

# Comprehensive Transportation Plan





# Comprehensive Transportation Plan

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## CHAPTER 1.

# INTRODUCTION

The transportation system is a vital component of Auburn's social, economic, and physical structure. On the most basic level, it enables the movement of people and goods throughout the City and the region. Long term, it influences patterns of growth and economic activity by providing access to different land uses. Planning for the development and maintenance of the transportation system is a critical activity for promoting the efficient movement of people and goods, for ensuring emergency access, and for optimizing the role transportation plays in attaining other community objectives.

## 1.1 PURPOSE

The Comprehensive Transportation Plan is the blueprint for transportation planning in Auburn. It functions as the overarching guide for development of the transportation system. The Plan evaluates the existing system by identifying key assets and improvement needs. These findings are then incorporated into a needs assessment, which informs the direction the City will take in developing the future transportation system.

This Plan is multi-modal, addressing multiple forms of transportation in Auburn including the street network, non-motorized travel, transit, and air transportation. Evaluating all modes uniformly enables the City to address its future network needs in a more comprehensive and balanced manner.



*Auburn Transit Center*

## VISION

The Comprehensive Transportation Plan reflects the needs and sensibilities of the Auburn community and, in doing so, seeks to:

- Enhance the quality of life for all Auburn residents;
- Encourage healthy community principles through non-motorized travel;
- Promote a transportation system that supports local businesses and enhances economic development opportunities;
- Create a transportation system that is thoughtfully designed and welcoming to visitors; and
- Provide a balanced, multi-modal transportation system that addresses local and regional needs.

## GMA REQUIREMENTS

Washington State's 1990 Growth Management Act (GMA) requires that transportation planning be directly tied to the City's land use decisions and fiscal planning. This is traditionally accomplished through the adoption of the Comprehensive Plan transportation element. However, Auburn fulfills this mandate by adopting the

Comprehensive Transportation Plan as the City's Comprehensive Plan transportation element. In order to be GMA compliant, the Comprehensive Transportation Plan must:

- Use land use assumptions to estimate future travel, including impacts to state-owned facilities;
- Inventory the existing transportation system in order to identify existing capital facilities and travel levels as a basis for future planning;
- Identify level-of-service (LOS) standards for all arterials, transit routes, and state-owned facilities as a gauge for evaluating system performance;
- Specify actions and requirements for bringing into compliance locally owned transportation facilities or services that are below an established level-of-service standard;
- Determine existing deficiencies of the system;
- Identify future improvement needs from at least ten years of traffic forecasts based on the adopted land use plan;
- Include a multiyear financing plan based on the identified needs;
- Address intergovernmental coordination; and
- Include transportation demand management strategies.

## 1.2 How the City Uses the Plan

The Comprehensive Transportation Plan provides policy and technical direction for development of the City's transportation system through the year 2030. It updates and expands upon the *1997 Transportation Plan* by recognizing network changes since the last plan, evaluating current needs, and

identifying standards for future development and various infrastructure improvement scenarios. The Plan underwent a major update in 2005 and a midterm update in 2009 to incorporate the Lea Hill and West Hill annexation areas into the Plan. The 2009 update also included new modeling work which brought the Plan from a 2020 to a 2030 horizon year.

### NEEDS ASSESSMENT

A system-wide, multi-modal needs assessment was conducted throughout plan development to ascertain which aspects of Auburn's transportation system work well and which ones need improvement. An evaluation of potential solutions and investment priorities was also conducted as part of this process. The end result is that Auburn has a more thorough understanding of system deficiencies, a better grasp of the best ways to address these deficiencies, and direction for growing the system in a sustainable manner.

### PUBLIC INVOLVEMENT

Public outreach was an important component of the need assessment process. One open house and several neighborhood meetings were held to solicit feedback from the public on transportation issues, both during the 2005 and 2009 update processes. The 2009 update, which incorporated the Lea Hill and West Hill areas into the Plan, also included an online questionnaire aimed at gathering information about the transportation concerns of Auburn residents.

A citywide telephone survey was also conducted in May 2005 and followed up with a June 2009 survey that measured resident's opinions and behaviors to determine their satisfaction with City services and the overall quality of life in Auburn. Both surveys concluded that investment in



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City roads is a high priority, but overall satisfaction with the transportation system is mixed.

During the 2005 update, the City formed a Technical Advisory Committee (TAC) to provide guidance in specialized areas of transportation. The TAC was composed of staff from City departments such as Parks, Police, Planning, and Public Works; the Washington State Department of Transportation; Metro Transit; the Auburn School District; and the Muckleshoot Indian Tribe. It also contained Auburn residents with different areas of expertise, from neighborhood needs to non-motorized travel, a planning commissioner, a City councilmember, the President of the Auburn Area Chamber of Commerce, and a freight industry representative.

The 2009 update used the City's Transportation, Trails, and Transit (TTT) Committee as a sounding board for the plan update. The TTT Committee is comprised of representatives from Auburn's various geographical areas and the business community.

## **POLICY DEVELOPMENT**

The City creates policies to state preferences for preservation of the existing system and development of the future transportation system. Policies can be qualitative in nature, but often they are quantitative and prescribe a specific standard.

Policies are also important for communicating the City's values and needs to neighboring jurisdictions and regional and state agencies. The City works in collaboration with other governmental and non-governmental organizations. Having established policies in place enables the City to more effectively influence change in keeping with its needs and objectives.

## **LOS AND CONCURRENCY**

The concurrency provisions of the 1990 Growth Management Act (GMA) require that local governments permit development only if adequate public facilities exist, or can be guaranteed to be available within six years, to support new development.

The GMA requires each local jurisdiction to identify facility and service needs based on level-of-service (LOS) standards. The City establishes corridor LOS standards for all arterial and collector streets, on a scale of "A" to "F". Auburn ensures that future development will not cause the system's performance to fall below the adopted LOS by doing one or a combination of the following: limiting development, requiring appropriate mitigation, or changing the adopted standard.

## **CAPITAL FACILITIES PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM**

The City uses the Transportation Improvement Program (TIP) and Capital Facilities Plan (CFP) to develop a financial plan for capital improvements in Auburn, thus enabling the City to fulfill the GMA requirement of having a multiyear financing plan based on the identified transportation needs.

The TIP, a 6-year transportation financing plan, is fiscally constrained for the first three years and is adopted annually by the City Council. It is a financial planning tool used to implement the list of transportation improvement projects identified in the Transportation Plan analysis of existing and future traffic conditions. It is reviewed annually by the City Council and modified as project priorities and funding circumstances change.





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The Capital Facilities Plan is also an annually adopted 6-year financing plan. However, it is fiscally constrained for all six years. Unlike the TIP, the CFP is an adopted element of the City's Comprehensive Plan. Also, the CFP includes non-transportation projects in addition to the transportation related projects also found in the TIP.

## 1.3 REGIONAL COORDINATION

More and more, Auburn's transportation system is influenced by what happens beyond its city limits. Growth in neighboring communities, infrastructure maintenance by regional agencies, the lack of funding for road maintenance as well as capacity expansion, and competing demands for transit services all affect mobility in Auburn. This Plan calls for effective interjurisdictional actions to address cross-border issues and to mitigate the impact of new development. The Plan also recognizes that other jurisdictions, particularly state government and transit providers, are responsible for a major share of the transportation facilities serving Auburn.

### WSDOT

The Washington State Department of Transportation owns four major routes connecting Auburn to the region: SR 167, SR 18, SR 164 (Auburn Way South), and a portion of West Valley Highway. Auburn works with the state to study these corridors and implement roadway improvements. WSDOT also serves an important role as administrator of federal and state transportation funds.

### SOUND TRANSIT

Sound Transit provides a variety of regional transit services for King, Snohomish, and

Pierce counties. In Auburn, Sound Transit provides commuter rail and express bus service. The Transit Center also serves as a hub and transfer station for local transit service provided by Metro Transit.

The transit chapter provides more detail on current Sound Transit services, remaining needs for regional transit service, and the role Auburn plays in coordinating with the agency.

### KING COUNTY

King County Metro Transit, a division of the King County Department of Transportation, provides local bus service for the Auburn area. Planned service for the City of Auburn is described in the *Six-Year Transit Development Plan*. The City has developed an employee Commute Trip Reduction (CTR) program in cooperation with Metro Transit. Details of the CTR program are summarized in the Non-motorized and Transit chapters of this plan.

King County Road Services Division is responsible for maintaining and regulating the roadway network in King County, including the Totem and Klump portions of King County situated within the City of Auburn boundaries. King County Road Services has a number of programs and plans in place that regulate development and other activities affecting the county's roadway network.

### PIERCE COUNTY

As a two county City, Auburn coordinates with Pierce County on issues concerning the Pierce County portions of Auburn. Auburn also participates in The Regional Access Mobility Partnership (RAMP), a regional coalition comprised of both public and private sector interests dedicated to



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improving mobility in the South Puget Sound and Washington State.

Auburn partners with Pierce Transit on the 497 bus route, which provides peak hour service from Lakeland Hills to the Auburn Transit Center. Auburn and Pierce Transit hope to continue this relationship and develop future partnerships to expand transit service in Auburn.

## COUNTYWIDE PLANNING POLICIES

Under the Growth Management Act, King and Pierce Counties have adopted Countywide Planning Policies to guide development in both incorporated and unincorporated areas of their jurisdictions. The policies support county and regional goals of providing a variety of mobility options and establishing level-of-service standards that emphasize the movement of people and not just automobiles. The Countywide Planning Policies are also important because they provide direction for planning and development of potential annexation areas.

## PSRC – VISION 2040 AND TRANSPORTATION 2040

The Puget Sound Regional Council (PSRC) sets policy for King, Pierce, Kitsap, and Snohomish counties through its long-range planning document, *Vision 2040*, and its regional transportation plan, which at the time this Plan was developed was undergoing a multi-year update called *Transportation 2040*. Both documents encourage future growth to be concentrated in regional growth centers. They also seek to provide a multi-modal transportation system that serves all travel modes, actively encouraging the use of alternatives to the automobile. Another important policy theme is a focus on maximizing the efficiency of the transportation system through transportation

demand management (TDM) and transportation system management (TSM) strategies, as well as completing critical links in the network.

Auburn's Transportation Plan must be consistent with PSRC's regional planning efforts.

## ADJACENT CITIES

The City recognizes the importance of coordinated and strong interjurisdictional action because transportation impacts do not stop at local boundaries. The City works closely with neighboring cities and the Muckleshoot Indian Tribe to address transportation issues. These neighbors adopt goals and policies that directly impact the Auburn community. In developing this plan, analysis was undertaken to ensure that all transportation system improvements are compatible with neighboring jurisdictions.

### CITY OF KENT

The City of Kent shares Auburn's northern border and several regional transportation corridors including S 277<sup>th</sup> Street, SR 167, and the West Valley Highway. Phase III of the S 277<sup>th</sup> Street reconstruction started in January 2004. The project improved a half-mile-long section of S 277<sup>th</sup> Street that currently carries 24,000 vehicles per day, allowing it to safely carry the vehicles projected to use the corridor daily in 2030.

The City of Kent is also a partner in the SR 167 corridor improvement study currently being undertaken by WSDOT. A significant component of this study is accommodating regional freight traffic, much of which is generated from the high concentration of warehouses in Auburn and Kent.

## CITY OF FEDERAL WAY

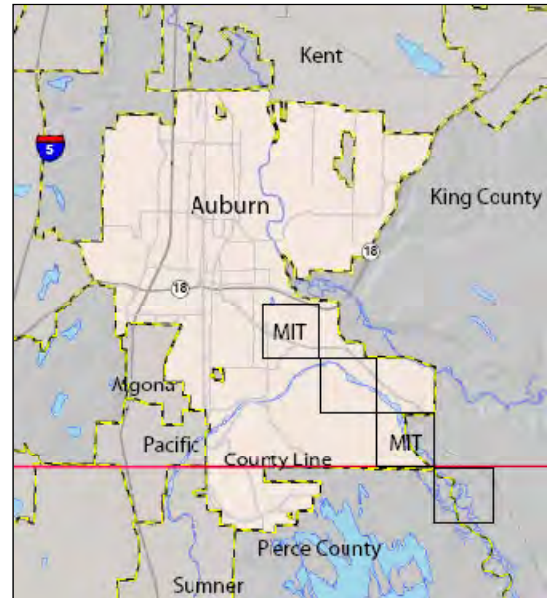
The City of Federal Way is located west of Auburn. Several roadways, most notably SR 18, connect Auburn and Federal Way. Auburn and Federal Way regularly coordinate on both motorized and non-motorized roadway improvements affecting both jurisdictions.

## CITIES OF SUMNER/ALGONA/ PACIFIC/BONNEY LAKE

The City partners with its southern neighbors in many respects, including street system planning, transit planning, and regional trail planning. For instance, Auburn and the City of Pacific are working to complete the White River Trail on both sides of the BNSF rail track. Auburn is also working with Sumner, Pacific and Algonia on roadway improvement projects. The City coordinates primarily with Bonney Lake for provision of water service in the Pierce County portion of the City. However, efforts to coordinate transportation systems and services will likely occur in the future. Partnerships with neighboring cities will continue to be an important factor in successful transportation planning.

## MUCKLESHOOT INDIAN TRIBE

The Muckleshoot Indian Tribe is situated in the southeastern portion of the City and in unincorporated King County, generally to the east of Auburn Way South (SR 164) and south of Hwy 18. The Muckleshoot Tribe operates two major attractions in or near Auburn: the Muckleshoot Casino and the White River Amphitheatre. Both of these activity centers generate a large number of auto trips. Commercial development on tribal lands is expected to increase in the future and must be evaluated during transportation planning efforts.



**Figure 1-1. Adjacent Jurisdictions**

The City and tribe coordinate on a variety of transportation planning issues, both to accommodate the capacity needs derived from traffic generated by tribal land uses and to ensure the tribe has a functioning transportation system for its members.

The Muckleshoot Tribe is developing its own Comprehensive Plan and Transportation Plan to identify needs and plan for its future transportation network. A draft Comprehensive Plan was released in March of 2005. One theme that is emerging from this effort is the need to build a well-connected internal roadway system on the reservation. Currently, Auburn Way South is the main travelway for drivers and pedestrians traveling between tribal locations. A more extensive internal network would increase transportation efficiency, improve pedestrian safety, and decrease the travel demand on Auburn Way South.

