



# Transportation Appendix

## Table of Contents

A	Land Use Assumptions Used in Estimating Travel	T-A3
B	Facilities and Services Needs	T-A4
C	Local Level of Service Standards for Arterials and Transit Routes	T-A17
D	Estimated Traffic Improvements to State-Owned Transportation Facilities	T-A24
E	Intergovernmental Coordination Efforts	T-A30

Many of the terms used in the Transportation Element and Appendix may be unfamiliar to the casual reader. There are useful glossaries in the State of Washington Department of Commerce's Transportation Guidebook (<http://www.commerce.wa.gov/Documents/GMS-Transportation-2012.pdf>) and the state Department of Transportation's website titled Growth Management Act (GMA) Comprehensive Plan Resources (<http://www.wsdot.wa.gov/planning/community/GMA.htm>) and also on WSDOT's website, (<http://www.wsdot.wa.gov/Publications/Manuals/index.htm>). Additional glossaries can be found at <http://www.fhwa.dot.gov/planning/glossary/index.cfm> and <http://trblist.org/subjectglossaries>

The purpose of providing the information in this Appendix, and related information in the Transportation Element, is to comply with the requirements of RCW Chapter 36.70A (Growth Management Act) by showing land use assumptions used in estimating travel; estimated traffic impacts to state-owned transportation facilities based on those assumptions; facilities and service needs, including level of service standards for local arterials and state highways; forecasts of traffic; and the availability of financing and a financing plan to show how these identified needs will be met.



# Transportation Appendix

## Transportation Figures

A-1	Arterial Classification	T-A5
A-2	Transit High-Occupancy Vehicle Lanes	T-A6
A-3	Bus Routes	T-A7
A-4	Rail and Ferry Routes	T-A8
A-5	Park & Ride Facilities	T-A9
A-6	Bicycle Facilities	T-A13
A-7	Pedestrian Facilities	T-A14
A-8	Port Facilities	T-A15
A-9	Airports	T-A16
A-10	Transportation Level-of-Service (LOS) Screenlines	T-A18
A-11	Level of Service: Screenline Volume-to-Capacity Ratios	T-A20
A-12	State Highway Project List	T-A24
A-13	State Highway Traffic Volumes – 2013 - 2035	T-A25
A-14	Arterials Reaching Adjacent Jurisdictions: PM Peak Hour Capacities, Volumes and V/C Ratios	T-A29

# Transportation Appendix

**A**

## Land Use Assumptions Used in Estimating Travel<sup>1</sup>

To estimate future travel levels, assumptions were made for a variety of factors related to future population, employment, and transportation facilities. These include the number and geographic distribution of both households and employment in Seattle and the region, characteristics of households and jobs (e.g., number of residents per household, household income), and the transportation network (e.g., streets, transit routes). Then, a computer model was used to predict the total number of person-trips between various zones, the number of trips that would use various modes (e.g., car, bus, bike, walk), and the resulting vehicle traffic volumes on various streets throughout the city.

### existing conditions

In 2010, the census counted 608,660 people living in Seattle; 2014 City estimates place the current number at about 640,500 people. But many other people visit Seattle for a range of purposes, such as working, shopping, education, tourism, medical appointments, pass-through travel, and other reasons.

Seattle covers about 53,113 acres of land. Most areas of the city are of predominantly one type of land use (e.g., residential, commercial, or industrial). About 40 percent of the city’s land area is occupied by residential uses. In 2010, there were approximately 308,500 housing units in the city. Estimates in 2012 placed the total number of housing units in the city at about 312,850 units. The area north of the ship canal has more of its land area occupied by housing than mid-Seattle (south of the ship canal to I-90) or south Seattle (south of I-90).

Street rights-of-way take up the next largest amount of land, almost 27 percent. Commercial and industrial areas, where most of the jobs in the city are located, occupy about 13 percent of the land area. Parks occupy slightly more than nine percent;

1. (RCW 36.70A.070 (6) (a) (ii))

cemeteries, reservoirs, and other uses occupy six percent; and the remainder of land is vacant.

### regional land use assumptions

The Puget Sound Regional Council (PSRC) conducts regional planning for the four-county (Snohomish, King, Pierce, and Kitsap) central Puget Sound region. The PSRC’s Vision 2040 Growth Strategy and Transportation Plan presents a vision and array of strategies designed to achieve goals of growth management, transportation demand management, and improved transportation investment decisions. The PSRC provides population and employment forecasts for the region, and encourages growth in ways that focus future population and employment growth into urban centers, which formally include the Urban Centers that are defined in this Comprehensive Plan.

### Seattle land use assumptions

Seattle’s growth assumptions for the period from 2015 through 2035 are 70,000 new housing units and net growth in employment of 115,000 jobs. This is the City’s share of the region’s projected housing and employment growth between 2015 and 2035, identified through the countywide process conducted by the Growth Management Planning Council.

The growth assumptions for the Urban Centers are as follows:

Urban Center	Housing Units	Jobs
Downtown	10,000	30,000
First Hill/Capitol Hill	7,000	4,000
South Lake Union	4,700	20,000
Uptown	3,500	3,500
University District	2,700	8,000
Northgate	1,600	5,000
Greater Duwamish Manuf./Industrial Center	NA	3,000
BINMIC	NA	1,500

**B** Facilities and Services Needs<sup>2</sup>

Seattle's street network consists of approximately 1,534 miles of arterials, including some that are designated state routes, and more than 2,400 miles of non-arterials (see Transportation Figure A-1). In the arterial system there are 620 miles of principal arterials, 566 miles of minor arterials, and 348 miles of collector arterials. High-occupancy vehicle (HOV) lanes exist on some arterials and limited access facilities as shown in Transportation Figure A-2.

**transit**

Public transit in Seattle is provided by three agencies. King County Metro provides bus, trolley and streetcar services that cover most of King County. Community Transit and Sound Transit operate express bus services to Seattle from King, Snohomish and Pierce Counties. As of 2014, King County Metro serves a population of more than 2 million people in a service area greater than 2,000 square miles. It operates more than 1,800 vehicles on about 214 bus, trolley and dial-a-ride routes. Included are 159 electric trolley buses serving 14 routes along almost 70 miles of two-direction overhead wires. Its 2012 ridership was more than 114 million passengers. Transportation Figure A-3 shows bus routes in Seattle.

King County Metro operates a 1.3-mile long tunnel under Third Avenue and Pine Street from the International District to 9th Avenue and Pine Street. The tunnel has four operational stations, and connects to I-90 at the south end and to the I-5 express lanes at the north end. The tunnel supports joint bus and light rail service until such time as light rail train service is too frequent to safely operate joint services in the tunnel.

Sound Transit is the regional transit authority for the Puget Sound area (which includes portions of King, Snohomish and Pierce Counties.) Sound Transit operates light rail service connecting Downtown Seattle

with SeaTac Airport and has construction underway to extend service northward to Lynnwood. That construction will deliver light rail service to Capitol Hill and Husky Stadium by 2016, and to the University District, Roosevelt and Northgate by 2021. Routing is shown on Transportation Figure A-4.

There are 11 Link light rail stations currently in Seattle: in the Rainier Beach, Othello, Columbia City, North Rainier/Mt. Baker, Beacon Hill, SODO/Lander Street, and SODO/Royal Brougham Way neighborhoods; and four in the Downtown transit tunnel. Weekday average ridership averages more than 37,000 passengers (2014).




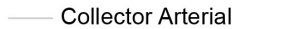


Sound Transit also provides Sounder commuter rail services during peak hours along existing rail lines from Downtown Seattle northward to Everett and southward to Tacoma and Lakewood.

Metro, Sound Transit and WSDOT operate approximately 18 park and ride facilities with approximately 2,262 parking spaces in Seattle. (See Transportation Figure A-5.)

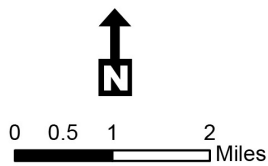
2 (RCW 36.70A.070 (6) (a) (iii))

# Transportation Figure A-1

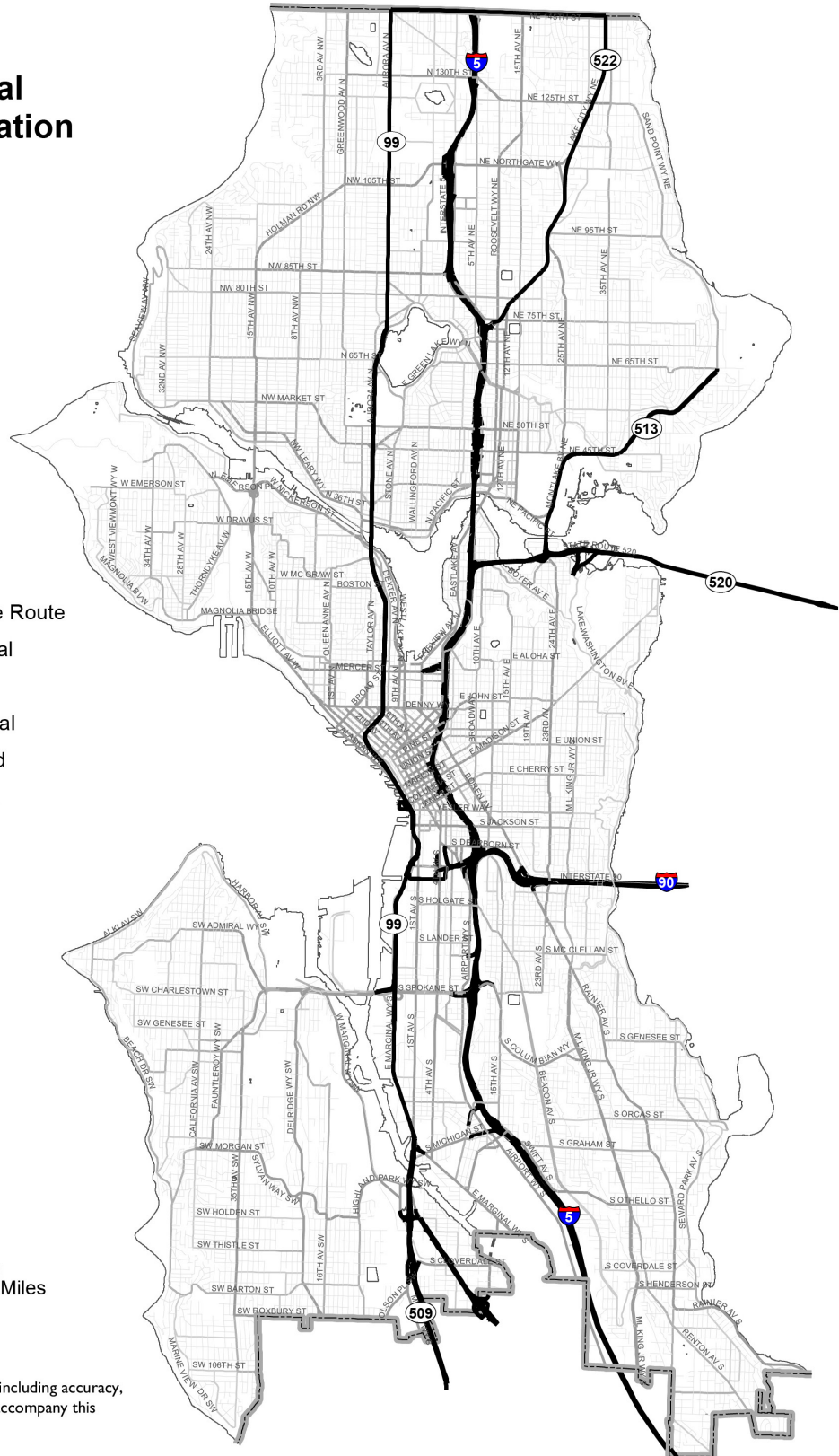
## Arterial Classification

-  Interstate/State Route
-  Principal Arterial
-  Minor Arterial
-  Collector Arterial
-  Not Designated
-  County Arterial

