TRANSPORTATION ELEMENT

Prepared by Fehr & Peers (2015)

With support from:

Perteet Engineering

Henderson, Young, & Co.

EnviroIssues

List of Tables

Table 1-1. City of Edmonds Existing and Future Land Use Summary 222
Table 3-1. Miles of Roadway by Existing Federal Functional Classification 240
Table 3-2. Typical Roadway Level of Service Characteristics 249
Table 3-3. Level of Service Criteria for Intersections 251
Table 3-4. Roadway Level of Service Standards 252
Table 3-5. Existing PM Peak Hour Intersection LOS 253
Table 3-6. City of Edmonds Existing and Future Land Use Summary 257
Table 3-7. 2035 Intersection Level of Service 259
Table 3-8. High Collision Locations 264
Table 3-9 Recommended Roadway Improvements 265
Table 3-10 Changes in 2035 Intersection Level of Service with Proposed Roadway Improvements 269
Table 3-11. Prioritization Criteria for Roadway Projects 270
Table 3-12. Roadway Project Priority 271
Table 3-13. Prioritization Criteria for Walkway Projects 278
Table 3-14. Recommended Walkway Projects 281
Table 3-15. Pedestrian Level of Service Standards 283
Table 3-16 Existing and Recommended Bicycle Facilities 287
Table 3-17 Bicycle Level of Service Standards 289
Table 3-18. Community Transit Bus Routes 292
Table 3-19. Park-and-Ride Facilities Serving Edmonds 295
Table 3-20 Transit Priority Corridor Level of Service 297
Table 4-1. Costs of Transportation Projects 305
Table 4-2. Potential Transportation Revenues- Current Sources 311
Table 4-3. Potential Transportation Revenue- Additional Optional Sources 313
Table 4-4. Transportation Improvement Plan 2016-2035 314

Appendices

Appendix A – Goals and Policies Comparison Table
Appendix B – Roadway Functional Classifications and Inventory
Appendix C – Travel Model Transportation Analysis Zones
Appendix D– Walkway Project Ratings

Acronyms

ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
BRT	Bus Rapid Transit
CAC	Citizens' Advisory Committee
CIP	Capital Improvement Program
CTR	Commute Trip Reduction
DART	Dial-A-Ride Transit
ECDC	Edmonds Community Development Code
FHWA	Federal Highway Administration
FTE	full time equivalent
GMA	Growth Management Act
LID	Local Improvement District
LOS	level of service
mph	miles per hour
PRSC	Puget Sound Regional Council
RID	Roadway Improvement District
SEPA	State Environmental Policy Act
SP	Sidewalk Program
SR	State Route
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TAZ	transportation analysis zone
TBD	Transportation Benefit District
TIB	Transportation Improvement Board
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TSM	Transportation System Management
UAP	Urban Arterial Program
UCP	Urban Corridor Program
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WSF	Washington State Ferries
WTP	Washington Transportation Plan

Glossary

Access	The ability to enter a freeway or roadway via an on-ramp or other entry point.
Americans with Disabilities Act (ADA)	A federal act that was passed in 1990 and amended in 2008. ADA requires jurisdictions to provide accessible sidewalks primarily through the installation of ADA-compliant sidewalk ramps. The design requirements address various areas of concern such as curb alignment with crosswalks, narrower sidewalk width, obstacles such as utility poles, placement of the sidewalk adjacent to the curb, or the slope of the ramps. Deficiencies in any of these areas could render a sidewalk or sidewalk ramp to be unsafe or inaccessible for the handicapped, or those who generally have difficulty walking.
Arterial	A major street that primarily serves through traffic, but also provides access to abutting properties. Arterials are often divided into principal and minor classifications depending on the number of lanes, connections made, volume of traffic, nature of traffic, speeds, interruptions (access functions), and length.
Average Daily Traffic (ADT)	The average number of vehicles that travel on a roadway on a typical day.
Capacity	The maximum sustained traffic flow of a transportation facility under prevailing traffic and roadway conditions in a specified direction.
Capital Improvement Program (CIP)	A long-range plan established by a city or county that encompasses its vision and future needs for capital facilities, including fire, police, utilities, and transportation. The CIP also establishes the jurisdiction's project priorities and funding methods.
Commute trip reduction (CTR)	Efforts related to reducing the proportion of trips made in single-occupancy vehicles during peak commuting hours. CTR efforts may include carpooling, telecommuting, compressed work weeks, or using alternative modes to get to work (e.g. walking or biking). Washington State's CTR efforts are coordinated through WSDOT and local governments in counties with the highest levels of automobile-related air pollution and traffic congestion. Qualified employers in these counties are required by law to develop a commuter program designed to achieve reductions in vehicle trips.

Concurrency	A requirement established by Washington State's Growth Management Act that adequate infrastructure be planned and financed to support a jurisdiction's adopted future land use plan. For transportation, adequacy is measured by the impact on a jurisdiction's roadway and/or intersection LOS. If an impact is anticipated to cause the adopted LOS standard to be exceeded, then the jurisdiction must have a strategy in place to increase capacity or manage demand (or a financial plan to put that strategy in place) within 6 years of the transportation impact.
Federal Highway Administration (FHWA)	A major agency of the United States Department of Transportation responsible for ensuring that America's roads and highways continue to be the safest and most technologically up-to-date.
Functional classification	A roadway category that is based on the types of trips that occur on the roadway, the roadway's basic purpose, and the level of traffic that the roadway carries. The functional classification of a roadway can range from a freeway to principal arterial to minor arterial to collector to local access.
Growth Management Act (GMA)	A Washington state law that provides a framework for managing growth through comprehensive plans, development regulations, and other activities. Under the GMA, comprehensive plans must address required topics, including but not limited to land use, transportation, capital facilities, utilities, and housing. The GMA requirements also include guaranteeing the consistency of transportation and capital facilities plans with land use plans.
Highways of Statewide Significance	Highways identified by the Washington State Transportation Commission that provide significant statewide travel and economic linkages.
Level of service (LOS)	A measure of how well a roadway or local signalized intersection operates. For roadways, LOS is typically a measure of traffic congestion based on volume-to-capacity ratios. For local intersections, LOS is typically based on how long it takes a typical vehicle to clear the intersection. Different criteria may be used to gauge the operating performance of transit, non-motorized, and other transportation modes.
Local Improvement District (LID)	Special assessment district in which infrastructure improvements, such as water, sewer, storm water, or transportation system improvements, will benefit primarily the property owners in the district.

Motorized Vehicle	A vehicle that is self-propelled but not operated upon rails, and includes neighborhood electric vehicles as defined in RCW 46.04.357. An electric personal assistive mobility device is not considered a motor vehicle. A power wheelchair or an electric-assisted bicycle is not considered a motor vehicle.
Non- Motorized Vehicle	A device other than a motor vehicle used to transport persons, including, but not limited to, bicycles, skateboards, in-line skates, and roller skates. Electric-assisted bicycles are included in this definition.
Traffic calming	The combination of physical measures and educational efforts to alter driver behavior and improve conditions for non-motorized street users. Physical measures may include bulb-out curb extensions, chicanes, or traffic circles, among other things. Educational efforts may include pavement markings or increased police enforcement.
Transportation Analysis Zone (TAZ)	Areas with similar land use characteristics that are used in travel demand models to assess traffic conditions and operations.
Transportation Benefit District (TBD)	A geographic area designated by a jurisdiction that is a means to funding transportation improvement projects; funding sources can include vehicle license fees, property taxes or sales taxes.
Transportation Demand Management (TDM)	A set of strategies intended to maximize the efficiency of the transportation network by reducing demand on the system. Examples of TDM strategies are encouraging commuting via bus, rail, bicycle, or walking; managing the available parking supply; or creating a compressed work week.
Transportation Improvement Program (TIP)	A long-range (6 years) plan established by a city or county that results from the Capital Improvement Program (CIP) process. The TIP establishes the jurisdiction's transportation deficiencies, project priorities, and possible funding methods.
Transportation System Management (TSM)	A coordinated approach to the construction, preservation, maintenance, and operations of the transportation network with the goal of maximizing efficiency, safety, and reliability. These activities include making intersection and signal improvements, constructing turn lanes, improving signage and pavement markings, and collecting data to monitor system performance.
Travel Demand Forecasting	Methods for estimating the desire for travel by potential users of the transportation system, including the number of travelers, the time of day, travel mode, and travel routes.

Washington Transportation Plan (WTP)	A long-range (20 years) statewide transportation plan adopted by the Washington Transportation Commission. The WTP describes existing transportation conditions in the state, and outlines future transportation needs.

Transportation Element

1. Introduction

The purpose of the Comprehensive Transportation Plan (Transportation Plan) is to guide the development of multimodal surface transportation within the City of Edmonds (City) in a manner consistent with the City's adopted transportation goals, objectives, and policies (presented in Chapter 2). The Transportation Plan serves as the transportation element of the City of Edmonds Comprehensive Plan (Comprehensive Plan). It identifies transportation infrastructure and services needed to support projected land use within the city through the year 2035, in compliance with the State of Washington Growth Management Act (GMA) [RCW 36.70A, 1990, as amended]. Based upon existing and projected future land use and travel patterns, the Transportation Plan describes roadway, pedestrian, bicycle and transit infrastructure and services and provides an assessment of existing and projected future transportation needs. It establishes transportation priorities and guides the development of the six-year Transportation Improvement Program (TIP), Capital Improvements Program (CIP), and Capital Facilities Plan (CFP). The Transportation Plan also establishes implementation strategies that address the transportation needs for the city through the year 2035.

B. Purpose of the Transportation Comprehensive Plan

Based upon the directives of the City's adopted transportation goals and policies, and the requirements of the GMA, the objectives of the Transportation Plan are as follows:

- Address the total transportation needs of the city through 2035;
- Identify transportation improvements necessary to provide a complete system that will function safely and efficiently through the year 2035;
- Ensure consistency with the Land Use Element of the Comprehensive Plan;
- Contribute to economic growth within the city through an efficient transportation system;
- Provide cost-effective accessibility and mobility for people, goods, and services;
- Provide multimodal travel alternatives that are safe and have convenient access to employment, education, and recreational opportunities for urban and suburban residents in the area, in support of the City's Complete Streets Ordinance;
- Identify funding needs for identified transportation improvements and the appropriate contribution by the public and private sectors of the local economy;
- Comply with the requirements of the GMA and State Environmental Policy Act (SEPA); and
- Support improvements to major transportation routes outside the city that will reduce through-traffic in the community.

The Transportation Plan sets a framework for understanding, creating, and prioritizing a transportation network for Edmonds, and it provides metrics for measuring progress towards its implementation.

C. Plan Background

Reports, Plans and Records

This Transportation Plan integrates the analysis and results of numerous plans and prior reports that have been completed for the City. Information was obtained from the following sources:

- City of Edmonds Transportation Element. 2009. Previous transportation plan that established citywide transportation goals and policies and infrastructure and service needs, which was updated for this Plan.
- City of Edmonds Comprehensive Plan. 2009. Current GMA plan that presents the City's planned future land use through 2025, and plans and policies established by the City to support that land use.
- SR 99 Traffic and Circulation Study. 2006. Assesses traffic conditions on State Route (SR) 99, and recommends safety and mobility improvements to be included in the City TIP.
- 2012 Technical Memorandum: SR 104/Westgate Transportation Assessment
- Memorandums prepared as part of the process for a future (SR 104 Complete Streets Corridor Analysis (2015).

Land Use Review

The Edmonds Comprehensive Plan and Edmonds Community Development Code (ECDC) guides development and growth within the city. Future transportation infrastructure and service needs identified in this Transportation Plan were established by evaluating the level and pattern of travel demand generated by planned future land use. Future population and employment projections for the region are provided by the state Office of Financial Management (for population) and the Puget Sound Regional Council (PSRC). Snohomish County works with local jurisdictions to determine the expected distribution and allocation of population and employment between cities and unincorporated county. The transportation analysis presented in this Transportation Plan is based upon the future population and employment allocated to the City of Edmonds, based on the countywide process.

Table 1-1 summarizes the City's existing and projected future land use growth.

Based on the City of Edmonds' adopted regional growth target, the population is expected to reach 45,550 residents by the year 2035 (increased of 5,750 from 2011). The City also anticipates by the year 2035 a total of 21,168 housing units (increase of 2,772 from 2011) and 13,948 jobs (increase of 2,269 from 2011).

Table 1-1. City of Edmonds Existing and Future Land Use Summary

Land Use Type	Unit	Existing (2014)	2035
Single Family	Dwelling Units	10,990	11,790
Multi-Family	Dwelling Units	6,370	8,450
Retail	Jobs	2,240	3,080
Finance, Insurance, Real Estate, Services & Government	Jobs	6,220	7,630
Wholesale, Transportation, Utilities, Manufacturing & Construction	Jobs	140	170
Education	Students	5,760	6,730

1. The model also includes values for park acres, marina slips, and park-and-ride spaces.
2. Excludes land use within Esperance.

D. Regulatory Framework

Growth Management Act (GMA)

Transportation planning at the state, county and local levels is governed by the GMA, which contains requirements for the preparation of the transportation element of a Comprehensive Plan. In addition to requiring consistency with the land use element, the GMA [RCW 36.70A.070 (6)] requires that the following components be included in transportation elements:

- Inventory of facilities by mode of transport;
- Level of service assessment to aid in determining the existing and future operating conditions of the facilities;
- Proposed actions to bring these deficient facilities into compliance;
- Traffic forecasts, based upon planned future land use;
- Identification of infrastructure needs to meet current and future demands;
- Funding analysis for needed improvements, as well as possible additional funding sources;
- Identification of intergovernmental coordination efforts; and
- Identification of demand management strategies as available.

In addition to these elements, GMA mandates that development cannot occur if development causes Level of Service to decline below the adopted standards, unless transportation improvements can be made or other appropriate actions taken, concurrent with development. Such appropriate actions may include transit service, Transportation Demand Management (TDM) strategies, or Transportation System Management (TSM) strategies.
Under the GMA, local governments and agencies must annually prepare and adopt six-year Transportation Improvement Programs (TIPs). These programs must be consistent with the transportation element of the local comprehensive plan and other state and regional plans and policies as outlined below.

Washington Transportation Plan

The Washington Transportation Plan (WTP) presents the State's strategy for developing budgets and implementing improvements over a 20-year planning horizon. The WTP contains an overview of the current conditions of the statewide transportation system, and an assessment of the State's future transportation investment needs. The WTP policy framework sets the course for meeting those future needs.

Puget Sound Regional Council (PSRC) Plans

The PSRC is the Regional Transportation Planning Organization for the area that includes Snohomish, King, Pierce, and Kitsap counties. The PSRC works with local jurisdictions to establish regional transportation guidelines and principles and certifies that the transportation-related provisions within local jurisdictions' comprehensive plans are consistent with the Regional Transportation Plan and conform to GMA requirements.

VISION 2040

VISION 2040 is the region's growth plan through the year 2040. Key to Vision 2040 is the establishment of *Multicounty Planning Policies*, which are designed to help achieve the Regional Growth Strategy and address region-wide issues within a collaborative and equitable framework. The policies are built around several key goals for transportation in the region:

- Maintenance, Management, and Safety – Maintain, preserve, and operate the existing transportation system in a safe and usable state.
- Support the Growth Strategy – Support the regional growth strategy by focusing on connecting centers with a highly efficient multimodal transportation network.
- Greater Options, Mobility, and Access – Invest in transportation systems that offer greater options, mobility, and access in support of the regional growth strategy.

Each policy section contains actions that lay out steps the region will need to take to achieve VISION 2040. This Transportation Element is consistent with the Vision 2040 priorities.

Destination 2040

Transportation 2040 is an action plan for transportation in the central Puget Sound region, consistent with VISION 2040. Adopted in 2010, it identifies investments to support the region's expected growth and improve the service transportation provides to people and businesses. It lays out a financing plan that suggests a long-term shift in how we fund transportation improvements, with more reliance on users paying for transportation improvements. Transportation 2040 also proposes a strategy for reducing transportation's contribution to climate change and its impact on important regional concerns such as air pollution and the health of Puget Sound.

Snohomish County Countywide Planning Policies

The Snohomish County Countywide Planning Policies are written policies used to establish a countywide framework from which the county and cities' comprehensive plans are developed. The Countywide Planning Policies were last amended in 2011. Future amendments will be in response to changes in the countywide growth strategy, changes in the GMA, decisions of the Growth Management Hearings Board, and issues involving local plan implementation.
The County's transportation policies are intended to guide transportation planning by the county and cities within Snohomish County and to provide the basis for regional coordination with the Washington State Department of Transportation (WSDOT) and transit operating agencies. The

policies ensure that the countywide transportation systems are adequate to serve the level of land development that is allowed and forecasted.

Edmonds Comprehensive Plan

The Comprehensive Plan serves as the City's primary growth management tool and must be consistent with the Growth Management Act. A community such as Edmonds, with attractive natural features, a pleasant residential atmosphere and proximity to a large urban center, is subject to constant growth pressures. The Plan is intended to provide a long-range strategy guiding how the City will develop and how services will be provided.

The Comprehensive Plan identifies the City's expected population, housing, and jobs through the year 2035. It contains goals, policies, maps, and narrative—all of which must be consistent and coordinated with each other. Key elements of the Comprehensive Plan include:

- Community sustainability
- Land use
- Transportation (as represented by this Transportation Plan)
- Housing
- Parks, recreation, and open space
- Community culture and urban design
- Economic development.
- Capital facilities
- Utilities

The comprehensive transportation plan serves as the transportation element of the city's comprehensive plan.

E. Public Participation

The Comprehensive Transportation Plan has included a significant amount of community involvement at all stages of the planning and development process. Feedback obtained from open houses, citizen committee involvement, and intergovernmental coordination was very useful to the initial development and subsequent revision of the Transportation Plan, greatly enhancing its effectiveness. These efforts led to more realistic assessments of existing conditions and impacts of forecasted growth, as well as the identification of appropriate measures to address both current and future conditions.

Public Open Houses

Two public open houses were held at Edmonds City Hall to inform the community about the Comprehensive Transportation Plan and gather comments on transportation improvement priorities.

The first open house was held on February 25, 2015. The purpose of this meeting was to introduce the project to citizens, share the existing transportation inventories and existing conditions analyses that had been completed, and gather input from participants on the transportation issues they felt are most important. The second meeting was held on June 10, 2015. The purpose of this meeting was to share the draft list of recommended transportation projects, present cost estimates, discuss the financial outlook for transportation capital projects and solicit citizen input on project priorities.

The public open houses were publicized through notice in the City newsletter, City website, advertisement on the local government channel, and meeting notification in the local newspaper.

Citizen Advisory Transportation Committee

The City of Edmonds Citizen Advisory Transportation Committee is comprised of ten citizens and (1) City Council member who met monthly with the City's Transportation Engineer. The purpose of the Committee was to:

- Monitor and make recommendations relating to motorized and non-motorized transportation issues, systems, and funding;
- Contribute input to updates of the City Comprehensive Transportation Plan and monitor the City's efforts to implement the improvements detailed in the Plan; and
- Enhance communication with the public with regard to transportation needs.

The Transportation Committee provided transportation recommendations for updates reflected in this Transportation Plan. City staff worked with Transportation Committee members throughout the Plan development to update the City's transportation goals and policies, discuss Plan elements, and determine how best to produce a balanced multimodal plan. The Committee also acted as the Walkway Committee, ranking all the proposed Walkway projects (based on various criteria).

Edmonds Bike Group

The long-standing group meets monthly to discuss bicycle transportation issues. Membership includes over 50 residents, with about 10 members who regularly attend monthly group meetings. Members represent Edmonds, Woodway, Lynnwood, and Mountlake Terrace, and are interested in improving citywide bicycle infrastructure and conditions for bicycle travel. The Bike Group helped establish a bike map indicating existing local bicycle facilities (such as bike lanes, bike

routes, and sharrows) and where those should be added as part of future projects. The Bike Group's recommendations are also presented in Chapter 4 of this Transportation Plan.

Intergovernmental Coordination

The following agencies reviewed this Comprehensive Transportation Plan: WSDOT, PSRC, Community Transit, Snohomish County, the City of Mountlake Terrace, the City of Shoreline, the City of Lynnwood, and the Town of Woodway.

F. Overview of the Transportation Plan Elements

This Comprehensive Transportation Plan includes the following elements:

- ***Chapter 2: Goals, and Policies*** – Presents the transportation goals and policies that guide the evaluation of existing and future conditions, and the development of the Recommended Transportation Plan.
- ***Chapter 3: Street System*** – Provides an inventory of existing streets, existing and projected future traffic volumes, assessment of existing and projected future roadway operations, safety assessment, and recommended improvements to address safety and mobility needs.
- ***Chapter 4: Non-Motorized System*** – Provides an inventory of existing walkways and bikeways, assessment of needs, strategy for compliance with the Americans with Disabilities Act (ADA), and recommended improvements to address pedestrian and bicycle mobility and safety.
- ***Chapter 5: Transit and Transportation Demand Management*** – Provides an inventory of existing transit facilities and service, including buses, rail and ferries; and presents strategies to support transit and commute trip reduction.
- ***Chapter 6: Implementation and Financial Plan*** – Provides a summary of the projects, project prioritization, total costs, and financial strategies and projected revenue for recommended improvements through 2035.

2. Goals and Policies

Assessments of existing and future conditions, as well as development of the Transportation Plan, are guided by transportation goals and policies developed by the City. Major updates of the goals and policies take place during updates of the Transportation Element, under the direction of the Citizen Advisory and Technical Advisory Committees.

Goals are generalized statements which broadly relate the physical environment to values. Under each goal, **Policies** are listed that provide specific direction for meeting the goals. In 2011, the City of Edmonds adopted a Complete Streets Ordinance, which pledges that the City will plan, design, and implement transportation projects, accommodating bicycles, pedestrians, and transit riders.

The Transportation Element has six overarching goals that work together to achieve this vision of providing a transportation system that accommodates all users:

1. Provide a safe and user-friendly travel experience for all users
2. Build a transportation system that enhances the City's land use vision
3. Be sustainable- financially, environmentally, and socially
4. Foster an active and healthy community
5. Create a complete and connected system that offers efficient transportation options
6. Partner with other entities to create a logical system that integrates within the regional transportation network

Each of these goals is described in more detail below, and includes specific policies to achieve individual goals. **Appendix A** provides a tabular comparison of goal and policy changes compared to the previous plan.

F.1. Goal 1: Provide a safe and comfortable travel experience for all users

Policy 1.1 Design new streets and, when the opportunity arises, redesign streets to a standard that reduces lane width to accommodate vehicles that use the street most frequently; rather than large vehicles that may use the street only occasionally.

Policy 1.2 Relate required street widths to the function and operating standards for the street.

Policy 1.3 Design street improvements to enhance the safe and efficient movement of pedestrians and bicycle traffic. Incorporate traffic calming measures where appropriate.

Policy 1.4 Design walking paths for use by people at all mobility levels. Improvements to walking paths and curb cuts should meet the requirements of the ADA.

Policy 1.5 Place highest priority on provision of lighting on walking paths, crosswalks and bicycle facilities that regularly carry non-motorized traffic at night. Non-motorized traffic, characterized as any vehicle that does not require a license, includes motorized bicycles, scooters, and Segways, in addition to pedestrians and people riding bicycles.

Policy 1.6 Seek opportunities to improve safety for those who bicycle in the city.

Policy 1.7 Coordinate planning, construction, and operation of transportation facilities and programs with the State, Counties, neighboring cities, Puget Sound Regional Council, Community Transit, Sound Transit, and other entities to ensure critical infrastructure is in place to respond to both natural and human-caused disasters.

F.2. Goal 2: Build a transportation system that enhances the City's land use vision

Policy 2.1 Locate and design transportation facilities to meet the demands of existing and projected land uses as provided for in the Comprehensive Plan.

Policy 2.2 Work with transit agencies to ensure existing and planned transit creates connections to existing and future employment and activity centers.

Policy 2.3 Locate and design transportation facility improvements to respect the community's residential character, natural features, and quality of life.

Policy 2.4 Design local residential streets to prevent or discourage use as shortcuts for vehicle through-traffic. Coordinate local traffic control measures with the affected neighborhood.

Policy 2.5 Design street improvements to encourage downtown traffic circulation to flow in and around commercial blocks, promoting customer convenience and reducing congestion. Separate through-traffic from local traffic circulation to encourage and support customer access.

Policy 2.6 Carefully review parking requirements for downtown development proposals both for autos and bikes to promote development while still ensuring adequate balance between parking supply and demand.

Policy 2.7 Encourage underground parking as part of new development.

Policy 2.8 Provide a complete walking path network in commercial areas, especially downtown, as an element of public open space that supports pedestrian and commercial activity.

Policy 2.9 Reassess the Transportation Improvement Program (TIP) annually to ensure that transportation facility needs, financing, and levels of service are consistent with the

City's land use plan. The annual update should be coordinated with the annual budget process, and the annual amendment of the Comprehensive Plan.

Policy 2.10 Ensure city transportation facilities and services are provided concurrent with new development or redevelopment to mitigate impacts created from such development. Road improvements may be provided at the time of or within 6 years of development.

Policy 2.11 Encourage neighborhoods to fund improvements that exceed City standards (e.g. for parking, median strips, landscaping, traffic calming, walking paths or other locally-determined projects).

Policy 2.12 Guide the development of new streets and maintenance of existing streets to form a well-connected network that provides for safe, direct, and convenient access to the existing roadway network for automobiles, bicycles, and pedestrians. Prioritize transportation investments that reinforce the City's vision of developing near transit-oriented areas.

F.3. Goal 3: Be sustainable- financially, environmentally, and socially

Policy 3.1 Minimize the adverse impact of transportation facility improvements on the natural environment both in established neighborhoods and undeveloped areas.

Policy 3.2 Design streets with the minimum pavement areas needed and utilized innovative and sustainable materials where feasible, to reduce impervious surfaces.

Policy 3.3 Include analyses of geological, topographical, and hydrological conditions in street design.

Policy 3.4 Encourage landscaping along residential streets to preserve existing trees and vegetation, increase open spaces, and decrease impervious surfaces. Landscaping may be utilized to provide visual and physical barriers but should be carefully designed not to interfere with motorists' sight distance and traffic, pedestrian, bicycle, and wheel chair safety. Landscaping improvements should take maintenance requirements into consideration.

Policy 3.5 Encourage underground placements of utilities when existing roadways are improved.

Policy 3.6 Encourage placement of underground conduit for future installation of fiber optic cable as roadways are built or improved.

Policy 3.7 Convert private streets to public streets only when:

a. The City Council has determined that a public benefit would result.

b. The street has been improved to the appropriate City public street standard.

c. The City Engineer has determined that conversion will have minimal effect on the City's street maintenance budget.

d. In the case that the conversion is initiated by the owner(s) of the road, that the owner(s) finance the survey and legal work required for the conversion.

Policy 3.8 Construct walking paths in an ecologically friendly manner, encouraging the use of pervious paving materials where feasible.

Policy 3.9 Maximize efficiencies of existing transportation facilities through:

- Transportation Demand Management.
- Encouraging development to use existing facilities.
- Technologies that improve the efficiency of travel, including signal improvements and changeable message signs.

Policy 3.10 Base the financing plan for transportation facilities on estimates of local revenues and external revenues that are reasonably anticipated to be received by the City.

Policy 3.11 Finance the six-year Transportation Improvement Program (TIP) within the City's financial capacity to achieve a balance between available revenue and expenditures related to transportation facilities. If projected funding is inadequate to finance needed transportation facilities, based on adopted LOS (Level of Service) standards and forecasted growth, the City should explore one or more of the following options:

- Lower the LOS standard
- Change the Land Use Plan
- Increase the amount of revenue from existing sources
- Adopt new sources of revenue

Policy 3.12 Seek funding to complete multimodal solutions to transportation needs.

Policy 3.13 Ensure that ongoing operating and maintenance costs associated with a transportation facility are financially feasible prior to constructing the facility.

Policy 3.14 Ensure that future development pays a proportionate share of the cost to mitigate impacts associated with growth. Future development's payments may take the form of impact fees, SEPA mitigation payments, dedications of land, provision of transportation facilities, or special assessments.

Policy 3.15 Strive to conform to the Federal and State Clean Air Acts by working to help implement PSRC's Vision 2040 and by following the requirements of Chapter 173-420 of the WAC.

Policy 3.16 Support transportation investments that advance alternatives to driving alone, as a measure to reduce greenhouse gas emissions and in turn reduce the effect of citywide transportation on global climate change.

Policy 3.17 Keep roadways operating in safe condition by taking steps to secure roadway funding from a variety of sources to maintain, rehabilitate, or replace roadways. Edmonds will work with its partners to understand street maintenance and rehabilitation needs. Prioritize roadway preservation projects and consider the long term maintenance costs of new capacity as part of the up-front cost of development.

Policy 3.18 Where possible, encourage easements that provide pedestrian connections and protect the natural environment.

Policy 3.19 Support the transportation needs of traditionally underserved neighborhoods and vulnerable populations through investment in equitable modes of transportation, in addition to potential catch-up investment for areas in need as necessary.

F.4. Goal 4: Foster an active and healthy community

Policy 4.1 Encourage active transportation by providing safe facilities for bicycle and pedestrians.