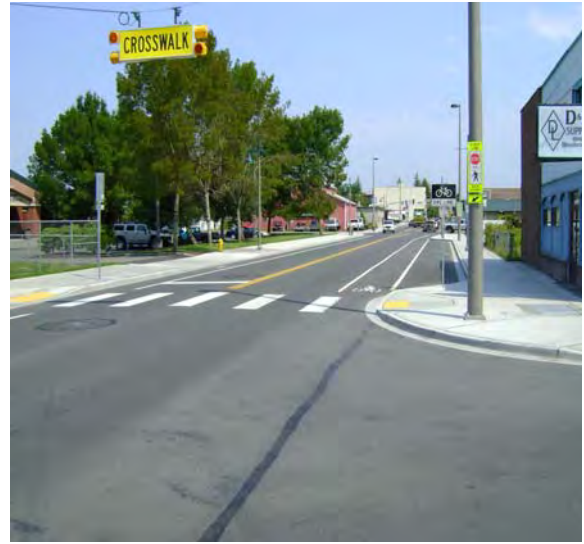
## 1.4 Accomplishments Since the Last Plan

During the past nine years, over \$130 million in transportation improvements have been completed in the City of Auburn. These projects have emphasized providing new road capacity, improving pedestrian safety, and providing better access to regional transit services including commuter rail.

Table 1-1 and the related map (Figure 1-2) show the key projects completed since the *1997 Transportation Plan*. The completed projects list includes a new transit center and parking garage in downtown Auburn with access to buses and the Sounder commuter rail service. Other major projects include the 3rd Street overpass, 277<sup>th</sup> Street Grade Separations and the Lake Tapps Parkway extension, which created additional access and capacity for the Lakeland Hills and Lake Tapps neighborhoods.

Several non-motorized safety and mobility projects such as enhanced mid-block crosswalks on West Main Street, I Street NE, and Auburn Way North, the West Main Street project, and Safe Routes to School projects at Olympic Middle School and Pioneer Elementary have enhanced the travel environment for pedestrians and bicyclists in Auburn.

In addition to the larger-scale capital projects identified in Figure 1-2, the City also funds several annual programs that help maintain or improve the existing system to meet the changing demands of the City. These include Traffic Signal Improvements, Roadway Safety and Infrastructure Improvements, Sidewalk Improvements, Traffic Calming, Arterial Preservation, and Local Street Preservation (SOS Program).



*Pedestrian Crossing on West Main St.*

## 1.5 Plan Organization

The next three chapters are organized according to the three primary transportation system types in Auburn: the **street system** (Chapter 2), the **non-motorized system** (Chapter 3), and the **transit system** (Chapter 4). Each chapter contains a needs assessment and discussion of the future system, including proposed projects or improvements.

The remaining chapters cover subjects pertaining to all three system types. Chapter 5 details the City's transportation objectives and policies. Chapter 6 discusses funding sources that can be used to finance future network improvements. Chapter 7 identifies a monitoring and evaluation strategy to ensure the document remains relevant and that progress is made towards implementation of the Plan.



**Table 1-1. Transportation Improvements Completed Since 2000**

#	Location	Project	Year Completed	Type of Improvement
1	37th St NW/UPRR	Railroad Crossing	2000	Street
2	Transit Center	Commuter Rail Station & Parking Garage	2000	Transit
3	Auburn Way S / Riverwalk Dr	Changed Traffic Signal	2001	Street
4	29th and "R" Street SE	Traffic Signal	2001	Street
5	8th NE ("K" NE to AWN)	Paved Road /Pedestrian Path	2001	Street/NM
6	3 <sup>rd</sup> St SW	Grade Separation	2001	Street
7	15th St SW - Industry Dr to "C" St SW	Bike Lanes	2002	Non-motorized
8	Transit Center	Pedestrian Bridge	2002	NM/Transit
9	"A" St SW at 2nd Street SW	Traffic Signal	2002	Street
10	S 277 <sup>th</sup> Street	Grade Separation	2002	Street
11	West Valley Hwy (15 <sup>th</sup> Street SW to Peasley Canyon)	Pavement Reconstruction	2003	Street
12	Lake Tapps Pkwy	Road Extension - east	2003	Street
13	Downtown Fred Meyer	Constructed Trail	2003	Non-motorized
14	White River Trail	Trail Lighting	2003	Non-motorized
15	Dykstra Park	Footbridge Repair	2003	Non-motorized
16	Downtown Transit Station	Kiss & Ride Lot	2004	Transit
17	Lakeland Hills Way/E Valley Hwy	Traffic Signal	2004	Street
18	Auburn Way South	ITS Improvements, Phase 1	2005	Street
19	West Main St at Union Pacific Railroad	Crossing Gate	2005	Street/NM
20	Kersey Way at Oravetz Road	Traffic Signal	2005	Street
21	"C" St between Ellingson Rd & 15 <sup>th</sup> St SW	Road Widening	2005	Street
22	3 <sup>rd</sup> St NE at Auburn Post Office	Pedestrian Crossing	2005	Non-motorized
23	3 <sup>rd</sup> Street SE/Cross Street SE	Intersection Capacity	2006	Street
24	A Street Loop	New Road	2006	Street
25	C Street NW (W Main Street to 3rd St.)	Pavement Reconstruction	2006	Street
26	Auburn Way South Safety Improvements	Safety/Access Control	2007	Street
27	West Main Street Streetscape	Bicycle & Pedestrian	2007	NM/ Street
28	Auburn/Pacific Trail (Phase 1)	Multi-Use Trail	2007	Non-motorized
29	M Street SE (29th to 37th Streets SE)	Pavement Reconstruction	2007	Street
30	6th Street SE (A Street SE to AWS)	Pavement Reconstruction	2008	Street
31	East Main Street at F Street SE	Pedestrian Crossing	2008	Non-motorized
32	I Street NE at 18 <sup>th</sup> Street NE	Pedestrian Crossing	2008	Non-motorized



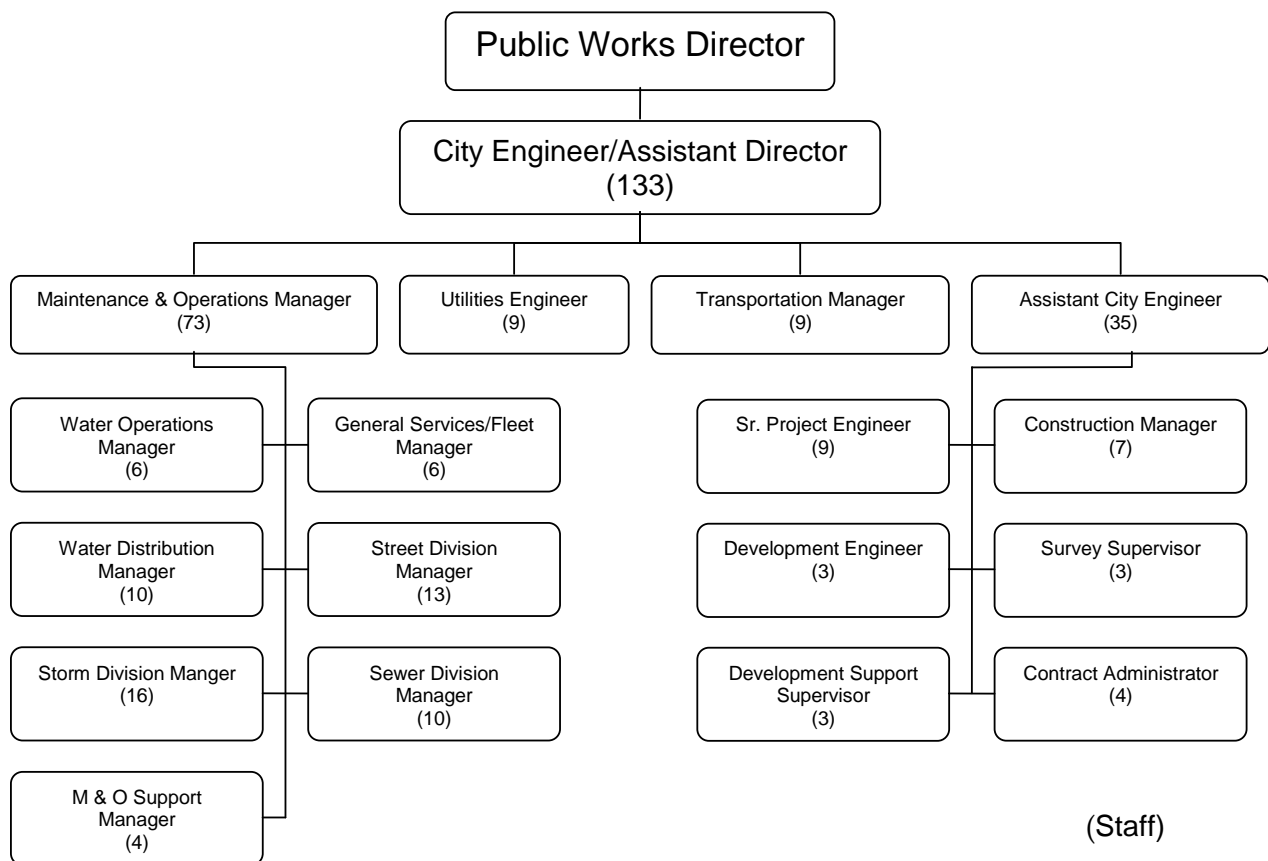
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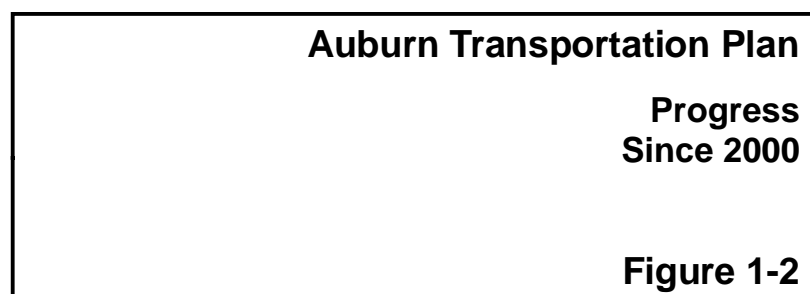
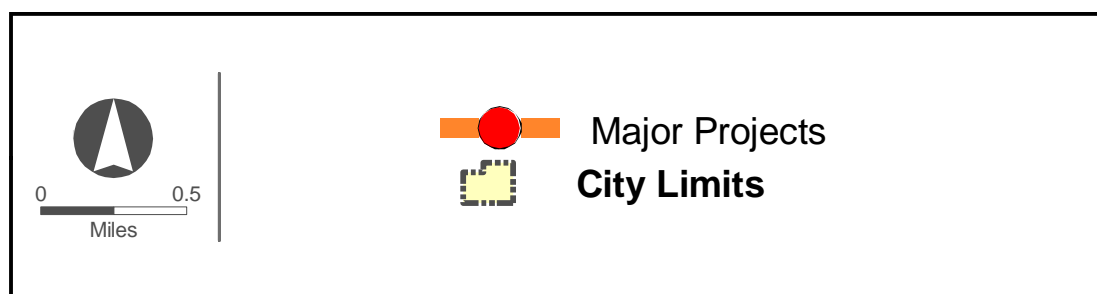
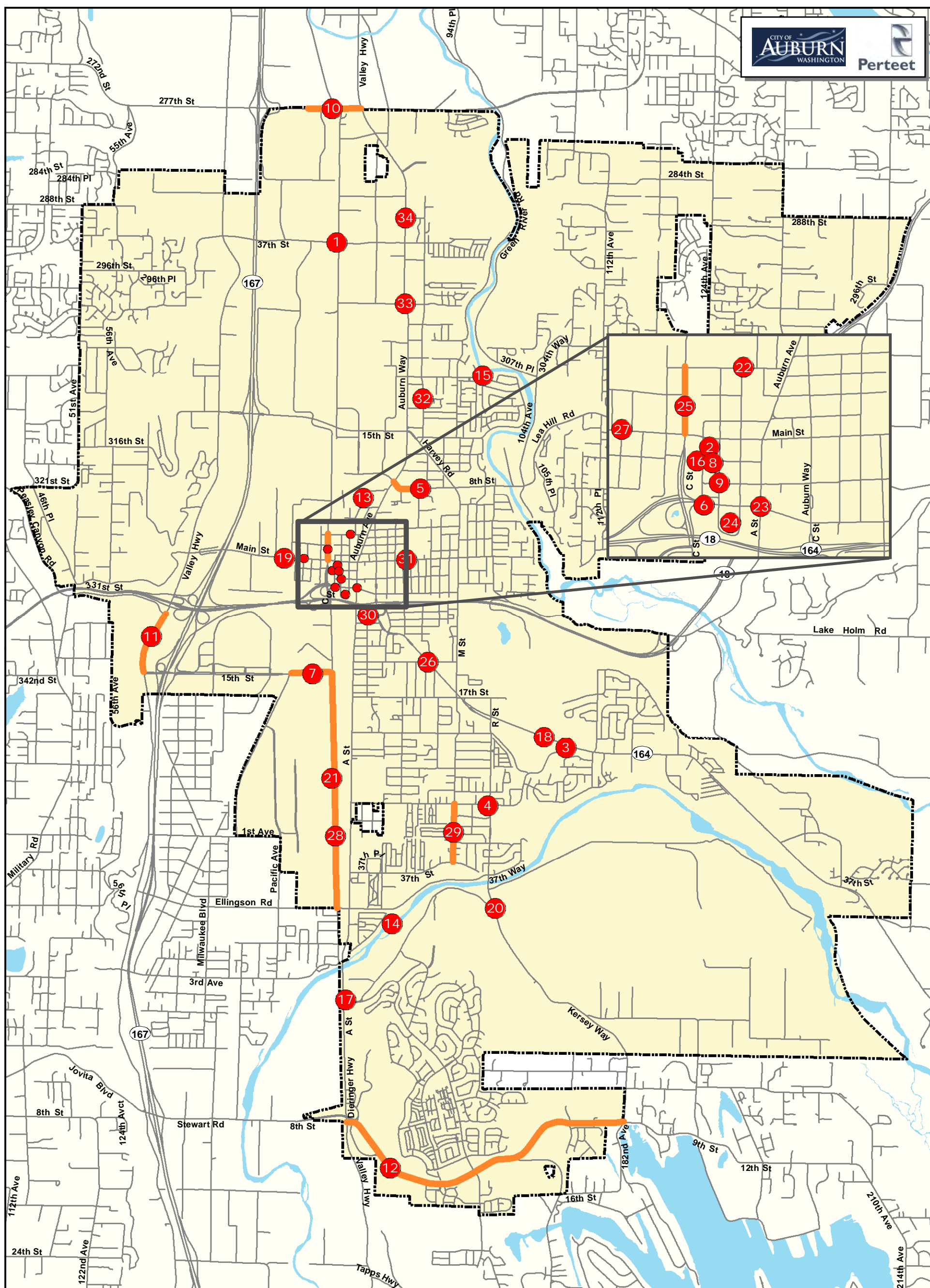
33	Auburn Way South & S. 277 <sup>th</sup> Street	ITS Improvements, Phase 2	2009	Street
34	Auburn Way North at 42 <sup>nd</sup> Street	Pedestrian Crossing Signal	2009	Non-motorized
35	Citywide	Save Our Streets (overlay 31.5 miles of local streets)	Ongoing	Street

## 1.6 Staff Resources

Implementation of the Comprehensive Transportation Plan requires numerous resources, including staff time. All departments play a role in executing the Plan, but the Public Works Department is the implementation lead. The Public Works Department employs engineers, planners, technical and support staff, and maintenance and operations personnel to maintain and improve the City's transportation system. Nonetheless, staff performs many functions and dedicating sufficient resources to carry out the goals of this plan continues to present challenges. Figure 1-3 identifies the basic organization of the Public Works Department.

