

8.11.3 Collected traffic impact fees shall only be spent for costs associated with city street system capacity improvements within the traffic impact zone or combined traffic impact zone where they are collected.

8.11.4 Any interest earned on impact fee payments or on invested monies in the traffic impact fee fund, may be pooled and expended on any one or more of the transportation improvements for which the impact fees have been collected.

8.11.5 Fees may be collected for system improvement costs previously incurred by the city to the extent that new growth and development will be served by the previously constructed improvements, provided such fee shall be imposed to make up for any system improvement deficiencies.

8.11.6 If a development does not fit into any of the categories specific in the transportation impact fee schedule, the developer's traffic engineer shall use the impact fee applicable to the most directly comparable type of land use specified in the impact fee schedule, with final approval by the Public Works Director or designee.

8.11.7 If a development includes mixed uses, the fee shall be determined by apportioning the space committed to the different uses specified in the impact fee schedule.

8.11.8 The Public Works Director shall be authorized to adjust the impact fees for development based on analysis of specific trip generating characteristics of the

development. Such adjustments may consider mixed-use characteristics and/or expected levels of ridesharing and transit usage of the development.

GOAL 8.12 TRANSPORTATION IMPROVEMENT PROGRAM

Policies

8.12.1 The city will develop an annual Six Year Transportation Improvement Program (TIP) to correlate with improvements identified in the Transportation Element and the Capital Facilities Element. (Consistent with GMA, only funded TIP projects will be included in the Capital Facilities Element.)

8.12.2 The City Council shall adopt a Six-Year Transportation Improvement Plan (STIP) establishing the priority of projects where the city intends to expend collected fees. Any changes to the priority or addition of a project to the six-year plan shall be authorized through Council action.

GOAL 8.13 COMMIT TO MEETING FEDERAL AND STATE AIR QUALITY REQUIREMENTS AND WORK WITH STATE, REGIONAL, AND LOCAL AGENCIES AND JURISDICTIONS TO DEVELOP TRANSPORTATION CONTROL MEASURES AND/OR SIMILAR MOBILE SOURCE EMISSIONS REDUCTION PROGRAMS THAT MAY BE WARRANTED TO ATTAIN OR MAINTAIN AIR QUALITY REQUIREMENTS.

Policies

8.13.1 Encourage residents and businesses to maintain or improve air quality by completing emissions testing, using alternative transportation, discouraging burning of yard wastes and slash, and discouraging the use of uncertified wood stoves and fireplaces.

8.13.2 Take a lead role in encouraging other modes of transportation by using more efficient vehicles and alternative-fueled vehicles in the city fleet, and by encouraging employees to use alternative modes of transportation to travel to work.

8.13.3 Encourage alternatives to automobile transportation by promoting improvements to the public transit system, increasing availability of bicycling and walking facilities, and limiting the amount of parking that may be included in some new developments.

8.13.4 Consider alternative transportation options when considering land use decisions and designations to support increased use of walking, biking, carpooling and bus riding.

8.13.5 Encourage conservation of trees and vegetation through development regulations and incentive mechanisms.

8.13.6 Advocate with Community Transit in designating a public transportation system compatible with the city's centers' growth strategy.

8.13.7 Establish information to educate citizens on the importance of clean air.

GOAL 8.14 PLAN AND DEVELOP A TRANSPORTATION SYSTEM THROUGH INTERGOVERNMENTAL COORDINATION.

Policies

8.14.1 Coordinate on a regular basis with neighboring jurisdictions, regional transportation agencies and the Washington State Department of Transportation to address shared transportation needs and concerns.

8.14.2 Work with Snohomish County and neighboring cities to ensure that projects outside of the city do not adversely impact the city's transportation system and do not result in a diversion of traffic through city neighborhoods.

8.14.3 Pursue partnerships with Snohomish County and Washington State Department of Transportation on planning, funding and implementation of transportation improvements with multi-jurisdictional benefits.

8.14.4 Continue coordination with the Washington State Department of Transportation on State Route corridor improvements with an emphasis on SR-9 and SR-204 vicinity safety and capacity improvements.

8.14.5 Work with Puget Sound Regional Council on the planning, funding and implementation of transportation improvements of regional and local significance.

GOAL 8.15 ALLOW FOR ALTERNATIVE DESIGN STANDARDS AND/OR MATERIALS FOR STREET AND PARKING AREAS.

Policies

8.15.1 Explore the feasibility of reducing right-of-way widths by using new materials (e.g., grasscrete (grass concrete) for emergency vehicle turn-around.

8.15.2 Encourage increased levels of pervious surfaces in parking lots by using new designs and/or materials (e.g., grasscrete).

8.15.3 Study the feasibility of adopting increased design standards for certain arterial "entryways" into the community.

8.15.4 Encourage low impact development projects and low impact development techniques on non-LID projects to conserve and use existing natural site features, integrate distributed, small-scale stormwater controls and prevent measurable harm to streams, lakes, wetlands and other natural aquatic systems from commercial, residential or industrial development sites by maintaining a more hydrologically functional landscape.

GOAL 8.16 SUPPORT NEIGHBORHOOD EFFORTS TO IMPLEMENT APPROPRIATE TRAFFIC CALMING DEVICES AND STRATEGIES.

Policies

8.16.1 Traffic calming devices may be implemented in neighborhoods, subject to city approval, in order to improve pedestrian and vehicular safety. The type of devices used should be appropriate to the context in which they are installed.

8.16.2 Except when the city chooses to sponsor a demonstration project, a pre-requirement for implementation of traffic calming devices on existing streets will require initiation and financial commitment from the petitioning neighborhood. To ensure the whole neighborhood has an opportunity to provide input, the city shall hold neighborhood meetings before approving any such device.

8.16.3 The city may approve a variation from the adopted road standards of Title 14 when such variation substantially contributes to the implementation of traffic calming devices.

8.16.4 The city will not directly finance the implementation of traffic calming devices, but will provide technical and grant writing support to neighborhoods. The neighborhood proponents shall be responsible for assuring the necessary funding is available to complete the project.

8.16.5 Developers are encouraged to incorporate creative, low impact, stormwater facilities in conjunction with constructing streets which implement traffic calming goals.

GOAL 8.17 MAINTAIN, PRESERVE, AND OPERATE THE EXISTING TRANSPORTATION SYSTEM IN A SAFE AND USABLE STATE.

Policies

8.17.1 Maintain and operate transportation systems to provide safe, efficient and reliable movement of people, goods and services.

8.17.2 Protect the investment in the existing system and lower overall life-cycle costs through effective maintenance and preservation programs.

8.17.3 Reduce the need for new capital improvements through investments in operations, pricing programs, demand management strategies and system management activities that improve the efficiency of the current system.

8.17.4 Improve safety of the transportation system and, in the long term, achieve the state's goal of zero deaths and disabling injuries.

8.17.5 Protect the transportation system against disaster, develop prevention and recovery strategies and plan for coordinated responses.