Policy 4.2 Leverage funding opportunities and the City's right of way to complete the arterial walking path system according to the following priority list:

- Arterial roadways without walking paths or shoulders on which transit service is provided;
- Arterial roadways without walking paths or shoulders on which transit service is not provided;
- Arterial roadways with shoulders too narrow or in or poor walking condition for pedestrians;
- Arterial roadways with adequate shoulders for pedestrians but without walking paths; and
- The remainder of the arterial roadway system (e.g. roads with walking paths along one side, or roads with walking paths in disrepair).

Policy 4.3 As funding permits and right of way is available, complete a collector walking path system that connects to transit service and activities such as retail, schools, or parks.

Policy 4.4 When appropriate, acquire easements and/or development rights in lieu of rights-of-way for installation of smaller facilities such as sidewalks, walking paths, and bikeways.

Policy 4.5 Locate utilities and walking path amenities, including but not limited to poles, benches, planters, trashcans, bike racks, and awnings, so as to not obstruct non-motorized traffic or transit access.

Policy 4.6 Locate walking paths and bicycle facilities to facilitate community access to parks, schools, neighborhoods, shopping centers and transit facilities/stops.

Policy 4.7 Place highest priority on pedestrian safety in areas frequented by children, such as near schools, parks, and playgrounds. Provide walking paths in these areas at every opportunity.

Policy 4.8 Maintain existing public walking paths.

Policy 4.9 Periodically review and update walking path construction priorities in the Transportation Plan.

Policy 4.10 Encourage the use of innovative crosswalk treatments, such as pedestrian actuated flashing signals or pedestrian crossing flags.

Policy 4.11 Encourage collaboration across departments to develop a network of walking paths throughout the city. This network could include but not be limited to signed loop trails in neighborhoods, park-to-park walking paths, and theme-related walks.

Policy 4.12 Encourage separation of walking paths from bikeways, where feasible. Multi-use paths should also be encouraged in instances which separating walk and bike paths is unreasonable.

Policy 4.13 Place highest priority for improvements to bicycle facilities and installation of bike racks and lockers near schools, commercial districts, multi-family residences, recreation areas, and transit facilities.

Policy 4.14 Provide bicycle lanes where feasible, to encourage the use of bicycles for transportation and recreation purposes. Sharrows can be provided on lower volume roadways to create motorist awareness.

Policy 4.15 Identify bicycle routes through signage.

Policy 4.16 Ensure that existing public bicycle facilities are maintained and upgraded when feasible.

Policy 4.17 Prioritize connectivity to transit nodes that provide important connections to regional destinations.

Policy 4.18 When bicycle improvements are being considered along a certain stretch, the addition of protected bike lanes will be considered as part of the evaluation.

F.5. Goal 5: Create a complete and connected system that offers efficient transportation options

Policy 5.1 Design all streets where feasible as complete streets that serve automobile, transit, pedestrian and bicycle travel according to City ordinance 3842.

Policy 5.2 Periodically review functional classifications of city streets and adjust the classifications when appropriate.

Policy 5.3 Provide on-street parking as a secondary street function only in specifically designated areas such as in the downtown business district and in residential areas where off-street parking is limited. Streets should not be designed to provide on-street parking as a primary function, particularly in areas with frequent transit service.

Policy 5.4 Encourage parking on one side rather than both sides of streets with narrow rights-of-way, with the exception of downtown.

Policy 5.5 Encourage the efficient movement of people and goods through an effective and inter-connected transportation network that includes: collector and arterial streets, trails, bike paths, public transit and other transportation facilities.

Policy 5.6 Design streets to accommodate emergency service vehicles. Improve emergency service access to the waterfront, especially to west side of train tracks when there is a train crossing.

Policy 5.7 Coordinate traffic signals located within ½ mile of each other to decrease delay and improve operations.

Policy 5.8 Use public rights-of-way only for public purposes. The private use of a public right-of-way is prohibited unless expressly granted by the City.

Policy 5.9 Construct pedestrian facilities on all streets and highways, interconnecting with other modes of transportation.

Policy 5.10 Locate walking paths and additional street features such as benches and shelters along transit routes to provide easy access to transit stops.

Policy 5.11 Explore future funding for a city-based circulator bus that provides local shuttle service between neighborhoods (Firdale Village, Perrinville, Five Corners, Westgate) and downtown.

Policy 5.12 Place priority on coordinating bus routes and bus stop sites in City plans for street lighting improvements.

Policy 5.13 Consider transit stop sites in the design of roadways, walking path improvements and land use permit reviews.

Policy 5.14 Design Arterial and Collector roadways to accommodate buses and other modes of public transportation including the use of high occupancy vehicle priority treatments, transit signal priority, queue bypass lanes, boarding pads and shelter pads, and transit-only lanes where appropriate.

Policy 5.15 Implement multi-modal LOS standards that considers transit and non-motorized operations as well as automobile operations.

Policy 5.16 Provide additional transportation facility capacity when existing facilities are used to their maximum level of efficiency consistent with adopted LOS standards.

Policy 5.17 Encourage the provision of a bus rapid transit system or other high-capacity frequent transit service along SR 104.

F.6. Goal 6: Partner with other entities to create a logical system that integrates within the regional transportation network

Policy 6.1 Provide access between private property and the public street system that is safe and convenient, and incorporates the following considerations:

- Limit and provide access to the street network in a manner consistent with the function and purpose of each roadway. Restrict number of driveways located along arterials. Coordinate with local businesses and property owners to consolidate access points in commercial and residential areas.
- Require new development to consolidate and minimize access points along all state highways, principal arterials, and minor arterials.
- Design the street system so that the majority of direct residential access is provided via local streets.
- For access onto state highways, implement Chapter 468-52 of the Washington Administrative Code (WAC), Highway Access Management -- Access Control Classification System and Standards.

Policy 6.2 Provide safe bicycle connections to existing bicycle facilities in adjacent jurisdictions.

Policy 6.3 Work with transit providers to ensure that transit service within the city is:

- Convenient and flexible to meet community and user needs;
- Dependable, affordable, and maintains regular schedules;

- Provides adequate service during evening hours, weekends, and holidays; and

- Comfortable and safe for all users.

Policy 6.4 Work with transit providers to ensure that public transit is accessible within a quarter (1/4) mile of any address in the city.

Policy 6.5 Work with transit providers to serve designated activity centers with appropriate levels of transit service. Transit stops should be properly located throughout the activity center, and designed to serve local commuting and activity patterns, and significant concentrations of employment.

Policy 6.6 Design new development and redevelopment in activity centers to provide pedestrian access to transit.

Policy 6.7 Work with transit agencies to coordinate public transit with school district transportation systems to provide transit connections for school children.

Policy 6.8 Form a multimodal system that links ferry, rail, bus, auto, and non-motorized travel providing access to regional transportation systems while ensuring the quality, safety, and integrity of local commercial districts and residential neighborhoods.

Policy 6.9 Locate and design a multi-modal transportation center and terminal to serve the city's needs with the following elements:

- A ferry terminal that meets the operational requirements to accommodate forecast ridership demand and that provides proper separation of automobile, bicycle and walk-on passenger loading;

- A train station that meets intercity passenger service and commuter rail loading requirements, and provides the requisite amenities such as waiting areas, storage and bicycle lockers;

- A transit center with connections to major regional destinations;

- A linkage between stations/terminals that meets the operational and safety requirements of each mode, including a link between the multi-modal station terminal to the business/commerce center in downtown Edmonds;

- Safety features that include better separation between train traffic and other modes of travel, particularly vehicle and passenger ferry traffic as well as the general public; and

- Overall facility design that minimizes the impact to the natural environment, in particular the adjacent marshes.

Policy 6.10 Encourage joint public/private efforts to develop and implement transportation demand management and traffic reduction strategies.

Policy 6.11 Work with both public and private entities to ensure the provision of adequate transportation facilities and services necessary to mitigate impacts to Edmonds' transportation system.

Policy 6.12 Participate in local and regional forums to coordinate strategies and programs that further the goals of the Comprehensive Plan.

Policy 6.13 Coordinate with neighboring jurisdictions and regional and state agencies to make transportation system improvements and assure that funding requirements are met.

Policy 6.14 Encourage public transportation providers within the city to coordinate services to ensure the most effective transportation systems possible and provide comfortable stop amenities.

Policy 6.15 Coordinate with neighboring jurisdictions and regional and state agencies to encourage their support of the City's policies and planning processes.

Policy 6.16 Participate on the boards of Community Transit and other public transit providers, and regularly share citizen and business comments regarding transit services to the appropriate provider.

Policy 6.17 Work with Community Transit to provide additional passenger shelters and benches at bus stops sites within Edmonds.

Policy 6.18 Coordinate with local public transit agencies and private transit providers regarding road closures or other events that may disrupt normal transit operations in order to minimize impacts to transit customers.

Policy 6.19 Work with Community Transit and local employers to encourage ridesharing to employment centers and major activity centers.

Policy 6.20 Coordinate with non-City providers of transportation facilities and services on a joint program for maintaining adopted LOS standards, funding and construction of capital improvements. Work in partnership with non-City transportation facility providers to prepare functional plans consistent with the City Comprehensive Plan.

Policy 6.21 Regularly coordinate with WSDOT, Washington State Ferries, Community Transit, King County Metro, Snohomish County, the Town of Woodway, and the Cities of Mountlake Terrace, Lynnwood, Shoreline, and Mukilteo, to ensure planning for transportation facilities is compatible.

Policy 6.22 Encourage and promote the use of electric vehicles as they are developed in all automobile, truck, and commercial vehicle classes. Encourage the use of such vehicles in a way that conditions are safe and don't impede traffic flow. Provide for a broad range of electric charging opportunities at public and private parking venues throughout the city, including standards for new developments that provide parking facilities.

Policy 6.23 Position Edmonds to respond to technical innovations, such as electric vehicles, autonomous vehicles, and other personal mobility devices. Coordinate with regional and private entities to accommodate these modes of transportation that have the potential to provide increased mobility and environmental benefits.

Due to the restructuring of sections when compared to the 2009 Plan, many policy numbers have changed. **Appendix A** shows a comparison table.

3. Transportation Network

This chapter provides an inventory of the existing transportation network in Edmonds, including roadways, pedestrian facilities, bicycle facilities, and transit service. This chapter also includes safety assessment and inventory of parking facilities.

G. Existing Roadway Functional Classification

All streets in the city have a designated functional classification. The functional classification of a street depends on the types of trips that occur on it, the basic purpose for which it was designed, and the relative level of traffic volume it carries. The different classifications of roadways serve different stages of a trip, with some roadways designed to prioritize mobility while others prioritize access to adjacent land uses:

Each road is classified as one of the following:

- **Freeway** – Multi-lane, high-speed, high-capacity road intended exclusively for motorized traffic. All access is controlled by interchanges and road crossings are grade-separated. No freeways pass through Edmonds, though Interstate-5 (I-5) runs to the east of the city limits.

- **Principal Arterial** – Road that connects major activity centers and facilities, typically constructed with limited direct access to abutting land uses. The primary function of principal arterials is to provide a high degree of vehicle mobility, but they may provide a minor amount of land access. Principal arterials serve high traffic volume corridors, carrying the greatest portion of through or long-distance traffic within a city, and serving inter-community trips. On-street parking is often limited to improve capacity for through-traffic. Typically, principal arterials are multi-lane facilities and have traffic signals at intersections with other arterials. Regional bus routes are generally located on principal arterials, as are transfer centers and park-and-ride lots. Principal arterials usually have sidewalks and sometimes have separate bicycle facilities, so that non-motorized traffic is separated from vehicle traffic.

- **Minor Arterial** – Road that connects centers and facilities within the community and serves some through traffic, while providing a greater level of access to abutting properties. Minor arterials connect with other arterial and collector roads, and serve less concentrated traffic-generating areas, such as neighborhood shopping centers and schools. Provision for on-street parking varies by location. Although the dominant function of minor arterials is the movement of through traffic, they also provide for considerable local traffic with origins or destinations at points along the corridor. Minor arterials also carry local and commuter bus routes. They usually

have sidewalks and sometimes have separate bicycle facilities, so that non-motorized traffic is separated from vehicular traffic.

- **Collector** – Road designed to fulfill both functions of mobility and land access. Collectors typically serve intra-community trips connecting residential neighborhoods with each other or activity centers, while also providing a high degree of property access within a localized area. These roadways "collect" vehicular trips from local access streets and distribute them to higher classification streets. Additionally, collectors provide direct services to residential areas, local parks, churches and areas with similar land uses. Typically, right-of-way and paving widths are narrower for collectors than arterials. They may only be two lanes wide and are often controlled with stop signs. Local bus routes often run on collectors, and they usually have sidewalks on at least one side of the street.

- **Local Access** – Road with a primary function of providing access to residences. Typically, they are only a few blocks long, are relatively narrow, and have low speeds. Local streets are generally not designed to accommodate buses, and often do not have sidewalks. Cul-de-sacs are also considered local access streets. All streets in Edmonds that have not been designated as an arterial or a collector are local access streets. Local access streets make up the majority of the miles of roadway in the city.

Higher classes (e.g. freeways and arterials) provide a high degree of mobility and have more limited access to adjacent land uses, accommodating higher traffic volumes at higher speeds. Lower classes (e.g., local access streets) provide a high degree of access to adjacent land and are not intended to serve through traffic, carrying lower traffic volumes at lower speeds. Collectors generally provide a more balanced emphasis on traffic mobility and access to land uses.
Cities and counties are required to adopt a street classification system that is consistent with these guidelines (RCW 35.78.010 and RCW 47.26.090). **Figure 3-1** shows the existing road functional classifications for city streets, as well as recommended classification changes.

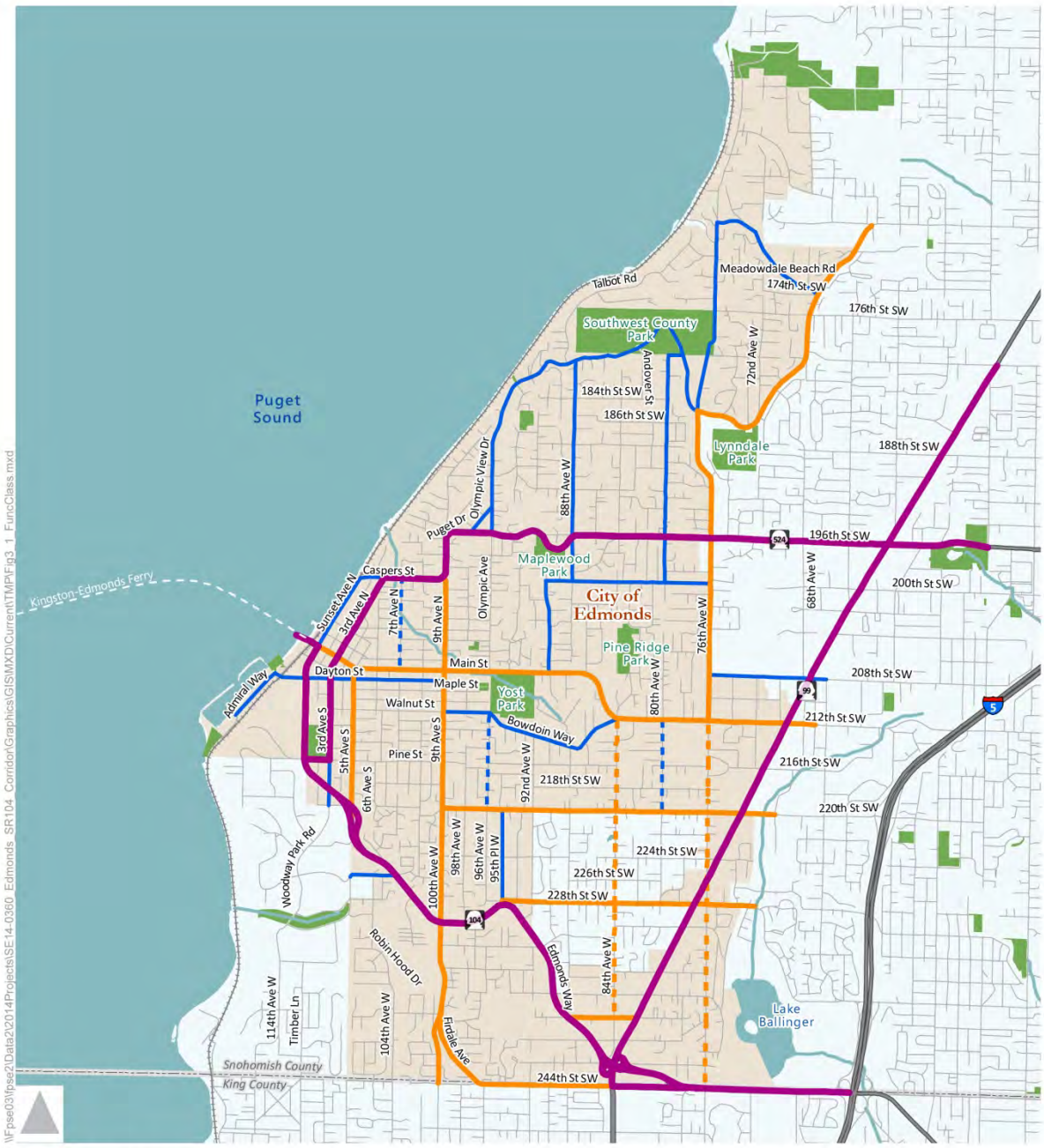


Figure 3-1

Roadway Functional Classification

Figure 3-1 Functional Classification

Table 3- *summarizes the total miles of roadway located within the city by existing functional classification. The table compares the miles of roadway to Federal Highway Administration (FHWA) guidelines (FHWA 1989). The table shows that all miles of all classifications are within guidelines. The total miles of principal and minor arterial are within guidelines for total amount of arterial.*

Table 3-1. Miles of Roadway by Existing Federal Functional Classification

Functional Classification	Miles of Roadway in Edmonds	Proportion of Total Roadway	Typical Proportion based on FHWA Guidelines[1]
Principal Arterial	12	8%	2% – 9%
Minor Arterial	14	9%	7% – 14%
Collector	17	11%	6% – 24%
Local Access	114	72 %	62% – 74%
Total	157	100%	

1. Source: Federal Highway Administration 2013.

Evaluation of Road Functional Classifications

Over time, changes in traffic volumes and shifts in land use and traffic patterns may cause the function of a road to change. Thus, it is important to periodically review the functions city roads serve, and evaluate whether any changes in classification are warranted. The following guidelines are used for evaluating the classifications.

1. **Average Daily Traffic (ADT)** – Roadways with higher functional classifications typically carry higher traffic volumes. On high volume roadways, the demand for traffic mobility is more likely to outweigh the need for access to abutting land. Conversely, where volumes are lower the access function of the street will generally be more important than mobility for traffic. Traffic volumes alone do not provide the basis for classification, but are used in conjunction with the other criteria listed below. However, the following ranges are used as guidelines:
   - Minor Arterial Street: 3,000 to 15,000 ADT
   - Collector Street: 1,000 to 5,000 ADT

2. **Non-motorized use** – The accommodation of non-automobile modes, including walking, bicycling, and transit use is another important measure of a road's function. Roads with higher classifications tend to serve more modes of travel. The more travel modes that a street accommodates, the greater the number of people that street serves, and the more important that street is to the movement of people, goods, and services throughout the city.

3. **Street length** – A street that is longer in length tends to function at a higher classification. This is due to the fact that longer (continuous) streets allow travelers to move between distant attractions with a limited number of turns, stops, and other distractions that discourage them from using streets of lower classification. Longer streets generally supply a higher level of mobility, compared to other streets that provide more access.

4. **Street spacing** – Streets of higher classification usually have greater traffic carrying capacity and fewer impediments to travel. Fewer facilities are needed to serve the traffic mobility demands of the community due to their efficiency in moving traffic. This typically means that fewer streets of higher classification are needed, so there will be greater distances between them. The farther the distance of a street from a higher classification street, the more likely it is that the street will function at a similar classification. A greater number of streets of lower classification are needed to provide access to abutting land. Therefore, they must be spaced more closely and there must be many more of them. It is considered most desirable to have a network of multiple lower classification streets feeding into progressively fewer higher classified streets. Based on these guidelines, typical spacing for the different classifications of roadways are as follows:

   - Principal Arterials: 1.0 mile
   - Minor Arterials: 0.3 to 0.7 mile
   - Collectors: 0.25 to 0.5 mile
   - Local Access: 0.1 mile

5. **Street connectivity** – Streets that provide easy connections to other roads of higher classification are likely to function at a similar classification. This can be attributed to the ease of movement perceived by travelers who desire to make that connection. For example, state highways are generally interconnected with one another, to provide a continuous network of high order roadways that can be used to travel into and through urban areas. Urban arterials provide a similar interconnected network at the citywide level. By contrast, collectors often connect local access streets with one or two higher-level arterial streets, thus helping provide connectivity at the neighborhood scale rather than a citywide level. Local streets also provide a high degree of connectivity as a necessary component of property access. However, the street lengths, traffic control, and/or street geometry are usually designed so that anyone but local travelers would consider the route inconvenient.

   The Federal-Aid Highway Act of 1973 requires the use of functional highway classification to update and modify the Federal-aid highway systems. Thus, the FHWA and WSDOT have adopted a federal functional classification system for city roadways. Allocation of funds, as well as application of local agency design standards, is based on the federal classification. Federal funds may only be spent on federally classified routes.

   Based upon the guidelines provided above, the following changes to functional classifications are recommended:

   - Apply for the following federal functional classification upgrade from local access to collector for the following five road segments:

   - 7th Avenue N, Main Street – Caspers Street
   - 80th Avenue W, 212th Street SW – 220th Street SW
   - 96th Avenue W, 220th Street SW – Walnut Street

   - Apply for the following federal functional classification upgrade from collector to minor arterial for the following six road segments:

- 76th Avenue W, 212th Street SW – NE 205th Street
- 84th Avenue W, 212th Street SW – 238th Street SW

Under the recommended classifications, the total proportion of minor arterial would increase slightly, and the proportion of local access street would decrease slightly, compared to existing conditions. Supporting information can be seen in **Appendix B.**

H. Roadway System Inventory

State Highways

There are three Washington state routes located within the city.

- SR 104 (Edmonds Way) runs roughly east-west between the Edmonds-Kingston Ferry dock and I-5.
- SR 524 (Puget Drive/196th Street SW) runs east-west connecting SR 104 to SR 99, I-5, and ultimately SR 522.
- SR 99 runs north-south on the east side of the city, and is the highest traffic-carrying arterial in Edmonds. From Edmonds, it runs north to Everett, and south through Shoreline to Seattle and the Tacoma metropolitan area.

In 1998, the Washington State Legislature passed Highways of Statewide Significance legislation (RCW 47.06.140). Highways of Statewide Significance promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant facilities should be planned from a statewide perspective, and thus they are not subject to local concurrency standards. (WSDOT 2007)

In Edmonds, SR 104 between the Edmonds-Kingston Ferry Dock and I-5, and SR 99 between the south city limits and SR 104 have been designated as Highways of Statewide Significance. The Edmonds-Kingston ferry route is considered to be part of SR 104, and is also identified as a Highway of Statewide Significance (excluding the ferry terminal). (Washington State Transportation Commission 2009)

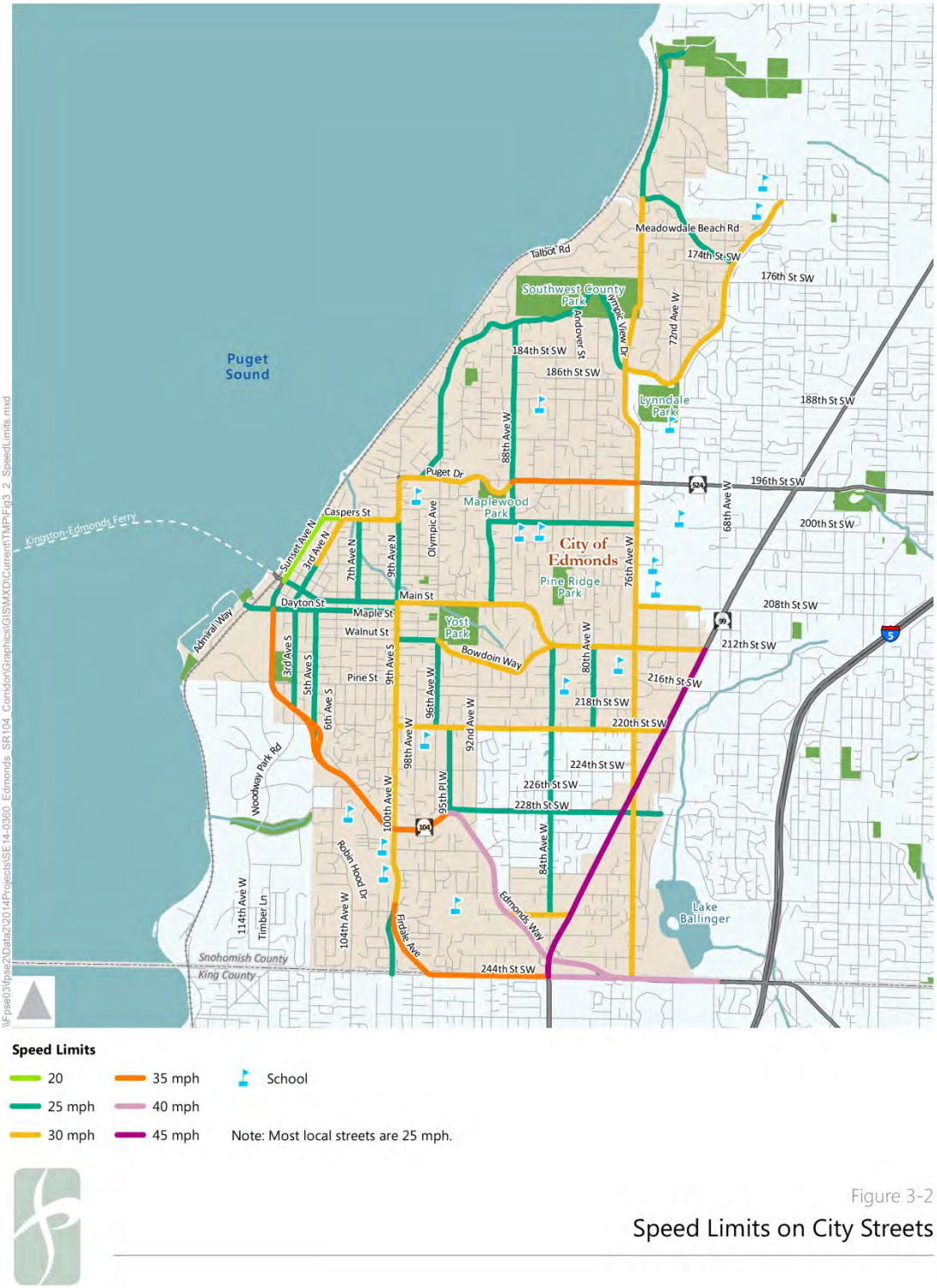
City Streets

The city street system is comprised of a grid of principal arterials, minor arterials, collectors, and local streets. **Appendix B** summarizes the city roadways currently classified as principal arterial, minor arterial, or collector. The table shows the existing functional classification, speed limit, number of lanes, and walkway/bikeway characteristics for each of the roadways.

Speed Limits

Figure 3-2 shows speed limits on collectors and arterials in Edmonds. The speed limits range from 25 miles per hour (mph) to 45 mph. The speed limit on most local access streets is 25 mph. The speed limit was dropped on State Route 104, between 5th Avenue S and Dayton Street, from 40 mph to 35 mph in early 2015 (when Pine St. Pedestrian Crossing was added by WSDOT).

Figure 3-2. Speed Limits on City Streets



Traffic Control

Traffic signals and stop signs are used to provide traffic controls at intersections with high traffic volume. These devices aid in control of traffic flow. In addition, these devices help to minimize collisions at intersections. **Figure 3-3** shows the city intersections controlled by traffic signals and those controlled by all-way stop signs. There are 31 signalized intersections, two emergency signals, and 45 all-way stop controlled intersections in the city. The city maintains all signals except for some located on Highways of Statewide Significance that are maintained by WSDOT.

Traffic Calming Devices

Traffic calming devices are devices installed on any classified streets, to discourage speeding, reduce cut-through traffic, and/or improve safety. Traffic calming devices are currently in place at many locations throughout Edmonds. These measures have been installed as part of capital improvement projects, as opportunities were presented, and occasionally in response to citizen requests.

The following types of traffic calming devices are currently present within the city:

- **Bulb-outs** – curb extensions that are used to narrow the roadway either at an intersection or at mid- block along a street corridor. Their primary purpose is to make intersections more pedestrian friendly by shortening the roadway crossing distance and drawing attention to pedestrians via raised peninsula. Additionally, a bulb-out often tightens the curb radius at the corner, which reduces the speeds of turning vehicles.

- **Chicane** – series of curb extensions that alternate from one side of the street to the other, which narrows the roadway and requires drivers to slow down to travel through the chicane. Typically, a series of at least three curb extensions is used.

- **Partial closure** – involves closing down one lane of a two-lane roadway along with a “Do Not Enter” or “One Way” sign, in order to reduce cut-through traffic.

- **Raised pavement markers** – 4-inch diameter raised buttons placed in design sequence across a road, causing a vehicle to vibrate and alert the motorist to an upcoming situation. Raised pavement markers may be used in conjunction with curves, crosswalks, pavement legends and speed limit signs. They are most effective when used to alert motorists to unusual conditions ahead, and are most commonly used on approaches to stop signs, often in situations where the visibility of a stop sign is limited.