**Figure 1-3. Public Works Department Staff Resources (2009)**







## Chapter 2.

## THE STREET SYSTEM

The Auburn transportation system is comprised of different transportation modes that move people and freight throughout the City and broader region. The system is multi-modal, accommodating cars, trucks, buses, pedestrians, and bicyclists. This is made possible by an extensive road network within the City and throughout the region.

The roadway system provides the primary means for transportation throughout the Auburn area. The City is served by an extensive street network, which includes freeways, arterials, collectors, and local streets. This chapter describes that network and how well it serves the City presently and in the future.

Under the Growth Management Act, cities and counties are required to adopt level-of-service (LOS) standards to establish what level of congestion a community is willing to accept and to determine when growth has consumed that available capacity. The GMA requires that land use and transportation planning be coordinated so that transportation capacity is evaluated concurrent with development. This chapter sets the standard for performance of the street network and discusses strategies to preserve and improve the system for future use.



*Downtown Auburn  
View from Transit Center Parking Garage*

### 2.1 Existing Street System FUNCTIONAL CLASSIFICATION

Streets function as a network. The logic and efficiency of the street network are dependent upon how streets move traffic through the system. Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character

of service they provide. There are three main classes of streets in Auburn: arterials, collectors, and local streets. City street classifications are identified in Figure 2-1. All streets have been classified using the Federal Functional Classification system guidelines.

The *Auburn Engineering Design Standards, Chapter 10 - Streets*, identifies design standards for each type of street, in conformance with WSDOT and AASHTO standards. The Street chapter includes street design requirements for configuration, geometrics, cross sections and other information.

Street classifications define the character of service that a road is intended to provide. The three major street classes, arterials, collectors, and local streets, all have subclasses described below.

## ARTERIALS

Arterials are the highest level of City street classification. There are two types of arterials in Auburn.

**Principal Arterials** are designed to move traffic between locations within the region and to access the freeways. Design emphasis is placed on providing movement of inter-city through traffic in addition to intra-city traffic.

Direct access to commercial and industrial land uses is permitted. These streets are the highest traffic volume corridors, generally have limited land access, and are used for cross-town trips.



*Principal Arterial*

**Table 2-1. Streets with Notable Changes Since Adoption of 2005 Roadway Functional Classification System**

Street Name	Segment	2005 Plan Classification	Current Classification
<b>Streets that increased in classification</b>			
112th Avenue SE	SE 304th St to SE 320th St	Residential Collector	Minor Arterial
124th Avenue SE	SE 312th St to SE 320th St	Nonresidential Collector	Minor Arterial
S 320th Street	112th Ave SE to 124th Ave SE	Nonresidential Collector	Minor Arterial
105th Place	Lea Hill Road to 112th Ave SE	Nonresidential Collector	Residential Collector, Type I
104th Ave SE/SE 304th St	SE 320th St to 132nd Ave SE	Nonresidential Collector	Minor Arterial
12th St SE (Future)	M St SE to Dogwood St SE	Nonresidential Collector	Residential Collector, Type I / Minor Arterial
Dogwood St SE	Scenic Dr SE to Auburn Way S	Residential Collector	Minor Arterial
Stuck River Drive	Kersey Way SE to 3600 block	Local	Residential Collector, Type II
29th St NE / M St NW	15th St NW to Emerald Downs Dr	Local	Nonresidential Collector
F St SE	4th St SE to Auburn Way S	Nonresidential Collector	Residential Collector, Type I
22nd Street NE	O St NE to Riverview Dr NE	Local	Residential Collector, Type I
Riverview Dr NE	22nd Street NE to Pike St NE	Local	Residential Collector, Type I
55th Avenue S	S 305th St to S 316th St	Local	Residential Collector, Type I
55th Avenue S	S 336th St to S 346th St	Local	Residential Collector, Type I
56th Avenue S	S 316th St to S 331st St	Local	Residential Collector, Type I
S 300th St / 64th Ave S	65th Ave S to 51st Ave S	Local	Residential Collector, Type I
<b>Streets that decreased in classification</b>			
O St SW	15th St SW to Boundary Blvd	Minor Arterial	Nonresidential Collector
Boundary Blvd	Algona Blvd N to 15th St SW	Minor Arterial	Nonresidential Collector

These arterials are the framework street system for the City and usually connect through to neighboring jurisdictions. They are typically constructed to accommodate five lanes of traffic with speed limits of 35 to 45 mph. The design year average daily traffic (ADT) is greater than 15,000 vehicles per day. Principal arterials are heavily utilized as bus routes, carrying both local and regional services. In some cases, on-street bicycle facilities are not appropriate for Principal Arterials and bicyclists should be accommodated on a parallel Class I separated trail. Pedestrians are accommodated on sidewalks.

**Minor Arterials** interconnect and augment the principal arterial system by providing access to and from the principal arterials and freeways. They serve moderate length trips at a somewhat lower mobility than principal arterials and distribute traffic to smaller geographic areas. Minor arterials may serve secondary traffic generators such as business centers, neighborhood shopping centers, major parks, multifamily residential areas, medical centers, larger religious institutions, and community activity centers. While minor arterials should not enter neighborhoods, they do provide access between neighborhoods. They are typically constructed to accommodate four to five lanes of traffic with speed limits of 30 to 35 mph and a design year ADT of 10,000 to 20,000 vehicles per day. Minor arterials are frequently utilized as bus routes, have sidewalks to comfortably accommodate pedestrians and may include Class II bicycle lanes.

## COLLECTORS

Collectors are a step below arterials in the City classification system. There are three types of collectors in Auburn.

**Residential Collectors, Type I** are used to connect local streets and residential neighborhoods to community activity centers and minor and principal arterials. Residential

Collectors, Type I are typically constructed to accommodate two travel lanes with medians and turn pockets at intersections or two travel lanes with Class II bicycle lanes. The posted speed limit is generally 30 mph and the design year ADT is 2,500 to 10,000 vehicles per day. Residential Collectors, Type I have sidewalks and may be utilized for some transit service, including dial-a-ride transit and paratransit services.



*Residential Collector, Type I*

**Residential Collectors, Type II** are routes located in areas with less intensive land uses. They carry traffic between local and arterial streets. Residential Collectors, Type II provide access to all levels of arterials, are typically constructed to accommodate two lanes with gravel shoulders on both sides, and have a speed limit of 30 to 40 mph. The gravel shoulder may be reduced on one side to provide a wider shoulder on the other for equestrian access or bicycle travel. Residential Collectors, Type II do not have sidewalks and generally do not carry transit services except for paratransit and possibly dial-a-ride-transit. The design year ADT is 1,000 to 5,000 vehicles per day.

**Non-Residential Collectors** provide intra-community access by connecting non-residential areas such as industrial and commercial areas to minor and principal arterials. They may serve neighborhood traffic

generators such as stores, elementary schools, religious institutions, clubhouses, small hospitals or clinics, areas of small multifamily developments, as well as other commercial and industrial uses. Non-Residential Collectors are typically constructed to accommodate two lanes and a center two-way left-turn lane, with a speed limit of 30 mph and may include Class II bicycle lanes. The design year ADT is 2,500 to 5,000 vehicles per day. Non-Residential Collectors have sidewalks and may be utilized for some transit service, including dial-a-ride transit and paratransit services.

## LOCAL STREETS

Local Streets are the most common street type in the City. Local streets comprise all facilities not part of one of the higher classification systems. Local streets primarily provide direct access to abutting land and to the higher order streets. Service to through traffic is discouraged. There are four categories of local streets.

**Local Residential Streets, Type I** provide access to abutting residential parcels. They offer the lowest level of mobility among all street classifications. The street is designed to conduct traffic between dwelling units and higher order streets. As the lowest order street in the hierarchy, the street usually carries minimal through traffic and includes short streets, cul-de-sacs, and courts. The speed limit is generally 25 mph and the design year ADT is 200 to 1,200 vehicles per day. Local Residential Streets, Type I have sidewalks to accommodate pedestrians and in most cases, bicyclists may travel comfortably on the shoulder of the road (Class IV bicycle facility). Transit service is generally limited to dial-a-ride transit and paratransit.

**Local Residential Streets, Type II** serve areas with less intensive land uses by providing access to adjacent land and distributing traffic to and from the principal or minor arterials,

residential collectors, type II, and local access streets. The travel distance is relatively short compared to Residential Collectors, Type II. Local Residential Streets, Type II are two lane roadways with gravel shoulders and a speed limit of 25 mph. The design year ADT is 100 to 1,000 vehicles per day. Because these streets have low traffic volumes, bicyclists can comfortably share the travel lane with motorized vehicles. Since Local Residential Streets, Type II do not have sidewalks, pedestrians walk along the shoulder of the road. Transit service is very infrequent and most likely limited to paratransit and possibly dial-a-ride-transit.

**Local Non-Residential Streets** provide direct access to higher order classification streets and serve primarily industrial and manufacturing land uses. They offer a lower level of mobility and accommodate heavy vehicle traffic. Typically they have two travel lanes with a speed limit of 25 mph and the design year ADT is 400 to 1,200 vehicles per day. Local Non-Residential Streets have sidewalks to accommodate pedestrians and bicyclists may travel on the shoulder of the road (Class IV bicycle facility), although bicycle travel may not be as comfortable as on Local Residential Streets due to a greater frequency of trucks and other heavy vehicles. Transit service is generally limited to dial-a-ride transit and paratransit.

**Private Streets** may be appropriate for local access in very limited usage. They provide direct access to City streets and should be limited to those streets accessing properties within a planned area or properties immediately adjacent. Private streets at minimum are built to the same design and construction standards as a local residential street.

From a planning perspective, acknowledgment and proper designation of functional classifications allows for the preservation of right-of-way for future transportation corri-



dors, whether the corridor provides access to car, HOV, transit, bike, or pedestrian use. Functional classification helps establish corridors that will provide for the future movement of people and goods, as well as emergency vehicle access, through the City. Proper designation is crucial to the planning effort; as development occurs, accommodation for the appropriate transportation corridors should be incorporated into development plans.

The City has reclassified several street segments since 2005, as shown in Table 2-1. Reclassification occurs over time in response to changes in the function of streets, the traffic patterns, and the character of the surrounding land uses. In particular, some streets within both the West Hill and Lea Hill were reclassified since they were annexed from King County in 2008. Table 2-1 indicates that some streets have been reclassified to a higher classification, while others have been moved to a lower classification.

## ALLEYS AND ACCESS TRACTS

**Alleys** provide vehicular access to abutting properties, generally through the rear or side of the property. Alleys can be public or private and serve several purposes including access management and the alleviation of traffic problems on city streets. Alleys should provide through access to city streets or adequate turnaround space if through access is not feasible. Alleys shall be constructed to allow for general-purpose and emergency access at all times.

**Access Tracts**, sometimes referred to as shared driveways, provide vehicular access for lots that do not abut a street or alley. They are most common in panhandle lots or rear lots that do not have street or alley access. Access tracts are privately owned and maintained. They must provide for sufficient vehicular movement and turnaround space, be free of

temporary and permanent obstructions, and provide for emergency access.

## TRAFFIC VOLUMES

Average daily traffic counts were obtained from data collected in the spring of 2008 and 2009. Figure 2-2 shows the average daily traffic volumes on City arterials for the years 2008 and 2009, based on a seven-day week average. The highest daily volumes are found on Auburn Way South, A Street SE, Auburn Way North, Harvey Road, Lea Hill Road/SE 312th Street, M Street, Lakeland Hills Way, 51st Avenue S, and 15th Street NW.

A major contributor to the high traffic volumes on City arterials is traffic passing through the City. This pass-through traffic originates in surrounding jurisdictions and uses City streets to access the major regional highways, such as SR 18 and SR 167. Nearly 50 percent of traffic on Auburn's arterial and collector networks is attributable to pass-through traffic. The City is committed to working with WSDOT to improve the state highway system, thereby reducing the demand on the City street system.

## SPEED LIMITS

The City designates speed limits as a means of alerting drivers to safe and appropriate travel speeds for a particular corridor segment. Local roads are generally designated at 25 mph zones, with some exceptions such as near schools. The City routinely monitors corridors to ensure appropriate speed limits are in place. Legal speeds are located in City code and are clearly signed on the roadways.

## TRAFFIC SIGNALS AND SIGNS

Traffic signals, signs, and pavement markings are used to direct drivers, pedestrians, and bicyclists, thereby increasing the effective use of the roadway by moving traffic more efficiently and safely. The City uses the Manual of Uniform Traffic Control Devices (MUTCD)

as guidance for design, construction, and placement of signs in the right of way.

## **FREIGHT**

Auburn is an important freight hub in the Puget Sound region, and the efficient movement of freight, through and within the City, is critical to Auburn's economic stability. Both rail and truck freight, originating largely in the Ports of Tacoma and Seattle, pass through Auburn regularly.

The Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF) have rail lines running through Auburn. The Union Pacific line runs north-south, to the east of the Interurban Trail. Burlington Northern Santa Fe moves freight in both the north-south and east-west directions. BNSF has a double-track, federally designated, high-speed railroad line running north-south. The Stampede Pass line runs east-west through south Auburn, entering the north-south line just south of the Auburn Transit Center.

In addition, the company maintains a rail yard between A Street SE and C Street SW, south of SR 18. In the future, this area may develop as a multi-modal rail yard, prompting the need to mitigate increased truck traffic through capacity improvements. The Burlington Northern Santa Fe also has plans to increase traffic on the Stampede Pass line, the east-west rail line running through Auburn. In anticipation of this increase and in order to mitigate the traffic and safety impacts of current rail movements on this line, the City has programmed a grade separation project on M Street SE.

The pavement at the crossing of the Union Pacific Railroad at 15<sup>th</sup> Street SW is in very poor condition. Rehabilitation of the pavement is a high priority for the City, and a project has been programmed to reconstruct 15<sup>th</sup> Street SW from C Street SW to the railroad tracks.

Auburn experiences considerable truck traffic. The City has designated truck routes for through freight movement in an effort to maximize the efficacy of and protect the roadway infrastructure. Current truck routes are shown in Figure 2-3. The City defines truck freight movement as the movement of heavy and medium trucks. Medium trucks include trucks with two to four axles and two-axle trucks with six tires. Heavy trucks include all articulated trucks, trucks with one to three trailers, and/or with three to nine axles. Truck routes, established by City ordinance, are designated for roadways that incorporate special design considerations such as street grades, continuity, turning radii, street and lane widths, pavement strength, and overhead obstruction heights.

The City expects that the majority of regional trips will take place on state highways. However, recognizing that trips through the City are sometimes necessary, Auburn has designated a network of north-south and east-west corridors as truck routes, which are built to truck standards. In addition, the City has designated future truck routes, which will be built to truck standards whenever opportunities exist to reconstruct the roadway network, either through public improvement projects or through agreements with private developers.