Data Sources:  
City of Seattle GIS



2015 City of Seattle  
No warranties of any sort, including accuracy, fitness or merchantability, accompany this product

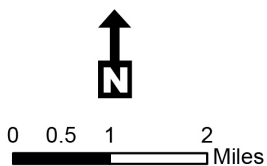


### Transportation Figure A-2

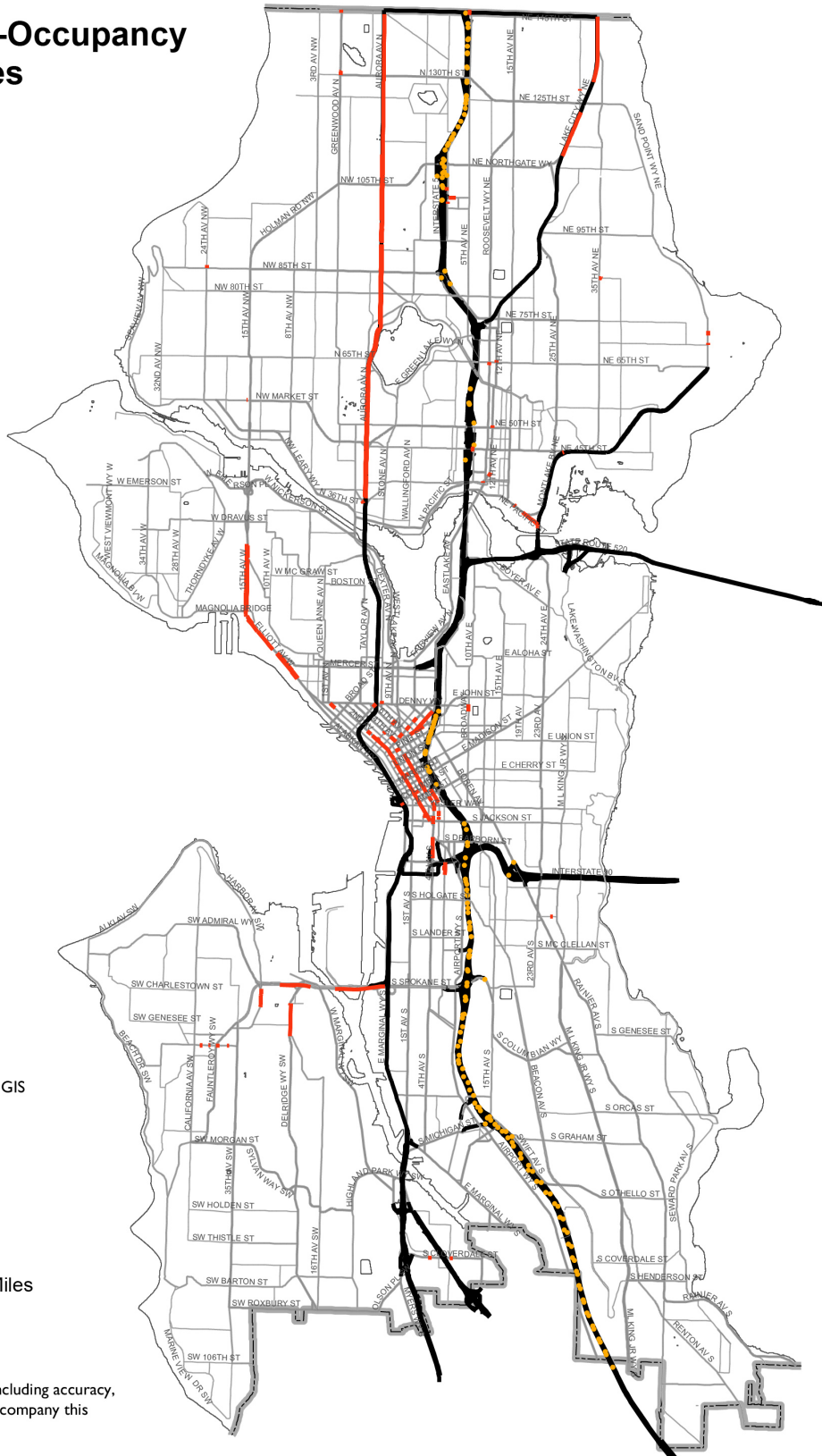
## Transit/High-Occupancy Vehicle Lanes

- Bus Lane
- HOV Lane

Data Sources:  
 City of Seattle GIS  
 Seattle Department of Transportation GIS

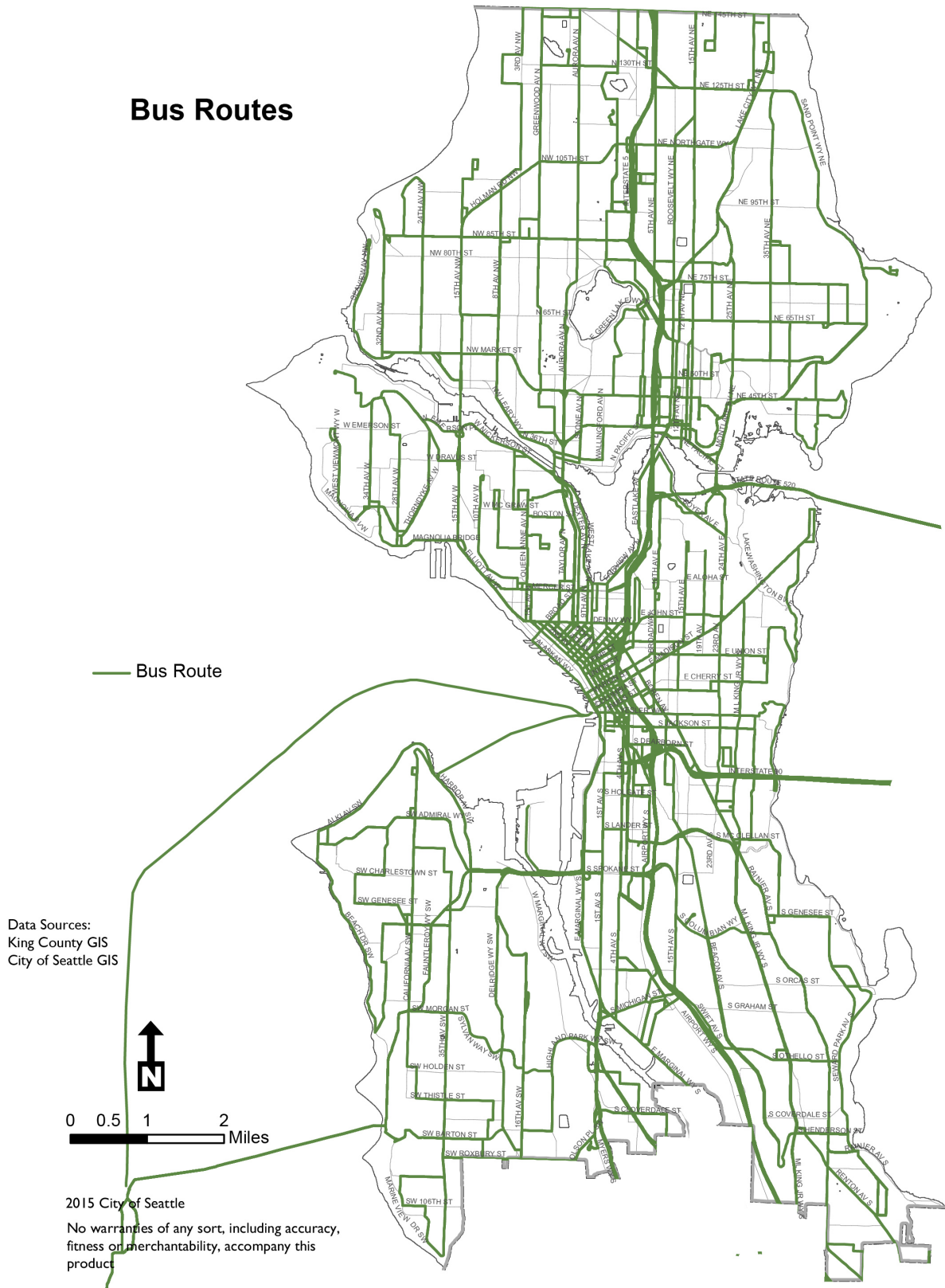


2015 City of Seattle  
 No warranties of any sort, including accuracy, fitness or merchantability, accompany this product