- **Speed cushion** – Similar to speed humps, speed cushions are divided into sections so that wide wheelbase vehicles can straddle them. As such, they can more easily accommodate transit, fire engines, and other emergency response vehicles.

- **Traffic circle** – raised island placed in the center of an intersection which forces traffic into circular maneuvers. Motorists yield to vehicles already in the intersection and only need to consider traffic approaching in one direction. Traffic circles prevent drivers from speeding through intersections by impeding straight-through movement.

- **Radar feedback sign** – An electronic sign that notifies on coming motorists of their current speed in miles per hour. The posted speed limit is also visible to give motorists a reference. The intent of this device is to make drivers more conscientious of their speed in relation to the speed limit.

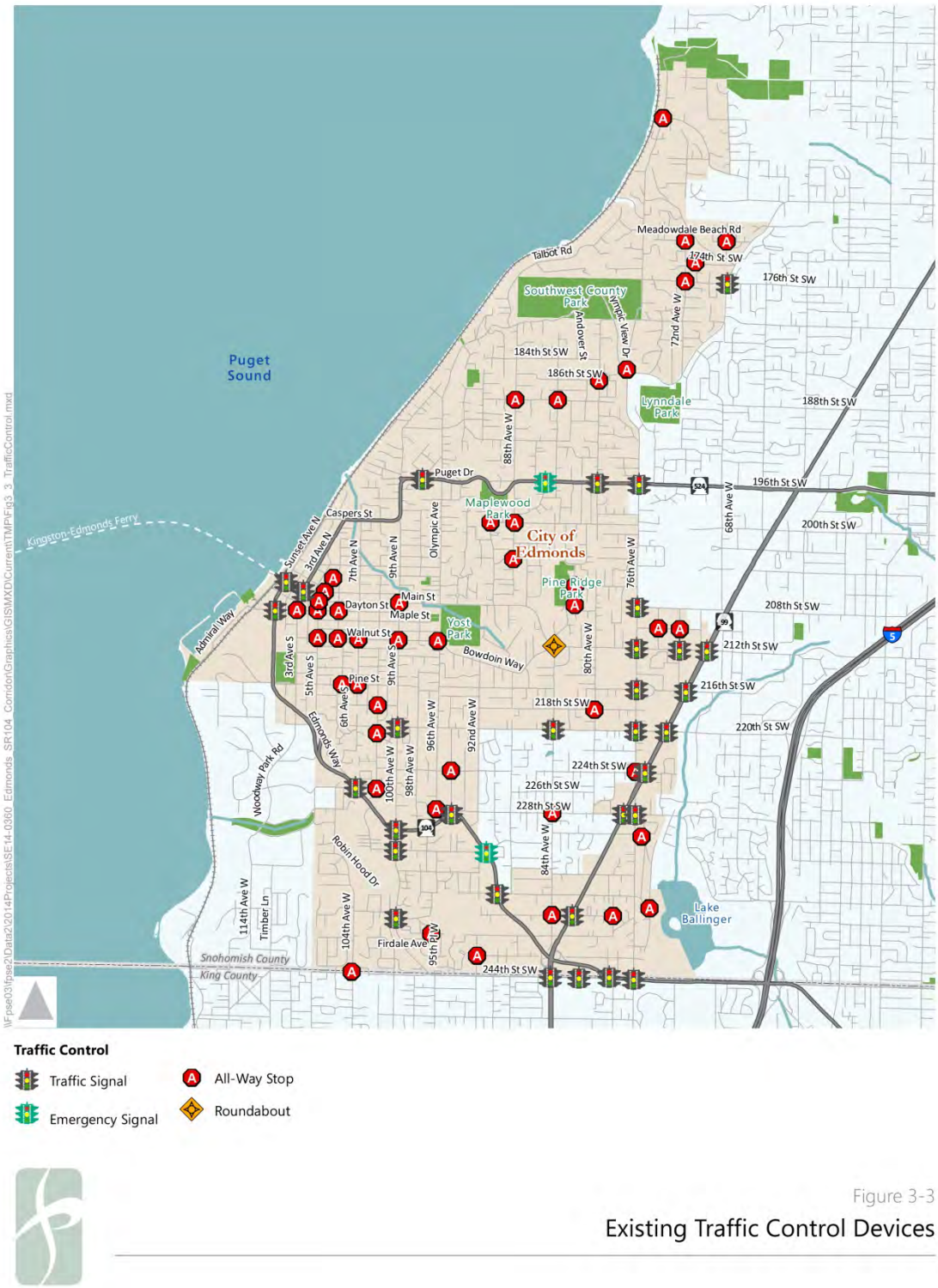


Figure 3-3
Existing Traffic Control Devices

Figure 3-3. Existing Traffic Control Devices

Parking

On-street parking is available throughout most of the city. Parking is accommodated on the street and in private parking lots associated with existing development. Public parking is provided throughout the city at no charge to drivers. In the downtown area, parking is limited to three hours along most of the downtown streets, with certain stalls designated for handicapped parking, one-hour parking, and loading/unloading.

The City has established an employee permit parking program to provide more parking to the general public in high demand parking areas by encouraging Edmonds' business owners and employees to park in lower demand parking areas. The permit authorizes permit employees to park for more than three hours in three-hour parking areas if the parking is part of a commute to work.

Public parking lots, allowing all-day parking, are also provided at various locations in Downtown Edmonds (such as Police Department/Fire Department and City Hall)...The City continues to monitor parking demand and supply and make adjustments as needed. A detailed Downtown parking study will need to be completed in the future to determine if parking is adequate to accommodate parking demand. **Figure 3-4** shows the downtown streets on which three hour parking, one hour parking, and handicapped parking are located.

Street Standards

The Goals and Objectives of the Transportation Plan relate street design to the desires of the local community, and advise that design be at a scale commensurate with the function that the street serves. Guidelines are therefore important to provide designers with essential elements of street design as desired by the community. Essential functions of streets in Edmonds include vehicle mobility, pedestrian access, bicycle access and aesthetics.

The City has adopted street design standards (Edmonds Community Development Code (ECDC) 18.00.040, City of Edmonds Construction Standard Details and Specifications) for residential, business and commercial access roads, and follows established design guidelines for other streets. These are known as the **"Edmonds Standard Details"**. These standard details provide typical roadway cross-sections for different street classifications. They provide flexibility in design to accommodate a variety of physical, operational, and cost issues.

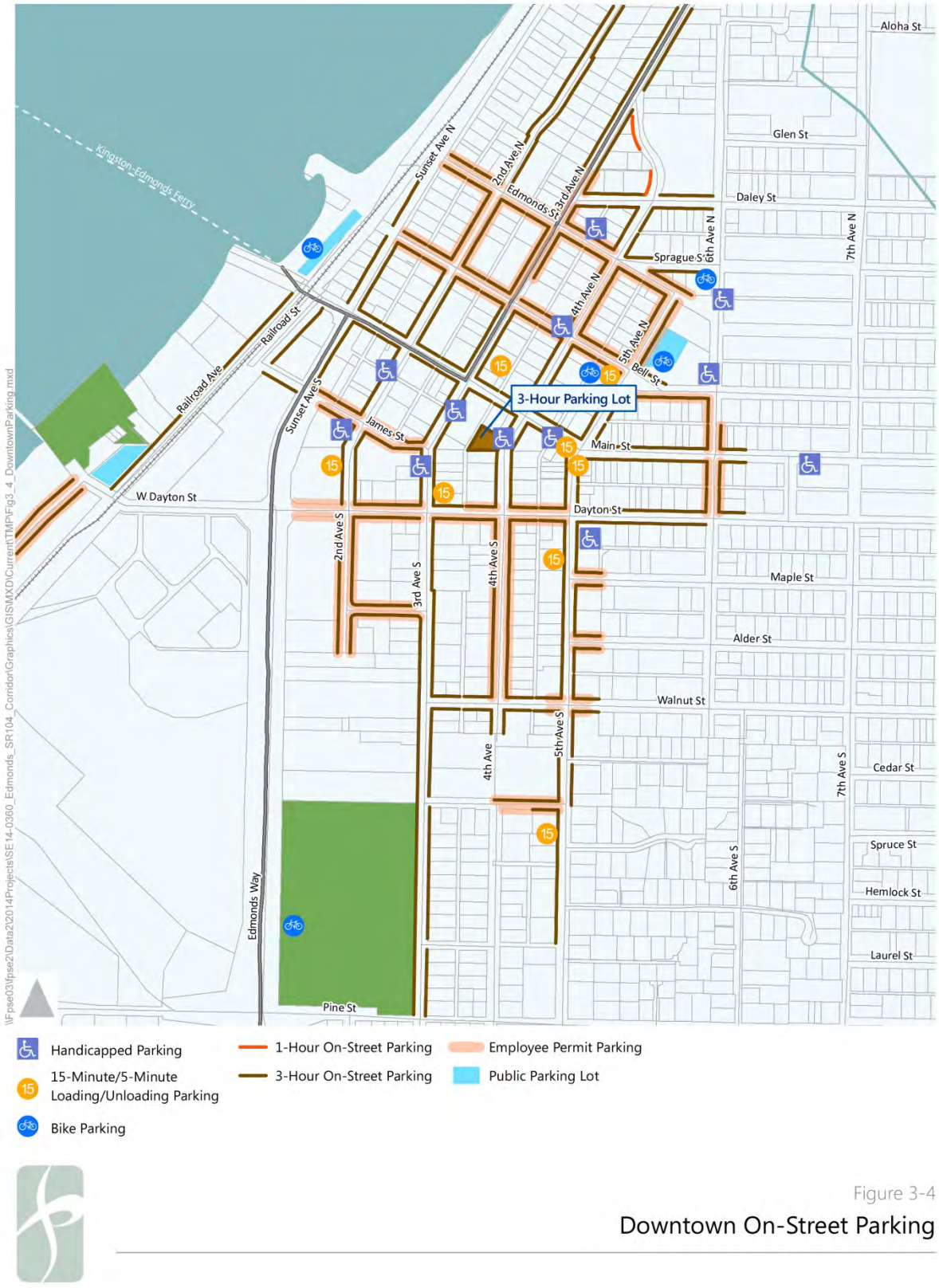


Figure 3-4. Downtown On-Street Parking

I. Roadway Conditions

Existing traffic Operations

Traffic volumes

PM peak hour traffic counts were taken at numerous locations throughout the city in November 2014, as shown in **Figure 3-5**. The analysis of existing operating conditions on city roadways is based on these data.

Level of Service

Level of Service (LOS) is the primary measurement used to determine the operating quality of a roadway segment or intersection. The quality of traffic conditions is graded into one of six LOS designations: A, B, C, D, E, or F. **Table 3-2** presents typical characteristics of the different LOS designations. LOS A and B represent the fewest traffic slow-downs, and LOS C and D represent intermediate traffic congestion. LOS E indicates that traffic conditions are at or approaching urban congestion; and LOS F indicates that traffic volumes are at a high level of congestion and unstable traffic flow.

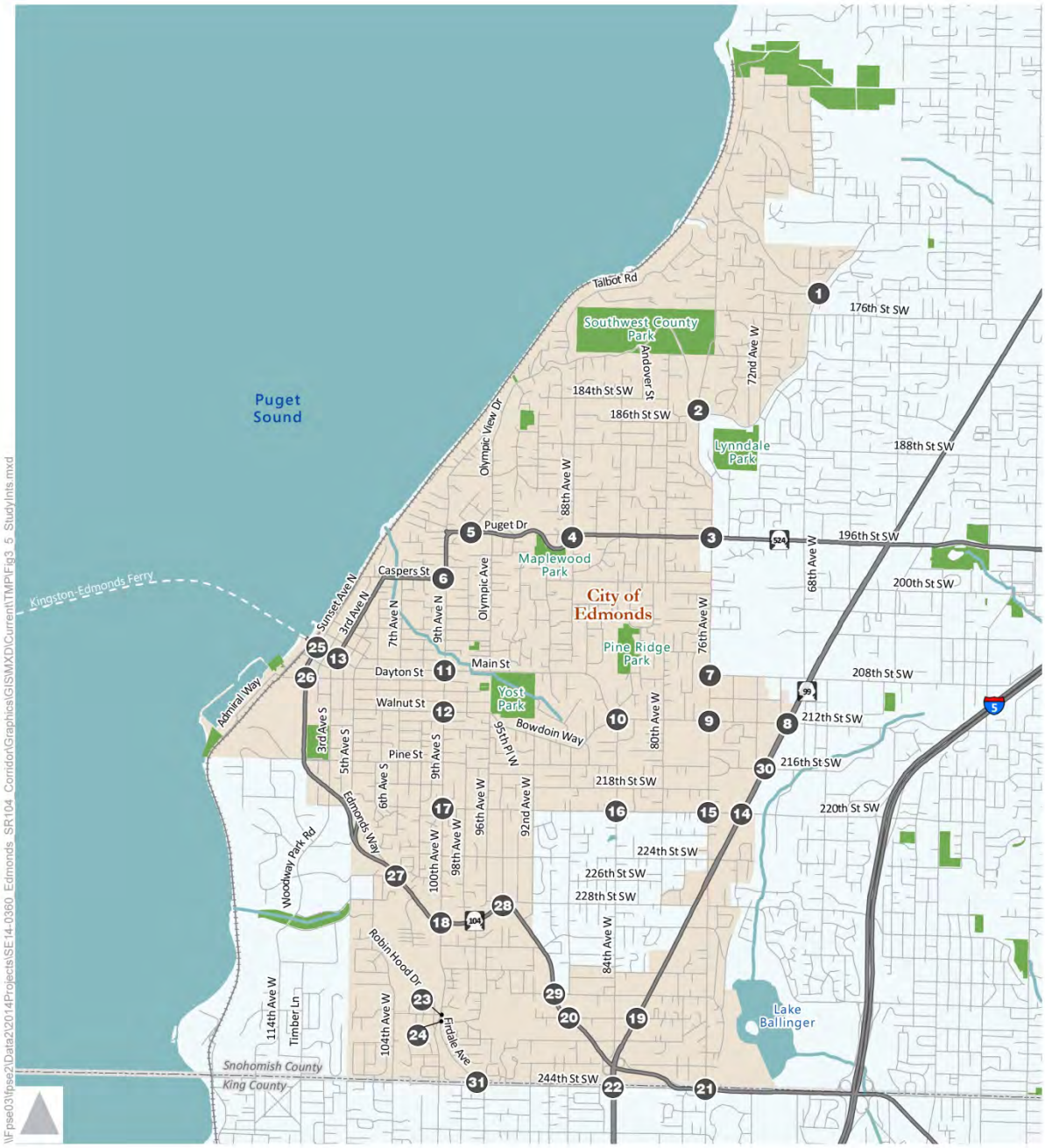
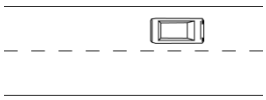
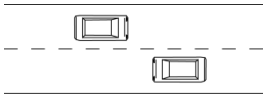
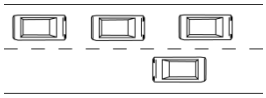
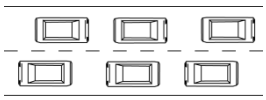
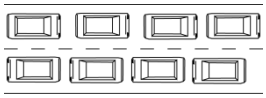
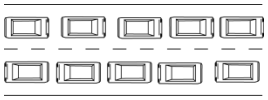


Figure 3-5
Study Area Intersections

Figure 3-5. Study IntersectionsTable 3-2.

Table 3-2: Typical Roadway Level of Service Characteristics

Level of Service		Characteristic Traffic Flow
A		Free flow – Describes a condition of free flow with low volumes and high speeds. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. Stopped delay at intersections is minimal.
B		Stable flow – Represents reasonable unimpeded traffic flow operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tensions.
C		Stable flow – In the range of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. The selection of speed is now significantly affected by interactions with others in the traffic stream, and maneuvering within the traffic stream required substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.
D		Stable flow – Represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience- Small increases in traffic flow will generally cause operational problems at this level.
E		Unstable flow – Represents operating conditions at or near the maximum capacity level. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor disturbances within the traffic stream will cause breakdowns
F		Forced flow – Describes forced or breakdown flow, where volumes are above theoretical capacity. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Queues form behind such locations, and operations within the queue are characterized by stop-and-go waves that are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, and then be required to stop in a cyclical fashion.

Source: Transportation Research Board 2000

Level of Service Criteria

Methods described in the Highway Capacity Manual (Transportation Research Board 2010) are used to calculate the LOS for signalized and stop-controlled intersections. **Table 3-3** summarizes the LOS criteria for signalized and stop-controlled intersections. LOS for intersections is determined by the average amount of delay experienced by vehicles at the intersection. For stop-controlled intersections, LOS depends on the average delay experienced by drivers on the stop-controlled approaches. Thus, for two-way or T-intersections, LOS is based on the average delay experienced by vehicles entering the intersection on the minor (stop-controlled) approaches. For all-way stop controlled intersections, LOS is determined by the average delay for all movements through the intersection. The LOS criteria for stop-controlled intersections have different threshold values than those for signalized intersections, primarily because drivers expect different levels of performance from distinct types of transportation facilities. In general, stop-controlled intersections are expected to carry lower volumes of traffic than signalized intersections. Thus, for the same LOS, a lower level of delay is acceptable at stop-controlled intersections than it is for signalized intersections.

Table 3-3. Level of Service Criteria for Intersections

	Average Delay per Vehicle (seconds/vehicle)	
LOS Designation	**Signalized Intersections**	**Stop-Controlled Intersections**
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

Source: Transportation Research Board 2000

Due to the complexity of calculating the LOS of Roundabouts, Sidra Solutions was used to analyze the roundabout at 212th St. SW and 84th Ave W. The Highway Capacity Manual 2010 method is used to determine an LOS, while geometrical variables are not taken into account, such as entry angle and lane width. The Highway Capacity Manual criteria for stop-controlled intersections (see Table 3-3) is applied, because drivers' expectations for delay at a roundabout more closely resemble expectations at a stop sign than at a signal (e.g. a lower level of delay is considered acceptable).

Concurrency and Level of Service Standard

Under GMA, concurrency is the requirement that adequate infrastructure be planned and financed to support development as it occurs. In practice, the GMA requires that communities can demonstrate the ability to provide adequate service levels within six years of development occurring. LOS standards are used to evaluate the transportation impacts of long-term growth and concurrency. In order to monitor concurrency, the jurisdictions adopt acceptable roadway

operating conditions that are then used to measure existing or proposed traffic conditions and identify deficiencies. The City has adopted LOS standards for city streets and state routes in the city that are subject to concurrency. **Table 3-4** shows the roadway LOS standards.

Table 3-4. Roadway Level of Service Standards

Facility	Standard
City Streets	Arterials: LOS D or better (except state routes) Collectors: LOS C or better
State Highways of Regional Significance	SR 99 north of SR 104; SR 524: LOS E or better
State Highways of Statewide Significance	SR 104; SR 99 south of SR 104: Not subject to City standard, but identify situations where WSDOT standard of D is not being met

LOS is measured at intersections during a typical weekday PM peak hour, using analysis methods outlined in the Highway Capacity Manual (Transportation Research Board 2010) and discussed in the previous section. For intersections of roads with different functional classifications, the standard for the higher classification shall apply.

Intersections that operate below these standards are considered deficient under concurrency. Deficiencies are identified either as existing deficiencies, meaning they are occurring under existing conditions and not as the result of future development, or as projected future deficiencies, meaning that they are expected to occur under future projected conditions. Concurrency management ensures that development, in conformance with the adopted land use element of the Comprehensive Plan, will not cause a transportation facility's operations to drop below the adopted standard. Transportation capacity expansion or demand management strategies must be in place or financially planned to be in place within six years of development use.

Transportation concurrency is a term that describes whether a roadway is operating at its adopted LOS standard. The adopted standard indicates a jurisdiction's intent to maintain transportation service at that level, which has budgetary implications. If a city adopts a high LOS standard, it will have to spend more money to maintain the roadways than if it adopts a low LOS standard. On the other hand, a standard that is too low may lead to an unacceptable service level and reduce livability for the community or neighborhood. Under the GMA, if a development would cause the LOS to fall below the jurisdiction's adopted standard, it must be denied unless adequate improvements or demand management strategies can be provided concurrent with the development. The key is to select a balanced standard—not so high as to be unreasonable to maintain, and not so low as to allow an unacceptable level of traffic congestion.

Highways of Statewide Significance (in Edmonds, SR 104, and SR 99 south of SR 104) are not subject to local concurrency standards. However, WSDOT has established a standard of LOS D for these facilities. The City monitors Highways of Statewide Significance, and coordinates with WSDOT to address any deficiencies that are identified.

Existing Level of Service

Table 3-5 and **Figure 3-6** presents existing PM peak hour LOS for 31 intersections throughout the city. The analysis indicates that all Edmonds City intersections are running to the City's adopted LOS standard. One Highway of Statewide Significance intersection (SR 104 & 238th St SW) is currently operating below the standard.

Table 3-5. Existing PM Peak Hour Intersection LOS

	Intersection	Traffic Control	Existing LOS	Average Delay (sec/veh)	LOS Standard	Jurisdiction
1	174th Street SW and Olympic View Drive	Side Street Stop	C	18	D	Edmonds/ Lynnwood
2	Olympic View Drive and 76th Avenue W	AWSC	C	17	D	Edmonds
3	196th Street SW and 76th Avenue W	Signal	D	51	E	WSDOT / Lynnwood
4	Puget Drive (SR 524) and 88th Avenue W	Side Street Stop	E	35	E	WSDOT / Edmonds
5	Puget Drive and Olympic View Drive	Signal	B	13	E	WSDOT/ Edmonds
6	Caspers Street and 9th Avenue N (SR 524)	Side Street Stop	C	20	E	WSDOT / Edmonds
7	208th Street SW and 76th Avenue W	Signal	A	6	D	Edmonds
8	212th Street SW and SR 99	Signal	D	49	E	WSDOT / Edmonds/ Lynnwood
9	212th Street SW and 76th Avenue W	Signal	D	41	D	Edmonds
10	212th Street SW and 84th Avenue W	Roundabout	B	13	D	Edmonds
11	Main Street and 9th Avenue N	AWSC	D	32	D	Edmonds
12	Walnut Street and 9th Avenue S	AWSC	B	13	D	Edmonds
13	Main Street and 3rd Avenue N (SR-524)	Signal	B	12	E	WSDOT / Edmonds
14	220th Street SW and SR 99	Signal	D	51	E	WSDOT / Edmonds / MLT
15	220th Street SW and 76th Avenue W	Signal	C	29	D	Edmonds
16	220th Street SW and 84th Avenue W	Signal	A	8	D	Edmonds
17	220th Street SW and 9th Avenue S	Signal	B	13	D	Edmonds
18	Edmonds Way (SR 104) and 100th Avenue W	Signal	C	26	D	WSDOT / Edmonds
19	238th Street SW and SR 99	Signal	B	16	E	WSDOT / Edmonds
20	238th Street SW and Edmonds Way (SR 104)	Side Street Stop	E[1]	50	D	Edmonds/ WSDOT
21	SR 104 and 76th Avenue W	Signal	C	23	D	Shoreline/ WSDOT

	Intersection	Traffic Control	Existing LOS	Average Delay (sec/veh)	LOS Standard	Jurisdiction
22	244th Street SW (SR 104) and SR 99	Signal	D	45	D	Shoreline/ Edmonds/ WSDOT
23	238th Street SW and 100th Avenue W	Signal	C	22	D	Edmonds
24	238th Street SW and Firdale Avenue	Signal	B	18	D	Edmonds
25	SR 104 and Main Street	Signal	A	7	D	WSDOT
26	SR 104 and Dayton Street	Signal	A	8	D	WSDOT
27	SR 104 and 226th Street SW	Signal	B	11	D	WSDOT / Edmonds
28	SR 104 and 95th Place W	Signal	A	7	D	WSDOT/ Edmonds
29	SR 104 and 236th Street SW	Signal	A	5	D	WSDOT / Edmonds
30	SR 99 and 216th Street SW	Signal	C	35	E	WSDOT / Edmonds/ Lynnwood
31	244th Street SW and Firdale Avenue	Side Street Stop	B	11	D	Edmonds
27	SR 104 and 226th Street SW	Signal	B	11	D	WSDOT / Edmonds

1. LOS exceeds WSDOT standard for Highways of Statewide Significance.

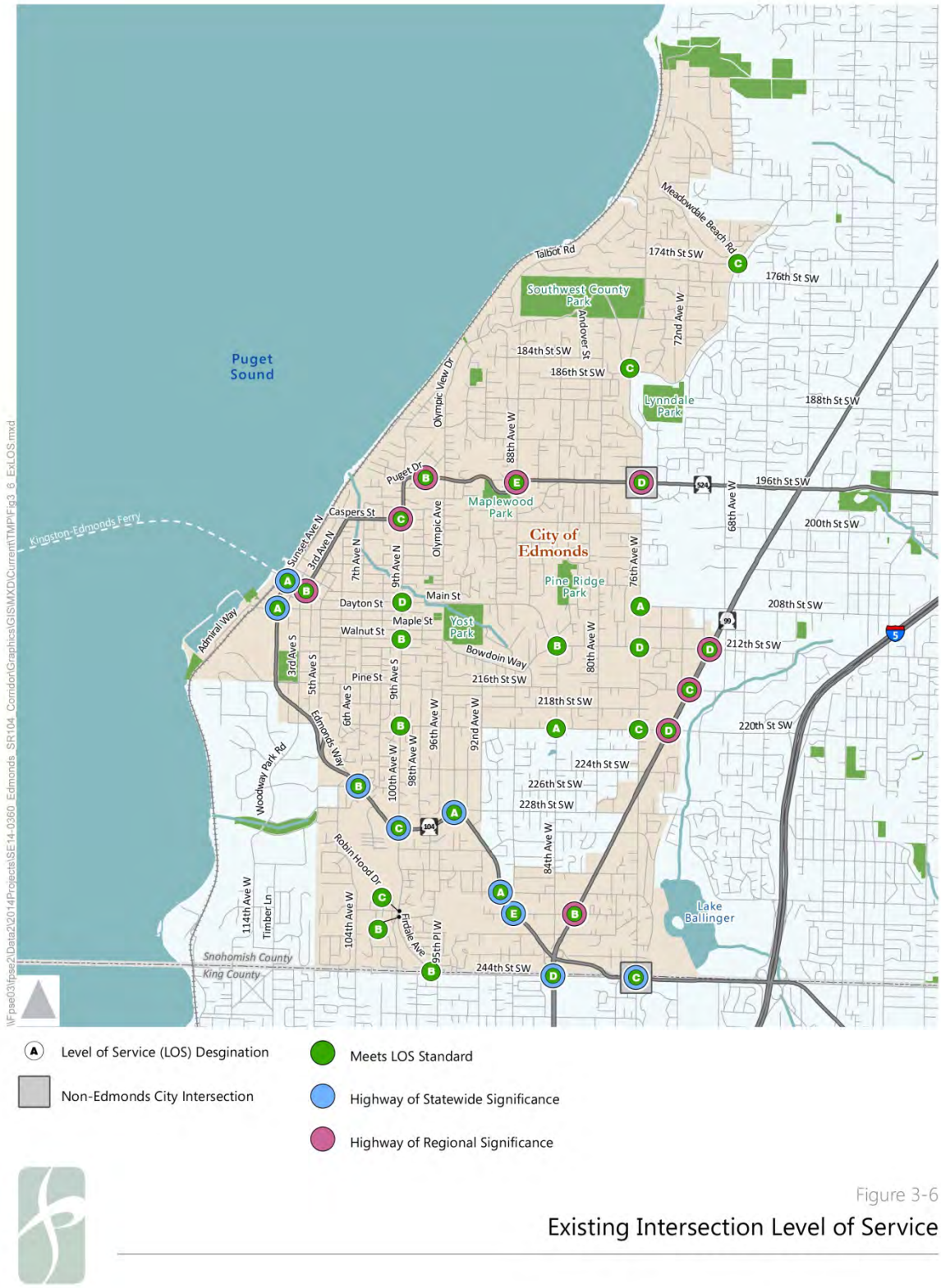


Figure 3-6
Existing Intersection Level of Service

Figure 3-6. Existing Level of Service

Future Traffic Operations

This section presents the methodology used to forecast traffic operating conditions through 2035.

Travel Demand Forecasting Model

The City's travel demand forecasting model was used to analyze future travel demand and traffic patterns for the weekday PM peak hour. The PM peak hour is typically the hour in which the highest level of traffic occurs, and is the time period in which concurrency assessment is based. The major elements of the model include:

- Transportation network and zone structure
- Existing and future land use estimates

The model uses Visum software to estimate PM peak hour vehicle trips using the following steps:

- Trip generation
- Trip distribution
- Network assignment

These fundamental model elements and the key steps of the model are described in the following sections.

Key Elements of the Travel Demand Model

Transportation Network and Zone Structure

The roadway network is represented as a series of links (roadway segments) and nodes (intersections). Road characteristics such as capacity, length, speed, and turning restrictions at intersections are coded into the network. The geographic area covered by the model is divided into transportation analysis zones (TAZs) that have similar land use characteristics. **Appendix C** shows the TAZs that are used in the Edmonds model. The PSRC regional transportation model was used as the basis for both transportation network and TAZ definitions. For the more detailed Edmonds model, some larger TAZs from the regional model were subdivided into smaller TAZs, and the roadway network was analyzed in greater detail.