Auburn has significant industrial and commercial development throughout the City. The City encourages local delivery trucks to use the designated truck network as much as possible, but recognizes that trips on non-truck routes will sometimes be necessary. The City is committed to supporting local industry, business, and residential needs and recognizes that the ability to ship and receive freight is essential to the success of many businesses. Therefore, the City will collaborate with local businesses to improve freight access, while maintaining the roadway infrastructure, whenever possible. This may include adopting

City Code and updating the *Auburn Engineering Design and Construction Standards* in a manner that favors these priorities.



*Truck Traffic Building on S 277th Street*

## **SAFETY**

The City places a high priority on providing a safe transportation system for travelers of all modes. Continual efforts are made to construct and retrofit streets in a manner that improves safety and decreases the likelihood of accidents. Pedestrian crossings and other non-motorized safety issues are discussed in the following chapters. Railroad crossings, emergency response needs and accidents related to the street system are discussed below.

## **RAILROAD CROSSINGS**

At grade railroad crossings create a potentially dangerous situation for motorists, non-motorized travelers, and rail passengers. Auburn has several at grade railroad crossings. The Union Pacific line crosses city streets at S 285th Street, 37th Street NW, 29th Street NW, West Main Street, and 15th Street SW. The Burlington Northern Santa Fe (BNSF) tracks intersect city streets at 37th Street NW, 29th Street NW, 3<sup>rd</sup> Street NW, W Main Street, M Street SE, and the Auburn Black Diamond Road. With more than 60 trains passing through the City each day, the City has many at

grade crossings, each with unique safety implications. The City coordinates with railroad operators and the State to upgrade the crossings whenever possible. For instance, new long-gate crossing arms were recently placed at the Union Pacific crossing on W Main Street. Also, in 2002 the pedestrian overpass at the Auburn Transit Center was completed, adding a new measure of safety for pedestrians crossing the railroad tracks. The City is underway with design of the M Street SE grade separation project. This project will grade separate M Street SE at the BNSF Stampede Pass tracks by lowering M Street SE under the railroad overpass. The second phase of the project will create and a new connector road between M Street and Auburn-Black Diamond Road. Construction of the grade separation phase of the project is anticipated to be complete during 2013.



*BNSF Freight Train at West Main Street*

## **EMERGENCY RESPONSE AND MANAGEMENT**

Providing residents with quick responses in emergency situations is a high priority for the City. The City maintains a Comprehensive Emergency Management Plan and supporting plans which identify critical facilities that should be maintained as a first priority during catastrophic events. Critical transportation facilities, although subject to change, generally

include Principal Arterials, bridges and major evacuation routes within the City.

In addition, the City works to provide an adequate street network that will ensure multiple alternate routes for emergency vehicles. Fire response vehicles are equipped with traffic signal controls that enable emergency vehicles to secure safe and rapid passage through signalized corridors. In addition, the City has mutual-aid agreements with nearby emergency response operators to ensure adequate coverage in case of road closures or other obstacles that would otherwise prevent timely emergency response.

## ACCIDENTS

The City collects and monitors accident data to identify roadway hazards, and seeks to correct hazardous locations in the City by implementing appropriate safety measures. While the City relies primarily on its own data, accident data from other sources, including neighboring jurisdictions and the State, is utilized whenever available.

## 2.2 Street Standards and Levels-of-Service

The GMA requires the City to establish service levels for the street network and to provide a means for correcting current deficiencies and meeting future needs. Transportation professionals use the term 'level-of-service' (LOS) to measure the operational performance of a transportation facility, such as a street corridor or intersection. This measure considers perception by motorists and passengers in terms of speed, travel time, freedom to maneuver, traffic interruptions and delays, comfort, and convenience.

The City currently uses a single-mode LOS system based upon vehicular travel. In the future, a multi-modal system which includes

transit, pedestrians, and bicyclists should be developed and adopted.

The currently adopted LOS methodology gives letter designations from 'A' through 'F', with LOS A representing the best operating conditions, and LOS F representing the worst. LOS can be quantified in different terms, depending on the transportation facility. Definitions for each level-of-service and the methodologies for calculating the level-of-service for various facilities are contained in *Transportation Research Board, Highway Capacity Manual*.

The City most commonly uses corridor level-of-service for accessing facilities. Generally, this is considered the most comprehensive way to determine vehicular traffic impacts. The following descriptions provide some guidance for interpreting the meaning of each LOS letter for corridor LOS on city streets.

- LOS A describes primarily free-flow operations at average travel speeds, usually about 90 percent of the FFS (*free-flow speed*) for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal. (**Free-flow speed** is the average speed of vehicles on a given facility, measured under low-volume conditions, when drivers tend to drive at their desired speed and are not constrained by control delay. **Control delay** is the total elapse time from a vehicle joining the queue until its departure from the stopped position at the head of the queue. This includes the time required to decelerate into the queue and accelerate back to free-flow speed.)
- LOS B describes reasonably unimpeded operations at average travel speeds, usually about 70 percent of the FFS for the street class. The ability to maneuver within the traffic stream is only slightly restricted, and



control delays at signalized intersections are not significant.

- LOS C describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the FFS for the street class.
- LOS D borders on the range in which small increases in flow (*density of vehicles*) may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression (*a large percentage of vehicles arriving at the intersection on a red, rather than green light*), inappropriate signal timing, high volumes (*of traffic*), or a combination of these factors. Average travel speeds are about 40 percent of FFS.
- LOS E is characterized by significant delays and average travel speeds of 33 percent or less of the FFS. Such operations are caused by a combination of adverse signal progression, high signal density (*closely spaced signals*), high volumes, extensive delays at critical intersections, and inappropriate signal timing.
- LOS F is characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the FFS. Intersection congestion is likely critical at signalized locations, with high delays, high volumes, and extensive queuing.

## CITY LOS STANDARDS AND CURRENT LOS

It is necessary to define LOS standards for transportation facilities to enforce the concurrency requirements of the Growth Management Act. If development results in a facility's service falling below a defined LOS standard, concurrency requires the devel-

opment causing the deficiency be remedied or the permit for that development be denied.

Auburn defines unsatisfactory LOS as: an unacceptable increase in hazard or unacceptable decrease in safety on a roadway; an accelerated deterioration of the street pavement condition or the proposed regular use of a street not designated as a truck route for truck movements that can reasonably result in accelerated deterioration of the street pavement; an unacceptable impact on geometric design conditions at an intersection where two truck routes meet on the City arterial and collector network; an increase in congestion which constitutes an unacceptable adverse environmental impact under the State Environmental Policy Act; or the inability of a facility to meet the adopted LOS standard.

The City uses corridor LOS as its primary measurement of transportation system impacts. The City corridors typically used for analyzing LOS are shown in Figure 2-4, although the City may require analysis of a different segment in order to assess the full LOS impacts. All arterials and collectors in Auburn have designated LOS standards. The LOS standard for these corridors is primarily LOS D with the exception of some corridors that may operate as LOS E or F, with a specified maximum travel time.

While the City uses a p.m. based LOS system, a.m. LOS impacts may be examined in situations where unique conditions are likely to results in an a.m. LOS deficiency.

Table 2-2 identifies Auburn's LOS Standards, as well as the 2009 corridor LOS. As indicated in the table, LOS was calculated for many of Auburn's street corridors using traffic counts taken in Spring 2008 and Spring 2009.

**Table 2-2. Auburn Corridor Level of Service**

ID	Corridor	From	To	LOS Standard	LOS 2009
1	Auburn Way North	15th St NE	Northern City Limits	D	C/D
2	Auburn Way North	East Main St.	15th St NE	E	D
3	Auburn Way South	East Main St.	M St SE	D	F/E
4	Auburn Way South	M St SE	Eastern City Limits	D	C
5	M St./Harvey	Auburn Way North	East Main St.	E	C
6	M St./Harvey	East Main St	Auburn Way South	D	D/C
7	Evergreen Way	Lakeland Hills Way	Kersey Way	D	Future
8	37th St NE/NW	West Valley Hwy	I St. NE	D	B/C
9	15th St NE/NW	West Valley Hwy	Auburn Way North	F**	D
10	Auburn Ave / "A" St	SR 18	Southern City Limits	D	B
11	Main St	West Valley Hwy	R St	D	C
12	15th St SW	West Valley Hwy	C St SW	D	D
13	C St SW	Ellingson	SR 18	D	C/E
14	West Valley Hwy	Northern City Limits	15th Street NW	E	B/C
15	S 277th St	Frontage Rd.	108th Ave SE	E	E/B
16	R St./Kersey Way	Auburn Way S.	Oravetz Road	D	A/B
17	Lake Tapps Parkway	East Valley Hwy.	182nd Ave E	D	B
18	"A" St SW/NW/ "B" St NW	4th St NW	S 277th St	D	Future
19	8th St NE/Lea Hill Rd.	Auburn Way North	132nd Ave SE	E	C/B
20	D St NW/Emerald Downs Dr	S 277th St	15th St. NW	D	A/B
21	I St NE	S 277th St	Harvey Rd	D	A/B
22	132nd Ave SE	SE 282nd St	SE 312th St	D	B
23	124th Ave SE	SE 282nd St	SE 320th. St	D	C
24	104th Ave SE/SE 304th St	8th St NE	132nd Ave SE	D	B/A
25	105th PI SE/SE 320th St	Lea Hill Road	124th Ave SE	D	B
26	Lakeland Hills Way SE	Lake Tapps Parkway	Oravetz Rd	D	C/D
27	29th St SE/Riverwalk Dr.	A Street SE	Auburn Way South	D	C
28	108th Ave SE/112th Ave. SE	S 277th St	SE 304th St	D	A
29	49th St NW	B St NW	S 277th St	D	Future
30	R Street SE	8th St NE	4th Street SE	D	B/C
31	3rd St SW/Cross St	C Street	Auburn Way South	E	E
32	17th St SE	A St SE	Auburn Way South	D	B/A
33	41st St SE/Ellingson Rd	A St SE	Western City Limits	E	F
34	Lakeland Hills Way/Oravetz	East Valley Hwy	Kersey Way	E	A/B
35	West Valley Hwy	15th Street NW	Southern City Limits	E	C/B
36	Kersey Way	Oravetz Road	Southern City Limits	D	A
37	S. 316th Street/Terrace Drive	West Valley Highway	Western City Limits	D	B
38	S. 296th Street/65th Ave	West Valley Highway	Western City Limits	D	B
39	51st Ave S.	S. 288th Street	Peasley Canyon Rd	D	B
40	S. 284th Street	112th Ave SE	124th Ave SE	D	B/A
41	S. 284th Street	124th Ave SE	132nd Ave SE	D	Future
42	R St. Bypass/Black Diamond	M Street SE	SR 18	D	Future

Corridor segments within Downtown Auburn may operate at LOS E in accordance with the Auburn Downtown Plan. All other arterial and collector corridors must operate at LOS D or better, unless otherwise indicated in Table 2-2.

\* Split LOS indicates directional LOS in either the East-West or North-South direction. Otherwise, the LOS is the same in both directions.

\*\* Total travel time in the eastbound direction cannot exceed 1000 seconds for this corridor to meet the LOS Standard.

## STATE HIGHWAY LOS

Amendments to the GMA in 1998 added new requirements for local jurisdictions to address state-owned transportation facilities, as well as local transportation system needs in their comprehensive plans (RCW 47.06.140). House Bill 1487, adopted by the Washington State Legislature in 1998, requires that the transportation element of local comprehensive plans include the LOS standards for Highways of Statewide Significance (HSS). HB 1487 clarified that the concurrency requirement of the GMA does not apply to HSS or other transportation facilities and services of statewide significance. HB 1487 also requires local jurisdictions to estimate traffic impacts to state-owned facilities resulting from land use assumptions in the Comprehensive Plan.

## THE WSDOT STANDARD

WSDOT has identified an LOS standard of “D” for all urban Highways of Statewide Significance (HSS) according to the State Highway System Plan (HSP). All state highways within the City of Auburn, including SR 18, SR 167, and SR 164 are classified as urban Highways of Statewide Significance, and therefore have an LOS standard of “D”.

Land use and the transportation system are closely linked, each influencing the development of the other. Hence, for the purpose of this plan, it is necessary to evaluate how land use patterns impact the transportation system.

## LAND USE/TRANSPORTATION RELATIONSHIP

A broad overview of Auburn’s Comprehensive Plan land use map shows industrial (light and heavy) designations in the west side of the City along both sides of West Valley Highway, strip commercial development along Auburn Way South and a sizable commercial plan designation near the intersection of the SR 18

and 15<sup>th</sup> Street SW interchange (Super Mall). Downtown Auburn is roughly located east of the Interurban Trail, north of SR 18, west of F Street SE/NE, and south of 3<sup>rd</sup> Street NW/NE and 4<sup>th</sup> Street NE. Residential development exists along the Auburn valley floor, West Hill, and Lea Hill and Lakeland Hills. A major land use activity in Lea Hill includes the Green River Community College located on SE 320<sup>th</sup> Street.

As with many cities in South King and Pierce counties, especially those along the SR 167 corridor, the local land use plan is characterized by a predominance of industrial land use designations. The land use element identifies “Industrial” as the City’s second most predominant zoning designation (residential being first). Consequently, the City’s land use plan establishes a development pattern that has industrial related traffic impacts upon the State Highway System. This includes the frequent movement of freight. Auburn’s industrial areas also consist of light industrial warehouse development. This type of development typically results in a relatively low PM peak hour trip generation impact. There are a number of circumstances including potential tax policy changes, which may lead to a change in land use designations and, as a consequence, a reduction in the prevalence of industrial uses in this area and throughout Auburn.

Another key land use feature in the land use element is a “Heavy Commercial” designation

at 15<sup>th</sup> Street SW, adjacent to SR 167 and SR 18. This commercial designation is the site of the Supermall. The Supermall attracts customers on a regional basis and impacts use of the State Highway System in this respect, even more so than the downtown or the strip commercial development along Auburn Way. Commercial development in downtown Auburn and along Auburn Way tends to serve more localized needs.

The City's Comprehensive Plan land use map focuses residential development in the valley and in the west hills, Lea Hill, and Lakeland Hills. Access to the State Highway System is generally limited in the east hill, although Highway 18 can be accessed on Lea Hill at SE 304<sup>th</sup> Street. Future impacts on the State Highway System in the Lea Hill area will primarily be commuter traffic due to the predominance of residential comprehensive plan designations in that area. The development of Lakeland Hills will also principally result in increased commuter traffic.

Future impacts to the State Highway System can generally be gauged by projected arterial link ADT volumes at or near state highway ramps. This is, at best, only a general estimate since not all traffic passing through these street segments is utilizing the State Highway System. Further, traffic using the arterial segment may be originating from local jurisdictions outside of Auburn, and may therefore not result from assumptions in Auburn's land use plan.