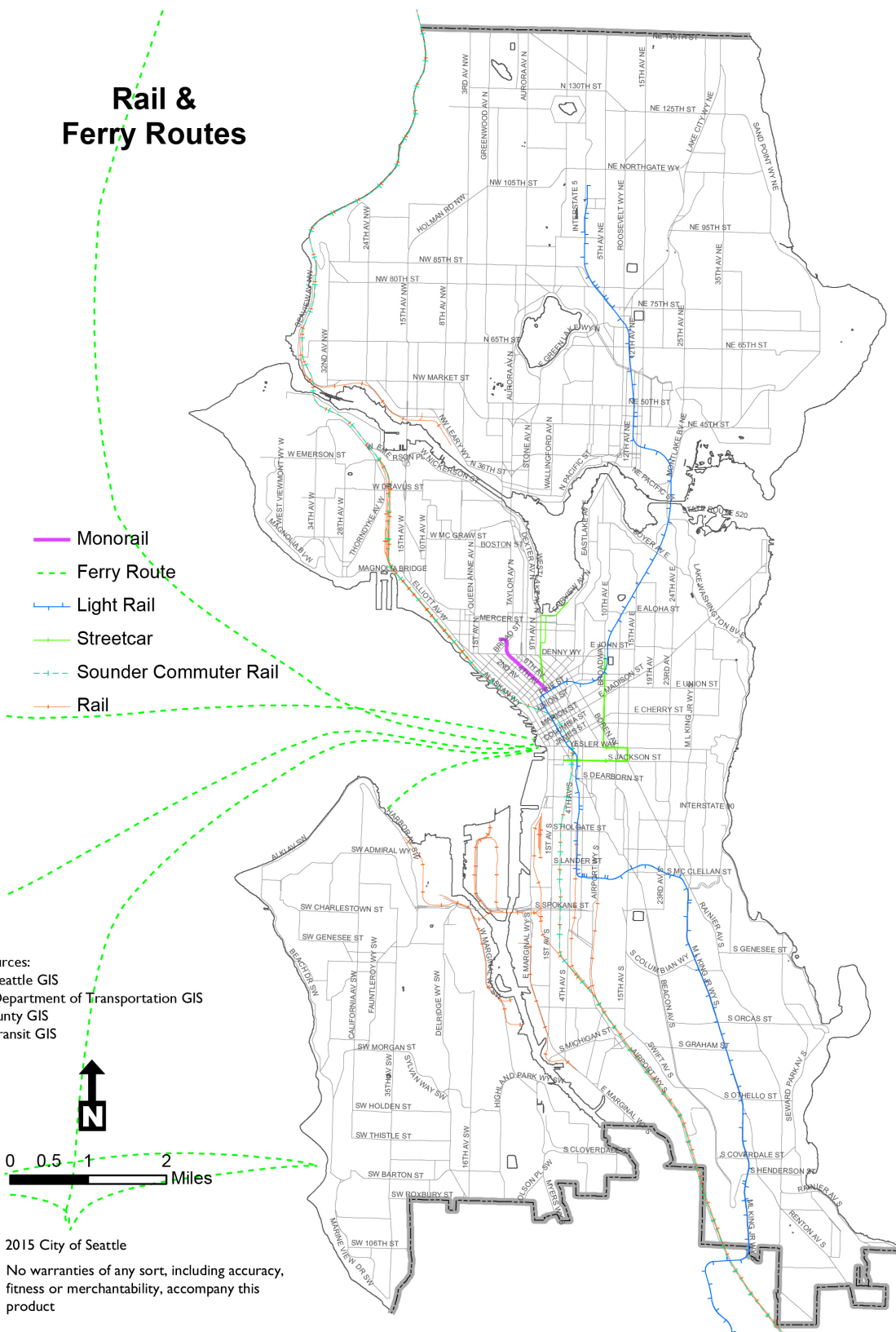
### Transportation Figure A-3

## Bus Routes



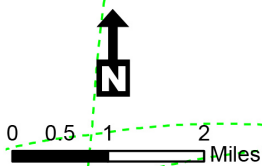
### Transportation Figure A-4

## Rail & Ferry Routes



- Monorail
- - - Ferry Route
- |— Light Rail
- Streetcar
- - -|— Sounder Commuter Rail
- Rail

Data Sources:  
 City of Seattle GIS  
 Seattle Department of Transportation GIS  
 King County GIS  
 Sound Transit GIS



2015 City of Seattle  
 No warranties of any sort, including accuracy, fitness or merchantability, accompany this product



Transportation Figure A-5  
**Park & Ride Facilities**

Lot	Name	Address	Spaces	Amenities/Routes/Notes
N/A	Montlake Station	Montlake Blvd E & SR 520	0	54 Bike Lockers Metro: 25, 43, 48
703	Green Lake Park & Ride	6601 8th Ave NE	411 *	22 Bike Lockers  Metro: 48, 64, 66, 67, 76, 242, 316 Sound Transit: 542 *Lot is usually filled 90 percent or above by 9:00 a.m. on weekdays
505	Lamb of God Lutheran Church	12509 27th Ave NE	21	Metro: 41
706	North Seattle Interim Park & Ride	402 NE 103rd St.	156	Metro: 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995 Sound Transit: 555, 556
758	Northgate Mall Park & Ride Garage	NE 103rd St & 1st Ave NE	280 *	Spaces located on floors 1 and 2  Metro: 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995 Sound Transit: 555, 556 *Lot is usually filled 90 percent or above by 9:00 a.m. on weekdays
753	Northgate Transit Center	10200 1st Ave NE	296 *	12 Bike Lockers  12 On-Demand Bike eLockers Ticket Vending Machines Metro: 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995 Sound Transit: 555, 556 Boarding Locations Map *Lot is usually filled 90 percent or above by 9:00 a.m. on weekdays
753.1 and 753.2	Northgate Transit Center East Park & Ride	3rd Ave NE & NE 103rd St	448 *	Spaces include 50 for carpool  Metro: 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995 Sound Transit: 555, 556 *Lot is usually filled 90 percent or above by 9:00 a.m. on weekdays
710	South Jackson Park Park & Ride	5th Ave NE & NE 133rd St	46	Metro: 242
760	Thornton Place Garage	3rd Ave NE & NE 100th St	350 *	Garage Floors P1 & P2  Hours: Monday-Friday 6 a.m. - 8 p.m. Metro: 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995

Transportation Figure A-5 (Continued)  
**Park & Ride Facilities**

Lot	Name	Address	Spaces	Amenities/Routes/Notes
				Sound Transit: 555, 556 *Lot is usually filled 90 percent or above by 9:00 a.m. on weekdays
749	Airport & Spokane Park & Ride	Airport Way S & S Spokane St	25	Metro: 101, 102, 106, 131, 150, 177, 178, 190 Sound Transit: 590, 592, 593, 594, 595
550	Beverly Park First Baptist Church	11659 1st Avenue S	12	Metro: 128, 131
N/A	Columbia City Station	4818 Martin Luther King Jr Way S	0	37 Bike Lockers  No Metro or Sound Transit Parking Available Paid Parking Nearby Ticket Vending Machines Sound Transit: Central Link Light Rail Closest Bus Route: Metro: 8
591	Community Bible Fellowship	11227 Renton Avenue S	29	Metro: 106
562	Holy Family Church	9641 20th Avenue SW	23	Metro: 22, 113, 125 Sound Transit: 560
738	Olson Place & Myers Way Park & Ride	9000 Olson Pl SW	100	Metro: 60, 113
N/A	SODO Station	500 S Lander St	0	16 Bike Lockers Sound Transit: Central Link Light Rail
553	Sonrise Evangelical Free Church	610 SW Roxbury St	10	Metro: 60, 113
744	Southwest Spokane St Park & Ride	3599 26th Avenue SW	55	Metro: 21, 37 Express

Source: King County Metro. "Park and Ride Information." Last modified 2014. <http://metro.kingcounty.gov/tops/parknride/>.

bicycles and pedestrians

Bicycles are classified as “vehicles” in the Seattle Traffic Code and have the right to use all streets in the city except where explicitly prohibited. Bicycling is steadily growing in popularity as an everyday commuting method and as recreational activity. Transportation Figure A-6 illustrates the location of seven categories of bike facilities. There are more than 300 miles of bicycle facilities as of 2013, including 78 miles of bicycle and climbing lanes, 92 miles of shared lane pavement markings, 6 miles of neighborhood greenways, 47 miles of multi-use trails, 128 miles of signed routes, and more than 2 miles of other on- and off-street bicycle facilities. A recently updated Bicycle Master Plan and an Implementation Plan spell out the approach to expanding the network further to increase its connectivity, completeness and safety.

Bicycle racks are provided in neighborhood commercial areas and downtown, and some work places provide secure, weather protected bike parking, showers, and lockers. As of 2010, the City had installed over 2,550 bike racks across the city. Seattle’s Land Use Code also requires that many new developments include bike parking where parking is built for cars.

As of 2010, Seattle had more than 2,200 miles of sidewalks, nearly 5,000 crosswalks, almost 27,000 curb ramps, 500 stairways, and 39 lane miles of 12-foot wide trails (see pedestrian facilities mapped in Transportation Figure A-7). Over the past decade, the City has made progress in addressing gaps in sidewalk coverage by pursuing construction of sidewalks or asphalt walkways in numerous locations where they were lacking, within the constraints of budgeted funding. However, there remain several areas around the city, such as residential neighborhoods north of N 85th Street, that lack sidewalks because they were originally developed when sidewalks were not required. The pace of new sidewalk construction in 2009 was approximately 25 block-equivalents.

parking

On-street parking occurs in the public right-of-way and is therefore regulated by the City through the creation of no-parking and special-use parking zones, time-of-day restrictions, parking duration limits, pay stations/meters, and residential parking zones. Over the past decade, the City has modernized its pay stations/meters and continues to do so with innovations such as pay-by-phone. It also has pursued more active management of on-street parking rates in order to accomplish goals for availability of on-street parking for motorists wishing to park. This improves residents’, visitors’ and shoppers’ ability to reliably find parking when and where they need it.

Residential parking zones (RPZ’s) are designed to protect Seattle’s residential neighborhoods from parking impacts and congestion from major employment and/or retail centers. In an RPZ, on-street parking is generally restricted to one or two hours, except for residents and guests who display special RPZ decals. Existing RPZ’s include the following communities: Montlake, Squire Park, West Seattle-Fauntleroy, Capitol Hill, Wallingford, University District, First Hill, Eastlake, Magnolia, North Queen Anne, North Capitol Hill, Uptown (Seattle Center), Central District (Garfield High School), Belmont/Harvard, Mount Baker (Franklin High School), North Beacon Hill, Licton Springs (North Seattle Community College), Cowen Park/Roosevelt, Ravenna Bryant. The RPZ program is slated for review in 2015, with the objective to review program goals and seek refinements that will respond to current needs and priorities with respect to neighborhoods’ on-street parking.

Off-street parking facilities are usually privately-owned and operated. The City regulates the location and size of garages and lots through the Land Use Code. Facilities with paid parking pay a licensing fee.

Carpools receive preferential parking treatment through City programs, allocation of on-street parking spaces, and Land Use Code requirements for carpool parking in new developments.

## rail

**Passenger Rail:** Amtrak operates trains over 900 miles of Burlington Northern tracks in the state and provides service to 16 cities. The Empire Builder provides daily service from Seattle to Spokane and on to Chicago; the Amtrak Cascades runs four times a day to/from Portland, and twice daily to/from Vancouver, B.C. The Coast Starlight runs daily connecting Seattle to Portland, Oakland and on to Los Angeles. Sound Transit operates two Sound train routes on the same tracks to between Seattle/Tacoma-Lakewood and Seattle/Everett.

**Freight:** Burlington Northern Santa Fe (BNSF) owns and operates a mainline dual-track from Portland to Seattle. Union Pacific owns and operates a single mainline track with two-way train operations between Tacoma and Seattle. BNSF owns and operates tracks that extend north from downtown Seattle to Snohomish County and then east to Spokane.

There are four **intermodal terminals** servicing the Duwamish Industrial area: BNSF Railway operates the Seattle International Gateway yard north of S. Hanford Street. Union Pacific Railroad operates the Seattle Argo Yard just south of Spokane St off of Diagonal/Denver Avenues. Port of Seattle terminals include intermodal facilities at Terminals 5 and 18. BNSF's Interbay rail yard is north of downtown Seattle.