Land Use Estimates

A citywide land use inventory was completed in 2008 using assessor records, supplemental aerial photos, and field verification. Using recent data from the PSRC and Washington State Employment Security Department, it was determined that the model's 2008 land use assumptions remain representative of existing (2014) conditions. External zones to the model were updated using the recently completed Snohomish County travel demand model to ensure regional consistency. Future year land use patterns and growth were also developed for year 2035. As with the existing year model, the Edmonds future year model was supplemented with external zone data from the 2035 Snohomish County travel demand model. Citywide land use is summarized in **Table 3-6**.

Table 3-6. City of Edmonds Existing and Future Land Use Summary

Land Use Type	Unit	Existing (2014)	2035
Single Family	Dwelling Units	10,990	11,790
Multi-Family	Dwelling Units	6,370	8,450
Retail	Jobs	2,240	3,080
Finance, Insurance, Real Estate, Services & Government	Jobs	6,220	7,630
Wholesale, Transportation, Utilities, Manufacturing & Construction	Jobs	140	170
Education	Students	5,760	6,730

Notes:
- The model also includes values for park acres, marina slips, and park-and-ride spaces.
- Excludes land use within Esperance.

Key Steps of the Travel Demand Model

Trip Generation

The trip generation step estimates the total number of trips produced by and attracted to each TAZ in the model area. The trips are estimated using statistical data on population and household characteristics, employment, economic output, and land uses. Trips are categorized by their general purpose, including:

- Home-based-work, or any trip with home as one end and work as the other end;
- Home-based-other, or any non-work trip with home as one end;
- Non-home-based, or any trip that does not have home at either end.

The trip generation model estimates the number of trips generated per household and employee during the analysis period for each of these purposes. The output is expressed as the total number of trips produced in each TAZ and the total number of trips attracted to each TAZ, categorized by trip purpose.

Trip Distribution

The trip distribution step allocates the trips estimated by the trip generation model to create a specific zonal origin and destination for each trip. This is accomplished using the gravity model, which distributes trips according to two basic assumptions: (1) more trips will be attracted to larger zones (defined by the number of attractions estimated in the trip generation phase, not the geographical size), and (2) more trip interchanges will take place between zones that are closer together than between zones that are farther apart. The result is a trip matrix for each of the trip purposes specified in trip generation. This matrix estimates how many trips are taken from each zone (origin) to every other zone (destination). The trips are often referred to as trip interchanges.

Network Assignment

Each roadway link and intersection node is assigned a functional classification, with associated characteristics of length, capacity, and speed. This information is used to determine the optimum path between all the zones based on travel time and distance. The trips are distributed from each of the zones to the roadway network using an assignment process that takes into account the effect of increasing traffic on travel times. The result is a roadway network with traffic volumes calculated for each segment of roadway. The model reflects the effects of traffic congestion on the roadway network.

Model Calibration

A crucial step in the modeling process is the calibration of the model. The model output, which consists of estimated traffic volumes on each roadway segment, is compared to existing traffic counts. Adjustments are made to the model inputs until the modeled existing conditions replicate actual existing conditions, within accepted parameters. Once the model is calibrated for existing conditions, it can be used as the basis for analyzing future traffic conditions and the impacts of potential improvements to the roadway network.

2035 Traffic Operations without Improvements

Table 3-7 presents projected PM peak hour LOS for city intersections by 2035, and compares them to the 2015 existing conditions. **Figure 3-7** identifies the 2035 LOS conditions, showing the following locations that are projected to operate below the City's adopted LOS standards:

- Olympic View Drive and 174th Street SW
- Olympic View Drive and 76th Avenue W
- 196th Street SW and 88th Avenue W
- 212th Street SW and SR 99
- Main Street and 9th Avenue N
- 220th Street SW and SR 99
- 220th Street SW and 76th Avenue W
- SR 99 and 216th Street SW

There would also be 3 intersections along Highways of Statewide Significance that do not meet WSDOT's recommended LOS of D; however, these intersections are not subject to City concurrency standards. The City still considers exceeding LOS D to be an operational deficiency, and will work with WSDOT to address LOS conditions at these locations:

- SR 104 and 238th Street SW
- SR 104 and Meridian Avenue N
- 244th Street SW and SR 99

Table 3-7. 2035 Intersection Level of Service

	Intersection	2015 LOS	2015 Average Delay (sec/veh)	2035 LOS*	2035 Average Delay (sec/veh)	Jurisdiction
1	174th Street SW and Olympic View Drive	C	18	**F**	**56**	Edmonds/ Lynnwood
2	Olympic View Drive and 76th Avenue W	C	17	**F**	**61**	Edmonds
3	196th Street SW and 76th Avenue W	D	51	E	61	WSDOT / Lynnwood
4	Puget Drive (SR 524) and 88th Avenue W	E	35	**F**	**70**	WSDOT / Edmonds
5	Puget Drive and Olympic View Drive	B	13	D	42	WSDOT/ Edmonds
6	Caspers Street and 9th Avenue N (SR 524)	C	20	D	34	WSDOT / Edmonds
7	208th Street SW and 76th Avenue W	A	6	A	10	Edmonds
8	212th Street SW and SR 99	D	49	**F**	**>150**	WSDOT / Edmonds/ Lynnwood
9	212th Street SW and 76th Avenue W	D	41	D	46	Edmonds
10	212th Street SW and 84th Avenue W	B	13	C	24	Edmonds
11	Main Street and 9th Avenue N	D	32	**F**	**73**	Edmonds
12	Walnut Street and 9th Avenue S	B	13	D	31	Edmonds
13	Main Street and 3rd Avenue N (SR 5524)	B	12	B	16	WSDOT / Edmonds
14	220th Street SW and SR 99	D	51	**F**	**122**	WSDOT / Edmonds / MLT
15	220th Street SW and 76th Avenue W	C	29	**F**	**93**	Edmonds
16	220th Street SW and 84th Avenue W	A	8	B	13	Edmonds
17	220th Street SW and 9th Avenue S	B	13	C	23	Edmonds
18	Edmonds Way (SR 104) and 100th Avenue W	C	26	D	41	WSDOT / Edmonds
19	238th Street SW and SR 99	B	16	D	47	WSDOT / Edmonds
20	238th Street SW and Edmonds Way (SR 104)	**E**	50	**F**	**>150**	Edmonds/ WSDOT
21	SR 104 and 76th Avenue W	C	23	**E**	**77**	Shoreline/ WSDOT
22	244th Street SW (SR 104) and SR 99	D	45	**E**	**78**	Shoreline/ Edmonds/ WSDOT
23	238th Street SW and 100th Avenue W	C	22	A	7	Edmonds
24	238th Street SW and Firdale Avenue	B	18	C	25	Edmonds
25	SR 104 and Main Street	A	7	A	8	WSDOT
26	SR 104 and Dayton Street	A	8	B	10	WSDOT
27	SR 104 and 226th Street SW	B	11	B	16	WSDOT / Edmonds
28	SR 104 and 95th Place W	A	7	B	12	WSDOT/ Edmonds
29	SR 104 and 236th Street SW	A	5	B	13	WSDOT / Edmonds

	Intersection	2015 LOS	2015 Average Delay (sec/veh)	2035 LOS*	2035 Average Delay (sec/veh)	Jurisdiction
30	SR 99 and 216th Street SW	C	35	**F**	**>150**	WSDOT / Edmonds/ Lynnwood
31	244th Street SW and Firdale Avenue	B	11	B	13	Edmonds

* **Bold** indicates that LOS exceeds standard.

Figure 3-7

2035 Intersection Level of Service

Figure 3-7. 2035 Level of Servic

Safety Assessment

Citywide efforts to provide safe transportation include enforcement of traffic regulations, provision of crosswalks and sidewalks for pedestrians, and provision of well-designed streets for safe driving. Safety also involves ongoing coordination with emergency service providers to ensure access for their emergency equipment. Recommendations to address safety issues are based on assessment of historical collision data, focused sub-area or corridor safety studies, or on citizen feedback. These assessments are described in the following sections.

Collision History

For this Transportation Plan update, historical collision data provided by WSDOT between January 2009 and September 2014 were compiled and evaluated (WSDOT 2014). Collision analysis looks both at the total number of collisions and the rate of collisions per million entering vehicles at an intersection. Both are important safety indicators.

The intersections with the highest number of collisions are located along SR 99, SR 104, and in downtown Edmonds. This pattern is shown in **Figure 3-8**, which is a map showing the relative magnitude of collisions occurring throughout the city.

An intersection that carries higher traffic volumes is more likely to experience a higher level of collisions. To account for this, and to allow collision data to be more accurately compared, the rate of collisions per million entering vehicles was also calculated for all locations. Typically, a collision rate at or greater than 1.0 collision per million entering vehicles raises indicates that further evaluation may be warranted. **Table 3-8** presents the collision data for all study locations having over 0.5 collisions per million entering vehicles

Edmonds' intersection collision rates shown in Table 3-8 are total collisions per million entering vehicles. The rate range for Edmonds is 0.6 to 1.4. This compares to regional average collision rates for (non-Freeway) state routes of between 2.3 to 2.9.

The locations with the rates at or above 1.0 collision per million entering vehicles are as follows (from the highest rate to the lowest rate):

- Main Street and 3rd Avenue N (SR 524)
- Edmonds Way (SR 104) and 100th Avenue W
- 220th Street SW and 76th Avenue W
- SR 104 and Main Street
- 212th Street SW and 84th Avenue W
- 238th Street SW and SR 99

Another comparison is collision rates per 1,000 population. On that basis, Edmonds has a rate of around 11.5. In comparison with 24 other cities in the state with comparable populations, this rate is the fifth lowest and is below the average rate of 16.4. Comparative rates for other nearby cities include Shoreline (12.0), Lynnwood (32.9), and Bothell (21.3). Rates for some smaller cities include Kenmore (19.6), Mountlake Terrace (23.9) and Mukilteo (16.6).

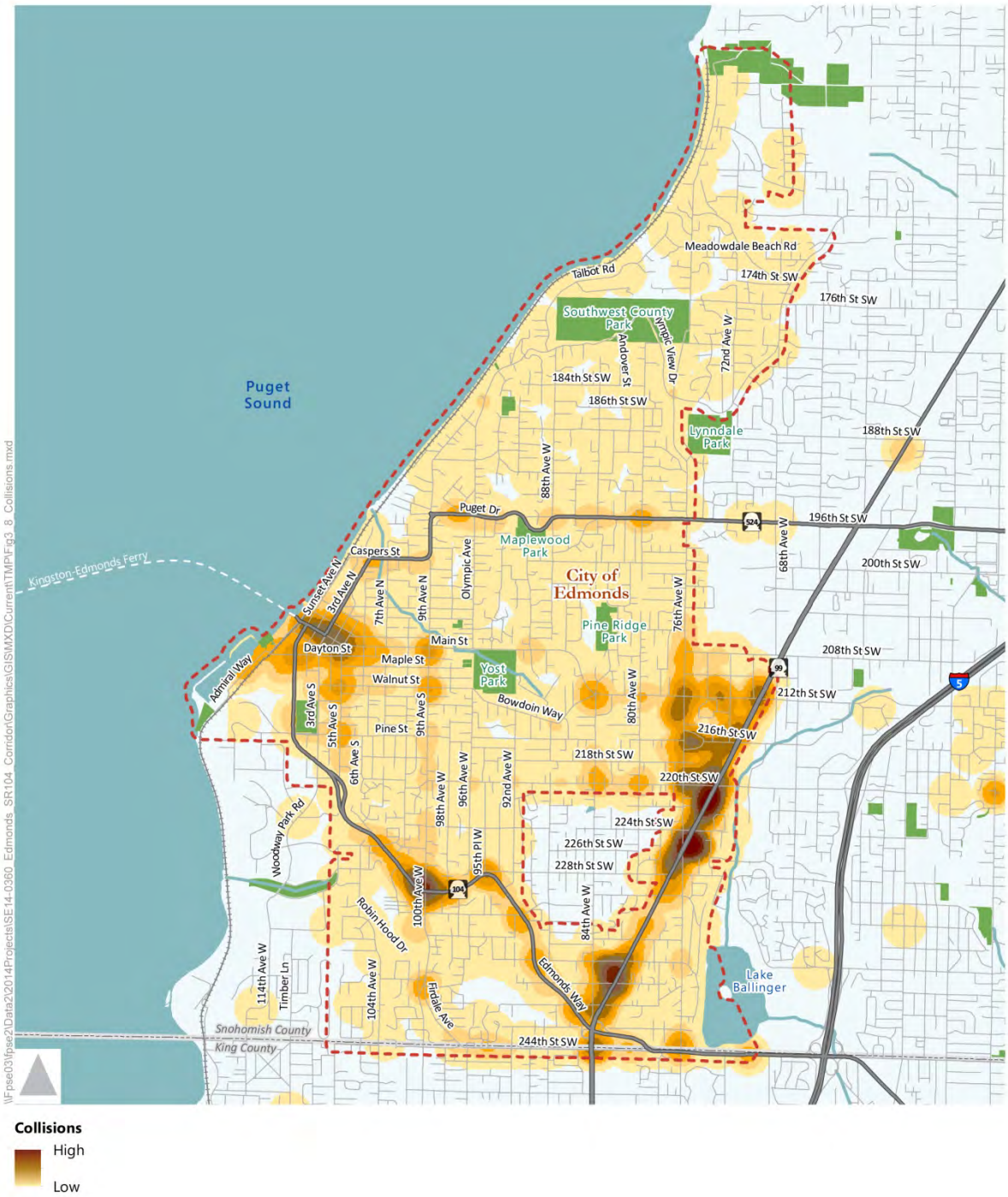


Figure 3-8

Vehicle Collisions

Figure 3-8 Collision Map

Table3-8. High Collision Locations

Intersection	Collisions between January 2009 and September 2014	Average Collisions per Million Entering Vehicles
Main Street and 3rd Avenue N (SR 524)	28	1.4
Edmonds Way (SR 104) & 100th Avenue W	90	1.4
220th Street SW and 76th Avenue W	51	1.2
SR 104 and Main Street	19	1.2
212th Street SW and 84th Avenue W	30	1.1
238th Street SW and SR 99	75	1.1
Main Street and 9th Avenue N	25	0.9
Walnut Street and 9th Avenue S	22	0.9
SR 104 and 95th Place W	33	0.8
SR 104 and Dayton Street	21	0.7
220th Street SW and SR 99	64	0.7
212th Street SW and 76th Avenue W	29	0.6
212th Street SW and SR 99	48	0.6

Source: WSDOT 2014.

J. Recommended Roadway Capital Projects

Proposed roadway capital projects were identified based on the review of intersection Level of Service and safety. These capital projects supplement the list of projects within the city's current Transportation Improvement Plan, including ongoing maintenance (e.g. overlays, signal and sidewalk upgrades), traffic calming, and other operational enhancements. The proposed roadway projects are presented in **Table 3-9** and illustrated in **Figure 3-9**.

Level of Service Projects

Capital roadway improvement projects were developed to address situations where the intersection LOS does not meet the city's standards under existing or 2035 projected conditions. These projects are needed to improve operation and capacity at intersections that do not meet the City's LOS standards.

Safety Projects

The City considers improvements to all modes (vehicle, bicycle, pedestrian, and transit) in the design of road projects. The proposed intersection and road improvements will include elements to support

and promote alternative mode operations and safety. Many of the projects that would improve intersection LOS also would improve intersection safety for motorists and other users.

Actions are also recommended on the following streets to improve vehicle and pedestrian safety:

- 238th Street SW, between SR 104 and SR 99
- 84th Avenue W, between 212th Street S and 238th Street SW
- SR 104 Access Management and Pedestrian Crossings
- SR 99 Access Management (Tied to SR 99 Revitalization Project)
- 228th St. SW from SR 99 to 95th Pl W

State Highway Projects

Intersections located on SR 104 are not subject to City's LOS standards; however, capital roadway improvement projects were developed as part of the SR 104 Complete Streets Corridor Analysis to address intersection operations and are included in the project list. Additional projects along SR 104 have been developed to address non-motorized and safety issues. The City is working with WSDOT for implementation of these improvements, or alternative projects to meet the same mobility objectives. The project list also includes several intersection projects along SR 99, consistent with WSDOT's and the city's LOS standards.

Table 3-9 Recommended Roadway Improvements

ID	Location	Improvement	Jurisdiction
1	174th Street SW and Olympic View Drive	Widen Olympic View Drive to add a northbound left turn lane for 50-foot storage length. Shift the northbound lanes to the east to provide an acceleration lane for eastbound left turns.	Edmonds/ Lynnwood
2	Olympic View Drive and 76th Avenue W	Install traffic signal. Widen 76th to add a northbound left turn lane for 175-foot storage length.[2]	Edmonds
4	Puget Drive and 88th Avenue W	Install traffic signal.[1]	Edmonds
8	SR 99 and 212th Street SW	Widen 212th to add a westbound left turn lane for 200-foot storage length and an eastbound left turn lane for 300-foot storage length. Provide protected left turn phase for eastbound and westbound movements.	WSDOT / Edmonds/ Lynnwood
11	Main Street and 9th Avenue N	Install traffic signal.[2]	Edmonds

ID	Location	Improvement	Jurisdiction
14	SR 99 and 220th Street SW	Widen 220th to add a 325-foot westbound right turn lane and a 300-foot eastbound right turn lane. Widen 220th to add a second westbound left turn lane.	WSDOT / MLT / Edmonds
15	220th Street SW and 76th Avenue W	Widen 220th to add a left turn lane for eastbound and westbound movements.	Edmonds
20	238th Street SW and SR 104	Install a signal and provide protected left turn phase for northbound and southbound.	Edmonds/ WSDOT
21	SR 104 and 76th Avenue W	Widen SR 104 to add second westbound left turn lane for 325-foot storage length. Provide right turn phase for northbound movement during westbound left turn phase. Add bicycle lane striping on 76th Avenue W.	Shoreline / WSDOT
30	SR 99 at 216th Street SW	Widen to allow one left turn lane, one through lane and one right turn lane in eastbound and westbound directions, with 100-foot storage length for turn lanes. Add eastbound right turn overlap with northbound protected left turn.	WSDOT / Edmonds/ Lynnwood
A	84th Avenue W, between 212th Street S and 238th Street SW	Widen to three lanes with curb, gutter, bike lanes and sidewalk.	Edmonds/ Snohomish County
A	238th Street SW, between SR 104 and SR 99	Widen to three lanes with curb, gutter, bike lanes, and sidewalk.	Edmonds
C	228th Street SW, between SR 99 and 95th Pl. W	Widen to three lanes with curb, gutter, bike lanes and sidewalk, as well as intersection improvements at 228th @ 95th	Edmonds/ Snohomish County

1. Analysis indicates that restricting northbound traffic to right-turn-only (prohibiting through and left-turn movements) would also alleviate the deficiency identified. This could be implemented as an interim solution until traffic signal warrants are met.
2. An alternative that also would meet the LOS Standard would be a compact urban roundabout.

Note that the upcoming construction project at Intersection #9 (212th Street SW/76th Avenue W) will maintain an acceptable LOS at that location through 2035. Without that project, this intersection would exceed the LOS in the future.

Figure 3-10 shows the 2035 LOS conditions, comparing with and without improvements. For those intersections that do not meet the city's LOS standard, the previously listed projects were identified to improve the LOS conditions. **Table 3-10** compares the LOS and delay values between the two 2035 conditions for the key intersections listed in Table 3-9.

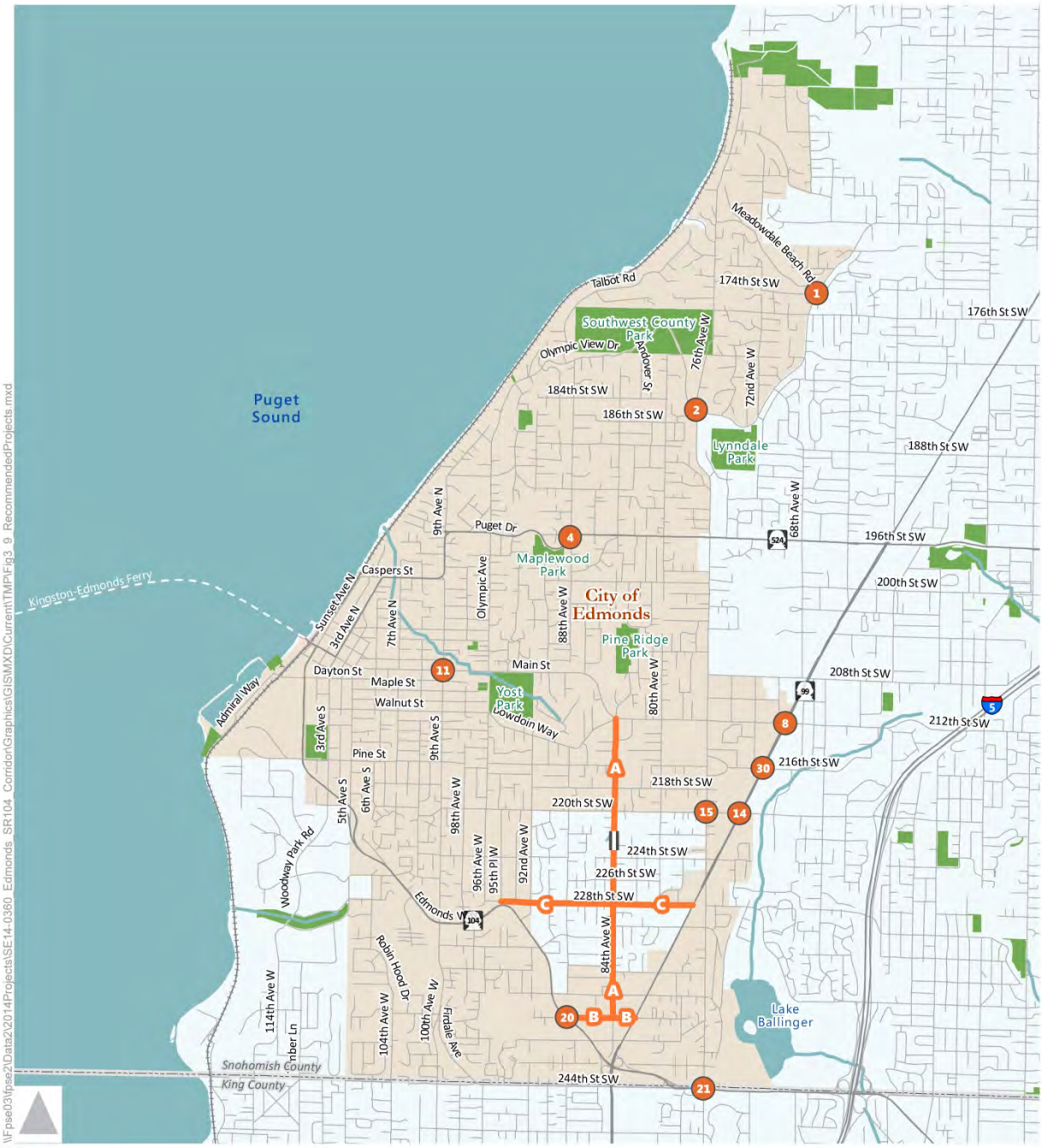


Figure 3-9

Recommended Roadway Capital Projects

Figure 3-9 Recommended Capital Road Improvements

Figure 3-10. 2035 Level of Service with and without Improvements

Table 3-10 Changes in 2035 Intersection Level of Service with Proposed Roadway Improvements

	Intersection	2035 LOS	2035 Average Delay (sec/veh)	2035 LOS w/ Improvements	2035 Average Delay w/ Improvements(sec/veh)	Jurisdiction
1	174th Street SW and Olympic View Drive	F	56	C	22	Edmonds/ Lynnwood
2	Olympic View Drive and 76th Avenue W	F	61	C	19	Edmonds
4	Puget Drive (SR 524) and 88th Avenue W	F	70	A	13	Edmonds
8	212th Street SW and SR 99	F	>150	**F**	**127**	Edmonds/ Lynnwood
11	Main Street and 9th Avenue N	F	73	B	14	Edmonds
14	220th Street SW and SR 99	F	122	E	61	Edmonds
15	220th Street SW and 76th Avenue W	F	93	D	44	Edmonds
20	238th Street SW and Edmonds Way (SR 104)	F	>150	B	12	Edmonds/ WSDOT
21	SR 104 and 76th Avenue W	E	77	D	47	Shoreline/ WSDOT
30	SR 99 and 216th Street SW	F	>150	**F**	**93**	Edmonds/ Lynnwood

* **Bold** indicates that LOS exceeds standard.

Roadway Project Priority

The roadway projects presented in this Transportation Plan were identified to address a variety of mobility and safety issues. The projects were prioritized according to five criteria presented in **Table 3-11**.

Table 3-11 Prioritization Criteria for Roadway Projects

Criteria	Weight	Description	Points	
Concurrency	3	Is the project required to meet concurrency?	3	Existing concurrency deficiency
			2	Concurrency deficiency identified in the future
			1	At LOS standard, near failing
			0	Does not address a concurrency deficiency
Safety	3	Does the project address identified safety issues?	3	≥ 1.5 collisions per million entering vehicles or among the highest total collisions within city
			2	1.0 - 1.5 collisions per million entering vehicles and/or addresses non-motorized safety issue
			1	<1.0 collisions per million entering vehicles
			0	No historical vehicle safety issues identified
Grant Eligibility	2	Does the project include elements, such as strong safety and/or non-motorized components, which would make it more attractive for state or federal grant funding?	3	High eligibility
			2	Medium eligibility
			1	Low eligibility
			0	No eligibility
Multimodal Elements	2	Does the project include elements that improve safety or mobility for pedestrians, bicyclists, and/or transit?	3	Improves transit and non-motorized travel
			2	Improves non-motorized travel
			1	Improves transit mobility
			0	Does not include multimodal elements
Magnitude of Improvement	1	At how many locations will the project improve travel conditions?	3	Improves LOS at 3 or more locations and/or improves non-motorized safety along a length of roadway
			2	Improves LOS and/or improves non-motorized safety at two locations
			1	Improves LOS and/or improves non-motorized safety at one location

Table 3-12 lists the roadway projects in ranked order, based upon the criteria described in **Table 3-11**. Projected costs of the recommended roadway projects are provided in Chapter 6 (Implementation and Financial Plan) of this Transportation Plan.

Table 3-12 Roadway Project Priority

	Criteria	Concurrency		Safety		Grant Eligibility		Multimodal Elements		Magnitude		
	Weight	3		3		2		2		1		
Rank	Project	Raw	Wtd	Raw	Wtd	Raw	Wtd	Raw	Wtd	Raw	Wtd	Weighted Total
1	220th St & 76th Ave.	2	6	3	9	2	4	1	2	2	2	23
1	220th St & SR 99	2	6	3	9	2	4	1	2	2	2	23
3	SR 99 & 216th St SW	2	6	3	9	1	2	2	4	1	1	22
4	Main St & 9th Ave.	2	6	1	3	2	4	3	6	1	1	20
4	212th St. & SR 99	2	6	3	9	1	2	1	2	1	1	20
6	196th St SW (SR 524) & 88th Ave.	2	6	2	6	1	2	2	4	1	1	19
6	84th Ave W, between 212th St S and 238th St SW	0	0	2	6	2	4	3	6	3	3	19
6	228th Street SW, between Hwy. 99 and 95th Pl. W	0	0	2	6	2	4	3	6	3	3	19
9	238th St SW, between Edmonds Way and 84th	0	0	2	6	2	4	3	6	2	2	18
10	SR 104 & 238th St	0	0	2	6	2	4	3	6	1	1	17
11	Olympic View Drive & 76th Ave W	2	6	1	3	1	2	2	4	1	1	16
11	SR 104 & 76th Ave NE	2	6	1	3	2	4	1	2	1	1	16
13	Olympic & 174th St SW	2	6	1	3	1	2	1	2	1	1	14

Wtd = Weighted = raw score X criterion weight

Traffic Calming Program

The city has adopted a Neighborhood Traffic Calming program, which is designed to assist residents and the City staff in responding to neighborhood traffic issues related to speeding, cut-through traffic, and safety. Implementation of a traffic calming program allows traffic concerns to be addressed consistently and traffic calming measures to be efficiently developed and put into operation. This section summarizes key elements of the traffic calming program.

The two main purposes of traffic calming techniques are to:

- Reduce the use of certain streets for cut-through traffic, and
- Reduce overall speeds.

Traffic calming devices are currently in place at many locations throughout Edmonds. These measures have been installed as part of capital improvement projects, as opportunities were presented, and occasionally in response to citizen requests.

A key component of any successful traffic calming program is citizen initiation and ongoing resident involvement. The traffic calming process begins when residents gather eight or more signatures on a petition, requesting that the City initiate a study. The City then undertakes a comprehensive traffic study, gathering data on vehicle speeds, traffic volumes, collision history, nighttime lighting conditions, and non-motorized transportation activity. If the study reveals a need for traffic calming, a three-phase approach to remediate traffic issues is used. Phase 1 is the start of the process, with the residents filing a petition and the City reviewing whether or not the application qualifies. Phase 2 focuses on solutions that can be quickly deployed, including education, signage, striping modifications, and more police enforcement. If a follow up study indicates that these solutions are not sufficiently effective, Phase 3 traffic calming measures are considered. Phase 3 measures, which are generally more costly and require more time to deploy, might include physical devices such as curb bulbs, chicanes, and traffic circles. The need for citizen involvement greatly increases in Phase 3, because each potential solution requires resident approval prior to implementation (see 2009 Transportation Plan / Appendix B for additional details).