Several city arterials connect directly to SR 167 and SR 18. Some examples include C Street SW, West Valley Highway, and Auburn Way South connections with SR 18, and 15<sup>th</sup> Street NW and 15<sup>th</sup> Street SW connections with SR 167. These streets are among the most heavily used in the City, a function of their relationship to the State Highway System. SR 164 is also in the city limits. Year 2008 and 2009 average daily traffic (ADT) volumes along SR 164 range from a low of 23,000 near the eastern city boundary up to 37,000 along Auburn Way South near SR 18. These volumes are forecasted to increase substantially over the next 20 years.

The State Highway System also impacts the City's local street system. A "cut-through" traffic pattern results in significant traffic volume increases on the local arterial street system. For example, many of Auburn's PM

peak hour trips are work to home trips originating *outside* of the Auburn area and destined for residential areas *outside* of Auburn, including Pierce County and the Enumclaw Plateau. This traffic exits state routes and travels through Auburn to avoid congestion on the State Highway System. This is evidenced by increases in traffic counts within the City that clearly exceed that which might be expected through anticipated growth and development patterns outlined in the City's land use plan. The City may implement measures that encourage local traffic movements and discourage cut-through traffic.



## 2.3 Future Street System

### METHODOLOGY FOR EVALUATING FUTURE SYSTEM

#### TRAVEL FORECASTS

##### HOUSING AND EMPLOYMENT GROWTH

Auburn has grown rapidly during the past decade, and housing and employment are expected to continue to increase significantly by 2030, with the population reaching over 128,000 residents, as shown in Figure 2-5. Much of the housing growth will come from higher density re-development in the downtown area and the rapidly growing Lakeland Hills and Lea Hill areas.

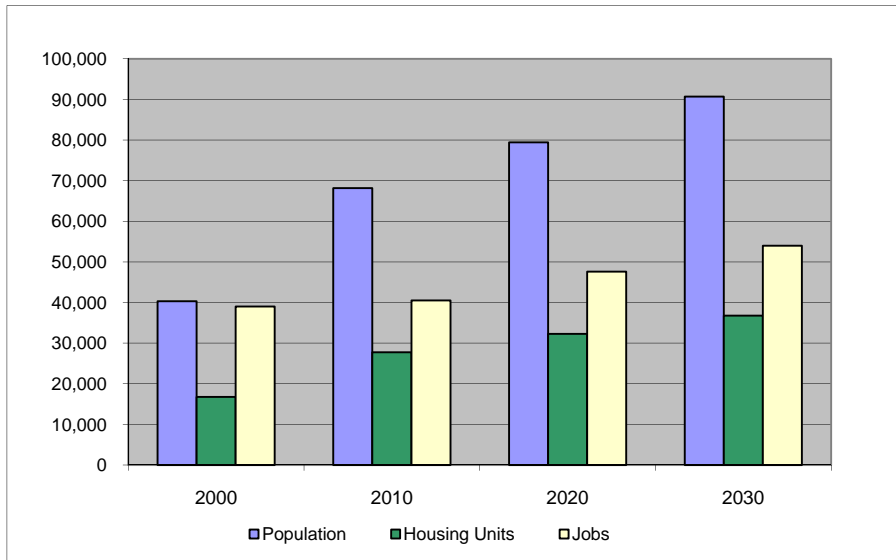
##### TRAFFIC GROWTH

The City of Auburn relies on traffic forecasts using the VISUM travel demand model, which is based upon the land use plan and assumptions found in the land use element of the Comprehensive Plan. Puget Sound Regional Council (PSRC) household and employment forecasts are also used. The model is calibrated to include existing land uses and local knowledge, including large traffic generators such as the Supermall of the Great Northwest, the Emerald Downs Thoroughbred Racetrack, and the Muckleshoot Indian Casino.

Areas outside of the current city limits that are expected to significantly impact the City transportation system are included in the model. The model enables the City to conduct traffic forecasts for all arterial and collector streets based upon a number of if-then development and land use scenarios.

The more dramatic traffic increases are often caused by development outside the City, especially along the roadways serving the Enumclaw Plateau. Other areas of major traffic increase include A Street SE, M Street SE, and the West Valley Highway.

**Figure 2-5. Population, Housing, and Job Growth  
FOR CITY OF AUBURN 2000 – 2030**



- 1 – Population and housing data for 2000 taken from US Census.
- 2 – Population and housing projection for 2010, 2020 and 2030 from City of Auburn
- 3 – Covered employment data and estimates derived from PSRSC.

## THREE SCENARIOS:

### FUTURE STREET NETWORK

In order to address the growing traffic volumes and congestion levels on city streets by 2030, three alternative roadway improvements scenarios were examined:

- **Project Group A:** Programmed Projects: Includes projects in the City's Transportation Improvement Program.
- **Project Group B:** Future City Street Projects beyond the shorter range Transportation Improvement Program.
- **Project Group C:** Regional Transportation Projects on State highways or adjacent jurisdictions' roadways that impact Auburn.

Each of these project group alternatives is described below and shown in Figure 2-6.

#### Project Group A - Programmed Projects

Project Group A is the baseline group of projects and consists primarily of the projects programmed in the City's TIP and in the State Highway Program. The projects include several city street widening and connection projects. See Figure 2-6 for project locations shown in red on the map.

This includes a project programmed in the TIP that is not included in the model: the crossing of the BNSF Rail yard at either 6<sup>th</sup> Street SW or 15<sup>th</sup> Street SW. This is discussed in more detail in the Future System Recommendations section of this chapter and will likely be included in future model runs and updates to this plan.

#### Project Group B - Future City Street Projects

Project Group B assumes completion of and builds upon the projects in Project Group A by adding more city street improvements in highly congested areas. Many of these projects were identified as a result of public outreach efforts

held in West Hill and Lea Hill after those areas were annexed into the City. Potential projects that were identified through the public outreach were evaluated against the 2030 level-of-service results of Project Group A. Additional project were identified to remedy predicted level-of-service deficiencies identified by the City's traffic demand model (Visum). The street improvements shown with blue project numbers in Figure 2-6 include street widening projects or spot improvements throughout the City. The spot improvements consist of intersection channelization and traffic signal timing projects to improve traffic flow. Another future project with significant area wide impacts is the addition of the Auburn Bypass connecting SR 18 to Auburn Way South. There are two potential alignments for the bypass route as indicated in the draft *Bypass Feasibility Report* (September 2009), a partnership between WSDOT, the City of Auburn, the Muckleshoot Indian Tribe, and other regional partners. Numerous issues were considered as part of this study, including environmental impacts. Although a preferred alternative will be developed as part of a future environmental process, for the development of this plan, the alternative alignment modeled had the Bypass Road connecting to Hwy 18 east of R Street and used the existing Dogwood Street alignment to connect to Hwy 18.

The Future City projects are shown in blue on Figure 2-6.

#### Project Group C - Regional Transportation Projects

Project Group C assumes completion of and builds upon the projects in Project Groups A and B. This group contains projects focused on the addition of major regional roadway improvements. As shown in green in Figure 2-6, the projects include completing the interchange of SR 18 at SR 167 (and eliminating access to/from SR 18 at West

Valley Highway), adding one general purpose lane in each direction to SR 167 from SR 18 to I-405, and extending High Occupancy Toll (HOT) lanes on SR 167 to SR 16, and widening of SR 164 to Academy Drive, and the addition of the Auburn Bypass connecting SR 18 to Auburn Way South. The projects shown in green on the map are State/Regional projects and are therefore not currently programmed in the City's TIP.

Table 2-3 summarizes the street projects included in each of the three project groups, along with planning level cost estimates. Figure 2-6 a map identifies the location of each project, as well as the group it is included in.

### **Additional Projects – Not Identified in Project Groups A, B, or C**

In addition to the projects identified in Table 2-3, four intersections outside of the City were identified as potential level-of-service concerns during the public outreach and modeling processes. While the following intersections have not been analyzed in detail because they are situated outside of Auburn's jurisdiction, they should be evaluated by the appropriate jurisdiction and programmed for improvements as needed.

- 51<sup>st</sup> Avenue S & South 316<sup>th</sup> Street
- S. 321<sup>st</sup> Street & 46<sup>th</sup> Place
- S. 321<sup>st</sup> Street and Peasley Canyon Road
- West Valley Hwy and Peasley Canyon Rd.

Also, there is an intersection project that was not modeled, but would provide a significant benefit to reliability and traffic flow associated with the am drop-off at Rainer Middle School. Currently, 116<sup>th</sup> Ave SE around Rainer Middle School becomes very congested due to the difficulty clearing the roadway of southbound vehicles in the a.m. 116<sup>th</sup> Avenue SE needs to be widened 3-4 feet in the southbound direction at Lea Hill Road to allow for a

dedicated right turn lane. This will help relieve congestion associated with the drop-off period at Rainier Elementary School.

**Table 2-3. Future Roadway Capacity Improvement Projects and Cost Estimates**

Map. No.	Location (corridor and segment)	Description	Total Cost (2012 dollars)
<b>Project Group A - Programmed Projects</b>			
1	<b>S. 277th Street</b>	Install 1 new lane WB and 2 new lanes EB (widen to 5 lanes total) and install a Class 1 trail	\$7,647,300
	AWN to Green River Bridge		
2	<b>D Street NW</b>	Construct 4 lane arterial	\$6,000,000
	37th Street NW to 44th Street NW		
3	<b>I Street NE Corridor</b>	Construct 5 lane arterial	\$6,760,000
	45th Street NE to 52nd Street NE		
4	<b>A Street NW Phase 1</b>	Construct multi-lane arterial	\$8,600,000
	3rd Street NE to 14th Street NW		
5	<b>A Street NW Phase 2</b>	Construct multi-lane arterial	\$3,300,000
	W. Main Street to 3rd Street NW		
6	<b>M Street Grade Separation</b>	Grade separated railroad crossing	\$22,500,000
	3rd Street SE to 8th Street SE		
7	<b>BNSF Yard Grade Separation</b>	Construct road across BNSF yard	\$32,000,000
	location to be determined		
8	<b>F Street SE</b>	Widen to 3 lanes and bike lanes and parking	\$2,500,000
	4th Street SE to Auburn Way South		
9	<b>M Street NE</b>	Widen to 4 lanes	\$1,475,000
	E Main Street to 4th Street NE		
10	<b>8th Street NE</b>	Add EB lane to south side of 8th Street NE	\$1,450,000
	Pike to R Street NE		
11	<b>49th Street NE</b>	Construct multi-lane arterial connection	\$3,350,000
	Auburn Way North to M Street NE		



Project Group A - Programmed Projects (Cont.)			
12	8th Street NE	Redesign intersection, add an eastbound U-turn.	\$392,000
	at 104th Ave SE		
13	Auburn Way South	Add WB to NB right turn lane	\$1,100,000
	at M Street SE		
14	124th Ave SE Corridor Phase 1	Widen to 4 lanes and bike lanes	\$1,950,000
	SE 318th Street to SE 312th Street		
15	124th Ave SE Corridor Phase 2	Intersection capacity improvements	\$1,250,000
	124th Ave SE and SE 312th Street		
16	124th Ave SE Corridor Phase 3	Intersection capacity improvements	\$850,000
	124th Ave SE and SE 320th Street		
17	SE 320th Street	Widen to 3 lanes and bike lanes	\$690,000
	124th Ave SE to GRCC west end		
18	East Valley Highway	Add ITS system	\$800,000
	41st Street SE to Lake Tapps Parkway		
19	Auburn Way South	Widen to 5 lanes and signalize Hemlock Street SE	\$2,332,000
	Fir Street to Hemlock Street		
20	M Street SE Corridor	Construct multi-lane corridor	\$6,675,000
	8th Street SE to Auburn Way South		
21	29th Street SE	EB/WB dual left turn lanes and pedestrian safety improvements	\$1,800,000
	at R Street SE		
22	Auburn Ave NE	Improve lane design and improve pedestrian access	\$915,000
	at 3rd Street NE		
Subtotal for Project Group A			\$114,336,300

Project Group B - Future City Street Projects			
23	<b>Lea Hill Road Segment 1</b>	Widen to 2 lanes each direction including widening of the Green River Bridge. Includes bike lanes and sidewalks.	\$24,700,000
	R Street NE to 104th Ave SE		
24	<b>Lea Hill Road Segment 2</b>	Widen to 2 lanes each direction. Includes bike lanes and sidewalks.	\$11,400,000
	104th Ave SE to 112th Ave SE		
25	<b>Lea Hill Road Segment 3</b>	Widen to 2 lanes each direction. Includes bike lanes and sidewalks.	\$3,575,000
	112th Ave SE to 124th Ave SE		
26	<b>S 312th Street</b>	Add NB right turn lane, EB right turn lane, WB left turn lane, and signal. Provide sidewalks and bike lanes on all legs.	\$1,720,000
	112th Ave SE		
27	<b>112th Ave SE</b>	Extend road to Lea Hill Road. Include sidewalks and bike lanes both sides.	\$6,500,000
	SE 310th Street to Lea Hill Road		
28	<b>SE 304th Street</b>	Add signal and NB left turn lane. Include sidewalks and bike lanes both sides.	\$1,300,000
	112th Ave SE		
29	<b>GRCC On-site Improvements</b>	If it will show in model, construct 750' 3-lane section at GRCC entrance with 2 entrance lanes, one exit lane plus a right turn exit pocket onto 124th NB. Bike lanes and sidewalks included.	\$300,000
	GRCC Entrance		
30	<b>GRCC Improvements at 124th Ave SE</b>	Construct 500' section from SE 320th to SE 318th Way with three SB lanes and one NB lane. The southbound lanes will be two left turn into GRCC and one right turn onto SE 320th. Bike lanes and sidewalks included.	\$510,000
	SE 318th Street to SE 320th Street		
31	<b>SE 284th Street / SE 288th Street</b>	Construct new collector linking 284th Street at 124th Ave. to 288th Street at 132nd Ave. Road will be one lane each direction with bike lanes and sidewalks.	\$7,700,000
	124th Ave SE to 132nd Ave SE		

Project Group B - Future City Street Projects			
32	<b>A Street Loop</b>	Add one-way (EB) road with unsignalized free right turn at A Street SE. Include sidewalks both sides of new road.	\$1,700,000
	A Street SW to A Street SE		
33	<b>A Street SE / C Street SW</b>	Coordinate signals at A and C Street together. At A Street, add additional WB thru lane; At C Street, restripe to allow SB left turn lane. Include sidewalks on all legs of both intersections.	\$1,500,000
	Ellingson Road		
34	<b>West Valley Highway</b>	Widen to 2 lanes each direction, and include sidewalks both sides; Between Main Street and SR 18, add bike lanes both sides or non-motorized trail on one side.	\$16,000,000
	37th St NW to north City limits, and 15th St SW to SR 18		
35	<b>Auburn Way South Bypass</b>	Construct an Auburn Way South Bypass between Riverwalk Drive and R Street SE with new connection to SR 18 at R Street SE.	\$60,450,000
	Riverwalk Drive to SR 18 at R Street SE		
36	<b>51st Ave S</b>	Provide protected SB left turn phase and signal and SB left turn lane; Include bike lanes and sidewalks on all legs.	\$1,400,000
	S 296th Street		
37	<b>108th Ave SE / 112th Ave SE</b>	Realign / improve radius at doglegs (SE 281st St.) for safety, and realign intersecting streets to improve site distances. Widen to 4 lanes north of 284th St. At 286th St, widen to allow for turn pockets. Include bike lanes and sidewalk both sides of 108th/112th.	\$7,700,000
	S 277th Street to S 286th Street		
Subtotal for Project Group B			\$146,455,000
Total Groups A and B			\$260,791,300