Rail-line capacity depends on train length, operating speeds, the number of switch crossover points, and whether the line has one- or two-way traffic. Current train speed limits in the City are 10, 20, or 40 mph depending on the segment.

## other intermodal facilities

The Port of Seattle owns, operates or supports marine, rail, and air intermodal facilities. Port of Seattle facilities include nine commercial marine terminals, four ocean container terminals with 31 container cranes, and a deep-draft grain terminal. Steamship operators have direct service to Asia, Europe, Latin American and domestic markets (Alaska and Hawaii.)

Services are offered by 17 ocean carriers; about 30 tug and barge operators; and BNSF Railway and Union Pacific railroads, operating intermodal yards. Transportation Figure A-8 shows Port of Seattle facilities located in Seattle.

## air transportation

There are five commercial aircraft landing facilities in the greater Seattle metropolitan area: Seattle-Tacoma International Airport (Sea-Tac), operated by the Port of Seattle and located in the City of SeaTac; King County International Airport; the Kenmore Air Harbor and Seattle Seaplanes facilities based in Seattle's Lake Union; and the Lake Washington seaplane base near Kenmore. Transportation Figure A-9 shows air facilities in the City of Seattle.

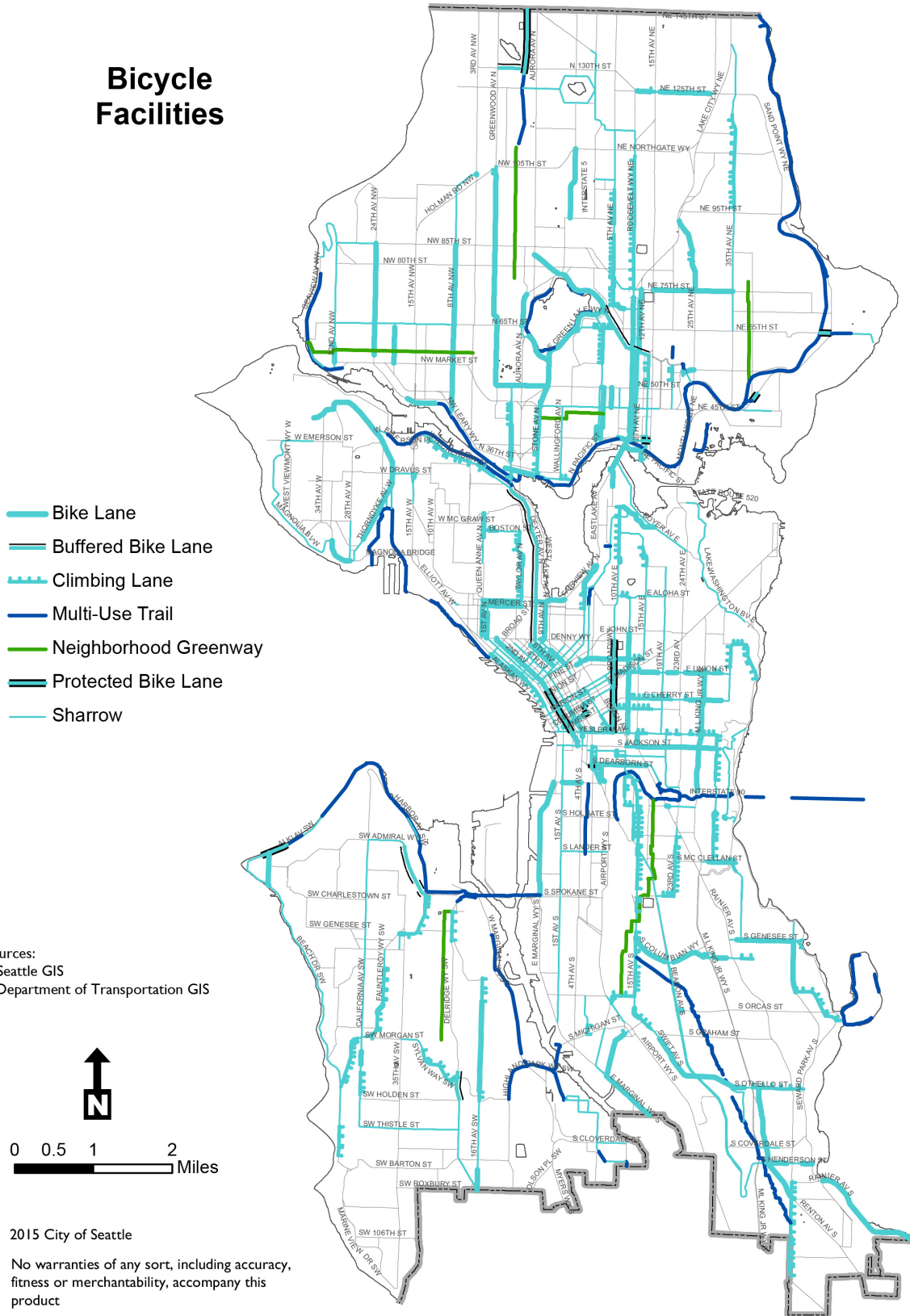
## water transportation

The Washington State Ferry (WSF) system operates two terminals in Seattle: Colman Dock in downtown Seattle, and the Fautleroy terminal in West Seattle. Passenger-and-vehicle service is provided on two ferry routes from Colman Dock to Bainbridge Island and to Bremerton. Passenger-and-vehicle ferries link Fautleroy with Vashon Island and Southworth. King County operates a Water Taxi service in Elliott Bay connecting to West Seattle.

In 2015, the cruise ship terminals at Bell Street Cruise Terminal at Pier 66 and Smith Cove Cruise Terminal at Terminal 91 will serve seven major cruise lines including Carnival, Celebrity Cruises, Holland America Line, Norwegian Cruise Line, Princess Cruises, Oceania Cruises and Royal Caribbean. Each ship call brings in \$2.4 million to the local economy. Overall, the Seattle cruise industry generates 3,404 jobs and \$407.8 million in annual business revenue.