Residential Neighborhood Issues

Residents periodically express concerns about speeding or a high level of cut-through traffic on residential streets.

Cut-Through Traffic – When congestion occurs on arterials and collector routes motorists begin to use local streets as cut-thorough routes. Maintaining the efficiency of arterial and collector routes is the most effective way to avoid or reduce cut-through traffic. However, there are times when drivers will use residential streets as shortcuts.

Speeding Traffic – Vehicles traveling well above the speed limit on residential streets reduces safety and is of concern to residents. Some residential streets have wide travel lanes that can encourage speeding because the motorist perceives the street is safe and intended for higher speeds.

Preservation and Maintenance Programs and Projects

The City's transportation infrastructure is comprised primarily of streets with pavements, sidewalks, illumination, and traffic control, including traffic signals, signs, and pavement marking. Transportation infrastructure requires maintenance, repair, rehabilitation, updating, and replacement to maintain serviceability, reliability, and safety, and to protect the public's investment. Maintenance of existing infrastructure enables efficiency of transportation operations, and reduces the need for

more expensive capital improvements. A detailed Citywide Pavement Rating Study was completed in 2012, and the street condition for every street was analyzed. This allowed the City to prioritize future overlay projects.

Maintenance of the City's transportation infrastructure is provided primarily by the City's Public Works Department. Activities include the following.

Pavement Preservation Program

The projects include spot repairs of failed pavement, full surface and taper grinding of pavement, curbing and sidewalk repairs, and minor storm water system modifications. The projects also incorporate traffic calming measures. In coordination with this transportation plan, future projects will include retrofit of curb ramps for ADA compliance, and may include delineating bike lanes and other bike route improvements (see Chapter 4 for a more detailed discussion). Selection of projects includes reviewing the capital improvement plans for water, sewer, and storm to determine if utility improvements are programmed within the roadway segment under consideration. If there are, the projects schedules will be coordinated. Depending of the level of failure for full surface repairs, options include an overlay, a completed resurfacing, a chip seal, or a slurry seal.

The Principal Arterial, Minor Arterials, and Collectors are all rated once every 2 years as part of the WSDOT Pavement Condition Survey. Those streets are assigned a Pavement Condition Index (PCI) ranging from 0-100:

- **91– 100: Excellent** (only routine maintenance necessary: activities are performed to maintain a safe traffic condition and include pothole patching, patching around utility structures, and crack sealing).
- **61 – 90: Good** (Repair activities are done within the initial 10 year life of a new pavement helps to prevent potholes from occurring. These activities may mean placing a new surface (2 inches or less) on an existing road way to provide a better all-weather surfaces, a better riding surface, and to extend or renew the pavement life).
- **41 – 61: Fair** (Rehabilitation work generally consists of the preparatory work activities and either thin or thick overlay. Preparatory work may involve digging out defective asphalt, base and sub base. A rehab project typically extends the roadway life between 10 –15 years).
- **Less than 40:** Poor / Severe (Reconstruction is required as a majority of the pavement or underlying base course has failed and can no longer serve as competent foundation for flexible pavements like asphalt).

Under existing conditions, 70% of city arterials and collectors are in Excellent to Fair condition, based upon these guidelines. The remaining 30% are in Poor to Fail condition. Under the ideal cycle, roads with functional classification of collector or above receive an overlay once every 20 years; and local roads receive an overlay once every 25 years.

Citywide Signal Improvements

As traffic signals age, their functionality becomes more limited and they become more difficult to maintain. The City upgrades traffic signals to maintain functionality, and to incorporate new technology.

Citywide Cabinet and Controller Upgrades

A signal controller is located in a controller cabinet at each traffic signal, and determines phases and cycle length for the signal it operates. Signal controllers are comprised of many types and many manufacturers, and as they age, their functionality becomes more limited and they become more difficult to maintain. The City upgrade signal controllers once their life cycle has been reached, in order to maintain functionality and accommodate modern traffic control equipment (when grant funds are secured).

Arterial Street Signal Coordination Improvements

The city coordinates traffic signals located within 1/2 –mile of each other, to maximize the operating efficiency of the overall roadway system.

Signal Coordination are planned for the following stretches:

- 220th St. SW from 76th Ave. W to SR 99
- 76th Ave W from 220th St. SW to 208th St. SW
- SR 104 from 226th St. SW to 236th St.

The following specific maintenance projects are also currently planned***:***

- Puget Drive/Olympic View Drive Signal Upgrades – Rebuild signal
- 238th Street SW/100th Avenue W Signal Upgrades – Rebuild complete signal system
- Main St. @ 3rd Avenue Signal Upgrades – Rebuild signal
- ADA Curb ramps upgrades

K. Non-Motorized System

This section provides an inventory of existing non-motorized facilities and an assessment of improvement needs. The term 'non-motorized' refers to pedestrians and human-powered vehicles, which for the most part are bicycles[6]. The chapter provides recommendations to improve pedestrian and bicycle mobility and safety.

Pedestrians

In 2002, the City of Edmonds completed its Comprehensive Walkway Plan. The plan included goals and objectives for non-motorized transportation in the city, in addition to a walkway inventory, a review of facility standards, and recommendations for walkway projects. The Walkway Plan has been updated in subsequent years, culminating in a full update as part of the 2015 plan.

Existing Pedestrian Facilities

Pedestrian facilities within the city include sidewalks, walkways, roadway shoulders, and off-road trails. Those facilities are typically more concentrated in areas with high pedestrian activity, such as

[6] Electric Assisted Bicycles can be considered within this definition for purposes of this report.

the downtown area, commercial and business centers, near schools and other public facilities. **Figure 3-11** illustrates the locations within Edmonds that have pedestrian-intensive land uses.

Figure 3-12 illustrates the existing sidewalks and walkways within the city. The figure shows that the sidewalk system is most complete inside the core area bounded by SR 104, 92nd Avenue W, and SR 524. Outside of this area, sidewalks are primarily located along roads classified as collectors or arterials. Raised and striped walkways are generally associated with schools and provide safe walking routes.

The federal ADA was passed in 1990 and amended in 2008. ADA requires jurisdictions to provide accessible sidewalks primarily through the installation of ADA-compliant sidewalk ramps. The design requirements address various areas of concern such as curb alignment with crosswalks, narrower sidewalk width, obstacles such as utility poles, placement of the sidewalk adjacent to the curb, or the slope of the ramps. Most of the city's sidewalk ramps were constructed in the 1980s or later. As pedestrian improvements are made along roadway corridors, the City has upgraded sidewalk ramps or installed new ones in accordance with current standards. Of approximately 350 intersections with existing ADA curb ramps in Edmonds, 65 intersections were found to fully meet ADA standards, and 24 intersections partially met ADA standards.

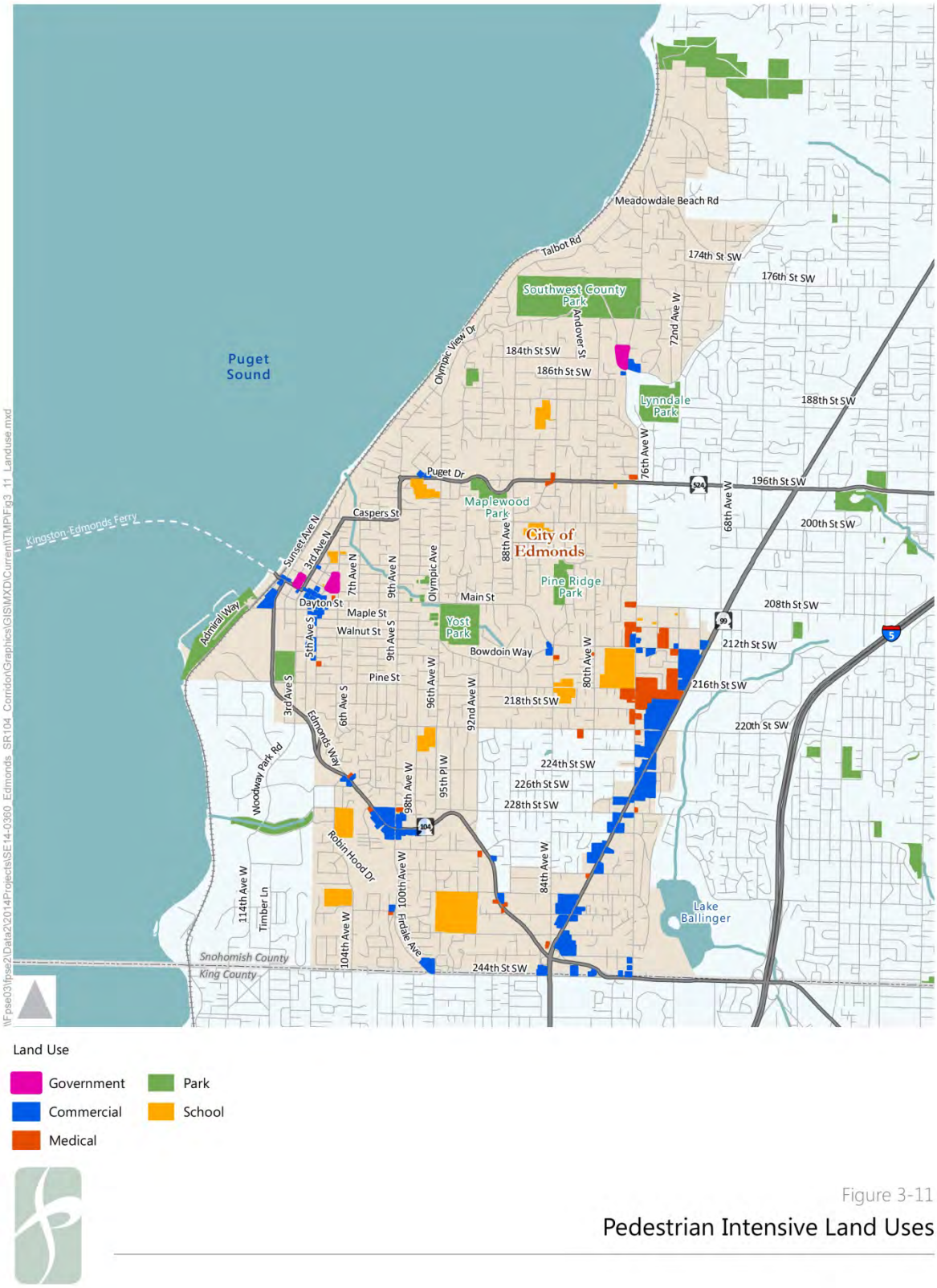


Figure 3-11. Pedestrian Intensive Land Uses

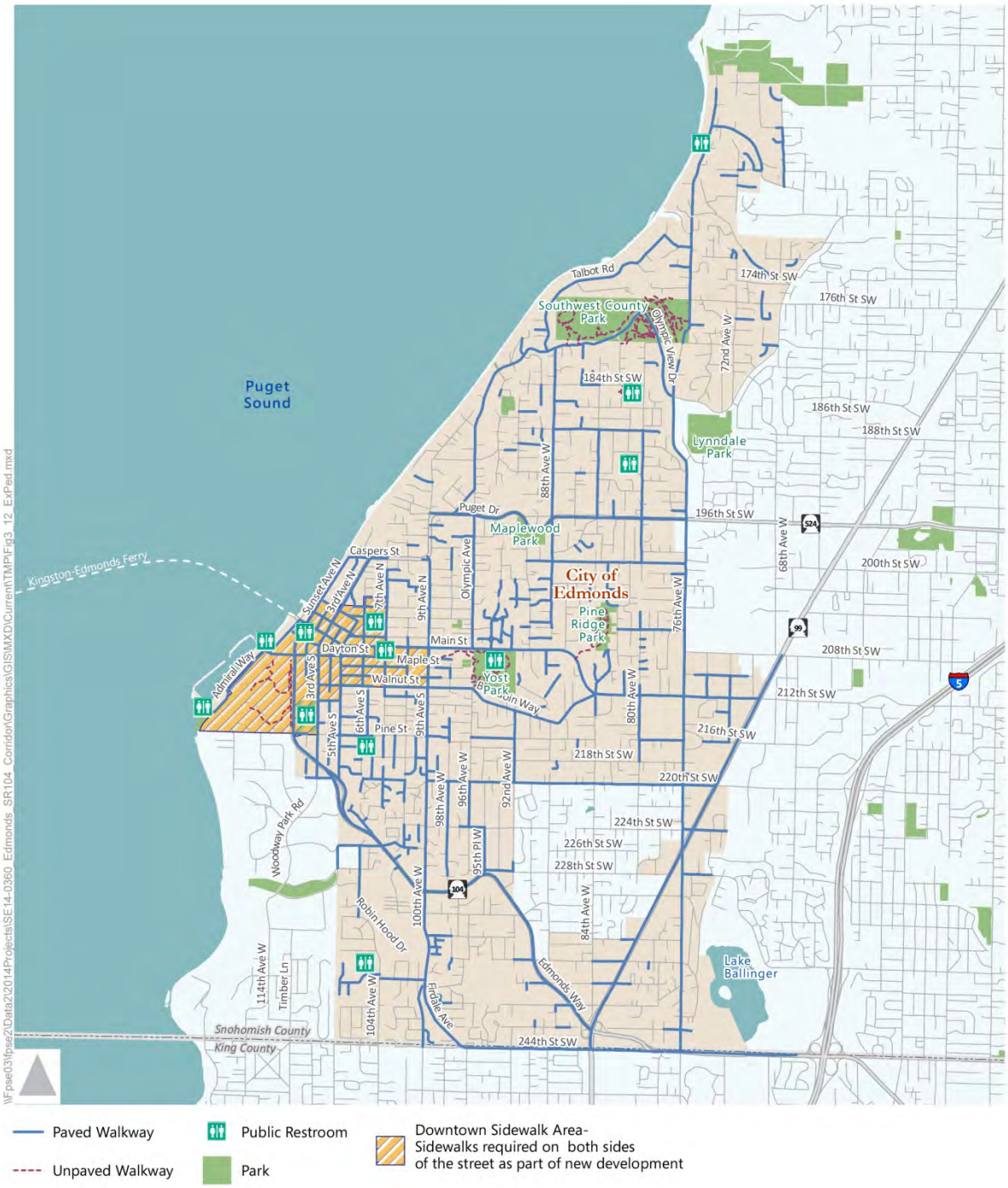


Figure 3-12
Existing Pedestrian Facilities

Figure 3-12. Existing Pedestrian Facilities

Recommended Pedestrian Improvements

This section presents recommended pedestrian improvements, which consist of new sidewalk connections to improve pedestrian mobility and safety, and upgrades of curb ramps to conform to ADA standards. Selected pedestrian crossing treatments are also identified.

Walkway Prioritization Process

Major gaps in the city walkway system were identified by the Transportation Committee. To address those gaps, the committee developed criteria to evaluate and prioritize walkway improvement projects. These criteria were used to prioritize improvements to walkway sections that were identified based on input from public meetings, Walkway Committee meetings, and deficiencies determined from a review of the existing city walkway inventory.

The criteria were weighted according to their importance. A system of points was developed to evaluate each proposed project against each criterion. The result was a weighted average score that helps to compare and prioritize proposed projects. **Table 3-13** describes the walkway prioritization criteria and their relative weights and point systems.

Table 3-13. Prioritization Criteria for Walkway Projects

Criteria	Weight	Description	Points	
Pedestrian Safety	5	How safe is the route for pedestrians? Does this improvement: ▪ Separate pedestrians from vehicular traffic, especially in high traffic areas? ▪ Improve width of walkway and surface conditions? ▪ Address potential conflicts at road crossings?	3	Strong concerns for pedestrian safety along this route
			2	Some concerns for pedestrian safety along this route
			1	This route is very similar to other routes in Edmonds
			0	Not a safety concern
Connectivity to Services, Facilities, and Links	5	Does this route connect to facilities or services such as schools, parks, churches, community centers, businesses, transit routes, or existing sidewalk? Does this improvement: ▪ Provide direct access to facilities or services? ▪ Ensure that the route links to a safe direct access to facilities or services?	3	Route provides significant access to 3 or more services and facilities
			2	Route provides access to services and facilities
			1	Route provides access to 1 service or facility
			0	Route does not provide access to services or facilities

Criteria	Weight	Description	Points	
Pedestrian Level of Activity	3	Is this a well-traveled route, or would it be, if improved? Level of activity may be determined by: ▪ Measured counts ▪ Identification by the public and staff, through observation and experience	3 2 1 0	Route is utilized by a significant number of pedestrians Route is utilized consistently by pedestrians Route is occasionally used by pedestrians Route is not utilized by pedestrians
Distance from Schools	3	Is this route within a mile of a public school?	3 2 1	Route is an Elementary school route or close proximity to school Route provides access to High school students Route is within 0.5 mile of school
Connectivity with Transit Services	2	Is this route also a route for transit or provide access to transit?	3 2 1	This route is on a public transit route with transit stops This route is within 650 feet from a public transit route with transit stops This route provides a principal pedestrian access corridor to public transit where sidewalks do not exist on adjacent pedestrian routes. (Beyond 650 feet from a public transit route.)
Environmental Impacts	1	Will the development of the route have any impacts on the environment? Environmental impacts include: ▪ Wetlands ▪ Shorelines ▪ Wildlife habitat ▪ Aesthetics	3 2 1 0	Route has no negative environmental impact and aesthetically improves the area Route has some negative environmental impact but aesthetically improves the area Route has some negative environmental impact Route will have major negative impact on the environment

Walkway sections were analyzed separately depending on the section length. Walkway sections longer than 1,000 feet are defined as “long walkways” and walkway sections shorter than 1,000 feet are defined as “short walkways”. **Table 3-14** summarizes the walkways that were considered for walkway improvements by the type of projects (i.e., short walkway or long walkway). The projects are listed in ranked order by the total points and by priority level, and split up between short and long walkways. **Figure 3-13** shows the locations of the walkway projects. Higher priority projects are shown in green in the figure, with lower priority projects shown in red. Projected costs of the recommended walkway projects are provided in Chapter 4 (Implementation and Financial Plan) of this Transportation Plan. A more detailed summary of each project’s limits, existing conditions, and point tally is provided in **Appendix D**.

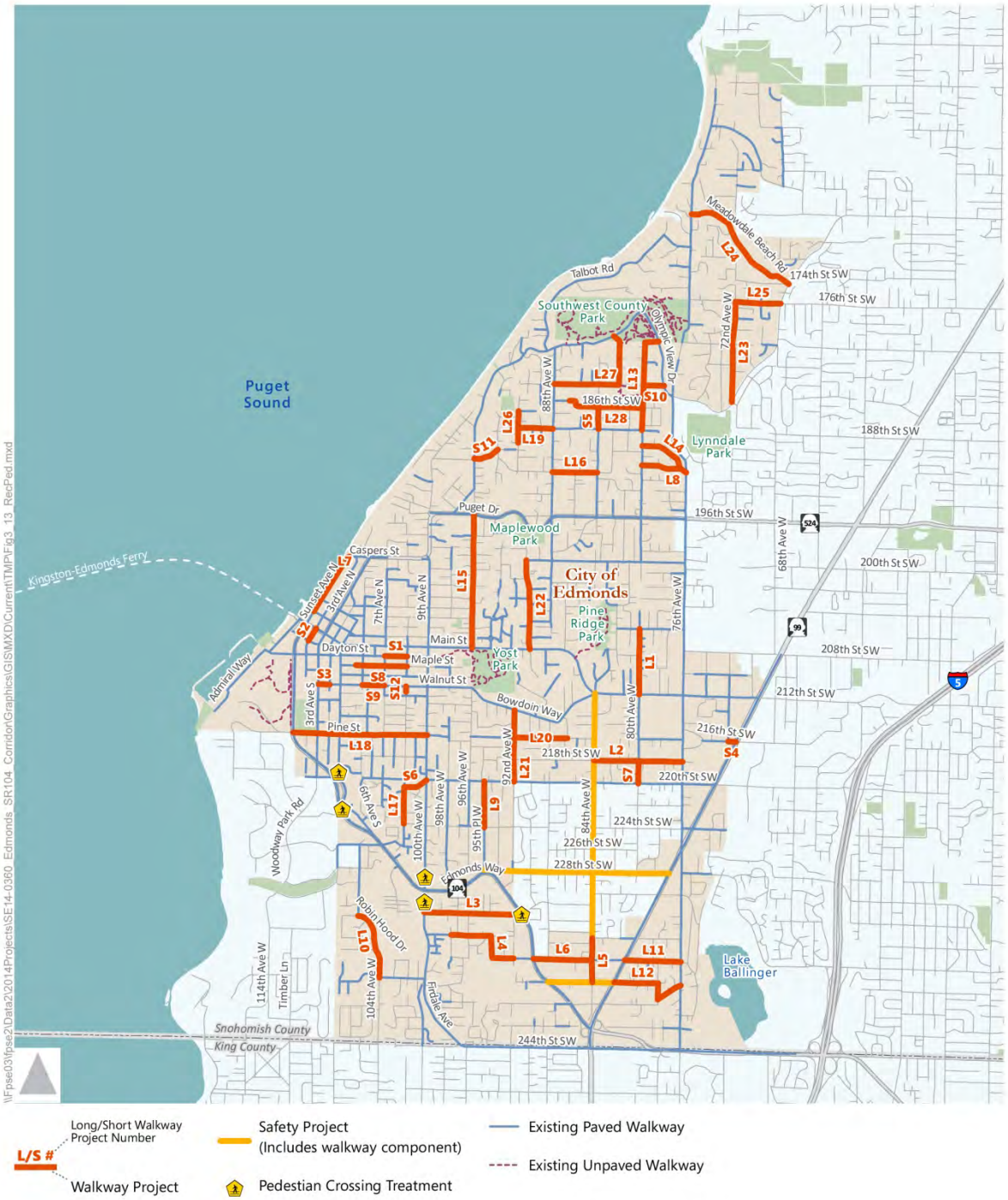


Figure 3-13
Recommended Pedestrian Projects

Figure 3-13. Recommended Walkway Projects

Table 3-14. Recommended Walkway Projects

ID	Street Name	From	To	Total Points	Priority
Short Walkway Projects					
S1	Dayton St.	7th Ave. S	8th Ave. S	48	1
S2	2nd Ave.	Main St.	James St.	42	1
S3	Walnut St.	3rd Ave. S	4th Ave. S	39	1
S4	216th St. SW	72nd Ave. W	SR 99	39	1
S5	84th Ave. W	188th St. SW	186th St. SW	38	1
S6	Elm Way	8th Ave. S	9th Ave. S	35	2
S7	80th Ave. W	218th St. SW	220th St. SW	34	2
S8	Maple St.	West of 6th Ave. S	8th Ave. S	32	2
S9	Walnut St.	6th Ave. S	7th Ave. S	32	2
S10	Paved (184th St. SW)	80th Ave. W	OVD	31	2
S11	190th Pl. SW	94th Ave. W	OVD	27	2
S12	8th Ave.	Walnut Ave.	South of Walnut	24	2
Long Walkway Projects					
L1	80th Ave. W	206th St. SW	212nd St. SW	49	1
L2	218th St. SW	76th Ave. W	84th Ave. W	48	1
L3	232nd St. W	100th Ave W	SR 104	46	1
L4	236th St. SW / 234th St. SW	SR 104	97th Pl. W	45	1
L5	84th Ave. W	238th St. SW	234th St. SW	44	1
L6	236th St. SW	SR 104	East of 84th Ave. W	44	1
L7	Sunset Ave.	Bell St.	Caspers St	42	1
L8	191st. St SW	80th Ave. W	76th Ave. W	41	1
L9	95th Pl. W	224th St. SW	220th St. SW	41	1
L10	104th St. SW / Robin Hood	238th St. SW	106th Ave. W	39	1
L11	236th St. SW	Hwy. 99	76th Ave. W	39	1

ID	Street Name	From	To	Total Points	Priority
L12	238th St. SW	Hwy. 99	76th Ave. W	39	1
L13	80th Ave. W / 180th St. SW	188th St. SW	OVD	37	1
L14	189th Pl. SW	80th Ave. W	76th Ave. W	36	1
L15	Olympic Ave.	Puget Dr.	Main St.	35	2
L16	192nd St. SW	84th Ave. W	88th Ave. W	35	2
L17	8th Ave. W	14th St. SW	Elm Way	35	2
L18	Pine St.	9th Ave. W	SR 104	32	2
L19	188th St. SW	88th Ave. W	92nd Ave. W	32	2
L20	216th St. SW	86th Ave. W	92nd Ave. W	32	2
L21	92nd Ave. W	Bowndoin St.	220th St. SW	32	2
L22	Maplewood Dr.	Main St.	200th St. SW	32	2
L23	72nd Ave. W	OVD	176th St. SW	32	2
L24	Meadowdale Beach Rd	OVD	76th Ave. W	29	2
L25	176th St. SW	72nd Ave. W	OVD	27	2
L26	92nd Ave. W	189th Pl. SW	186th Pl. SW	26	2
L27	Andover St. / 184th St. SW	184th St. SW / 88th Ave. W	OVD / Andover St.	26	2
L28	186th St. SW	Seaview Park	8608 185th Pl SW	24	2

1. Project L27 is an L-shaped project in which sidewalks are proposed on either side of Andover Street (the north-south leg), and on the north side of 184th Street SW (the east-west leg).

In addition to the walkway projects, a variety of non-motorized enhancements were identified as part of the SR 104 Corridor Analysis. Figure 3-13 shows several proposed pedestrian crossing treatments along SR 104 and connecting streets.

Pedestrian access to transit stops is also a critical element of the walkway improvement program. The City will continue to work with Community Transit to ensure that access to transit stops is as convenient and safe as possible. Community Transit offers its support in securing funds related to improving access to the existing transit system and transit facilities.

Pedestrian Level of Service Standard

The city has developed a pedestrian LOS standard that ties directly to the proposed walkway plan. As shown in **Table 3-15,** the LOS measure uses a simple red, yellow, green scale to identifywhether a pedestrian facility improvement is consistent with the proposed walkway plan. The city can use these LOS standards to monitor how well the walkway plan is being implemented over time.

Table 3-15. Pedestrian Level of Service Standards

LOS	Within Pedestrian Priority Network
	Provides pedestrian facility* as shown in Walkway plan
	Provides a lower-level pedestrian facility* than recommended in Walkway plan
	No pedestrian facility provided

* Pedestrian facility includes sidewalks and shoulders protected by a raised curb.

Curb Ramp Upgrade Program

In an effort to upgrade the sidewalk ramps to meet ADA requirements, the City has developed a Curb Ramp Upgrade Program that prioritizes future sidewalk ramp improvements at sub-standard locations. Priorities for future sidewalk new ramp installations or ramp upgrades are determined based on the following priority order:

- Downtown intersections receive priority over other locations;
- Arterial streets receive priority over local access streets;
- Intersections receive higher priority if they are near community centers, senior centers, or health facilities; transit stops, schools, or public buildings; or commercial areas and parks.

Implementation of the curb ramp upgrade program will occur over time, due to the costs of those upgrades, and available funding. As part of asphalt overlay projects, all ramps adjacent to the paving work must be upgraded to meet ADA standards and new ramps installed where none exist. Sidewalk ramps will also be installed as part of street reconstruction and sidewalk construction projects. Private redevelopment will also fund some ramp upgrades as part of required frontage improvements.

Bicycles

The City prepared a comprehensive Bikeway Plan in 2009. This plan was revised as part of the current study to outline a list of improvement projects for the bicycle system. The types of recommended bicycle facilities range from shared-use paths to bike lanes to bicycle parking.

- **Shared use paths and trails** – off-street facilities that cater to both pedestrians and cyclists. Where paved, these facilities provide a high amenity connection for nonmotorized users of all ages and all abilities.
- **Bike lanes** – portions of roadways that have been designated by striping, signing, and pavement markings for the preferential or exclusive use by cyclists.

- **Bike routes** – shared streets used by bikes and cars. Signed shared roadways are shared roadways that have been identified as preferred bike routes by posting bike route signs.
- **Bike Sharrows-** Some bike routes are proposed to have sharrows, which are marked within the travel lane and identify that bicycles are sharing the roadway. Sharrows are commonly used to indicate where on the roadway a cyclist should ride, and also to remind motorists to share the lane with bicycles when present.
- **Bike Parking**- There have been many bicycle parking facilities implemented over the past several years. Convenient bike parking is an important incentive to encourage more bicycling within the city.

Note that these bicycle facilities can be used by human-powered and electric-assisted bicycles. Given the hilly terrain in Edmonds, the use of electric-assisted bicycles could be expected to increase.

Bicycle Facility Inventory

Figure 3-14 shows existing bicycle facilities within the city, which include bicycle routes, bicycle lanes, trails, sharrows and bicycle parking facilities. The Interurban Trail, which links the cities of Seattle, Shoreline, Edmonds, Mountlake Terrace, Lynnwood, and Everett, runs through the southeastern portion of Edmonds. Trails are also located along the city's beaches and within city parks.

There are also easy connections for cyclists to ferries, Sound Transit's Sounder service, and Community Transit. Bicycles are allowed on all of these systems. WSF provides a reduced fare for bicycles, Sound Transit provides bike racks, and all Community Transit vehicles have bike racks.