Project Group C - Regional Transportation Projects			
38	<b>SR 164</b>	Widen road to two lanes each direction plus a center two-way left turn lane. Upgrade the intersection of Auburn Way South and Dogwood St to accommodate Bypass traffic.	\$61 M
	Hemlock to Academy		
39	<b>SR 167</b>	From I-405 to SR 18, add one NB and one SB general purpose lane; From SR 18 to SR 161, add one NB HOT lane and one SB HOT lane; Add direct NB/SB HOV/HOT lane connection ramps between SR 167 and I-405; Add NB and SB auxiliary lanes between I-405 and S 180th Street; Add NB and SB auxiliary lanes between SR 516 and S 277th Street; Extend SR 167 from SR 161 to SR 509	\$4.4 B
	I-405 to SR 509		
40	<b>SR 18</b>	Complete ramp from EB SR 18 to SB SR 167 and eliminate SR 18 access from West Valley Highway near Peasley Canyon.	Included in Project 40
	at SR 167		
41	<b>SR 167</b>	Add HOV lane each direction	\$120 million (State Funded)
	15th Street NW to 8th Street E		
42	<b>Stewart Road</b>	Widen to 2 lanes each direction and center turn lane in the Cities of Sumner and Pacific. Includes widening of the White River bridge.	\$40,000,000
	SR 167 to East Valley Highway		
43	<b>51st Ave S</b>	Add signal	\$490,000
	S 288th Street		



## ***FUTURE LEVEL OF SERVICE***

Each of the roadway improvement project groups was evaluated with a generalized level-of-service methodology using the VISUM software. This methodology produces an estimate of corridor LOS based upon the p.m. peak hour speeds along each roadway segment within a corridor. This methodology is consistent with, but not as detailed as, the LOS methodology used by the City to examine concurrency requirements. However, the modeled results provide a good measure with which to compare the relative transportation benefits associated with each of the project groups. Table 2-4 shows the LOS side-by-side for the three project group alternatives.

### **Project Group A**

Project Group A contains committed City roadway projects that are expected to be implemented in the future. Some of the projects are completely funded. The City is actively seeking funding for the other projects on the TIP and in the CFP. While these projects will have beneficial effects on traffic flow in the near future, by the year 2030 there will be considerable traffic congestion on the city street system, even with these improvements. Much of this congestion will be due to the growth in traffic on city streets created by new development in adjacent jurisdictions. Most of the principal and minor arterial routes within the City will experience moderate or high congestion levels in 2030 with Project Group A improvements only. Nine of the 42 established corridors will not meet their LOS standard by implementing Project Group A only.

### **Project Group B**

Project Group B adds more city street widenings and spot improvements to Project Group A to address some of the most heavily congested roadways. These projects will improve the LOS in the Lea Hill neighborhood

(such as 8<sup>th</sup> Street / Lea Hill Road) and along portions of 29<sup>th</sup> Street E, Riverwalk Drive, R Street, S 277<sup>th</sup> Street, and 3<sup>rd</sup> Street SW / Cross Street., R. In most of these situations, the LOS will improve but still remain at moderate to high congestion levels.

Five of the 42 established corridors will not meet their LOS standard by implementing only Project Groups A and B.

### **Project Group C**

Recognizing that city street improvements alone are unlikely to solve the City's future traffic congestion, Project Group C considers the effects of implementing regional transportation capacity improvements on SR 167 and SR 164 in addition to Group A and B projects. Project Group C also includes the potential bypass that would provide a direct link in east Auburn between SR 18 and SR 164.

These regional projects would provide substantial congestion relief along key Auburn streets, such as West Valley Highway (south of SR 18), A Street SE and C Street SW (both south of SR 18), Auburn Way South and, W Main Street. More traffic would remain on the state highways rather than city streets, while the bypass route would reduce congestion along much of Auburn Way South and M Street SE.

Despite the improvements resulting from Project Groups A, B, and C, traffic congestion in 2030 would persist on several city arterial and collector corridors. The City will closely monitor these corridors and examine further actions that might be appropriate.

Four of the 42 established corridors will not meet their LOS standard under Alternative 3, but many of them do show some improvement.

**Table 2-4. Future Project Groups - P.M. Peak Hour LOS in 2030**

ID	Corridor	From	To	Group A	Groups A & B	Groups A, B, & C
1	Auburn Way North	15th St NE	Northern City Limits	C	C	B/C*
2	Auburn Way North	East Main St.	15th St NE	C	C	C
3	Auburn Way South	East Main St.	M St SE	E	E	D
4	Auburn Way South	M St SE	Eastern City Limits	F	F	C/F
5	M St./Harvey	Auburn Way North	East Main St.	D	D/E	D/E
6	M St./Harvey	East Main St	Auburn Way South	D/E	D/E	C/E
7	Evergreen Way	Lakeland Hills Way	Kersey Way	A	A	A
8	37th St NE/NW	West Valley Hwy	I St. NE	C/D	C	C
9	15th St NE/NW	West Valley Hwy	Auburn Way North	C/D	C/D	C/D
10	Auburn Ave / "A" St	SR 18	Southern City Limits	D	D	C
11	Main St	West Valley Hwy	R St	C	C	D/C
12	15th St SW	West Valley Hwy	C St SW	F/E	F/E	F/E
13	C St SW	Ellingson	SR 18	D	D	B/D
14	West Valley Hwy	Northern City Limits	15th Street NW	B/D	B/D	B/D
15	S 277th St	Frontage Rd.	108th Ave SE	D	C	C
16	R St./Kersey Way	Auburn Way S.	Oravetz Road	D/E	C/D	C/D
17	Lake Tapps Parkway	East Valley Hwy.	182nd Ave E	B	B	B
18	"A" St SW/NW/ "B" St NW	4th St NW	S 277th St	B/C	B/C	B/C
19	8th St NE/Lea Hill Rd.	Auburn Way North	132nd Ave SE	F/E	E/D	E/D
20	D St NW/Emerald Downs Dr	S 277th St	15th St. NW	B	B	B
21	I St NE	S 277th St	Harvey Rd	B/C	B/C	C
22	132nd Ave SE	SE 282nd St	SE 312th St	B/D	C	C
23	124th Ave SE	SE 282nd St	SE 320th. St	D	C/B	C/B
24	104th Ave SE/SE 304th St	8th St NE	132nd Ave SE	C	C	C
25	105th Pl SE/SE 320th St	Lea Hill Road	124th Ave SE	D	C	C
26	Lakeland Hills Way SE	Lake Tapps Parkway	Oravetz Rd	A	A	A
27	29th St SE/Riverwalk Dr.	A Street SE	Auburn Way South	E/C	D/C	C
28	108th Ave SE/112th Ave. SE	S 277th St	SE 304th St	C/F	A/D	A/D
29	49th St NW	B St NW	S 277th St	D/C	D/B	C/B
30	R Street SE**	8th St NE	4th Street SE	B/A	C/A	C/A
31	3rd St SW/Cross St	C Street	Auburn Way South	D/C	C/B	C/B
32	17th St SE	A St SE	Auburn Way South	B	B	B
33	41st St SE/Ellingson Rd	A St SE	Western City Limits	E/C	E/C	E/C
34	Lakeland Hills Way/Oravetz	East Valley Hwy	Kersey Way	B	B	B
35	West Valley Hwy	15th Street NW	Southern City Limits	E	E	E/C
36	Kersey Way	Oravetz Road	Southern City Limits	A/B	A/B	B
37	S. 316th Street/Terrace Drive	West Valley Highway	Western City Limits	B/C	B/C	B
38	S. 296th Street/65th Ave	West Valley Highway	Western City Limits	C	C	C
39	51st Ave S.	S. 288th Street	Peasley Canyon Rd	D	D	D
40	S. 284th Street	112th Ave SE	124th Ave SE	C	C	C
41	S. 284th Street	124th Ave SE	132nd Ave SE	n/a	C	C
42	R St. Bypass/Black Diamond	M Street SE	SR 18	F/D	F/D	F/D

\* Split LOS indicates directional LOS in either the East-West or North-South direction. If there is no split, the LOS is the same in both directions.

\*\* Corridor 30 assumes R Street terminates at 4th Street SE and does not connect to R Street Bypass Road.

## FUTURE SYSTEM RECOMMENDATIONS

### FUTURE STREET IMPROVEMENTS

The proposed future street plan consists of a combination of city street and regional transportation improvements, described in Table 2-3 and shown in Figure 2-6. The City cannot adequately solve traffic congestion by making city street improvements alone. Partnerships with WSDOT, King and Pierce Counties, and other agencies are essential to implementing the future street system in Auburn. The following actions are proposed:

1. Implement street projects prioritized in the City's TIP and CFP;
2. Program and seek additional funding for street capacity projects not currently identified in the TIP and CFP; and
3. Work collaboratively with WSDOT and other partner agencies to implement roadway improvements on the regional highway network.

### **DOWNTOWN CIRCULATION PLAN**

Auburn's Downtown is undergoing considerable growth and transition to a higher density, mixed use town center. Major development including expansion of the Auburn Regional Medical Center and related businesses is occurring to the north of Main Street. Along Main Street and to the south, commercial, residential, and office development is planned.

The transformation of downtown Auburn will include many changes to the public right-of-way and streetscape. A *Downtown Circulation Plan* will be developed to accommodate the many types of travelers that will be using downtown streets including pedestrians, bicyclists, transit users, truck operators, and personal vehicle users. An improved pedestrian and bicycle environment will need to be designed into the fabric of downtown Auburn.



*West Main Street, Downtown Auburn*

At the same time, there are several major north-south corridors which run through the downtown, so accommodation for high volumes of vehicular travel and the potential repercussions of modifying the existing street system will need to be considered in the development of the *Downtown Circulation Plan*.

### **ENVIRONMENTAL PARK DISTRICT**

In the vicinity of the Environmental Park, to the west of downtown Auburn, the City is looking at establishing low impact roads and projects that add sidewalks, trails, and additional connectivity between Clay Street and Western Avenue. This area will be examined in more detail for transportation improvements as the concept for the Environmental Park District is further refined.

### **41<sup>ST</sup> STREET SE/ELLINGSON ROAD BETWEEN A STREET SE AND C STREET SW**

The area around 41<sup>st</sup> Street SE/Ellingson Road between A Street SE and C Street SW continues to be a chokepoint for Auburn drivers. This plan identifies some intersection improvements at the intersections of A and 41<sup>st</sup> Streets SE and C Street SW and Ellingson Road that will help to some degree. Still the close spacing of these two intersections, coupled with the numerous business and residential accesses in the area warrant a more in depth study of the area. This study will likely also include the entire A Street SE and C Street

SW corridors, including evaluation of the two BNSF railyard crossing projects discussed below. The results of the 41<sup>st</sup> Street SE/Ellingson Road study will be incorporated into a future update of this plan.

## **6<sup>TH</sup> STREET SE & 15<sup>TH</sup> STREET SW RAIL YARD CROSSINGS**

The City has identified two additional projects that were not modeled in the future roadway improvement scenarios; a BNSF rail yard crossing at 6<sup>th</sup> Street SE and one at 15<sup>th</sup> Street SW, both of which would connect C Street SW and A Street SE via a grade-separated crossing.

The City anticipates only one of the two projects will be necessary to accommodate the 2030 traffic demand. There are a variety of criteria that will enable the City to evaluate which project is ultimately chosen as the preferred alternative, including development of the BNSF property as a multi-modal rail yard, commercial development on Auburn Way South and A Street SE, development of the GSA property, funding feasibility, neighborhood impacts, transportation impacts, and engineering feasibility. Since these projects were not considered in the 2030 traffic model, it is difficult to access the projects' impacts. However, it is expected both projects would increase east-west mobility in Auburn. The 15<sup>th</sup> Street crossing would also lead to considerable increases in traffic across the Terminal Park neighborhood.

## **TRANSPORTATION SYSTEM MANAGEMENT**

Transportation system management (TSM) techniques, which make more efficient use of the existing transportation system, can reduce the need for costly system capacity expansion projects. These techniques can also be used to improve LOS when travel corridors approach the adopted LOS standard. TSM techniques used by the City include:

- Rechannalization/restriping, adding turn lanes, adding /increasing number of through lanes;
- Signal interconnect and optimization;
- Turn movement restrictions;
- Access Management; and
- Intelligent Transportation Systems (ITS).

The City will continue to use these TSM techniques to maximize the efficiency of the street network. Of the various TSM strategies available, ITS is a relatively new technology being implemented by the City as a cost effective means of increasing system capacity. The ITS system enables the City to change traffic signals in real-time, thereby handling unusual increases in traffic or traffic obstacles such as event related traffic and accidents. For example, ITS has proven successful in mitigating the impact of event traffic traveling south on Auburn Way South, often during the PM peak, to the White River Amphitheatre. The City will continue to roll out ITS capabilities on corridors around the City, as referenced in Figure 2-7 and detailed in the ITS policies found in Chapter 5.

In addition to TSM strategies, the City strives to provide viable alternatives for travelers, to ensure freedom of choice among several transportation modes, including transit, biking and walking as alternatives to the automobile. The City will prioritize the development of pedestrian-friendly environments such as bicycle routes and pedestrian paths as the non-motorized system expands.

## **TRANSPORTATION DEMAND MANAGEMENT**

Reducing congestion includes strategies to reduce demands on the transportation system. The State of Washington emphasized the importance of transportation demand management (TDM) by adopting the Commute Trip Reduction law 15 years ago. That law requires all major employers, with over 100



employees arriving between the hours of 6:00 and 9:00 AM, to develop programs and strategies to reduce the number of commuter automobile trips made by their employees. Transportation demand management reduces demand on the street system. While TDM and TSM employ a different suite of strategies, they share many of the same benefits. Both increase the efficiency of the transportation system, reduce the need for costly capacity expansions, help improve LOS, and contribute to an enhanced quality of life for those who use and benefit from the transportation system. TDM strategies include:

- ride-sharing through vanpools and carpools;
- preferential parking for high-occupancy vehicles;
- car sharing programs;
- transit use incentives;
- parking management to discourage single occupant vehicle (SOV) travel;
- telecommuting;
- alternative work schedules to compress the work week or shift the commute outside the typical commute hours; and
- urban design encouraging non-motorized travel through design features.

The City of Auburn will continue to encourage drivers of single occupancy vehicles to consider alternate modes of travel such as carpools, vanpools, transit, non-motorized travel, and alternative work schedules.