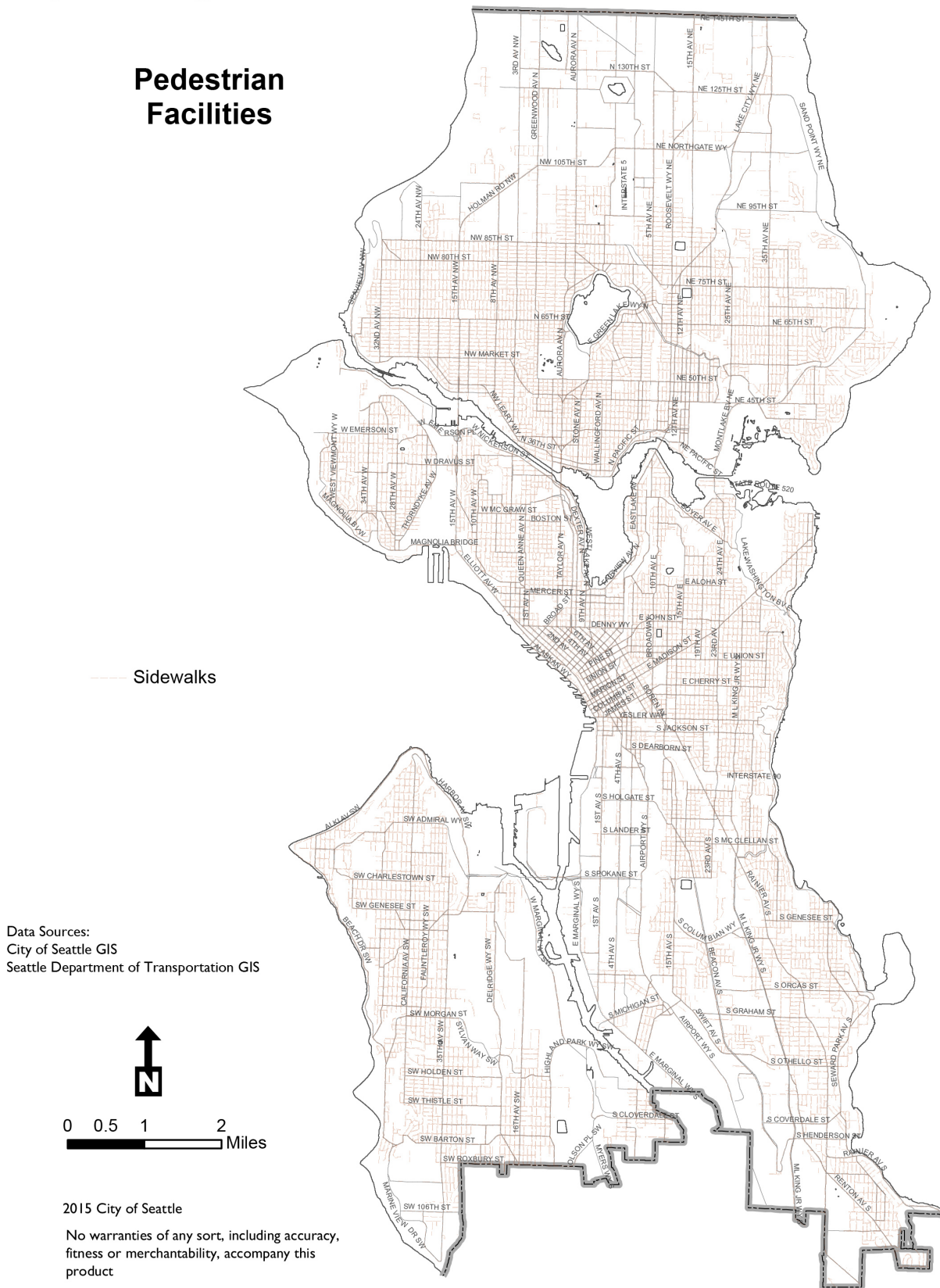
# Transportation Figure A-6

## Bicycle Facilities



# Transportation Figure A-7

## Pedestrian Facilities





### Transportation Figure A-9

## Airports

 Airport

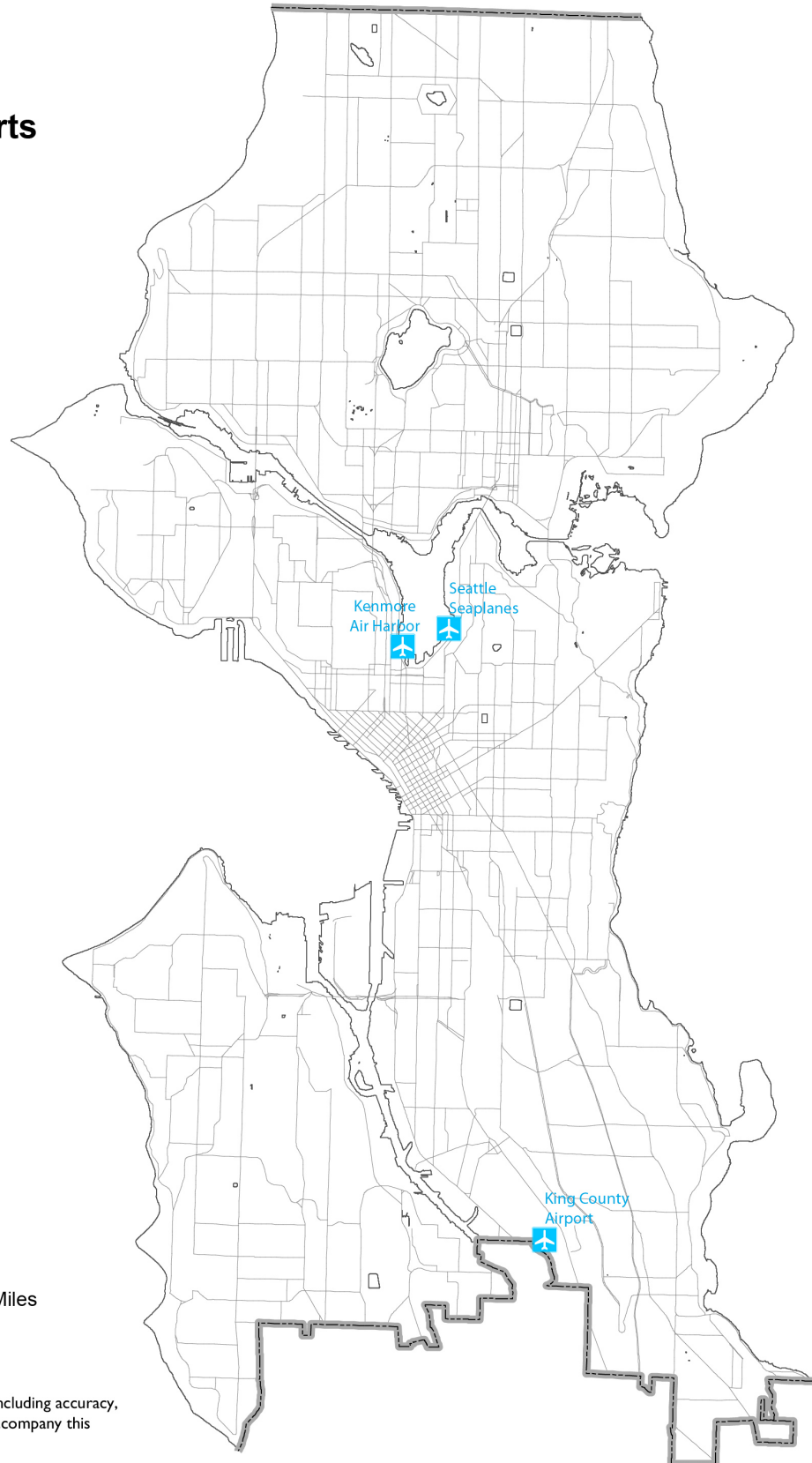
Data Sources:  
King County GIS  
City of Seattle GIS



0 0.5 1 2 Miles

2015 City of Seattle

No warranties of any sort, including accuracy, fitness or merchantability, accompany this product





C

**Local Level of Service Standards for Arterials and Transit Routes<sup>3</sup>**

**traffic forecasts**

The v/c ratios in Transportation Figure A-11 are based on a model that reflects the PSRC Regional Transportation model. However, the model also modifies PSRC’s model to better represent street conditions such as arterial speeds, future transit routing and service levels, the distribution of trips and choice of transportation modes.

The model’s current and 2035 region-wide and city-limit traffic volume estimates are shown in the following table. These inform the Comprehensive Plan’s assumed future v/c ratios. The methodology used is that traffic volumes are modeled for arterial streets for the year 2035 and compared to current conditions as of 2014/2015. The modeled volumes are then totaled for all arterials crossing a particular screenline. These totals are then compared to the sum of the arterials’ rated capacities. The arterial capacity ratings were systematically reviewed and updated in 2015 to provide a consistent and accurate basis for comparison. This yields a ratio of volume-to-capacity (v/c) for each direction of traffic for each screenline.

<b>Total vehicle-miles-of-travel (VMT) for the region (per day):</b>	
Existing:	81.1 million
2035 forecasts:	105.3 million (+30%)

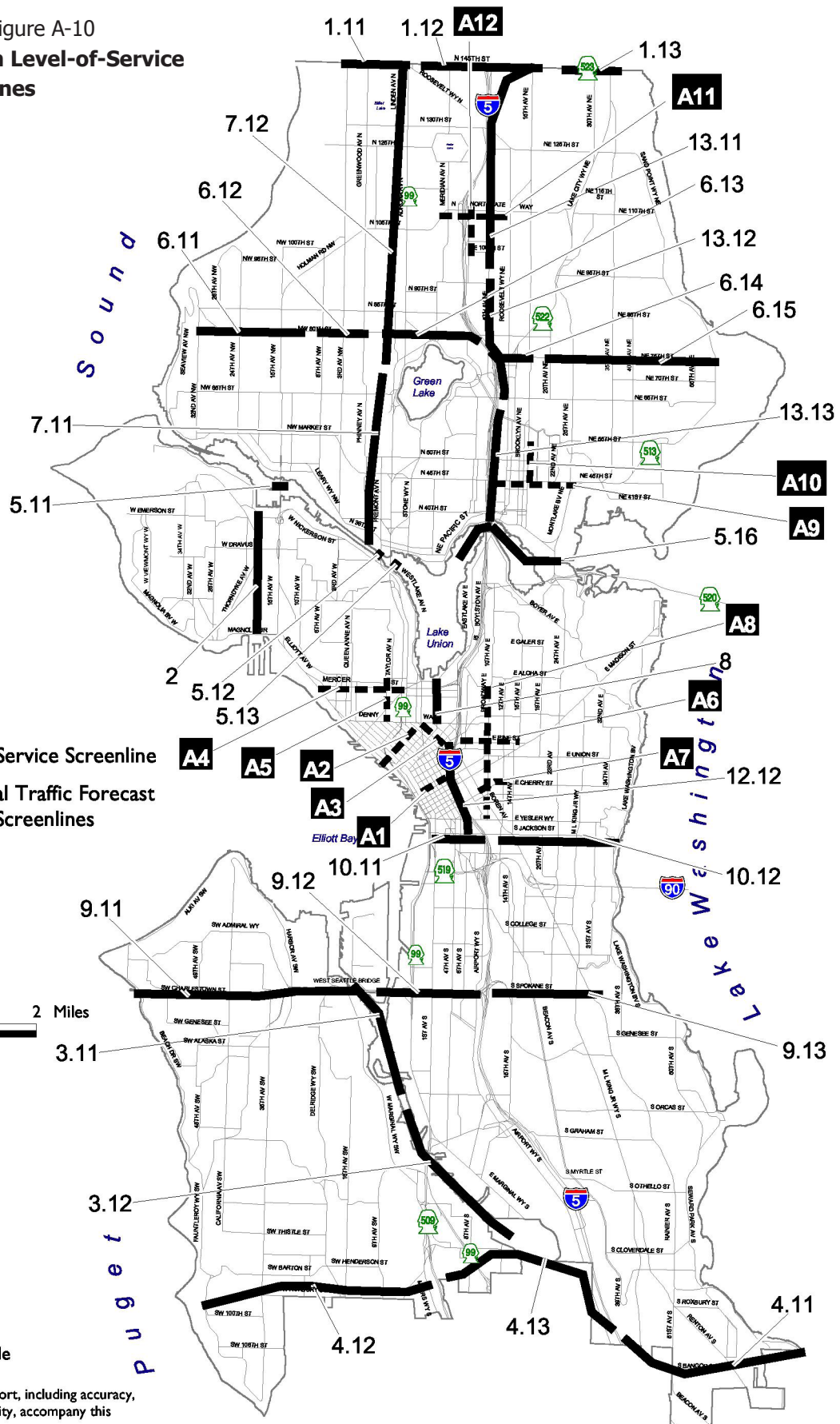
<b>Traffic volume at north city limit (vehicles per day):</b>	
Existing:	360,800
2035 forecasts:	464,900 (+29%)

<b>Traffic volume at south city limit (vehicles per day):</b>	
Existing:	503,600
2035 forecasts:	637,500 (+27%)

<b>Traffic volume at east city limit (SR 520 and I-90) (vehicles per day):</b>	
Existing:	213,000
2035 forecasts:	269,500 (+27%)

<sup>3</sup> (RCW 36.70A.070. (6)(A)(iii)(B)), (RCW 36.70A.070.(6)(A)(iii)(C))

Transportation Figure A-10  
**Transportation Level-of-Service  
(LOS) Screenlines**



transportation appendix

2004 City of Seattle

No warranties of any sort, including accuracy, fitness or merchantability, accompany this product.

o:\cgis\l\compplan\maps\transpo\transpo.apr

Transportation Figure A-10 is a map illustrating the location of 42 screenlines. Thirty of these screenlines are part of the City's evaluative system for level of service (LOS) performance and correspond to the screenlines in Transportation Figure A-11. Twelve other screenlines (labeled as A1 - A12 on Transportation Figure A-10) focus geographically on Seattle's urban centers.

A screenline methodology is favored because it addresses the broader geographic impacts of development and travel patterns. The methodology recognizes that no single intersection or arterial operates in isolation. Motorists have choices, and they select particular routes based on a wide variety of factors such as avoiding blocking conditions, and minimizing travel times. Accordingly, this analytic methodology focuses on a "traffic-shed" where the screenlines measure groups of arterials among which drivers logically can choose to travel.

Transportation Figure A-11 lists for each screenline the current conditions and modeled traffic results for the evening peak hour in year 2035, in comparison to the LOS standard for each screenline. The standards are expressed as vehicle-to-capacity (v/c) ratios of 1.0 or 1.20, which indicates a level of use equivalent to 100 percent or 120 percent of rated roadway capacity, measured during peak commute times.

With the anticipated implementation of the Comprehensive Plan, the future transportation and circulation conditions in the 2035 evening peak hour at all of the screenlines will not exceed the City's adopted LOS standards for peak hour congestion.

This Plan includes policies to improve transit service and related transit capital facilities, as well as to improve non-motorized transportation facilities, to provide ways for people to avoid the traffic congestion inherent in dense urban centers and urban village areas.

These results are evaluated in more detail below.

- The forecasted screenline v/c ratios for the year 2035 evening peak hour range from 0.38 to 1.19.
- Future peak hour traffic conditions will continue to reflect patterns similar to today, with the

heaviest congestion at bridge locations including the Ballard Bridge (v/c = 1.19 northbound), the West Seattle Freeway and Spokane St. bridges (collectively a v/c = 1.15 westbound), the University and Montlake Bridges (collectively a v/c = 0.96 northbound and 1.06 southbound), and the Aurora Bridge (v/c = 0.94 northbound and 0.82 southbound).