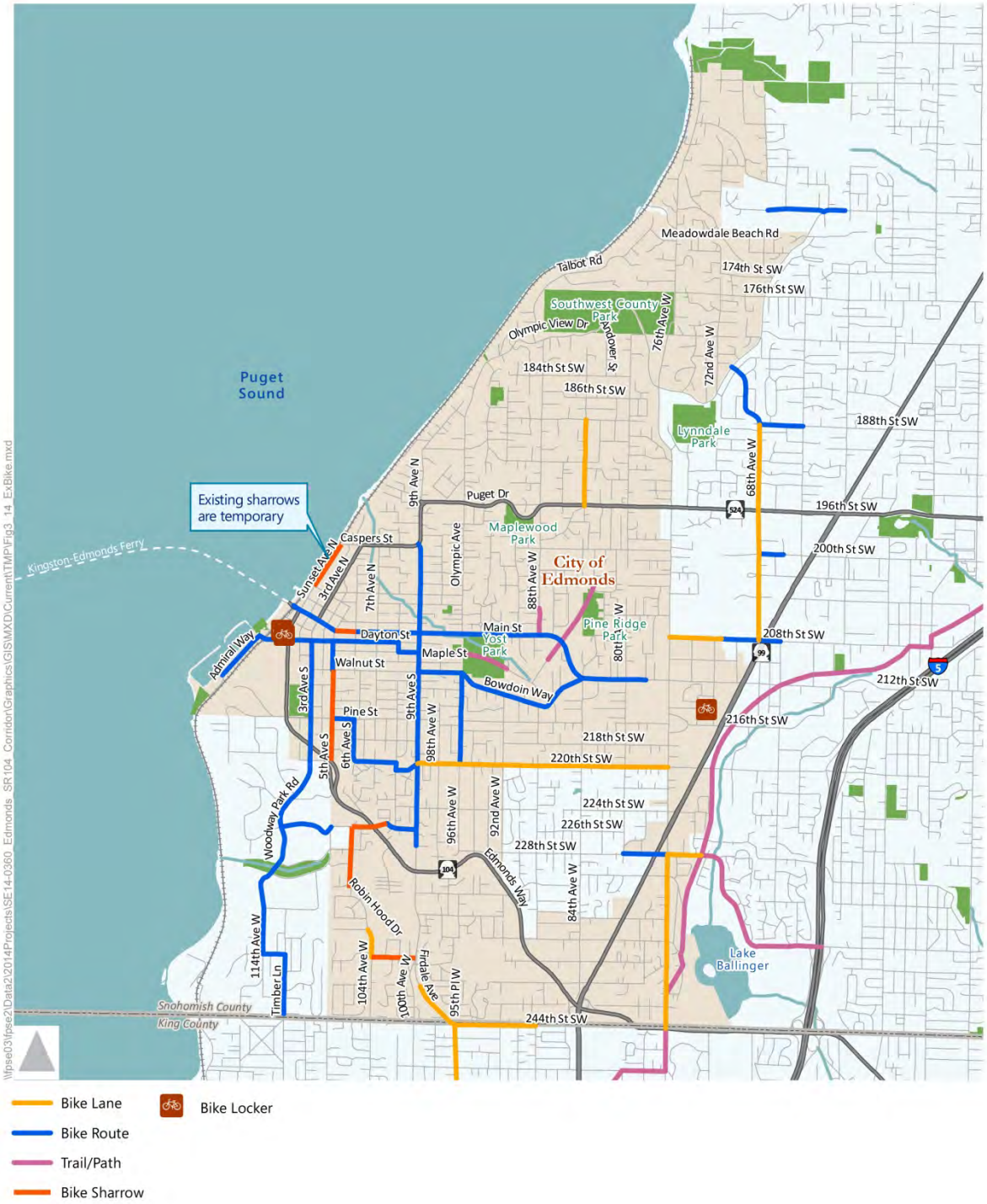


Figure 3-14
Existing Bicycle Facilities

Figure 3-14. Existing Bicycle Facilities

Recommended Bicycle Facilities

The city worked with the Edmonds Bike Group to develop recommended bicycle facilities. **Figure 3-15** shows the recommended bicycle facilities along with the existing bicycle system for reference. The bicycle projects include bicycle lanes or bicycle routes that can be added as part of future roadway improvement projects. The projects are concentrated around two major efforts: creating east-west bicycle connections between downtown Edmonds and the Interurban Trail, and creating north-south bicycle connections between the northern and southern portions of Edmonds.

The primary east-west bicycle projects include:

- Main St, 212th St SW
- Pine St, Elm St, 220th St SW

The primary north-south bicycle projects include:

- 3rd Ave S, Woodway Park Rd
- 9th Ave S, 100th Ave W
- 84th Avenue W
- 76th Avenue W

Other bicycle projects include:

- Olympic View Drive
- 224th St SW
- 88th Ave W, 84th Ave W

Table 3-16 shows the degree to which the bicycle plan has been implemented to date, along with the amount needed for completion. The table shows that while pedestrian trails and paths, as well as bicycle parking, is at or near full planned completion, other facilities are not as far along. Many miles of additional bicycle facilities are recommended by either upgrading existing bicycle classifications or by locating new bicycle facilities.

Table 3-16 Existing and Recommended Bicycle Facilities

Bicycle Facility	Existing	Recommended
Bicycle Lane (miles)	4.4	14.0
Bicycle Route (miles)	8.8	26.0
Bicycle Sharrows (miles)	1.7	4.6
Trail/Path (miles)	2.4	2.4
Bicycle Parking/ racks (locations)	62	67

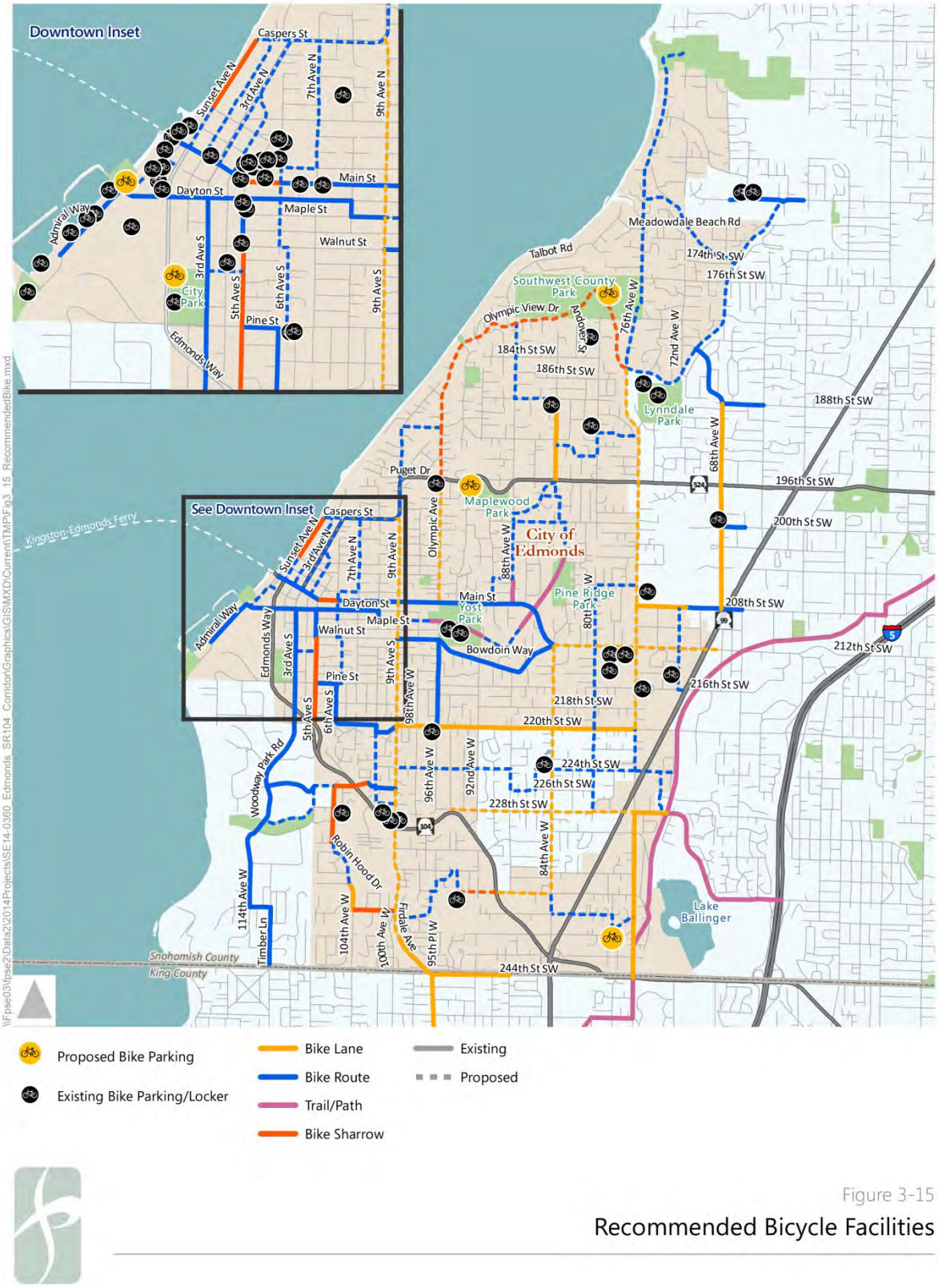


Figure 3-15 Recommended Bicycle Facilities

Bicycle Facility Level of Service Standards

The city has developed a bicycle LOS standard that ties directly to the proposed bicycle plan. As shown in **Table 3-17** the LOS measure uses a simple red, yellow, green scale to identify the whether a bicycle facility improvement is consistent with the proposed bicycle plan. The city can use these LOS standards to monitor how well the bicycle plan is being implemented over time.

Table 3-3 Bicycle Level of Service Standards

LOS	Within Bicycle Network
🟢	Provides bicycle facility* as shown in the Bicycle Plan
🟡	Provides a lower-level facility* than recommended in the Bicycle Plan
🔴	No bicycle facility provided

* Bicycle facilities – lowest-level to highest-level of treatment: shared; bicycle lanes; buffered bicycle facility; separated trail.

Bicycle Loops

The bicycle plan focusses on facilities needed to provide a safe and comfortable cycling environment. As a guide to bicyclists desiring to ride around Edmonds, **Figure 3-16** shows three bicycle loops of various difficulties and lengths that are recommended along roads that have low speeds and low vehicle volumes. The Edmonds Bike Group helped establish these three bicycle loops.

- The **short bicycle loop** has an easy level of difficulty and a distance of 5 miles.
- The **medium bicycle loop** is a medium level of difficulty route; it follows a similar route as the short bicycle loop, but has an additional 2 miles for a total length of 7 miles.
- The **long bicycle loop** is a scenic route designed for experienced cyclists. The total distance for the long bicycle loop is 20 miles with a portion located in the Town of Woodway.

Riders on these loops can take advantage of the facilities provided within the bicycle plan.

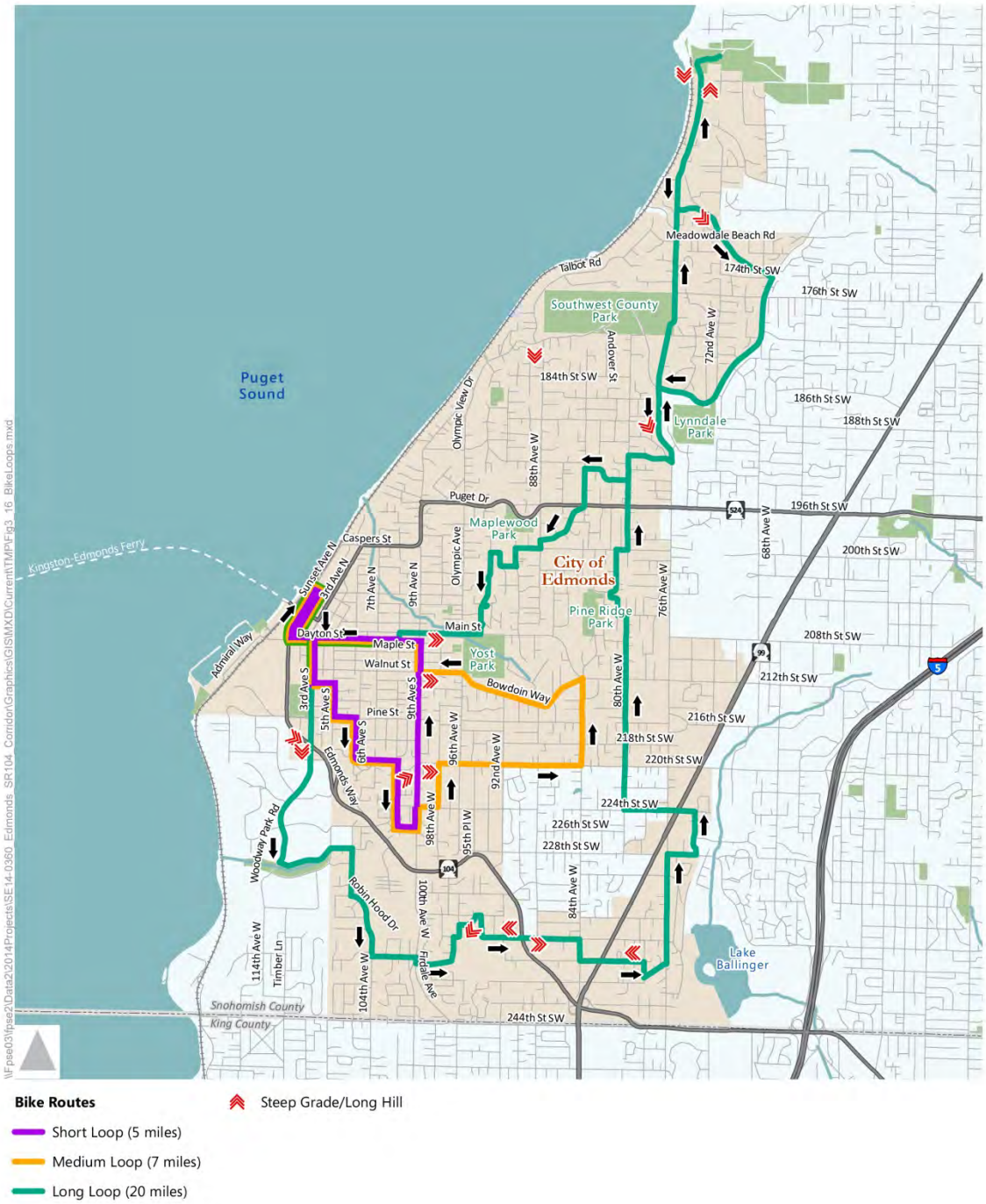


Figure 3-16 Recommended Signed Bicycle Loops

L. Transit

This section provides an inventory of existing transit facilities and services, including buses, rail and ferries. Strategies to increase transit use are also presented.

Existing Bus Service

Community Transit

Community Transit, the major provider of public transit for Snohomish County, operates three types of transit service in the city:

- Fixed bus route service
- Rideshare services
- Dial-A-Ride Transit (DART) paratransit service

Fixed Route Bus Service

Fixed bus routes are local or commuter services that operate on a standardized schedule. **Figure 3-17** shows the bus routes that serve the city. Most of this service is provided by Community Transit, although Sound Transit connections are available along I-5. SWIFT Bus Rapid Transit also operates through the city along SR 99.

Table 3-18 summarizes bus routes serving the city, which provide two-way service between destinations in the city and surrounding areas, from morning through evening. Commuter bus routes serving the city, which provide service to major employment destinations in Snohomish and King Counties, are also shown. Commuter routes typically operate only during the weekday morning and evening peak commute periods. Every Community Transit bus is equipped to accommodate wheelchairs. All buses are also equipped with bicycle racks.

Table 3-4. Community Transit Bus Routes

Route Number	Route Description	Days of Operation	Hours of Operation (approximate)	October 2014 Average Weekday Daily Boardings
101	Aurora Village (Shoreline) to Mariner Park and Ride	Weekdays and Saturdays	5:00 am – 11:00 pm (Weekdays); 6:00 am -10 pm (Saturdays)	1,603
115	Aurora Village Transit Center to Mariner Park & Ride	Weekdays and Saturdays	5:00 am – 11:00 pm (Weekdays); 6:00 am -10 pm (Saturdays)	2,424
116	Edmonds to Silver Firs	Weekdays and Saturdays	5:00 am – 11:00 pm (Weekdays); 6:00 am -10 pm (Saturdays)	2,131
119	Mountlake Terrace to Ash Way Park & Ride	Weekdays and Saturdays	6:00 am – 11:00 pm (Weekdays); 6:00 am -10 pm (Saturdays)	545
130	Lynnwood to Edmonds	Weekdays and Saturdays	5:20 am- 10:00 pm (Weekdays); 7:00 am-10:30 pm (Saturdays)	971
196	Alderwood Mall to Edmonds	Weekdays and Saturdays	6:00 am-10:30 pm (Weekdays); 7:00 am-10:30 pm (Saturdays)	613
405	Downtown Seattle to Edmonds P&R	Daily (Peak travel)	6:00 am-9:00 am & 3:00 pm – 7:00 pm (Weekdays)	277
416	Downtown Seattle to Edmonds	Daily (Peak travel)	6:00 am-9:00 am & 3:30 pm – 7:00 pm (Weekdays)	223
871	University District to Edmonds P & R	Daily (Peak travel)	6:00 am-10:30 am & 12:30 pm – 7:00 pm (Weekdays)	801
Swift	Aurora Village to Everett Swift Station	Weekdays and Saturdays	5:00 am – 11:00 pm (Weekdays); 6:00 am -10 pm (Saturdays)	5,667

Source: Community Transit 2015

Accessibility to fixed route transit is considered to be ideal when transit stops are located within 0.25 mile of residents. **Figure 3-17** shows the proportion of Edmonds residents living within 0.25 mile of a fixed-route local or commuter transit service. Approximately 60%[7] of Edmonds' population lives within 0.25 mile of local bus service, and approximately 74% of the Edmonds population lives within 0.25 mile of either local or commuter service. Transit coverage was reduced when Community Transit eliminated some bus routes after 2010.

[7] Value being confirmed and updated

Figure 3-17
Existing Access to Transit

Figure 3-17. Existing Access to Local and Commuter Transit

Rideshare Services

For citizens who are disinclined or unable to use fixed-route bus service, the following rideshare services are available:

- Commuter Vanpools – Community Transit provides vehicles, driver orientation, vehicle maintenance, and assistance in forming vanpool groups.
- Carpools – Community Transit provides ride-matching services for people seeking carpool partners.

DART Paratransit

DART is a specialized bus service provided by Community Transit for those who are unable to use regular bus service due to a disability. Service is available to all origins and destinations within 0.75 mile of local, non-commuter bus routes.

King County Metro Transit

King County Metro does not provide local service within Edmonds, but connections are available between Community Transit and Metro routes at the Aurora Village Transit Center just south of the city.

Sound Transit Express Bus

Sound Transit provides regional bus service to the urban portions of Snohomish, King, and Pierce counties, but does not have an established express bus stop in Edmonds. Sound Transit express bus service is available at transit centers and park-and-ride lots in the vicinity of Edmonds (Swamp Creek, Lynnwood Transit Center, and Mountlake Terrace Transit Center) and can be accessed by Community Transit.

Park-and-Ride Facilities

The primary commuter parking facility in the city is the Edmonds park-and-ride lot located at 72nd Avenue West and 213th Place SW. This facility, which has a capacity for 255 cars, is owned by WSDOT and operated by Community Transit. This facility offers bus service to Lynnwood, downtown Seattle, Redmond, Everett, Shoreline and Seattle's University District. The average utilization rate of this facility is 71%. (Community Transit 2008)

Many routes also serve the Edmonds Senior Center, Edmonds Station and Edmonds Ferry Terminal. Parking available in the vicinity of these facilities includes a total of 220 spaces near the ferry terminal and 156 spaces at the Edmonds Station. Edmonds Community College also serves as a transit hub, but no public parking is available at this location. **Table 3-19** summarizes the park-and-ride lots that serve Edmonds.

Table 3-19. Park-and-Ride Facilities Serving Edmonds

Lot Name	Location	Routes	Parking Capacity
Edgewood Baptist Church	20406 76th Avenue W	119	10
Calvary Chapel Edmonds	8330 212th Street SW	115, 116	10
Edmonds Lutheran Church	23525 84th Avenue W	115	15
United Presbyterian Church of Seattle	8506 238th Street SW	416	64
Edmonds Park-and-Ride	21300 72nd Avenue W	405, 871	255
Mountlake Terrace Transit Center	236th Street SW and I-5 Northbound Ramp	130, 871, King County Metro	880
Edmonds Ferry Terminal	SR 104	WSF	220
Edmonds Station	210 Railroad Avenue	110, 116, 130, 196, 416, Sounder, Amtrak	156

Source: Community Transit, Sound Transit and WSF

Outside of the city, the Lynnwood Transit Center and Aurora Village Transit Center are the major hubs for transferring between Community Transit local routes. Other transfer hubs include Edmonds Community College and Mountlake Terrace Transit Center. These Community Transit routes connect with King County Metro service at Aurora Village, Mountlake Terrace, and Bothell; Everett Transit in the City of Everett; the Washington State Ferry at the Edmonds and Mukilteo Terminals; with Sound Transit at various park-and-ride lots in the south Snohomish County; and Island Transit in the City of Stanwood.

Rail Service

Passenger rail service in Edmonds is provided by Sound Transit's Sounder commuter rail and Amtrak's intercity rail. The rail station is located at 211 Railroad Avenue and can be accessed by Community Transit.

Sounder Commuter Rail

Operated by Sound Transit, the Sounder commuter rail line operates between Seattle and Everett, with stops in Edmonds and Mukilteo. Through a partnership with Amtrak, Amtrak trains are also available for commuters along this route. Sounder operates four southbound trains during the morning commute period and four northbound trains during the evening commute period. Amtrak operates one additional train in each direction during both the morning commute period and the evening commute period. Additional parking is needed at the train station to accommodate the rising number of daily transit riders using this service. Sound Transit currently leases a parking lot from various property owners.

Amtrak Service

Amtrak operates two routes with stops in Edmonds: the Amtrak Cascades and the Empire Builder.

Amtrak Cascades

Edmonds serves as a stop along the Seattle – Vancouver route. Service is daily, with two northbound trains and two southbound trains stopping in Edmonds per day. From Edmonds, the two northbound trains terminate in Vancouver, British Columbia. Both southbound Cascades trains originate in Vancouver, BC.

The Cascades route's northbound service provides connections to Everett, Mount Vernon, and Bellingham in Washington State, and Surrey, Richmond, and Vancouver in British Columbia. Travelers who wish to take rail south to destinations between Seattle and Portland are best served by traveling to Seattle to take the Seattle–Portland route.

Empire Builder

The Empire Builder provides cross-country service between Seattle and Chicago. Its route traverses the states of Washington, Idaho, Montana, North Dakota, Minnesota, Wisconsin, and Illinois. Service is daily, with one eastbound train departing from Edmonds each evening (5:12 pm). One westbound train arrives in Edmonds each morning (9:10 am).

Washington State Ferries

The Edmonds-Kingston ferry route connects the northern portion of the Kitsap Peninsula and the Olympic Peninsula with northern King and southern Snohomish Counties. The route is 4.5 nautical miles long, and takes approximately 30 minutes to traverse. The Edmonds-Kingston route operates seven days per week year round, with average headways ranging between 35 and 70 minutes.

In 2013, the Edmonds-Kingston route carried 3.9 million people, at an average of 12,200 passengers per day. This is slightly less than the 4.3 million people the route carried in 2006. The annual Washington State Ferries Traffic Statistics Report indicates that in-vehicle boardings were the most prevalent, with about 86 percent of passengers boarding in this manner on the average weekday. Walk-on passengers constituted 14 percent of all passengers on an average weekday.

Future transit Improvements

Chapter 2 of this Transportation Plan identifies a number of specific goals and policies aimed at enhancing transit options and operations in the City. This section describes actions the City could take to improve transit availability and ease of use, working closely with transit service providers.

Priority Transit Corridors

Figure 3-18 depicts a future transit system with potential priority transit corridors shown in green. These priority corridors would emphasize good daily transit service and bus stop amenities to make transit attractive. With the expected opening of Link Light Rail to Lynnwood during the planning horizon, it is likely that several Community Transit bus routes will be redesigned within Edmonds and surrounding areas to integrate with light rail.

Transit Level of Service

A proposed Transit Level of Service policy is shown in **Table 3-20**. One primary LOS measure would be related to the provision of transit stop amenities along the priority transit corridors. Providing good pedestrian access to stops would also be a goal that the city could work cooperatively with Community Transit to achieve. The final measure, Quality of Service, is outside of the city's control, but the LOS policy would guide the city's discussions with Community Transit and other transit providers. A green LOS would be a desired standard to strive for as the plan is implemented.

Table 3-20 Transit Priority Corridor Level of Service

LOS	Transit Stop Amenities*	Pedestrian Access	Quality of Service (Optional)+
	More than 80% of transit stops meet amenity minimum provisions	Sidewalks and marked crosswalks serving stops	All day frequent service; adequate parking at park-and-rides and stations
	More than 60% of transit stops meet amenity minimum provisions	Sidewalks and marked crosswalks serving some stops	Peak period service; may be some parking overflow at park-and-rides and stations
	Less than 60% of transit stops meet amenity minimum provisions	General lack of sidewalks and marked crosswalks	N/A

* Amenities include bus stop shelter, bench, flag post, and/or concrete waiting area; these amenities are determined based on the number of people using a transit stop as defined by a transit agency.
+Consider the adequacy of parking provided at park-and-rides and transit stations

Additional Fixed Route Transit Service

The City will continue to coordinate with Community Transit regarding additional bus transit service on Olympic View Drive or east of 76th Avenue N.

In addition, the City adopted a policy (see Policy 8.12 in Chapter 2) to explore future funding for a city-based circulator bus that provides local shuttle service between neighborhoods (Firdale Village, Perrinville, Five Corners, Westgate) and downtown.

Washington State Ferries

WSDOT is planning to implement a ferry reservation system along commuter routes in the Central Puget Sound. Depending on its design, a reservation system could have impacts on ferry traffic arrival times and queuing areas. The City will work closely with WSDOT to implement a reservation system that meets regional and local needs.

Edmonds Crossing Multimodal Facility

The City is also a partner in the Edmonds Crossing multimodal ferry, bus, and rail facility. Sound Transit is planning to relocate Edmonds station as part of the larger Edmonds Crossing Multimodal project being led by WSDOT. While there is no funding for this relocation, the multimodal facility would be an important transit hub for the city.

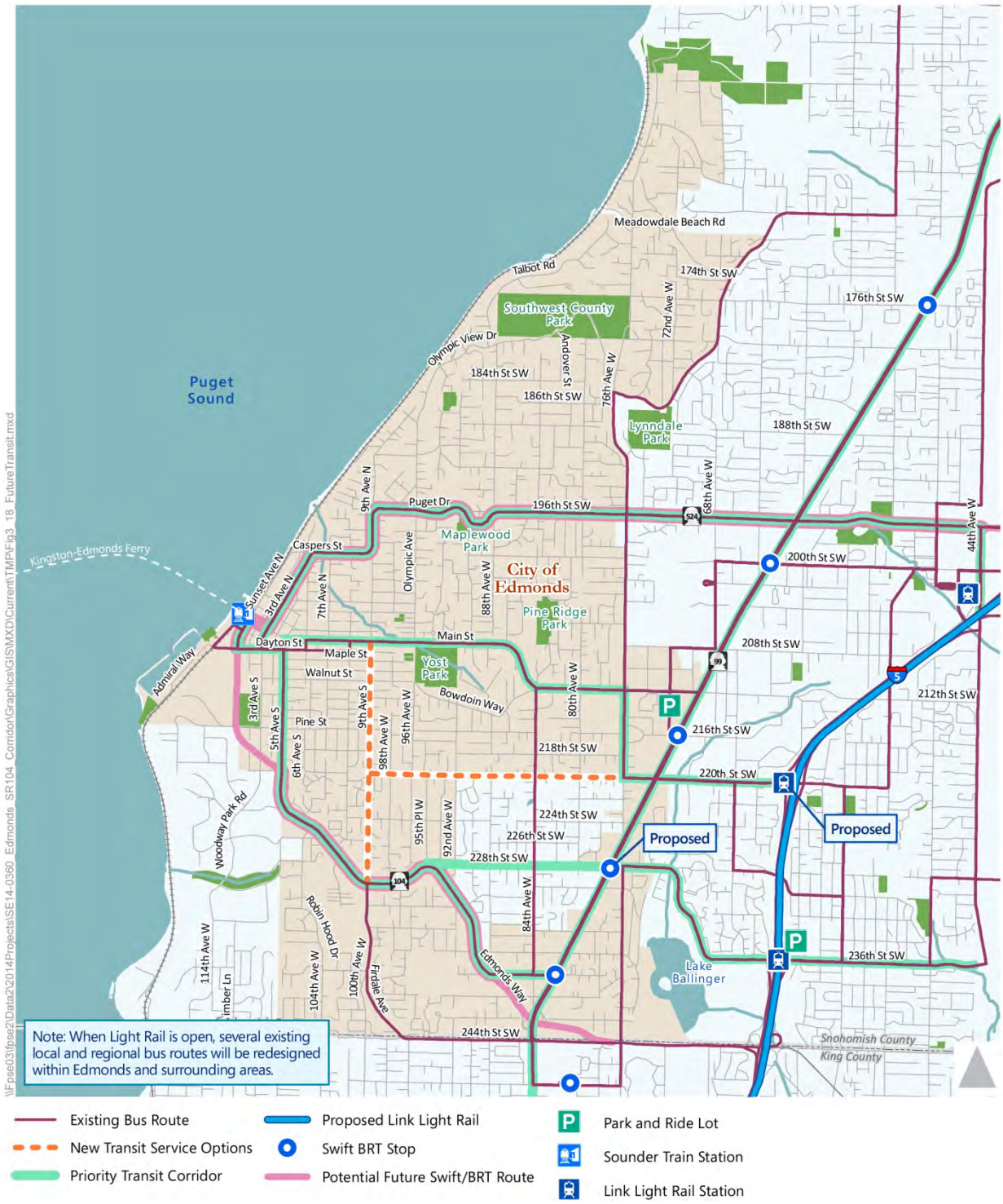


Figure 3-18. Future Priority Transit Corridors

M. Goods Movement

In addition to the railroad line, movement of freight through Edmonds occurs primarily along SR 104, SR 99, and 76th Ave W, as shown in Figure 3-19. SR 104 provides the only truck route into downtown Edmonds. Truck routes on 76th Ave W and Olympic View Drive connect Edmonds to cities in the north, while SR 99 connects Edmonds to cities in the North, East and South. For connections within the city, 4th Ave W, 220th St SW and 9th Ave S are designated for trucks. Beyond these primary routes, delivery vehicles use many other streets to reach their final destinations.