## STREET MAINTENANCE & REHABILITATION

The City is responsible for maintaining the physical structure of the roadway system. However, pavement maintenance is costly, and sufficient funds are generally not readily available. Recognizing this dilemma, Auburn residents approved Proposition 1, the “Save Our Streets” (SOS) Program, in November

2004. The SOS program creates a dedicated local street fund for repair, rehabilitation, and maintenance of local roadways.



***SOS Program - Before Pavement***



***SOS Program – Crack Seal***



***SOS Program - Asphalt Overlay***

The City plans to create a similar program to establish a dedicated fund for the repair and maintenance of arterials and collectors. The City arterial and collector systems have been subjected to significant wear for years, with few mechanisms available to the City to fund repairs. Hence, the City will be seeking the support of residents, businesses, and state lawmakers to establish a fund to repair these corridors. As repairs are made, the City will be attentive to corridors with substantial freight and bus traffic. These corridors will be retrofitted, whenever possible, with design and construction features that accommodate truck and bus travel, such as thicker pavement and wider curb radii.

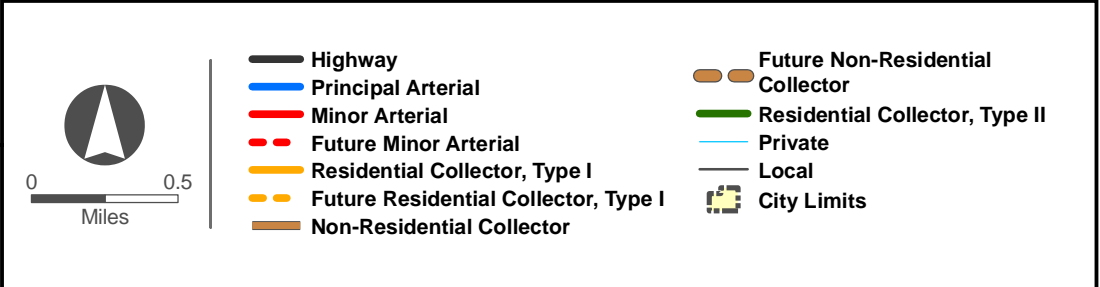
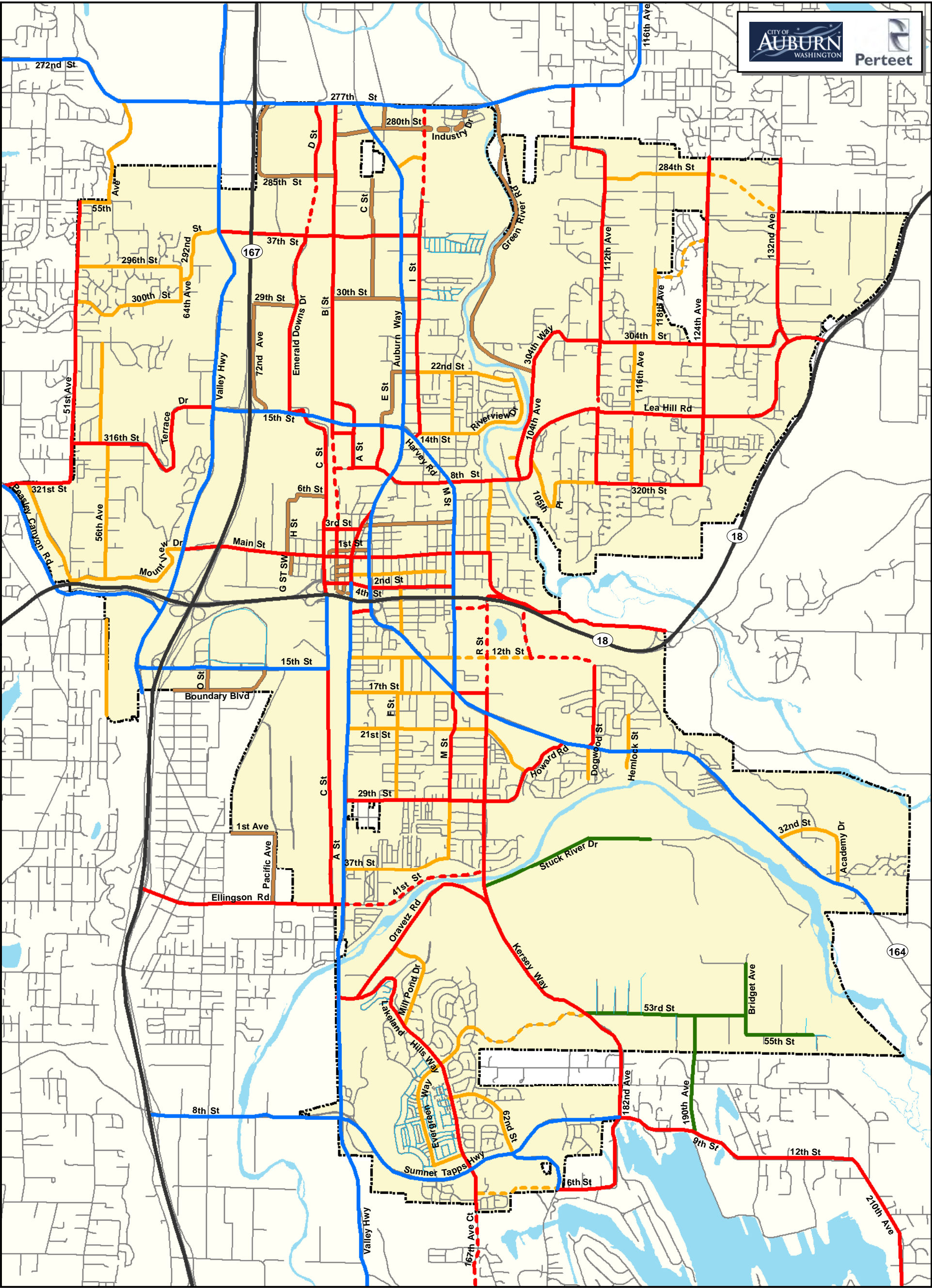
## NEIGHBORHOOD NEEDS

Transportation systems and facilities can have adverse impacts on neighborhoods. Impacts include safety problems due to speeding vehicles and increasing traffic volumes, increased traffic resulting from drivers seeking alternate routes to congested arterials, and the resulting air and noise pollution. Neighborhoods throughout the City are concerned with these traffic impacts and want to discourage traffic from using their streets for cut-through traffic.

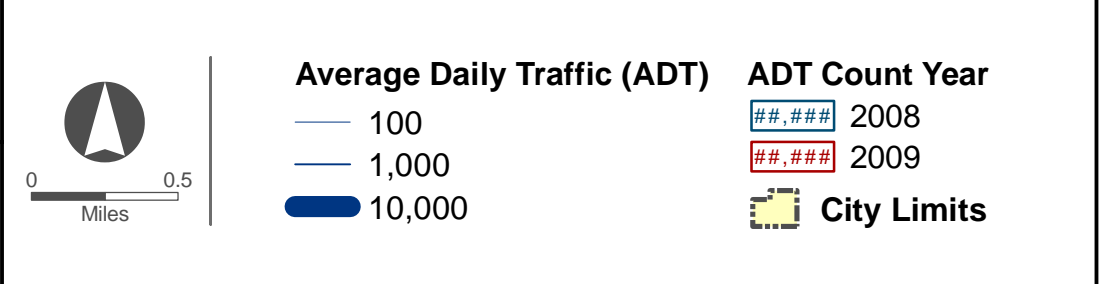
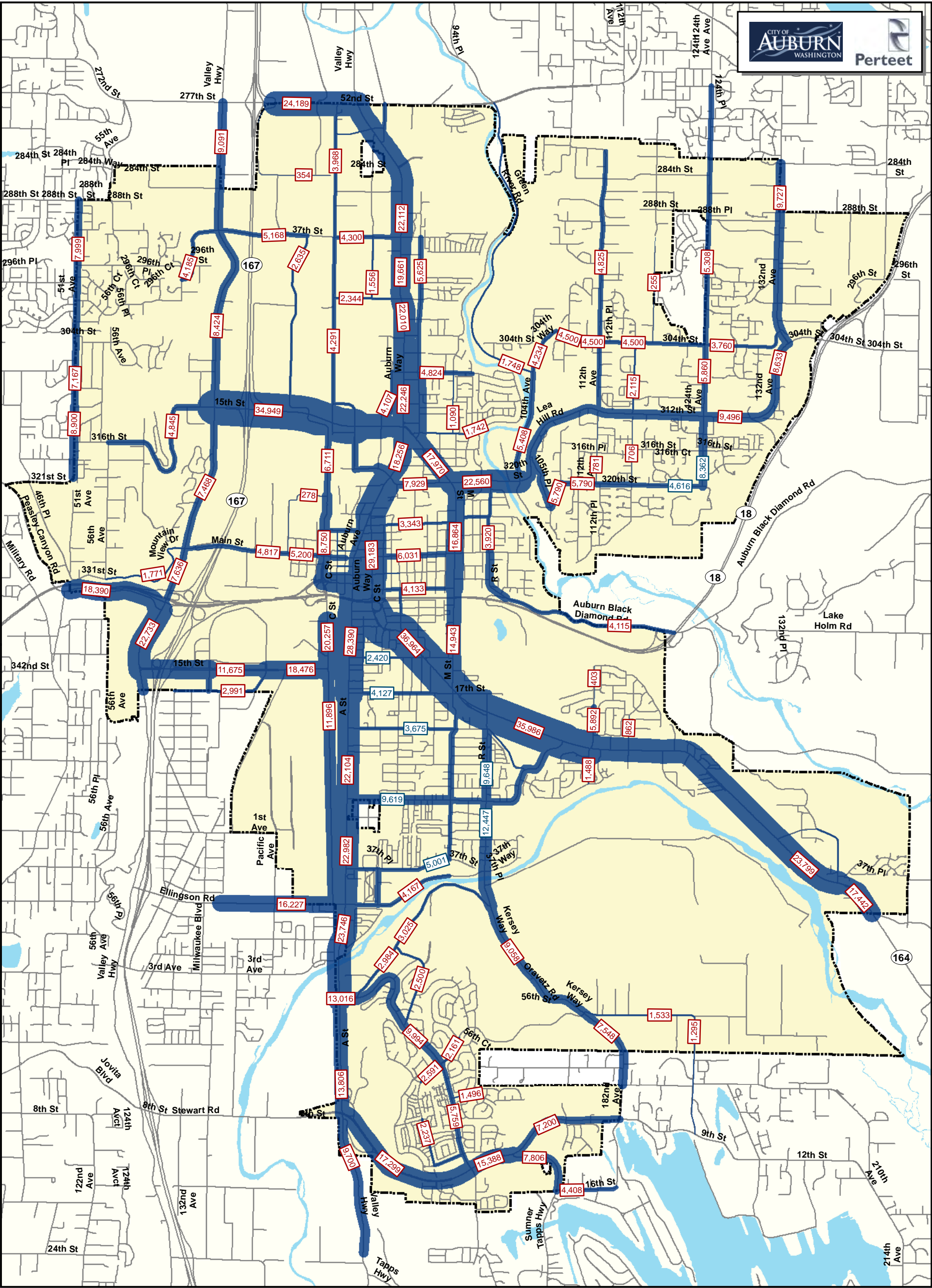
City policies discourage through traffic in neighborhoods. The City also has a traffic calming program that addresses the pedestrian, bicycle, and automobile traffic safety concerns that threaten neighborhoods. The traffic calming program is a community-based effort that helps alleviate traffic safety concerns for pedestrians, bicyclists, transit users, and motorists. The program raises public awareness of traffic safety issues and ways that people can help minimize traffic problems in their own neighborhoods.

## INTERGOVERNMENTAL COORDINATION

The Growth Management Act (RCW 36.70A.070) provides that comprehensive plans should include a discussion of intergovernmental coordination efforts, including “an assessment of the impacts of the transportation plan and land use assumptions on the transportation systems of adjacent jurisdictions.” Auburn works closely with neighboring cities, the Muckleshoot Indian Tribe, and state and regional agencies to ensure coordinated efforts are made in developing all modes of the transportation system. Among other efforts, the City of Auburn coordinates on both long-range planning efforts and ongoing development.

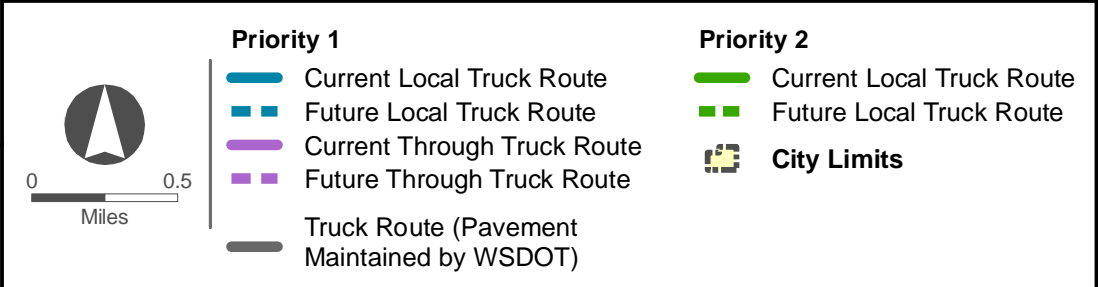
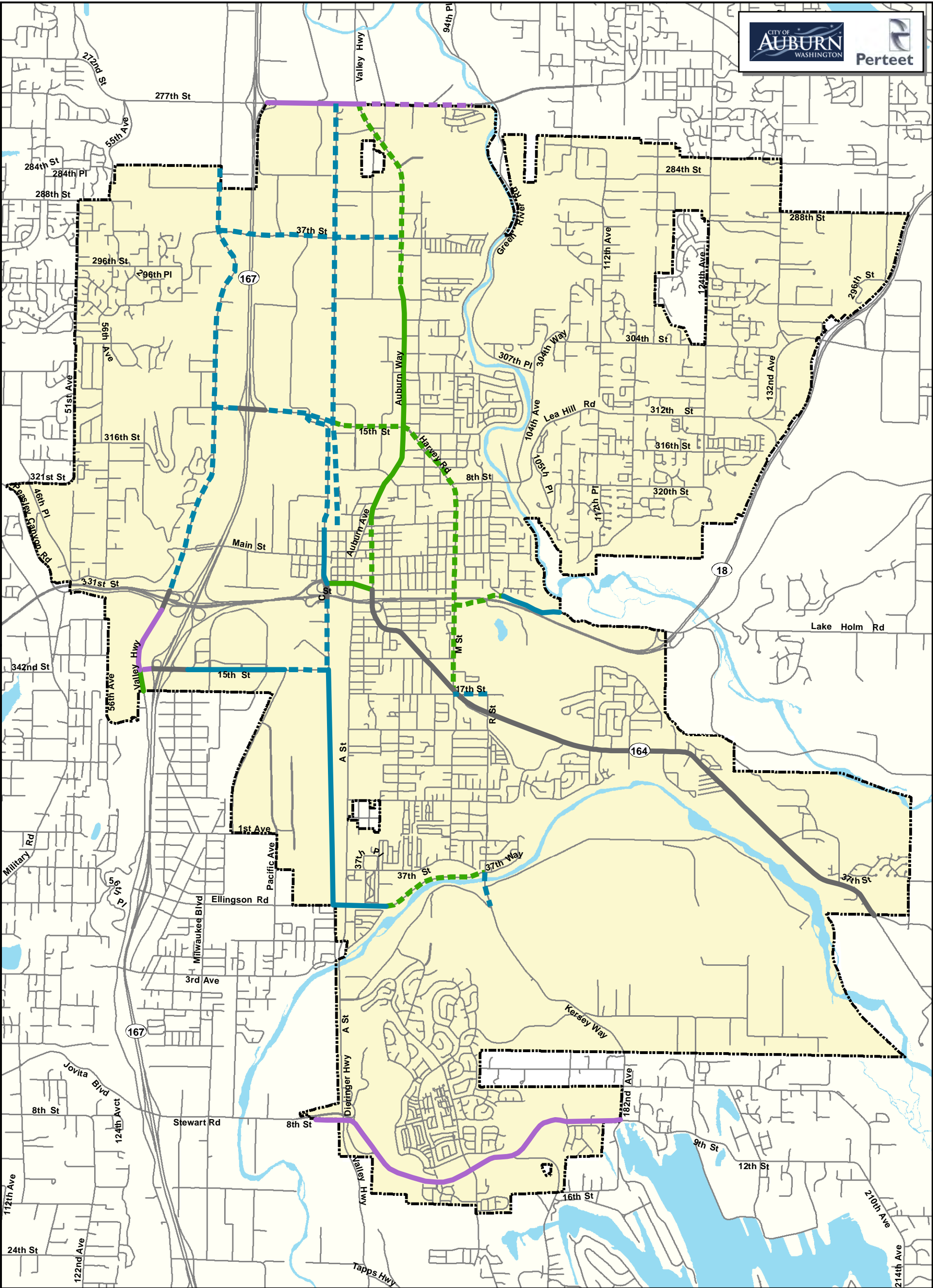