- Congestion is also projected to increase in other locations as well. This is due to growth or, in some cases, related to future planned road improvements addressing automobiles and bicycles. With respect to the latter factor, this analysis makes conservative assumptions about potential loss of automobile travel lanes. As part of future projects such as bicycle-serving "cycle tracks," a determination would be made contemporaneous with that project whether and how automobile travel lanes would be diminished. This caveat applies to all references below to future bicycle projects.
- Volumes on Aurora Ave N, Lake City Way N, Greenwood Ave N, and 3rd Ave NW near the north city limits will continue to be heavy during evening commutes, and will contribute to conditions that approach or slightly exceed the rated capacity level by 2035. (Screenlines 1.11, 1.13).
- Volumes on MLK Jr. Way S., Rainier Ave S., and Renton Ave S. near the south city limits will continue to grow, and will contribute to greater use of capacity in the southbound peak direction, approaching the rated capacity level by 2035. (Screenline 4.11).
- Southbound volumes toward southeast Seattle measured at S. Jackson St. and at S. Spokane St will contribute to conditions that reach a v/c ratio of approximately 0.90, or using about 90 percent of rated capacity by 2035. This partly reflects the potential for changes in capacity related to future possible bicycle improvements (Screenlines 9.13 and 10.12). See above caveat about future bicycle improvements.

Transportation Figure A-11  
**Level of Service:**  
**Screenline Volume-to-Capacity (V/C) Ratios**

Level-of-Service Screenline No.	Screenline Location	Span of Streets	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
1.11	North City Limit	3rd Ave NW to Aurora Ave N	1.20	NB	0.70	NB	1.03
				SB	0.57	SB	0.80
1.12	North City Limit	Meridian Ave N to 15th Ave NE	1.20	NB	0.41	NB	0.76
				SB	0.32	SB	0.61
1.13	North City Limit	30th Ave NE to Lake City Way NE	1.20	NB	0.73	NB	0.96
				SB	0.63	SB	0.83
2	Magnolia	Magnolia Bridge to W. Emerson Place	1.00	EB	0.53	EB	0.56
				WB	0.55	WB	0.56
3.11	Duwamish River	West Seattle Freeway and S. Spokane St	1.20	EB	0.61	EB	0.69
				WB	0.87	WB	1.15
3.12	Duwamish River	1st Ave S and 16th Ave S	1.20	EB	0.35	EB	0.38
				WB	0.52	WB	0.55
4.11	South City Limit	M L King Jr Way to Rainier Ave S	1.00	NB	0.47	NB	0.57
				SB	0.63	SB	0.98
4.12	South City Limit	Marine View Drive SW to Myers Way S	1.00	NB	0.37	NB	0.56
				SB	0.42	SB	0.72
4.13	South City Limit	SR 99 to Airport Way S	1.00	NB	0.41	NB	0.58
				SB	0.45	SB	0.73
5.11	Ship Canal	Ballard Bridge	1.20	NB	0.99	NB	1.19
				SB	0.52	SB	0.72
5.12	Ship Canal	Fremont Bridge	1.20	NB	0.71	NB	0.79
				SB	0.54	SB	0.71
5.13	Ship Canal	Aurora Ave N Bridge	1.20	NB	0.81	NB	0.94
				SB	0.62	SB	0.82
5.16	Ship Canal	University and Montlake Bridges	1.20	NB	0.80	NB	0.96
				SB	0.87	SB	1.06
6.11	South of NW 80th St	Seaview Ave NW to 15th Ave NW	1.00	NB	0.45	NB	0.52
				SB	0.43	SB	0.49
6.12	South of NW 80th St	8th Ave NW to Greenwood Ave N	1.00	NB	0.66	NB	0.87
				SB	0.49	SB	0.77
6.13	South of NE 80th St	Linden Ave N to 1st Ave NE	1.00	NB	0.44	NB	0.55
				SB	0.27	SB	0.41
6.14	South of NE 80th St	5th Ave NE to 15th Ave NE	1.00	NB	0.65	NB	0.76
					0.53	SB	0.67

Transportation Figure A-11 (Continued)  
**Level of Service:**  
**Screenline Volume-to-Capacity (V/C) Ratios**

Level-of-Service Screenline No.	Screenline Location	Segment	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
6.15	South of NE 80th St	20th Ave NE to Sand Point Way NE	1.00	NB	0.49	NB	0.64
				SB	0.47	SB	0.58
7.11	West of Aurora Ave N	Fremont Pl N to N 65th St	1.00	EB	0.48	EB	0.55
				WB	0.58	WB	0.66
7.12	West of Aurora Ave N	N 80th St to N 145th St	1.00	EB	0.50	EB	0.56
				WB	0.57	WB	0.66
8	South of Lake Union	Valley Street to Denny Way	1.20	EB	0.78	EB	0.92
				WB	0.78	WB	0.83
9.11	South of Spokane St	Beach Dr SW to W Marginal Way SW	1.00	NB	0.51	NB	0.59
				SB	0.58	SB	0.71
9.12	South of Spokane St	E Marginal Way S to Airport Way S	1.00	NB	0.47	NB	0.60
				SB	0.52	SB	0.71
9.13	South of Spokane St	15th Ave S to Rainier Ave S	1.00	NB	0.45	NB	0.67
				SB	0.58	SB	0.89
10.11	South of S Jackson St	Alaskan Way S to 4th Ave S	1.00	NB	0.56	NB	0.64
				SB	0.65	SB	0.84
10.12	South of S Jackson St	12th Ave S to Lakeside Ave S	1.00	NB	0.48	NB	0.74
				SB	0.58	SB	0.91
12.12	East of CBD	S Jackson St to Howell St	1.20	EB	0.35	EB	0.39
				WB	0.45	WB	0.52
13.11	East of I-5	NE Northgate Way to NE 145th St	1.00	EB	0.71	EB	0.84
				WB	0.59	WB	0.78
13.12	East of I-5	NE 65th St to NE 80th St	1.00	EB	0.44	EB	0.50
				WB	0.41	WB	0.53
13.13	East of I-5	NE Pacific St to NE Ravenna Blvd	1.00	EB	0.55	EB	0.62
				WB	0.54	WB	0.67
A1	North of Seneca St	1st Ave to 6th Ave	NA	NB	0.55	NB	0.67
					0.40	SB	0.59
A2	North of Blanchard	Elliott Ave to Westlake Ave	NA	NB	0.43	NB	0.55
				SB	0.36	SB	0.52
A3	East of 9th Ave	Lenora St to Pike St	NA	EB	0.36	EB	0.44
				WB	0.32	WB	0.43
A4	South of Mercer St	Elliott Ave W to Aurora Ave N	NA	NB	0.78	NB	0.93
					0.51	SB	0.78

## Transportation Figure A-11 (Continued)

**Level of Service:  
Screenline Volume-to-Capacity (V/C) Ratios**

Level-of-Service Screenline No.	Screenline Location	Segment	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
A5	East of 5th Ave N	Denny Way to Valley St	NA	EB	0.39	EB	0.55
				WB	0.40	WB	0.48
A6	North of Pine St	Melrose Ave E to 15th Ave E	NA	NB	0.45	NB	0.53
				SB	0.50	SB	0.63
A7	North of James St – E Cherry St	Boren Ave to 14th Ave	NA	NB	0.62	NB	0.72
				SB	0.57	SB	0.78
A8	West of Broadway	Yesler Way to E Roy St	NA	EB	0.50	EB	0.57
				WB	0.60	WB	0.71
A9	South of NE 45th St	7th Ave NE to Montlake Blvd NE	NA	NB	0.70	NB	0.79
				SB	0.70	SB	0.75
A10	East of 15th Ave NE	NE 45th St to NE 52nd St	NA	EB	0.52	EB	0.54
				WB	0.46	WB	0.53
A11	South of Northgate Way (N/NE 110th St)	N Northgate Way to Roosevelt Way NE	NA	NB	0.50	NB	0.66
				SB	0.49	SB	0.61
A12	East of 1st Ave NE	NE 100th St to NE Northgate Way	NA	EB	0.48	EB	0.61
					0.62	WB	0.88

Results for areas around Seattle's six urban centers are summarized as follows.

**Downtown:** Screenlines 10.11, 12.12, A1, A2, and A3 pass through or along the edge of the Downtown Urban Center, some encompassing north-south avenues, and some encompassing east-west streets. Higher v/c ratios reflect higher future volumes on most avenues and streets, and increased congestion. However, for all five of these screenlines, the future v/c ratios will remain below 1.0 in 2035 with Comprehensive Plan implementation and thus meet LOS standards.

**Uptown:** For the Uptown Urban Center, screenline A4 is an east-west screenline south of Mercer St extending as far west as Elliott Ave W and east to include Aurora Ave N, while screenline A5 is drawn north-south between 5th Ave N. and Taylor Ave N. The predicted increase in congestion, reaching above a v/c ratio of 0.90 for northbound traffic, relates to major traffic volumes on Elliott Ave W, Aurora Ave N.

It also relates to a possible reduction in capacity on 5th Ave N if bicycle improvements reduce lanes for motorized vehicle travel. Measures of east-west travel congestion will worsen but remain well below a 1.0 v/c ratio; improvements enabling a two-way Mercer Street add capacity in the westbound direction.

**South Lake Union:** For the South Lake Union Urban Center, Screenline 8 is drawn north-south at Fairview Ave N. Volumes will continue to increase, and road improvements will continue to occur for a number of years into this planning period. The v/c ratios for both directions along this screenline will decline by 2035, with higher evening congestion levels in the eastbound direction reflected by a v/c ratio of 0.93. However, the ratio will remain below the 1.20 LOS standard for this screenline.

**First Hill/Capitol Hill:** Screenlines A6, A7, and A8 are drawn through the First Hill/ Capitol Hill Urban Center. Screenline 12.12 is on the west edge of

the First Hill/Capitol Hill Urban Center adjacent to Downtown. For all four of these screenlines, the year 2035 v/c ratios under the Comprehensive Plan will remain well below the 1.20 LOS standard that applies to Screenline 12.12. Although the findings for Screenline A7 and A8 illustrate a somewhat elevated congestion level in all directions in the area between Boren Ave and 14th Ave by 2035, near James Street, and for travel east-west across Broadway, these areas are currently often congested at peak hours.

**University District:** For the University District Urban Center, screenlines 5.16 and 13.13 cover the south and west boundaries of the Urban Center, while screenline A9 passes east-west through the Center and screenline A10 is drawn north-south through the Center. Higher v/c ratios suggest higher volumes and a degree of increased congestion by 2035. However, the year 2035 v/c ratios will be below 1.0 for all four of these screenlines in the peak commuting directions. At the University and Montlake Bridges, evening peak hour volumes will continue to be high, and the southbound volumes on the University Bridge are projected to exceed the northbound volumes. This may reflect the diverse range of destinations of University employees and students. Given the pass-through nature of many evening commuters, the projected volumes for Roosevelt Way NE and Montlake Blvd. NE would continue to be high and grow slightly by 2035.