A few areas prohibit certain types of vehicles. The downtown area between SR 104 and 9th Ave S only allows single unit trucks, while SR 524, Olympic View Drive within the city, and a few other roads are prohibited for hauling.

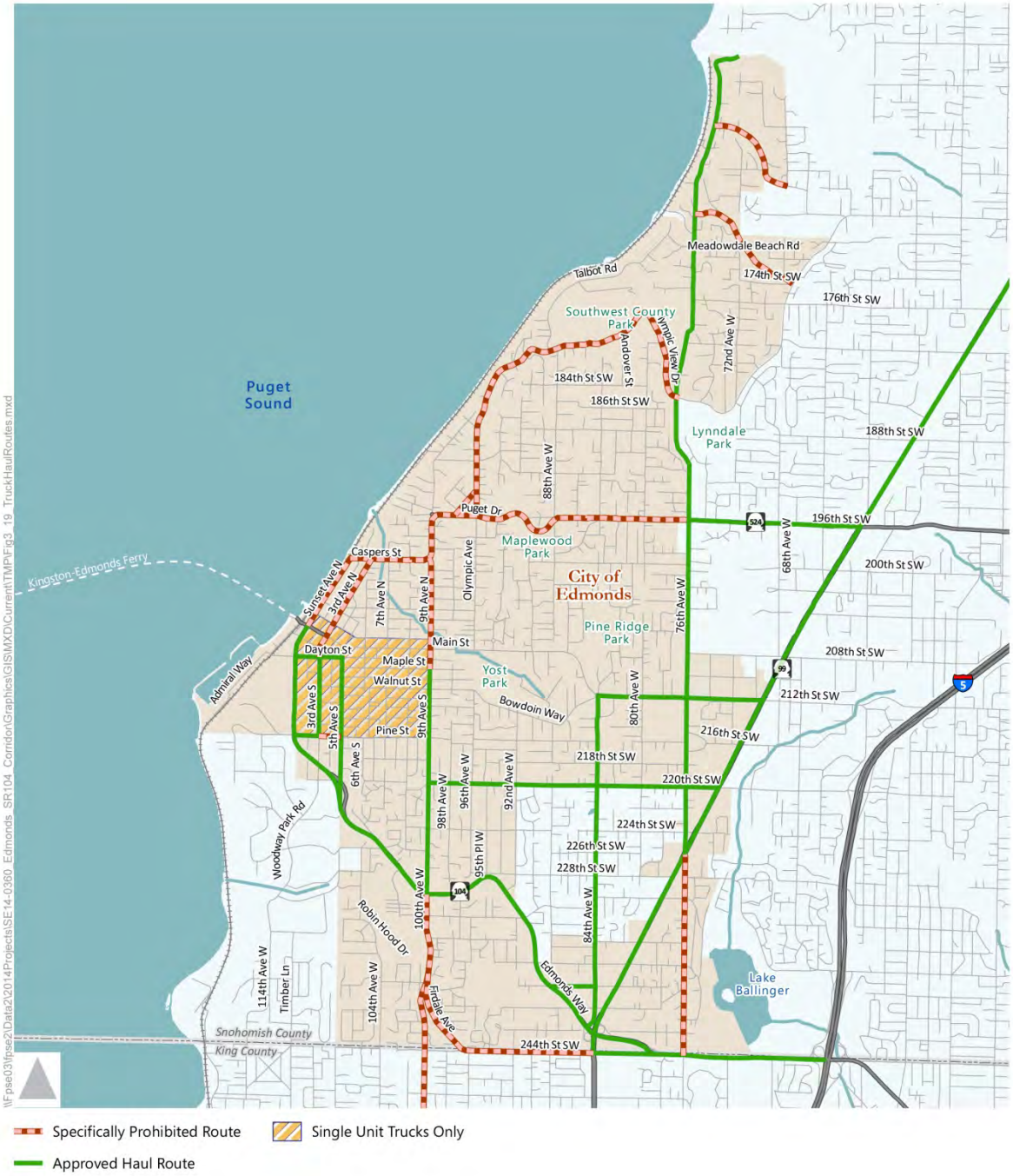


Figure 3-19
Truck Haul Routes

Figure 3-19. Truck Routes

N. Transportation Demand Management

TDM consists of strategies that seek to maximize the efficiency of the transportation system by reducing demand on the system. The results of successful TDM can include the following benefits:

- Travelers switch from driving alone to high-occupancy vehicle modes such as transit, vanpools, or carpools.
- Travelers switch from driving to non-motorized modes such as bicycling or walking.
- Travelers change the time they make trips from more congested to less congested times of day.
- Travelers eliminate trips altogether either through means such as compressed work weeks, consolidation of errands, or use of telecommunications.

Within the State of Washington, alternative transportation solutions are necessitated by the objectives of the Commute Trip Reduction (CTR) Law. Passed in 1991 as a section of the Washington Clean Air Act (RCW 70.94), the CTR Law seeks to reduce workplace commute trips. The purpose of CTR is to help maintain air quality in metropolitan areas by reducing congestion and air pollution. This law requires Edmonds to adopt a CTR plan requiring private and public employers with 100 or more employees to implement TDM programs. Programs provide various incentives or disincentives to encourage use of alternative transportation modes other than the single-occupant vehicle.

The City promotes TDM through policy and/or investments that may include, but are not limited to, the following:

- Parking management;
- Trip reduction ordinances;
- Restricted access to facilities and activity centers; and
- Transit-oriented and pedestrian-friendly design.

The City can support the CTR Law and regional vehicle trip reduction strategies by working with employers to encourage the reduction of commuter single-occupant vehicle use. Community Transit assists employers in developing plans that meet specific trip reduction needs as required by the CTR Law. Flex time, parking management, vanpooling, and carpooling are some of the available options. Community Transit offers free Employee Transportation Coordinator Training Workshops for employers affected by CTR. Transportation consulting services are also available to interested employers not affected by CTR. Community Transit also conducts community outreach programs that fall within the realm of TDM.

There are three employers in Edmonds that participate in the CTR program: the City of Edmonds, Stevens Hospital, and Edmonds Family Medicine Clinic. Each employer measures its progress toward its goal of reducing single-occupant vehicle trips by conducting an employee survey every other year. Community Transit assists in this effort, and reviews the results to see if the employers are in compliance with CTR goals.

O. SR 104 Complete street corridor analysis

During the development of the transportation plan, the City conducted a parallel study of the SR 104 corridor. Working with a Technical Advisory Committee and conducting extensive public outreach, the City developed a corridor vision that is based on the following guiding principles:

- Support both local and regional mobility
- Improve circulation and safety for biking, walking, and transit access
- Reinforce land use vision, including at Westgate
- Create a sense of arrival in Edmonds and tie to the waterfront
- Coordinate with the state and other entities
- Take a phased approach that provides benefits over time
- Promote environmental sustainability and economic vitality

The City used these principles to identify and prioritize a set of 19 corridor recommendations. The projects focused on pedestrian and vehicular safety, improved access, and corridor identity. One of the focus areas of the study was the Westgate area. The plan identified several access and circulation improvements in Westgate that can be tied to redevelopment of properties in the area. Details regarding the study are found in the SR 104 Complete Street Corridor Analysis report (2015).

P. SR 99 Gateway / Revitalization

The City conducted a focused assessment of the SR 99 corridor in 2006. This study identified several multi-modal and safety projects. One of the key projects, the 228th Street connection between SR 99 and 76th Avenue, will be constructed in 2016.

As part of the current transportation plan update, the City further examined traffic safety along SR 99. It identified the need to add a center median and left turn pockets (from 238th St. SW to 212th St. SW) to provide safer access management throughout the corridor. The ongoing SR 99 Gateway/Revitalization project will seek to provide additional safety and urban design improvements.

Q. Edmonds Waterfront At-Grade Crossing

Railroad use for freight transport has greatly increased and is expected to increase even more in the future. The frequency and greater length of trains means that access between the west side and east side of the rail is blocked for longer periods of time. This has significant implications for people needing to access either side—whether for emergency, business, residential, recreational, or other needs.

A priority of the city has been to find a solution to the at-grade railroad crossings at Main and Dayton Streets to the waterfront. The need is evident for providing emergency access, pedestrian/bicycle access, and access to the ferry and other land uses. Various options have been discussed, each with certain advantages, disadvantages, and costs. To determine the best option(s), the city has secured funds as part of the *2015 Legislative transportation package*.

4. Implementation and Financial Plan

This chapter provides a summary of the projects, project prioritization, total costs, projected revenue, and implementation strategies for recommended improvements through 2035. It also includes a performance measure, consistent with the criteria for performance measures in other parts of the Comprehensive Plan.

R. Performance Measure

The Comprehensive Plan contains a small number of performance measures (no more than one per element) that can be used to monitor and annually report on the implementation and effectiveness of the Comprehensive Plan. Performance measures, as identified in the Comprehensive Plan, are specific, meaningful, and easily obtainable items that relate to sustainability and that can be reported on an annual basis. They are intended to help assess progress toward achieving the goals and policy direction of each major Comprehensive Plan element.

The measure identified below is specifically called out as matching the above criteria and being important to transportation goals and will be reported annually, along with performance measures for other Comprehensive Plan elements. It is not intended to be the only measure that the City may use for transportation purposes.

Performance Measure: Number of linear feet of sidewalk renovated or added to the City's sidewalk network.

S. Project Costs

Preliminary costs for proposed transportation projects were estimated at a planning level, based on 2015 dollars. Estimates were based on typical unit costs, as applied to each type of improvement, and are not the result of preliminary engineering. Annual programs such as asphalt street overlay show projected expenditures beginning in 2010. These planning-level estimates of probable cost were the basis for the financial plan.

Table 4-1 summarizes the estimated costs for the recommended transportation projects and programs through 2035. The table shows that the cost of fully funding all operations, safety, and maintenance projects and programs through 2035 is $158 Million.

Table 4-1. Costs of Transportation Projects

ID	Location	Project	Cost
Roadway Projects			
1	174th Street SW and Olympic View Drive	Widen Olympic View Drive to add a northbound left turn lane for 50-foot storage length. Shift the northbound lanes to the east to provide an acceleration lane for eastbound left turns.	$610,000
2	Olympic View Drive and 76th Avenue W	Install traffic signal. Widen 76th to add a northbound left turn lane for 175-foot storage length.[2]	$1,183,000
4	Puget Drive and 88th Avenue W	Install traffic signal.[1]	$903,000
8	212th Street SW and SR 99	Widen 212th to add a westbound left turn lane for 200-foot storage length and an eastbound left turn lane for 300-foot storage length. Provide protected left turn phase for eastbound and westbound movements.	$2,806,000
11	Main Street and 9th Avenue N	Install traffic signal.[2]	$911,000
14	220th Street SW and SR 99	Widen 220th to add a 325-foot westbound right turn lane and a 300-foot eastbound right turn lane. Widen 220th to add a second westbound left turn lane.	$3,215,000
15	220th Street SW and 76th Avenue W	Widen 220th to add a left turn lane for eastbound and westbound movements.	$4,314,000
20	SR 104 @ 238th Street SW	Install a signal and provide protected left turn phase for northbound and southbound. (Note; Project is also part of the SR 104 Complete Streets Corridor)	$1,339,000

ID	Location	Project	Cost
21	SR 104 and 76th Avenue W	Widen SR 104 to add second westbound left turn lane for 325-foot storage length. Provide right turn phase for northbound movement during westbound left turn phase. (Note: Project is also part of the SR 104 Complete Streets Corridor)	$3,017,000
30	SR 99 at 216th Street SW	Widen to allow one left turn lane, one through lane and one right turn lane in eastbound and westbound directions, with 100-foot storage length for turn lanes. Add eastbound right turn overlap with northbound protected left turn.	$2,335,000
	SR-99 Gateway / Revitalization	Add center median and left turn pockets along the corridor (from 238th St. SW to 212th St. SW) to provide safer access management throughout. Enhance urban design features.	10,000,000
A	84th Avenue W, between 212th Street S and 238th Street SW	Widen to three lanes with curb, gutter, bicycle lanes, and sidewalk.	$15,441,000
B	238th Street SW, between SR 104 and SR 99	Widen to three lanes with curb, gutter, bicycle lanes and sidewalk.	$3,045,000
C	Add 228th ST. SW from SR 99 to 95th Pl.	Widen to three lanes with curb, gutter, bicycle lanes and sidewalk.	$10,146,000
		Sub Total	**$59,265,000**
Non-Motorized Projects			
	Citywide Walkway Projects (Short)		$2,317,500
	Citywide Walkway Projects (Long)		$28,485,000
	ADA Curb Ramp Upgrades and Transition Plan		$4,189,500
	Audible Pedestrian Signals		$25,000

ID	Location		Project	Cost
	Citywide Bikeway Projects			$555,000
			Sub Total	**$35,572,000**
Preservation and Maintenance Programs and Projects				
	Annual Street Overlays	2016-2021	Grind pavement, overlay	$12,000,000
		2022-2035		$30,000,000
	Citywide Signal Improvements	2016-2021	Upgrades to existing signals, for maintenance and technology	$25,000
		2022-2035		$75,000
	Citywide Cabinet and Controller Upgrades		Upgrades to existing traffic signal cabinets elements for maintenance and technology	$650,000
	Puget & Olympic View Drive		Signal rebuild	$500,000
	238th / 100th Ave Signal Upgrades		Rebuild complete signal system and install video detection	$750,000
	Main @ 3rd Ave. Signal Upgrades		Rebuild completed signal system	$375,000
			Sub Total	**$44,375,000**
Other Projects				
	Citywide Traffic Calming Program			$200,000
	SR 104 Complete Streets Corridor Analysis Projects			$5,903,000[3]

ID	Location	Project	Cost
	Operational Enhancements		$240,000
	Future Transportation Plan Updates		$575,000
	Debt Service on 220th Street SW Project		$324,500
	4th Avenue Corridor Enhancement		$4,325,000
	Debt Service for 100th Ave W. Stabilization Project		$373,000
	Edmonds Waterfront At-Grade Crossing Alternative Study		$625,000
	80th Ave. W Sight Distance		$292,000
	Arterial Street Signal Coordination		$50,000
	Citywide Protective / Permissive Traffic Signal Conversion		$20,000
	Trackside Warning System		$300,000
	228th Corridor Improvements Project – SR 99 to 76th Ave W		$1,000,000[4]
	212th St SW and 76th Ave W Intersection Improvements		$4,347,000[4]
		Sub Total	**$18,574,500**
		GRAND TOTAL (2016-2035)	**$157,786,500**

1. Analysis indicates that restricting northbound and southbound traffic to through and right-turn-only (prohibiting left-turn movements) would also alleviate the deficiency identified. This could be implemented as an interim solution until traffic signal warrants are met. Roadway re-alignment will also need to be analyzed, in order to increase intersection sight distance,

2. An alternative that also would meet the LOS Standard would be a roundabout.
3. Cost does not include roadway improvements at SR 104/76th Ave W, which are shown as Project 21 above, as well as the projects at SR 104/238th, which are shown as project 20 above.
4. Will be constructed in 2016

T. Revenue Sources

Current Sources of Revenue

Revenue sources the City currently uses to pay for transportation improvements are listed below, and **Table 4-2** lists estimates of the potential amount of revenue the City may receive during 2016 – 2035 from these current sources of revenue. *The estimates for 2016-2035 are based on the annual average amount received by the City from 2008 through 2013 unless noted otherwise below.*

- *Grants – State and federal grants may be obtained through a competitive application process. Each grant program is for specific types of projects, such as capacity, congestion relief, safety, mobility, sidewalks and/or bicycle routes. Edmonds' success in obtaining grants depends on having projects that match each grant program's requirements.*

- *Real Estate Excise Tax* –This is a tax on all sales of real estate, measured by the full selling price, and the City receives a tax of 0.5 percent. The 2016-2035 estimates are based on continuing the recent increases for street preservation that were appropriated in 2014 and 2015. The amount could be increased or decreased as a matter of City policy.

- *General Fund* – The General Fund includes a broad range of taxes and fees such as sales tax and property taxes. These revenue sources may be used for all City activities. *The estimates for 2016-2035 transportation costs are based on the average of the 2014 and 2015 appropriations for street preservation.* These amounts are not guaranteed under current City policies.

- *Motor Vehicle Fuel Tax* – The motor vehicle fuel tax is collected by the State and 2.4 cents per gallon are distributed to cities for roadway construction purposes. The money is distributed based on the population of each city.

- *Traffic Impact / Mitigation Fees* – Impact fees are paid by developers to mitigate the impacts on the transportation system caused by their development. The 2016-2035 estimates are based on the 2009 rates of approximately $1,000 per trip for the 4,000 additional trips that are expected between 2016 and 2035.

- *Stormwater Funds* – The City's stormwater utility uses a portion of its revenue to pay for portions of transportation capital improvements that include stormwater control components.

- *Transfers from Capital Fund* – The Capital Fund for stormwater also makes transfers to pay for eligible portions of transportation projects.

- *Interest Income* – The City deposits the revenues listed above in safe interest-bearing accounts until the money is needed for capital projects. The amount of interest that is earned is used for the same capital projects.

Table 4-2 summarizes potential revenue projected through 2035, from the current sources described above.

Table 4-2. Potential Transportation Revenues- Current Sources

Source	Amount
Grants (unsecured)	$18,594,500
Real Estate Excise Tax for Street Preservation	15,810,000
Transfers from General Fund for Street Preservation	11,290,000
Motor Vehicle Fuel Tax	8,000,000
Traffic Impact / Mitigation Fees	4,000,000
Stormwater Funds	1,481,900
Transfers from Capital Fund	535,800
Interest Income	56,000
TOTAL	**$59,768,200**

.

Based upon the total costs of recommended projects summarized in Table 4-1, and the potential revenue from current sources listed in Table 4-2, the estimated total revenue shortfall through 2035 is $98 Million.

Other Potential Financing Options

The City will continue to explore new options to fund transportation projects and programs that are important to citizens. Options that could be considered include the sources described below. *Estimates are provided for 2016-2035, and the basis for each estimate is summarized below.*

- *Transportation Benefit District* – Edmonds has enacted a Transportation Benefit District (TBD) in 2009 with a $20 per year vehicle license fee, Washington state law allows local governments to establish a TBD and accompanying funding sources to provide for the preservation, maintenance, and construction of local transportation infrastructure. The City has limited funding to pay for necessary transportation preservation and maintenance. This has resulted in the need to provide an ever-increasing annual contribution from the City's general fund to the street fund in order to continue preserving and maintaining transportation infrastructure.

  A TBD can also collect additional annual vehicle license fees of up to $80 (limited to a total of $100) per license per year and/or a 0.2% sales tax, subject to voter approval. In 2010, the voters rejected a request to add an additional $40 License Fee to fund transportation improvements, such as walkways, intersection improvements, corridor enhancements, roadway improvements throughout the City. In order to give the City some perspective on future revenues should another TBD vote occur, the vehicle license fee estimate shown in Table 4-3 is based on an additional $80 license fee per year for 40,000 vehicles. The sales tax estimate is based on an additional 0.2% sales tax extrapolated from the amount of existing sales taxes collected in recent years by the City.

- ***Red light Cameras***: in April 2009, a study was completed for the installation of red light cameras at (2) City intersections. The study demonstrates that a significant number of drivers were running the red light at those intersections. However, City Council rejected the installation of red light cameras in a 4 - 3 vote.

- *Business License Fee for Transportation* – Cities have the option of including a fee to fund transportation projects as part of business license fees. This is typically an annual fee that is charged per full time equivalent (FTE) employee. In order for this type of fee to be successful, cities typically collaborate very closely with business owners, to identify projects and programs for funding that would be of most benefit to local businesses. The 2016-2035 estimate assumes $50 per year per full-time equivalent employee for 15,000 employees.

- *Red Light Violation Fines*– Cities can charge fines for violating red lights at signalized intersections and use the amount of fine revenue that exceeds program costs to pay for transportation safety projects. In April 2009, a study was completed for the installation of red light cameras at two City intersections. The study demonstrated that a significant number of drivers were running the red light at those intersections. At that time, the City Council rejected the installation of red light cameras. Should this topice be addressed in the future, the revenue estimate in Table 4-3 is based on an assumption that each violation would produce $50 slated for transportation safety improvements (based on the experience of another Washington city).

- *Transportation Levy*– Cities can ask voters to approve an increase in property taxes and dedicate the levy proceeds to transportation. . The 2016-2035 estimate assumes a levy rate of $0.20 (based on the recent successful experience of another Washington city).

- *Non-Motorized Mitigation Fees*– Some Washington cities have developed a mitigation fee program under SEPA to obtain mitigation from developers for the impacts on bicycle and pedestrian facilities caused by their development. The estimate for 2016-2035 assumes that the mitigation program will collect approximately 20% of the cost of the non-motorized projects.

- *Local Improvement District/Roadway Improvement District* –LIDs, enabled under RCW 35.43, are a means of assisting benefitting properties in financing needed capital improvements. A special type of LID is a Roadway Improvement District (RID). LIDs may be applied to water, sewer and storm sewer facilities, as well as roads; but RIDs may only be applied to street improvements. LIDs and RIDs are special assessment districts in which improvements will specially benefit primarily the property owners in the district. They are created under the sponsorship of a municipal government and are not self-governing special purpose districts. To the extent and in the manner noted in the enabling statutes, they must be approved by both the local government and benefited property owners. No estimates are made for 2016-2035 because a study has not been conducted to determine specific projects that would meet the eligibility requirements for an LID or RID.

- **Reallocation of REET Funds to Transportation Projects**- The City could allocate a higher proportion of REET to transportation projects, up to the limit of 0.5 percent. No estimate is provided, since the reallocation would be a policy decision requiring tradeoffs between expenditures on other city projects.

- *Additional Grants* – Revenue projections summarized in Table 4-2 assume that the City will be able obtain future grant funding at levels consistent with what has been obtained historically. It may be possible for the City to obtain higher levels of grant funding than what has been historically obtained. However, state and federal grants are obtained through a highly competitive process, and other municipalities are also likely to increase their requests for grant funding to address their own revenue shortfalls. It is likely that only a small

portion of the City's revenue shortfall could be covered through additional grant funding, therefore no estimates are included for 2016-2035.

Table 4-3 summarizes potential levels of revenue that could be obtained by these additional sources, if they were approved by the City Council and by citizens. The table shows that the transportation funding shortfall could be covered by a combination of these optional revenue sources.

Table 4-3. Potential Transportation Revenue- Additional Optional Sources

Source	Amount
TBD License Fee (at $80 per license per year)	$ 64,000,000
TBD Sales Tax (at 0.2%)	24,000,000
Business License Fee for Transportation (at $50 per year per full-time equivalent employee)	15,000,000
Red Light Violation Fine (at $50 per violation after program costs) – must be used for safety projects.	29,200,000
Transportation Levy (at $0.20 per year)	7,600,000
Non-motorized Mitigation Fee (at 20% of project costs)	4,250,000
Local Improvement District / Roadway Improvement District	Not Estimated
REET Funds Reallocation to Transportation	Not Estimated
Additional Grants	Not Estimated
	$144,050,000

U. Implementation Plan

Transportation Improvement Plan (2016-2035)

The Comprehensive Transportation Plan serves to guide the development of surface transportation within the City, based upon evaluation of existing conditions, projection and evaluation of future conditions that result from the City's adopted future land use plan, and priorities stated by Edmonds citizens.

A six-year Transportation Improvement Program (TIP) is prepared each year, which identifies transportation projects needed to respond to planned growth of the community, and to meet safety and mobility objectives. The TIP integrates City transportation improvement projects and resources with other agencies in order to maximize financing opportunities such as grants, bonds, city funds, donations, impact fees, and other available funding.

The TIP is maintained as follows:

1. Provide for annual review by the City Council as part of the Capital Improvement Plan (CIP) contained in the Comprehensive Plan capital facilities element.

2. Ensure that the TIP:

   - Is consistent with the Comprehensive Plan;
   - Defines a project's need, and links it to LOS and facility plans;
   - Includes construction costs, timing, and funding sources; and considers operations and maintenance impacts where appropriate; and
   - Establishes project development priorities.

Table 4-4 summarizes the recommended Transportation Improvement Plan, 2016 through 2035, which is a comprehensive multimodal plan that is based on extensive public input and reflects a major update of the 2009 Plan. The table also identifies which projects are recommended for inclusion in the 2016-2021 TIP. In comparison to revenues, the TIP has a substantial funding shortfall.

Table 4-4. Transportation Improvement Plan 2016-2035

Project	2016 – 2021	2022 – 2035	Total
Annual Street Overlays	$ 12,000,000	$ 30,000,000	$ 42,000,000
Citywide Signal Improvements	25,000	75,000	100,000
Citywide Cabinet and Controller Upgrades	650,000		650,000
Puget & Olympic View Drive	500,000		500,000
238th / 100th Ave Signal Upgrades	750,000		750,000
Puget Drive / 196th St SW / 88th Avenue W	903,000		903,000
Main Street / 9th Avenue N	911,000		911,000
Olympic View Drive / 76th Avenue W		1,183,000	1,183,000
220th Street SW / SR 99	3,215,000		3,215,000
220th Street SW / 76th Avenue W	4,314,000		4,314,000
84th Avenue W, 212th Street SW - 238th Street SW (50% split with Snohomish County)		15,441,000	15,441,000

Project	2016 – 2021	2022 – 2035	Total
80th Avenue Sight Distance		292,000	292,000
Main St / 3rd Ave signal upgrade	375,000		375,000
212th Street SW / SR 99	2,806,000		2,806,000
216th Street / SR 99	2,335,000		2,335,000
174th Street SW / Olympic View Drive		610,000	610,000
238th Street SW / Edmonds Way (SR 104)		1,339,000	1,339,000
238th Street SW, SR104 - SR 99		3,045,000	3,045,000
228th St. SW, SR 99 – 95th Pl		10,146,000	10,146,000
SR 104 / 76th Avenue W (50% Split cost with Shoreline)		3,017,000	3,017,000
Citywide Walkway Projects	8,800,500	22,002,000	30,802,500
ADA Transition Plan	1,570,000	2,619,500	4,189,500
Citywide Bikeway Projects	160,000	395,000	555,000
Citywide Traffic Calming Program	60,000	140,000	200,000
Future Transportation Plan Updates	175,000	400,000	575,000
SR 104 Complete Streets Corridor Analysis Projects	1,172,600*	4,730,400	5,903,000
Debt Service for 100th Ave. W Stabilization Project	$206,000	$167,000	$373,000
Debt Service on 220th Street SW Project	242,000	82,500	324,500
4th Avenue Corridor Enhancement	4,325,000		4,325,000
SR-99 Gateway / Revitalization (Planning/Design phase only)	10,000,000		10,000,000
Audible Pedestrian Signals	25,000		25,000
Edmonds Waterfront At-Grade Crossing Alternative Study	625,000		625,000
Operational Enhancements	70,000	170,000	240,000
Upgrade to citywide Protected permissive phasing	20,000		20,000
Trackside Warning System	300,000		300,000
Arterial Street Signal Coordination	50,000		50,000
228th Corridor Improvements Project: SR 99 - 76th Ave W	1,000,000		1,000,000

Project	2016 – 2021	2022 – 2035	Total
212th St SW and 76th Ave W Intersection Improvements	4,347,000		4,347,000
MODIFY TOTAL	**$61,932,500**	**$95,854,400**	**$157,786,500**
Projected Revenue	**$17,096,630**	**$42,671,570**	**$59,768,200**
Shortfall, Unless Alternative Funding Identified	**$44,835,470**	**$53,182,830**	**$98,018,300**

* Note: Assumes following projects for 2016-20121: Ferry Terminal Storage, 226th Street SW, 95th Place W.