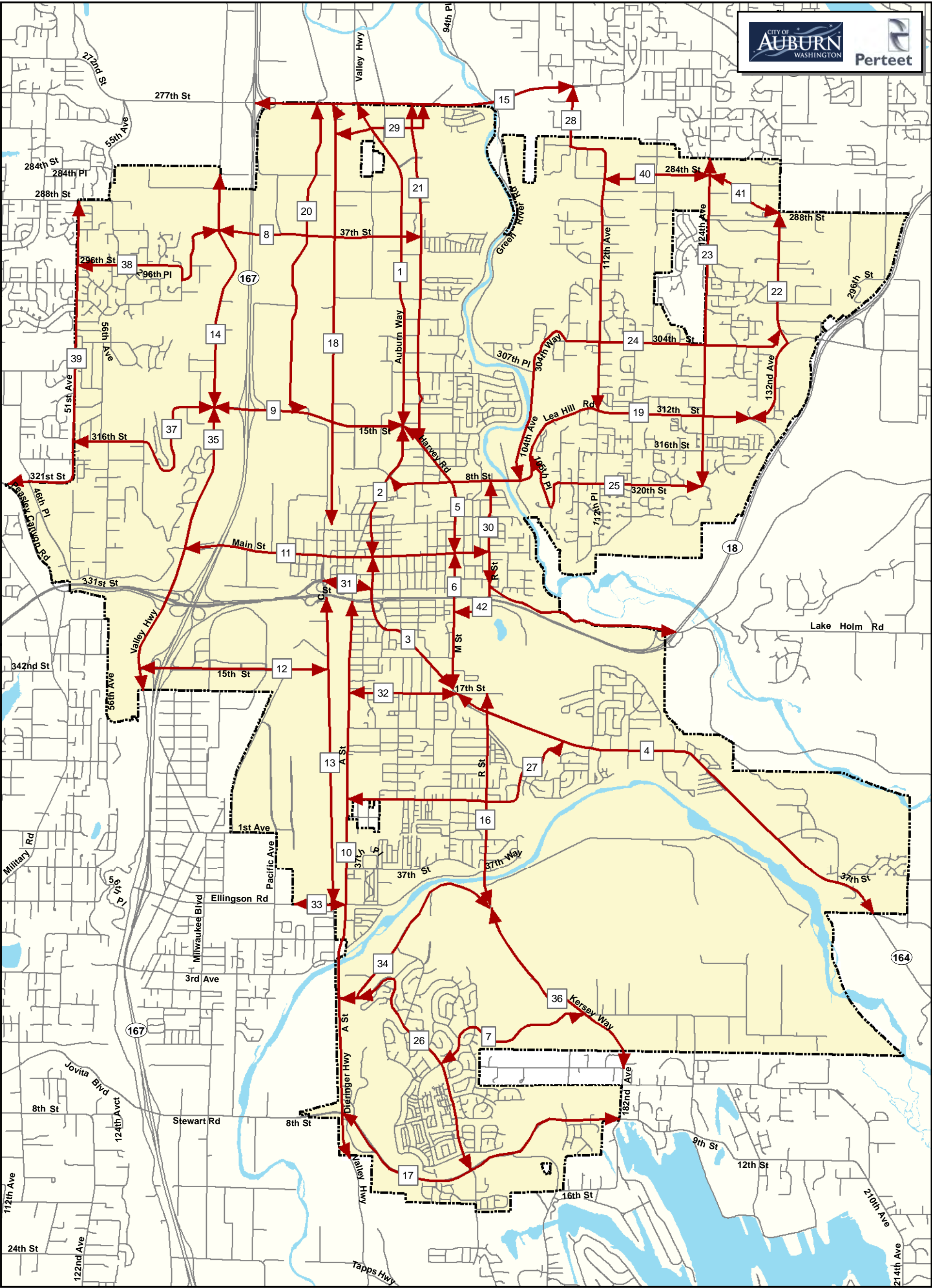


Auburn Transportation Plan  
Average Daily Traffic Volumes  
Figure 2-2

Sources: City of Auburn, King County







**Corridor Sections**

**City Limits**

**Auburn Transportation Plan**

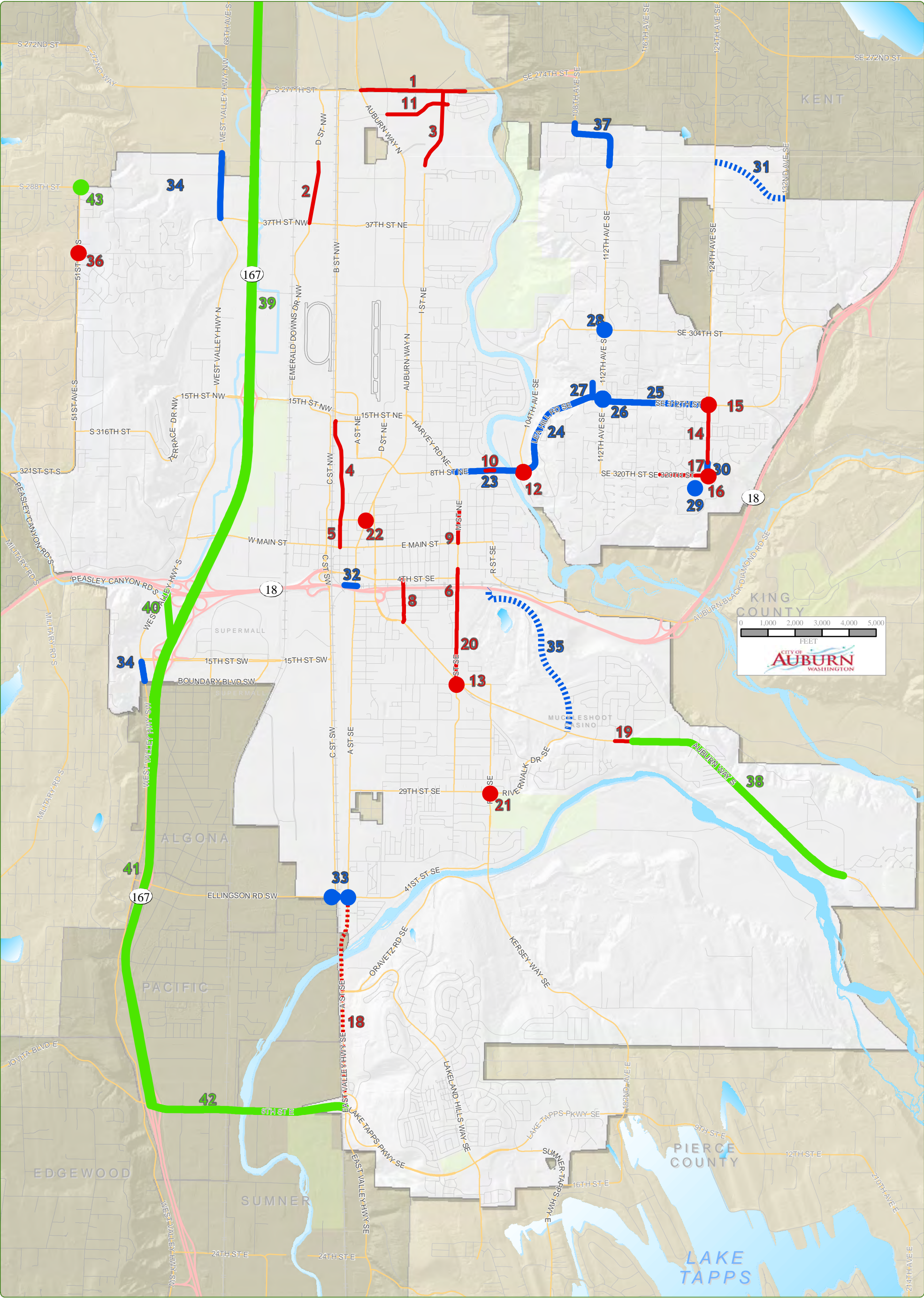
**Auburn Corridor**

**Section Map**

**Figure 2-4**

Sources: City of Auburn, King County





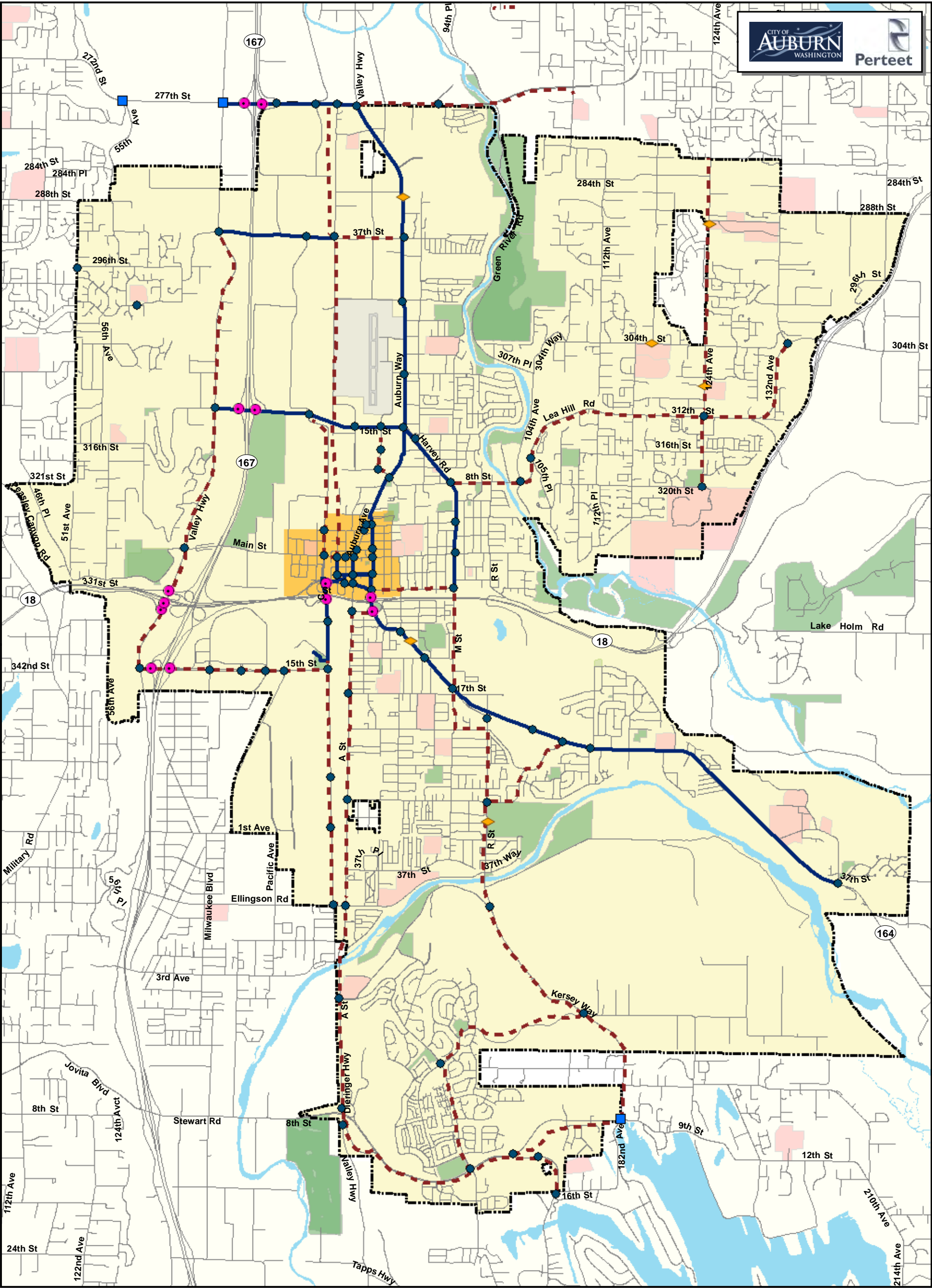
Auburn Transportation Plan  
Roadway Improvement Alternatives  
Figure 2-6

- |                  |                          |                 |                |
|------------------|--------------------------|-----------------|----------------|
| Hydrology        | Political Boundaries     | Projects        | Transportation |
| Streams          | City of Auburn           | Project Group A | Arterials      |
| Lakes and Rivers | Surrounding Cities       | Project Group B | Highways       |
|                  | King and Pierce Counties | Project Group C | Locals         |

Printed On: 7/25/2012  
Map ID: 4035

Information shown is for general reference purposes only and does not necessarily represent exact geographic or cartographic data as mapped. The City of Auburn makes no warranty as to its accuracy.





0 0.5  
Miles

● City Signal

◆ PED Signal

● WSDOT Signal

■ County Signal

— Existing ITS Corridor

- - Future ITS Corridor

▭ City Limits

Auburn Transportation Plan

Intelligent Transportation Systems

Figure 2-7

Sources: City of Auburn, King County