**Northgate:** For the Northgate Urban Center, screenline A11 is drawn east-west just south of Northgate Way, while screenline A12 passes north-south just east of 1st Ave NE. Screenline 13.11 also measures east-west traffic crossing 5th Ave NE. The year 2035 v/c ratios for these three screenlines will worsen but remain below 1.0. The measures of east-west traffic both indicate increasing congestion that will reach v/c ratio levels of approximately 0.8 to 0.9, meaning much of the available capacity will be used by 2035. The analysis also shows relatively high volumes west of I-5, for westbound Northgate Way and for both directions of Meridian Ave N.

State highway level of service standards

There are two different types of State highways with segments in Seattle with two different Level of Service standards. The larger facilities are "Highways of Statewide Significance" (HSS), These are I-5, I-90, SR 99, SR 509, SR 519, SR 520, and SR 522. Highways of Statewide Significance include, at a minimum, interstate highways and other principal arterials needed to connect major communities in the state.

For all the HSS, the State defines a level of service standard of "D." RCW 36.70A.070(6)(a)(iii)(C) provides that local jurisdictions' Comprehensive Plans should indicate LOS for state-owned facilities, but specifies that local concurrency requirements do not apply to the HSS routes. Including LOS standards for HSS is a communication and coordination tool in local plans, so that the State of Washington has a current understanding of performance on their facilities. Accordingly, the State legislation that designates HSS also directs the State Transportation Commission to give higher priority for correcting identified deficiencies on highways of statewide significance.

Non-HSS facilities (also called "Highways of Regional Significance") in Seattle are SR 513, SR 523, and SR 99 (only those portions south of S Holden St). These highways are monitored by the Puget Sound Regional Council for regional planning purposes. For these highways the Level of Service standard is "E/mitigated."

state-funded highway improvements & local improvements to State highways

The City of Seattle will continue to coordinate with the Washington State Department of Transportation (WSDOT) for consistency in plans and projects. Transportation Figure A-12 shows the known anticipated major projects for the metropolitan area that will address State highways and facilities including ferries, and an indication of project status as applicable today and/or into the future until 2035.

These are the primary projects in the city and broader metropolitan area that will affect the functioning of portions of the State highway system

within the City’s boundaries. Planned local system improvements are diverse; these are addressed as presented in the City’s functional plans, including but not limited to the Transit Master Plan, Pedestrian Master Plan, Bicycle Master Plan, and the successor document to the Transportation Strategic Plan.

Transportation Figure A-12  
**State Highway Project List**

Project	2015	2035
SR 99 tunnel (with tolls)		x
SR 520 HOV lanes to Montlake	x	x
Second Montlake Bascule Bridge		
SR 520 Tolling	x	x
I-90 HOV lanes	x	x
I-405 Widening (SR 167 to SR 527)		x
Passenger-only Ferries (Kingston, Southworth, Juanita)		
Montlake Blvd NE HOV Lane and ITS Improvements		x

**D**

**Estimated Traffic Improvements to State-Owned Transportation Facilities**

Transportation Figure A-13 includes, for State highways, the latest existing conditions information and future modeled conditions for 2035. This data is organized by “average annual daily traffic” (AADT), “average weekday daily traffic” (AWDT), and a calculation of the modeled increase in AWDT for each highway segment expressed as a percentage.

AWDT is emphasized here as an analytical tool because it is the most representative of the peak commuting periods when volumes and congestion are highest. Existing conditions are based on available information from WSDOT, with factoring to estimate AADT in certain locations. By contrast, the modeled future conditions forecasts AWDT. These raw model volume results for 2035 were further analyzed by using the “difference method.”<sup>4</sup>

Forecasts are for particular components of State facilities including HOV lanes, express lanes and collector-distributor lane volumes. Note the explanation on page 29 of the different LOS for state highways designated as “HSS” and those designated as Highways of Regional Significance.

4 The findings are consistent with findings of the “Draft Environmental Impact Statement for the Seattle Comprehensive Plan Update” (May 2015) and were made using a consistent methodological approach.



Transportation Figure A-13  
**State Highway Traffic Volumes – 2013 - 2035**

State Highway	Location (Roads here are cross-streets that show approx. endpoints of State Hwy. segments)	Direction	2013 Avg. Annual Daily (AADT)	2013 Avg. Weekday Daily (AWDT) Volume	2035 Avg. Annual Daily (AADT) Volume	2035 Avg. Week-day Daily (AWDT) Volume	% Change In AWDT From 2013 To 2035
I-5	Boeing Access Rd. - Swift Ave. S	NB	95,900	100,300	115,000	120,200	20%
		SB	104,500	109,200	120,700	126,300	16%
I-5	Corson - Columbia Way S/West Seattle Bridge	NB	103,800	108,600	119,400	124,800	15%
		SB	121,500	127,100	135,300	141,500	11%
I-5	I-90 - James St.	NB	133,200	139,300	162,600	170,100	22%
		SB	146,900	153,600	164,900	172,400	12%
I-5	Lakeview Blvd. E - SR 520	NB	123,700	139,800	142,200	160,700	15%
		SB	114,200	129,000	132,100	149,300	16%
I-5	SR 520 - NE 50 <sup>th</sup> St.	NB	133,400	135,900	156,100	158,900	17%
		SB	121,900	124,100	138,000	140,500	13%
I-5	NE 65 <sup>th</sup> St. - SR 522	NB	117,700	119,900	137,900	140,400	17%
		SB	119,000	121,200	135,500	138,000	14%
I-5	NE 130 <sup>th</sup> St. - NE 145 <sup>th</sup> St.	NB	98,000	99,800	114,300	116,300	17%
		SB	98,700	100,400	116,200	118,300	18%
I-90	Rainier Ave. S - Lake Washington (mainline)	EB	65,000	70,300	82,600	89,200	27%
		WB	68,100	72,500	89,700	95,600	32%
SR 99	14 <sup>th</sup> Ave. S - S Cloverdale St.	NB	16,300	19,200	21,100	24,800	29%
		SB	13,700	16,200	15,700	18,500	14%
SR 99	W Marginal Way S- S Michigan St. (1st Ave. S Br.)	NB	44,000	48,500	56,700	62,500	29%
		SB	42,000	46,300	54,100	59,700	29%
SR 99	E Marginal Way - West Seattle Bridge	NB	21,300	23,500	30,100	33,200	41%
		SB	17,700	19,500	25,500	28,100	44%
SR 99	1 <sup>st</sup> Ave. S Ramps - Seneca/Spring	NB	33,900	37,400	31,100	34,300	-8%
		SB	36,100	39,800	29,300	32,300	-19%
SR 99	Raye St. - Bridge Way N	NB	32,900	36,000	42,600	46,500	29%
		SB	36,100	39,500	46,800	51,200	30%
SR 99	Winona Ave. N - N 80 <sup>th</sup> St.	NB	14,700	16,100	18,900	20,600	28%
		SB	17,300	18,900	23,100	25,300	34%
SR 99	Roosevelt Way N - N 145 <sup>th</sup> St.	NB	14,400	15,700	20,700	22,600	44%
		SB	14,600	16,000	21,700	23,800	49%
SR 99	S 112 <sup>th</sup> St. - S Cloverdale St.	NB	26,500	28,800	36,700	39,900	39%
		SB	26,600	28,900	35,200	38,300	33%

Transportation Figure A-13 (Continued)  
**State Highway Traffic Volumes – 2013 - 2035**

State Highway	Location (Roads here are cross-streets that show approx. endpoints of State Hwy. segments)	Direction	2013 Avg. Annual Daily (AADT)	2013 Avg. Weekday Daily (AWDT) Volume	2035 Avg. Annual Daily (AADT) Volume	2035 Avg. Weekday Daily (AWDT) Volume	% Change In AWDT From 2013 To 2035
SR 513	SR 520 Ramps - NE Pacific St. (Montlake Br.)	NB	16,600	18,100	20,700	22,600	25%
		SB	19,400	21,300	23,000	25,100	18%
SR 513	Montlake Blvd. NE - Union Bay Pl. NE	EB	18,600	20,300	18,600	20,300	0%
		WB	19,400	21,300	19,400	21,300	0%
SR 522	Roosevelt Way NE - 12 <sup>th</sup> Ave. NE	EB	12,300	13,500	14,300	15,700	16%
		WB	15,700	17,200	18,100	19,700	15%
SR 522	NE 137 <sup>th</sup> St. - NE 145 <sup>th</sup> St.	NB	15,100	16,500	18,100	19,800	20%
		SB	16,900	18,500	22,800	24,900	35%
SR 523	5 <sup>th</sup> Ave. NE - 15 <sup>th</sup> Ave. NE	EB	13,900	15,200	14,300	15,600	3%
		WB	13,100	14,300	14,800	16,200	13%
SR 520	Between I-5 and Montlake Blvd.	EB	30,000	33,900	34,700	39,200	16%
		WB	42,600	48,100	48,900	55,200	15%
SR 520	Between Montlake Blvd.-Lake Washington	EB	30,100	33,900	35,600	40,200	19%
		WB	32,100	36,300	39,300	44,500	23%
SR 519	1 <sup>st</sup> Ave. S - 4 <sup>th</sup> Ave. S	EB	14,800	16,100	18,100	19,800	23%
		WB	12,200	13,400	12,200	13,400	0%

Footnote for Transportation Figure A-13:

\*SR 99 14th Ave/Cloverdale Street: SR 99 south of Holden Street is a Highway of Regional Significance, with a level of service of "E/Mitigated

Findings in Transportation Figure A-13 also show impacts on various segments of state highways and are described more specifically as follows:

- **I-5 Downtown and north of Downtown** – Future weekday daily volumes (AWDT) will increase by between 13-18 percent by 2035 in both directions in the four studied segments of I-5 north of Downtown. Daily volumes in the central segment of I-5 through Downtown will increase by 12-22 percent and be the most-used portions of I-5 in Seattle. Future volumes in segments farther from Downtown will also grow but volumes will be comparatively lesser than in the segments nearest Downtown. This is an expected pattern, given the number of motorists that use I-5 and enter or exit from places including the University District, Wallingford, Green Lake, Roosevelt, and other neighborhoods in northwest and northeast Seattle. The added volumes through the day could exacerbate congestion, most notably during peak commuting periods, which could diminish overall freeway efficiency and performance.
- **I-5 south of Downtown** – Future volumes (AWDT) will increase by 15-20 percent northbound and 11-16 percent southbound by 2035 in two studied segments south of Downtown. Approaching Downtown from the south, the segment between I-90 and James Street would experience an approximately 22 percent increase in AWDT, likely due to volume contributions from I-90 and other local sources. The AWDT volumes on I-5 south of Downtown, ranging from approximately 120,000 to 140,000 vehicle trips, would be about 25 percent lower than for the segment of I-5 just north of Downtown.
- **I-90** – I-90 will experience AWDT increases of approximately 27 to 32 percent by 2035, with westbound volumes increasing to about 96,000 per day, slightly exceeding eastbound volumes.
- **SR 520** – For this highway that has experienced volume decreases due to the initiation of tolling, and construction east of Lake Washington, the projected future conditions are for increases in AWDT volumes of about 15 to 23 percent by 2035. This will be equivalent to an increase of about 5,000 to 6,000 vehicles in the eastbound direction, reaching about 40,000 vehicles per day east of Montlake, and about 44,500 vehicles per day in the west-

bound direction east of Montlake. Closer to I-5, the projected AWDT will reach approximately 55,000 vehicles in the westbound direction by 2035. Tolling is likely to continue to limit the rate of growth in usage over time on SR 520.