Interjurisdictional Coordination

The City will coordinate with the following agencies to implement projects and strategies presented in this Transportation Plan:

- Apply to the FHWA to implement recommended updates to the federal functional classification of some city streets, as summarized in Table 3-2.
- Coordinate with WSDOT on projects to address future operational deficiencies on SR 104.
- Coordinate with Snohomish County for joint agency funding of the proposed 84th Avenue improvement.
- Coordinate with PSRC to include projects in the regional transportation plan so that they will be eligible for funding.
- Coordinate with WSDOT and the FHWA to move forward with the Edmonds Crossing Multimodal Project.
- Coordinate with Community Transit to implement transit investments that are consistent with the City's priorities; including construction of additional bus shelters and benches, and new transit routes.

V. Contingency Plan in Case of Revenue Shortfall

Some revenue sources are very secure and highly reliable. However, other revenue sources are volatile, and therefore difficult to predict with confidence. To cover the shortfall identified in the previous section, or in the event that revenue from one or more of these sources is not forthcoming in the amounts forecasted in this Transportation Plan, the City has several options:

- Change the LOS standard, and therefore reduce the need for road capacity improvement projects.
- Increase the amount of revenue from existing sources, such as the option to reallocate REET funds.
- Find new sources of revenue which could include additional TBD funding, business license fee for transportation, red light violation fines, transportation levy, non-motorized mitigation fees, LID/RIDs, and/or federal and state grants.
- Require developers to provide such facilities at their own expense.

- Change the Land Use Element in the Comprehensive Plan to reduce the amount of development, and thus reduce the need for additional public facilities; or to further concentrate growth along higher capacity roads that are served by transit.

APPENDIX A

Goals and Policies Comparison Table

Old Policy Number	New Policy	Reason
1.1	2.1	
1.2	2.3	
1.3	3.1	
1.4		Redundant with Policy 3.1 (new reference)
1.5		Covered by Policies 1.1, 1.2, 1.3 (new references)
2.1	3.2	
2.2	4.1	
2.3		Covered within Policy 3.2 (new reference)
2.4	5.1	
3.1	2.4	
3.2	5.2	
3.3	5.3	
3.4	5.4	
3.5	1.1	
3.6	1.2	
3.7	3.3	
3.8	3.4	
3.9	3.5	
3.10	3.6	
3.11	1.3	
3.12		Covered within Policy 2.4 (new reference)
3.13	2.5	
3.14	2.6	
3.15	6.1	
3.16	2.7	
4.1	5.5	
4.2		Overly specific, recommend this be included in Design Standards.
4.3	4.2	

Old Policy Number	New Policy	Reason
4.4	5.6	
4.5	5.7	
5.1		This should be covered in Development Standards.
5.2	5.8	
5.3	4.4	
5.4	3.7	
6.1	5.9	
6.2	1.4	
6.3		The Transportation Advisory Group felt this is an ongoing process that is unnecessary to put in policy.
6.4	3.8	
6.5	4.5	
6.6	1.5	
6.7	4.6	
6.8	5.10	
6.9		This seemed like more of an implementation item than a policy.
6.10	4.8	
6.11	4.7	
6.12	4.9	
6.13		This seemed like more of an implementation item than a policy.
6.14		This seemed like more of an implementation item than a policy.
6.15		This seemed like more of an implementation item than a policy.
6.16	4.10	
6.17	4.11	
6.18	4.12	
6.19	2.8	

Old Policy Number	New Policy	Reason
7.1		This seemed like more of an implementation item than a policy.
7.2		This seemed like more of an implementation item than a policy.
7.3		This seemed like more of an implementation item than a policy.
7.4		This seemed like more of an implementation item than a policy.
8.1	1.6	
8.2	4.13	
8.3	6.2	
8.4	4.14	
8.5	4.15	
8.6		
8.7	4.16	
9.1	6.3	
9.2	6.4	
9.3	6.5	
9.4	6.6	
9.5	6.7	
9.6		Covered by Policy 6.9 (new reference)
9.7	6.8	
9.8		Covered by Policy 6.9 (new reference)
9.9	6.9	
9.10	6.10	
9.11	6.11	
9.12	5.11	
10.1	6.12	
10.2	6.13	
10.3	6.14	

Old Policy Number	New Policy	Reason
10.4	6.15	
10.5	6.16	
11.1	5.12	
11.2		
11.3	5.13	
11.4	6.17	
12.1	5.14	
12.2	6.18	
13.1		Overly specific, recommend this be included in Design Standards.
13.2		Overly specific, recommend this be included in Design Standards.
13.3		Overly specific, recommend this be included in Design Standards.
14.1		This seemed like more of an implementation item than a policy.
15.1		Replaced by new multimodal LOS Policy
15.2		Replaced by new multimodal LOS Policy
15.3		Replaced by new multimodal LOS Policy
15.4		Replaced by new multimodal LOS Policy
15.5		Replaced by new multimodal LOS Policy
15.6	2.9	
15.7	5.15	
16.1	2.10	
16.2	3.9	
16.3	5.16	
16.4		This policy belongs more

Old Policy Number	New Policy	Reason
		in the Land Use Element than Transportation Element.
16.5	6.19	
17.1	6.20	
17.2	6.21	
18.1	3.10	
18.2	3.11	
18.3	2.11	
18.4	3.12	
19.1		The Transportation Advisory Group felt this is an ongoing process that is unnecessary to put in policy.
19.2		Policy was out of date
19.3	3.13	
20.1		This policy was not considered enforceable.
20.2	3.14	
21.1		Duplicative of Policy 6.11 (new reference).
21.2		Duplicative of Policy 6.11 (new reference).
22.1		This seemed like more of an implementation item than a policy.
22.2		This seemed like more of an implementation item than a policy.
22.3		This seemed like more of an implementation item than a policy.
22.4		This seemed like more of an implementation item than a policy.
22.5		This seemed like more of an implementation item than a policy.
22.6		This seemed like more of an implementation item than a policy.
22.7		This seemed like more of an implementation item than a policy.
22.8		This seemed like more of an implementation item than a policy.
22.9		This seemed like more of an implementation item than a policy.
23.1	3.15	
23.2	3.16	
	1.7	
	2.2	
	2.12	Removed language referring to a new transit/urban center

APPENDIX B

Supplemental Data

Table B-1 Summary of Existing and Recommended Federal Functional Classifications

Road	Location	Existing	Recommended
No Recommended Changes			
SR 104 (Main Street, Sunset Avenue, Edmonds Way, 244th Street SW)	Edmonds-Kingston Ferry Dock – East City Limits	Principal Arterial	---
244th Street SW	SR 99 – SR 104	Principal Arterial	---
SR 99	244th Street SW – 208th Street SW	Principal Arterial	---
SR 524 (3rd Avenue N, Caspers Street, 9th Avenue N, Puget Drive, 196th Street SW)	Main Street – 76th Avenue W	Principal Arterial	---
3rd Avenue S	Pine Street – Main Street	Principal Arterial	---
Pine Street	Sunset Avenue – 3rd Avenue S	Principal Arterial	---
Main Street	Sunset Avenue – 84th Avenue W	Minor Arterial	---
Olympic View Drive	76th Avenue W – 168th Street SW	Minor Arterial	---
212th Street SW	84th Avenue W – SR 99	Minor Arterial	---
220th Street SW	SR 99 – East City Limits	Minor Arterial	---
228th Street SW	95th Place W – East City Limits	Minor Arterial	---
228th Street SW	SR 99 – East City Limits	Minor Arterial	---
238th Street SW	SR 104 – SR 99	Minor Arterial	---
244th Street SW	Firdale Avenue – SR 99	Minor Arterial	---
5th Avenue S	SR 104 – Main Street	Minor Arterial	---
100th Avenue W, Firdale Avenue, 9th Avenue S, 9th Avenue N	244th Street SW – Caspers Street	Minor Arterial	---
76th Avenue W	212th Street SW – Olympic View Drive	Minor Arterial	---
Meadowdale Beach Road	76th Avenue W – Olympic View Drive	Collector	---
Olympic View Drive	Puget Drive – 76th Avenue W	Collector	---
Walnut Street, Bowdoin Way	9th Avenue S – 84th Avenue W	Collector	---
W Dayton Street, Dayton Street	Admiral Way - 5th Avenue S	Collector	---
208th Street SW	76th Avenue W – SR 99	Collector	---
76th Avenue W, 95th Place W	Olympic View Drive – North City Limits	Collector	---

Road	Location	Existing	Recommended
Olympic Avenue	Puget Drive – Olympic View Drive	Collector	---
Maplewood Drive, 200th Street SW	Main Street – 88th Avenue W	Collector	---
84th Avenue W	212th Street SW – 240th Street SW	Collector	---
88th Avenue W	200th Street SW - Olympic View Drive	Collector	---
95th Place W	SR 104 – 220th Street SW	Collector	---
226th Street SW	108th Avenue W – SR 104	Collector	---
3rd Avenue S	Elm Street – Pine Street	Collector	---
Recommended Higher Classification			
7th Avenue N	Main Street – Caspers Street	Local Street	Collector
80th Avenue W	212th Street SW - 220th Street SW	Local Street	Collector
80th Avenue W	200th Street SW - 196th Street SW	Local Street	Collector
96th Avenue W	220th Street SW – Walnut Street	Local Street	Collector
Dayton Street	5th Avenue S – 100th Avenue W	Local Street	Collector
76th Avenue W	212th Street SW – NE 205th Street	Collector	Minor Arterial
84th Avenue W	212th Street SW – 238th Street SW	Collector	Minor Arterial
220th Street SW	100th Avenue W – SR 99	Collector	Minor Arterial
Recommend Lower Classification			
Admiral Way	South of W Dayton Street	Collector	Local Street

Table B-2 Inventory of City Streets

Existing City Classification	Street[1]	Location	Speed Limit (mph)	Number of Lanes	Sidewalk	Bikeway
Principal Arterial	SR 104	Pine Street – 244th Street SW	35 – 40	4 – 5	2 sides	None
	SR 99	244th Street SW – 212th Street SW	45	7	2 sides	None
	Sunset Avenue	Dayton Street – Main Street	25	3	2 sides	None
	Main Street	Sunset Avenue – Ferry Terminal	25	4 – 5	2 sides	None
	244th Street SW	SR 99 – East City Limits	40	4 – 5	2 sides	None
Minor Arterial	Caspers Street	3rd Avenue N – 9th Avenue N	30	2 – 3	2 sides	None
	Firdale Avenue	244th Street SW – 238th Street SW	25-35	3	2 sides	None
	Main Street	Sunset Avenue – 84th Avenue W	25 – 30	2	2 sides	None
	Olympic View Drive	76th Avenue W – 168th Street SW	30	2-3	2 sides	None
	Puget Drive/196th Street SW	9th Avenue N – 76th Avenue W	30 – 35	2 – 4	2 sides partially	None
	3rd Avenue N	Main Street – Caspers Street	25 – 30	2	2 sides	None
	5th Avenue S	SR 104 – Main Street	25	2	2 sides	None
	9th Avenue	220th Street SW – Caspers Street	25 – 30	2	2 sides	None
	9th Avenue N	Caspers Street – Puget Drive	30	3	2 sides	None
	76th Avenue W	244th Street SW – SR 99	30	2	2 sides	None
	76th Avenue W	SR 99 – 212th Street SW	30	2 – 4	2 sides	None

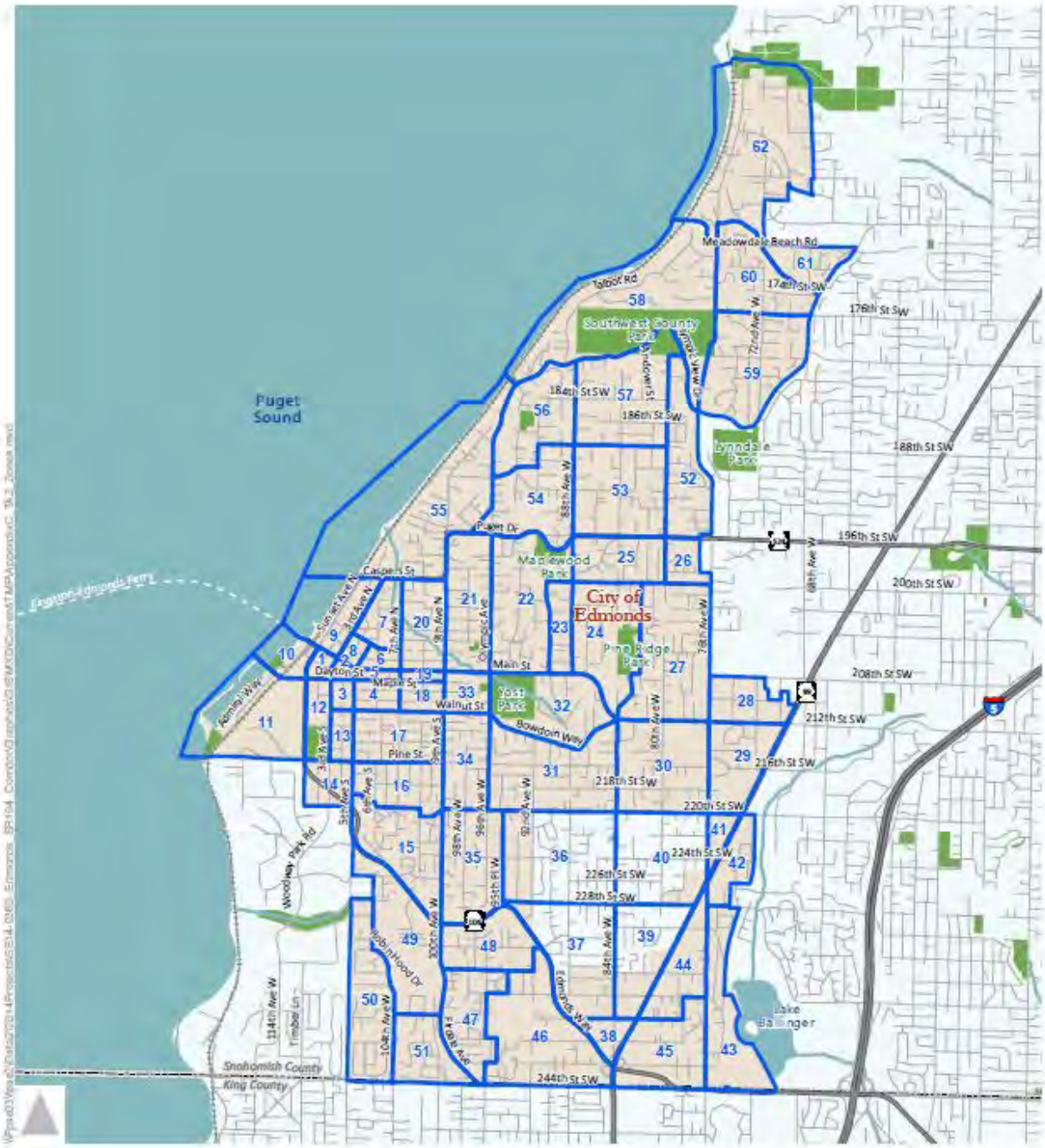
Existing City Classification	Street[1]	Location	Speed Limit (mph)	Number of Lanes	Sidewalk	Bikeway
	76th Avenue W	212th Street SW – Olympic View Drive	30	2 – 4	2 sides	None
	100th Avenue W	South City Limits – 238th Street SW	35	2	2 sides	None
	100th Avenue W	238th Street SW – SR 104	30 – 35	4	2 sides	None
	100th Avenue W	SR 104 – 220th Street SW	30	2 – 4	2 sides	None
	212th Street SW	84th Avenue W – 76th Avenue W	30	2 – 3	2 sides	Bike route
	212th Street SW	76th Avenue W – SR 99	30	4	2 sides	None
	220th Street SW	9th Avenue S – 84th Avenue W	30	2	2 sides	Bike lanes
	220th Street SW	84th Avenue W – SR 99	30	2 – 3	2 sides	None
	228th Street SW	SR 99 – East City Limits	25	2	2 sides	None
	228th Street. SW	95th Place Way - SR-99	25	2	Very short	None
	238th Street SW	SR 104 – SR 99	30	2	2 sides partially	None
Collector	Dayton Street	Admiral Way – 9th Avenue S	25	2 – 3	2 sides	None
	Maplewood Drive	Main Street – 200th Street SW	25	2	None	None
	Meadowdale Beach Road	76th Avenue W – Olympic View Drive	25	2	None	None
	Olympic View Drive	Puget Drive – 76th Avenue W	25	2	1 side	None
	Walnut Street, Bowdoin Way	9th Avenue S – 84th Avenue W	25 – 30	2	2 sides	None
	3rd Avenue S	SR 104 – Main Street	25	2	2 sides mostly	None

Existing City Classification	Street[1]	Location	Speed Limit (mph)	Number of Lanes	Sidewalk	Bikeway
	7th Avenue N	Main Street – Caspers Street	25	2	2 sides mostly	None
	76th Avenue W, 75th Place W	Olympic View Drive – North City Limits	25 – 30	2	1 side	None
	80th Avenue W	212th Street SW – 220th Street SW; 200th Street SW-Olympic View Drive	25	2	1 side partially	None
	84th Avenue W	238th Street SW – 212th Street SW	25	2	Very short 2 sides	None
	88th Avenue W	200th Street SW - Olympic View Drive	25	2	1 side	None
	95th Place W	SR 104 – 220th Street SW	25	2	1 side	None
	96th Avenue W	220th Street SW – Walnut Street	25	2	None	None
	200th Street SW	Maplewood Drive – 76th Avenue W	25	2	1 side	None
	208th Street SW	76th Avenue W – East City Limits Add Sunset Ave from Main St. to Caspers St. (20mph / 1 side sidewalk / temp. sharrow) Add Bowdoin from 95th to 84th Ave. (30 mph / 2 side sidewalk)	30	2	None	Bike lane

1. All other city streets not listed in this table are local access streets.

APPENDIX C

Travel Model Transportation Analysis Zones



DRAFT

Appendix C

Transportation Analysis Zones

APPENDIX D

Walkway Project Ratings

City of Edmonds

Walkway Route Selection Matrix

Walkway Selection Criteria:	Weighting Factor (WF)
Pedestrian Safety (PS)	5
Connectivity - Services / Facilities / Links (CSFL)	5
Activity (ACT)	3
Distance from School (DS)	3
Connectivity to transit routes and facilities (CT)	2
Environmental Impacts (EI)	1

Ranking	*STREET NAME*	*FROM*	*TO*	*ROADWAY CLASSIFICATION*	*PS* Pedestrian Safety	RATING = WF x Pts.	*CSFL* Connectivity	RATING = WF x Pts.	*ACT* Activity	RATING = WF x Pts.	*DS* Distance from school	RATING = WF x Pts.	*CT* Connectivity to transit routes and facilitie	RATING = WF X Pts	*EI* Environmental Impacts	RATING = WF x Pts.	Approximate Length	TOTAL POINTS	Unit Cost	Est. Cost
					Pts.		Pts.		Pts.		Pts.		Pts.		Pts.					
1	**Dayton St.**	7th Av. S	8th Av. S	Collector Street	*3*	*15*	*3*	*15*	*2*	*6*	*3*	*9*	*1*	*2*	*1*	*1*	***250'***	*48*	$300/LF	*$75,000*
2	**2nd Av.**	Main St.	James St.	Local Street	*3*	*15*	*3*	*15*	*2*	*6*	*1*	*3*	*1*	*2*	*1*	*1*	***100'***	*42*	$300/LF	*$30,000*
3	**Walnut St.**	3rd Av. S	4th Av. S	Local Street	*3*	*15*	*2*	*10*	*2*	*6*	*1*	*3*	*2*	*4*	*1*	*1*	***350'***	*39*	$300/LF	*$105,000*
4	**216th St. SW**	72nd Ave. W	Hwy 99	Local Street	*2*	*10*	*2*	*10*	*3*	*9*	*1*	*3*	*3*	*6*	*1*	*1*	***350'***	*39*	$450/LF	*$157,500*
5	**84th Av. W**	188th St. SW	186th St. SW	Local Street	*2*	*10*	*2*	*10*	*2*	*6*	*3*	*9*	*1*	*2*	*1*	*1*	***700'***	*38*	$450/LF	*$315,000*
6	**Elm Way**	8th Ave. S	9th Ave. S	Local Street	*2*	*10*	*2*	*10*	*2*	*6*	*2*	*6*	*1*	*2*	*1*	*1*	***750'***	*35*	$300/LF	*$225,000*
7	**80th Ave. W**	218th St. SW	220th St. SW	Local Street	*2*	*10*	*2*	*10*	*2*	*6*	*1*	*3*	*2*	*4*	*1*	*1*	***700'***	*34*	$450/LF	*$315,000*
8	**Maple St.**	West of 6th Av. S	8th Av.S	Local Street	*2*	*10*	*2*	*10*	*2*	*6*	*1*	*3*	*1*	*2*	*1*	*1*	***250'***	*32*	$300/LF	*$75,000*
9	**Walnut St.**	6th Av. S	7th Av. S	Local Street	*2*	*10*	*2*	*10*	*2*	*6*	*1*	*3*	*1*	*2*	*1*	*1*	***700'***	*32*	$300/LF	*$210,000*
10	**Paved Trail (184th St. SW)**	80th Ave. W	OVD	Trail	*2*	*10*	*2*	*10*	*1*	*3*	*1*	*3*	*2*	*4*	*1*	*1*	***1000'***	*31*	$450/LF	*$450,000*
11	**190th Pl. SW**	94th Av. W	OVD	Local Street	*2*	*10*	*1*	*5*	*2*	*6*	*1*	*3*	*1*	*2*	*1*	*1*	***700'***	*27*	$450/LF	*$315,000*
12	**8th Av.**	Walnut Av.	South of Walnut	Local Street	*1*	*5*	*2*	*10*	*1*	*3*	*1*	*3*	*1*	*2*	*1*	*1*	***150'***	*24*	$300/LF	*$45,000*

City of Edmonds

Walkway Route Selection Matrix

Walkway Selection Criteria:	Weighting Factor (WF)
Pedestrian Safety (PS)	5
Connectivity - Services / Facilities / Links (CSFL)	5
Activity (ACT)	3
Distance from School (DS)	3
Connectivity to Transit routes and Facilities (CT)	2
Environmental Impacts (EI)	1

Ranking	*Street Name*	*From*	*To*	*PS* Pedestrian Safety	RATING = WF x Pts.	*CSFL* Connectivity - Services / Facilities / Links	RATING = WF x Pts.	*ACT* Activity (ATC)	RATING = WF x Pts.	*DS* Distance From School	RATING = WF x Pts.	*CT* Connectivity to Transit Routes and Facilities	RATING = WF x Pts.	*EI* Environmental Impacts	RATING = WF x Pts.	Approximate Length	TOTAL POINTS	PRIORITY	Unit Cost	Est. Cost
				Pts.		Pts.		Pts.		Pts.		Pts.		Pts.						
1	**80th Av. W**	206th St. SW	212nd St. SW	3	15	3	15	3	9	2	6	1	2	2	2	2000 '	49	1	450	*$900,000*
2	**218th St. SW**	76th Ave. W	84th Av. W	3	15	3	15	3	9	2	6	1	2	1	1	2700 '	48	1	450	*$1,215,000*
3	**232nd St. W**	100th Ave. W	SR-104	3	15	3	15	1	3	2	6	3	6	1	1	2900 '	46	1	450	*$1,305,000*
4	**236th St. SW / 234th St. SW**	SR-104	97th Pl. W	3	15	2	10	2	6	3	9	2	4	1	1	3100 '	45	1	450	*$1,395,000*
5	**84th Ave. W**	238th St. SW	234th St. SW	3	15	3	15	2	6	1	3	2	4	1	1	1300 '	44	1	450	*$585,000*
6	**236th St. SW**	SR-104	East of 84th Av. W	3	15	3	15	2	6	1	3	2	4	1	1	2100 '	44	1	450	*$945,000*
7	**Sunset Ave.**	Bell St.	Caspers St	2	10	3	15	3	9	1	3	2	4	1	1	2600 '	42	1	450	*$1,170,000*
8	**191st. St SW**	80th Ave. W	76th Av. W	3	15	3	15	1	3	1	3	2	4	1	1	1400 '	41	1	450	*$630,000*
9	**95th Pl. W**	224th St. SW	220th St. SW	3	15	3	15	1	3	1	3	2	4	1	1	1300 '	41	1	450	*$585,000*
10	**104th Ave W / Robin Hood**	238th St. SW	106th Av. W	3	15	2	10	1	3	2	6	2	4	1	1	2200 '	39	1	450	*$990,000*
11	**236th St. SW**	Hwy. 99	76th Ave. W	3	15	2	10	1	3	2	6	2	4	1	1	1700 '	39	1	450	*$765,000*

City of Edmonds

Walkway Route Selection Matrix

Walkway Selection Criteria:	Weighting Factor (WF)
Pedestrian Safety (PS)	5
Connectivity - Services / Facilities / Links (CSFL)	5
Activity (ACT)	3
Distance from School (DS)	3
Connectivity to Transit routes and Facilities (CT)	2
Environmental Impacts (EI)	1

Ranking	*Street Name*	*From*	*To*	*PS* Pedestrian Safety	RATING = WF x Pts.	*CSFL* Connectivity - Services / Facilities / Links	RATING = WF x Pts.	*ACT* Activity (ATC)	RATING = WF x Pts.	*DS* Distance From School	RATING = WF x Pts.	*CT* Connectivity to Transit Routes and Facilities	RATING = WF x Pts.	*EI* Environmental Impacts	RATING = WF x Pts.	Approximate Length	TOTAL POINTS	PRIORITY	Unit Cost	Est. Cost
				Pts.		Pts.		Pts.		Pts.		Pts.		Pts.						
12	**238th St. SW**	Hwy. 99	76th Av. W	3	15	2	10	2	6	1	3	2	4	1	1	2600 '	39	1	450	*$1,170,000*
13	**80th Av. W / 180th St. SW**	188th St. SW	OVD	3	15	2	10	2	6	1	3	1	2	1	1	3000 '	37	1	450	*$1,350,000*
14	**189th Pl. SW**	80th Av. W	76th Ave. W	2	10	3	15	1	3	1	3	2	4	1	1	1300 '	36	1	450	*$585,000*
15	**Olympic Ave.**	Puget Dr.	Main St.	2	10	2	10	2	6	2	6	1	2	1	1	4000 '	35	2	450	*$1,800,000*
16	**192nd St. SW**	84th Av.W	88th Av. W	2	10	2	10	2	6	2	6	1	2	1	1	1300 '	35	2	450	*$585,000*
17	**8th Ave. W**	14th St. SW	Elm Way	2	10	2	10	2	6	2	6	1	2	1	1	1100 '	35	2	450	*$495,000*
18	**Pine St.**	9th Ave. W	SR 104	2	10	2	10	2	6	1	3	1	2	1	1	4000 '	32	2	450	*$1,800,000*
19	**188th St. SW**	88th Ave. W	92nd Av. W	2	10	2	10	2	6	1	3	1	2	1	1	1000 '	32	2	450	*$450,000*
20	**216th St. SW**	86th Ave. W	92nd Av. W	2	10	2	10	2	6	1	3	1	2	1	1	2450 '	32	2	450	*$1,102,500*
21	**92nd Av. W**	Bowndoin St.	220th St. SW	2	10	2	10	2	6	1	3	1	2	1	1	2250 '	32	2	450	*$1,012,500*
22	**Maplewood Dr.**	Main St.	200th St. SW	2	10	2	10	2	6	1	3	1	2	1	1	2700 '	32	2	450	*$1,215,000*

City of Edmonds

Walkway Route Selection Matrix

Walkway Selection Criteria:	Weighting Factor (WF)
Pedestrian Safety (PS)	5
Connectivity - Services / Facilities / Links (CSFL)	5
Activity (ACT)	3
Distance from School (DS)	3
Connectivity to Transit routes and Facilities (CT)	2
Environmental Impacts (EI)	1

Ranking	*Street Name*	*From*	*To*	*PS* Pedestrian Safety	RATING = WF x Pts.	*CSFL* Connectivity - Services / Facilities / Links	RATING = WF x Pts.	*ACT* Activity (ATC)	RATING = WF x Pts.	*DS* Distance From School	RATING = WF x Pts.	*CT* Connectivity to Transit Routes and Facilities	RATING = WF x Pts.	*EI* Environmental Impacts	RATING = WF x Pts.	Approximate Length	TOTAL POINTS	PRIORITY	Unit Cost	Est. Cost
				Pts.		Pts.		Pts.		Pts.		Pts.		Pts.						
23	**72nd Av. W**	OVD	176th St. SW	2	10	2	10	2	6	1	3	1	2	1	1	2900 '	32	2	450	*$1,305,000*
24	**Meadowdale Beach Rd**	OVD	76th Av. W	2	10	2	10	1	3	1	3	1	2	1	1	3800 '	29	2	450	*$1,710,000*
25	**176th St. SW**	72nd Ave. W	OVD	2	10	1	5	2	6	1	3	1	2	1	1	1400 '	27	2	450	*$630,000*
26	**92nd Av. W**	189th Pl. SW	186th Pl. SW	2	10	1	5	1	3	1	3	2	4	1	1	1000 '	26	2	450	*$450,000*
27	**Andover St. / 184th St. SW**	184th St. SW / 88th Ave. W	OVD / Andover St.	2	10	1	5	1	3	1	3	2	4	1	1	3500 '	26	2	450	*$1,575,000*
28	**186th St. SW**	Seaview Park	8608 185th Pl SW	2	10	1	5	1	3	1	3	1	2	1	1	1700 '	24	2	450	*$765,000*