- **SR 99 Downtown and north of Downtown** – This highway is anticipated to operate in a tunnel through Downtown by 2035, which may mean a change in volume trends compared to current operations. For three studied segments of SR 99 north of Downtown, future AWDT would increase by about 28 to 34 percent between the lower Queen Anne and Green Lake vicinities, and would increase by up to 45 to 50 percent in the segment near the north city limits at N 145th St. The projected volumes in this vicinity would be highest in the portion nearest Lake Union and the Ship Canal, reaching about 46,000 – 50,000 vehicles per day AWDT in each direction, while in the other segments farther north, the volumes would range from about 20,000 – 25,000 vehicles per day in each direction.
- **SR 99 south of Downtown** – South of Downtown, SR 99 provides access to the SODO and Greater Duwamish industrial areas, as well as southwest Seattle and points south including Burien and Tukwila. South of South Park, SR 99 reconnects to I-5 in Tukwila. The 1st Avenue S Bridge crosses the Duwamish Waterway and accommodates traffic to/from Georgetown and the King County International Airport vicinity as well. The variety of its connections and configurations leads to different trends for projected AWDT. This includes: anticipated AWDT increases of approximately 29 percent in each direction at the 1st Avenue S Bridge (approximately 60,000 to 63,000 vehicles in each direction); increased volumes in the SODO area north of Georgetown of 40 to 44 percent (28,000 to 33,000 vehicles in each direction); and similar gains in the southern segment near South Park of 25 to 40 percent (22,000 to 30,000 vehicles in each direction).
- **SR 522 (Lake City Way)** – Future volumes (AWDT) would increase by about 15 percent in each direction in Roosevelt near I-5 (15,000 to 20,000 vehicles in each direction), and by 20 to 35 percent in each direction in Lake City near the north city limits at NE 145th Street (20,000 to 25,000 vehicles in each direction). These trends

likely reflect anticipated increases in commuting traffic as well as projected traffic growth over time contributed to by nearby neighborhoods such as Lake City and Northgate.

- SR 513 (Montlake Blvd. to Sand Point Way) – Future volumes (AWDT) would increase by about 17 to 25 percent in this segment that includes the Montlake Bridge just north of SR 520. This would represent AWDT volumes of approximately 25,000 vehicles per day southbound and 22,600 vehicles per day northbound. This would exacerbate congestion during peak hours in this route that is used heavily for daily commuting. However, other analysis indicates that the future 2035 conditions would still meet the LOS standards for the applicable screenline that covers both the University Bridge and the Montlake Bridge.
- SR 519 (Edgar Martinez Way) – Future volumes (AWDT) would increase by about 23 percent in the eastbound direction for this segment that provides access to/from the Port of Seattle and SODO industrial area near the major sports stadiums. No increase in the westbound direction was projected in the modeling.
- SR 523 (NE 145th St. east of I-5) – This route provides east-west access from Lake City and Lake Forest Park to I-5 and is on the north city limits boundary. Future volumes (AWDT) would increase modestly by 3 to 13 percent, reaching volumes of approximately 16,000 vehicles in each direction by 2035.

#### impacts on adjacent jurisdictions

Four jurisdictions are adjacent to the City of Seattle: the City of Shoreline, and the City of Lake Forest Park along Seattle's north boundary, and the City of Tukwila and King County along Seattle's south boundary. Several major arterials that connect to streets in these jurisdictions near the Seattle borders were selected for analysis. For each arterial, the existing PM peak hour traffic volume and forecasted year 2035 traffic volume were compared to the rated capacity of the arterial, yielding a volume-to-capacity (v/c) ratio. The results of this analysis are shown in Transportation Figure A-14.

Transportation Figure A-14  
**Arterials Reaching Adjacent Jurisdiction**  
**PM Peak Hour Capacities, Volumes and V/C Ratios**

**A. Major arterials within Seattle just south of the Seattle/King County-Shoreline-Lake Forest Park Border (145<sup>th</sup> St.)**

Arterial	Existing (2014) - PM Peak Hour						2035 - PM Peak Hour					
	Outbound			Inbound			Outbound			Inbound		
	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio
Greenwood Ave. N	1,940	1,223	0.63	1,940	838	0.45	1,940	1,740	0.90	1,940	1,221	0.63
Aurora Ave. N	2,100	1,681	0.80	2,000	1,223	0.61	2,100	2,427	1.16	2,000	1,879	0.94
Meridian Ave N	770	312	0.41	770	162	0.21	770	581	0.75	770	369	0.48
5th Ave. NE	770	366	0.48	770	205	0.27	770	550	0.71	770	340	0.44
15th Ave NE	2,040	891	0.44	2,040	640	0.31	1,010	891	0.88	1,010	727	0.72
30th Ave NE	770	433	0.56	770	365	0.47	770	592	0.77	770	550	0.71
Lake City Way	2,150	1,697	0.79	2,040	1,388	0.68	2,150	2,215	1.03	2,040	1,790	0.88

**B. Major arterials within Seattle just north of Seattle/King County Border**

Arterial	Existing (2014) - PM Peak Hour						2035 - PM Peak Hour					
	Outbound			Inbound			Outbound			Inbound		
	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio	Capacity	Volume	V/C Ratio
26th Ave SW	770	401	0.52	770	336	0.44	770	522	0.68	770	374	0.49
16th Ave SW	770	292	0.38	770	216	0.28	770	524	0.68	770	250	0.32
Olson Pl. SW	2,040	1,442	0.71	2,040	1,070	0.52	1,010	1,442	1.43	1,010	1,070	1.06
Myers Way S	1,540	264	0.17	1,540	190	0.12	1,540	670	0.43	1,540	230	0.15
8th Ave S	770	93	0.12	770	99	0.13	770	222	0.29	770	99	0.13
14th Ave S	1,540	498	0.32	1,540	394	0.26	1,540	848	0.55	1,540	584	0.38
Renton Ave S	770	570	0.74	770	393	0.51	770	951	1.23	770	501	0.65
Rainier Ave S	1,460	967	0.66	1,460	663	0.45	1,460	1,421	0.97	1,460	991	0.68
E Marginal Way S	2,040	699	0.34	2,040	703	0.34	2,040	994	0.49	2,040	779	0.38
Airport Way S	2,000	756	0.38	2,000	356	0.18	1,000	1,123	1.12	1,000	822	0.82
M L King Jr. Way S	2,040	1,297	0.64	2,040	1,076	0.53	2,040	1,885	0.92	2,040	1,078	0.53
51st Ave S	770	351	0.46	770	219	0.28	770	698	0.91	770	310	0.40

For all but five instances for the arterials shown in Transportation Figure A-14, the PM peak hour v/c ratio is below 1.0, indicating that there currently is remaining traffic capacity and that the capacity will continue into the forecasted future. The exceptions are:

- Aurora Avenue N (SR 99), as the primary north-south highway arterial to/from Shoreline, is projected to experience considerable growth in evening peak hour volumes by 2035 (nearly 750 added vehicles), which will raise the projected northbound v/c ratio from 0.80 to 1.16.
- Lake City Way (SR 522), as the primary north-south highway arterial in north Seattle to/from Lake Forest Park, is projected to experience considerable growth in evening peak hour volumes by 2035 (nearly 520 added vehicles), which will raise the projected northbound v/c ratio from 0.79 to 1.03.
- Olson Place SW, a route to/from White Center and Burien, may experience a projected v/c ratio of 1.43 in the peak westbound direction by 2035, but this is tempered by a recognition that the conservative analysis of road capacity predicts a reduced capacity with a possible future bicycle improvement, and the future volumes for 2035 are not otherwise projected to increase over existing 2014 volumes. A similar effect on the eastbound direction of travel on Olson Place SW leads to a projected congestion level measured as a 1.06 v/c ratio. Future bicycle facility design would determine whether vehicle lanes would actually be reduced; given the street's width such reductions ultimately might not be needed.
- Renton Ave S, a route to/from Skyway and the City of Renton, is projected to experience growth of approximately 380 vehicles in the southbound direction by 2035, which will raise the corresponding v/c ratio to 1.23.
- Airport Way (a route to/from Tukwila), like Olson Place SW, may be affected in its capacity by a future possible bicycle improvement, and given projected increases in peak hour traffic southbound (360 added vehicles) could experience congestion measured as a v/c ratio of 1.12.

In other locations, including Rainier Ave. S and MLK Jr. Way S., both leading toward the City of Renton, projected v/c ratios of 0.97 and 0.92 respectively indicate future increases in traffic and probable congestion.

These modeled traffic volume and v/c findings for 2035 reflect growth not only under Seattle's Comprehensive Plan, but also the probable growth in the adjacent jurisdictions and throughout the central Puget Sound region that contributes to total traffic growth. Much of the traffic on these arterials is and will continue to be through-traffic, although the destinations of some motorists will be to and from Seattle as well as the neighboring jurisdictions.

In addition to the City of Seattle's analysis of transportation impacts on adjacent jurisdictions, as described in this section, Seattle continues to work with the adjacent jurisdictions to coordinate traffic operations and to minimize cross-boundary impacts.

## E

## Intergovernmental Coordination Efforts<sup>5</sup>

This section describes the City's intergovernmental coordination efforts during the development of the Comprehensive Plan, and potential impacts of the plan on the transportation systems of adjacent jurisdictions.

Seattle is an active member of the Puget Sound Regional Council (PSRC), which is charged with certifying that local transportation plans are consistent with regional plans and goals. The City supports PSRC's Vision 2040, a transportation/land use plan that describes linking high density residential and employment centers throughout the region by high capacity transit and promoting a multi modal transportation system. Vision 2040's goals are carried forward by this Comprehensive Plan.

5 (RCW 36.70A.070(6)(a)(v))

The PSRC provides population, employment, and transportation data to Seattle and other jurisdictions. Coordination is established via this centralized information resource. The PSRC is charged with allocating certain federal funds. Seattle has participated in establishing the criteria and selection process to determine how funds will be distributed among transportation projects.

The City of Seattle cooperates with the Washington State Department of Transportation (WSDOT) and the Puget Sound Regional Council regarding improvements to state transportation facilities and services and to ensure that the City's plans are consistent with the State Transportation Plan and the Transportation 2040 plan. The PSRC also monitors State highways of regional significance, such as non-HSS, for regional planning purposes.