Chapter 2: State of the City's Transportation System

Chapter 2 describes key existing transportation and land use conditions used in analysis and decision-making at SDOT, by Seattle citizens, and by elected officials. It contains relevant maps and statistics that describe the scale and use of the multi-modal transportation network from regional, citywide, and neighborhood perspectives. The intent is to provide information that improves understanding of how Seattle area residents, jobs, and neighborhoods are connected to each other and the region. The information in this chapter also provides a foundation for decision-making about transportation projects and programs. The maps consolidate information with sources given for easy reference to inform decisions taken by Seattle citizens, planners, and elected officials about Seattle's future.

2.1 Urban Villages and Land Use

The following maps show Seattle's designated urban villages (Figure 3). Note that Delridge and Georgetown are not pictured, because although they do have adopted neighborhood plans, they are not designated urban villages. Figure 4 shows current land use patterns. Seattle is essentially a fully built city with a mature transportation system. Land use and transportation remain fundamentally related and can be mutually supportive. The urban village strategy, described in the Comprehensive Plan, recognizes the land use-transportation relationship by focusing redevelopment in concentrated rather than linear patterns, directing transportation investments to link these pedestrian-oriented activity centers, and providing more opportunities for walking and bicycling within these centers. Over the last ten years, thirty-eight urban villages developed Neighborhood Plans to help support such development. These urban villages will also be priority areas for the City's investments in new capital facilities.

As shown in Figure 3: Urban Centers, Urban Villages, and Manufacturing/Industrial Centers, there are currently six urban centers—Downtown, Capitol Hill/First Hill, Uptown, University District, Northgate, and South Lake Union. Seattle's urban centers absorb most of the City's share of expected new growth. Hub Urban Villages and Residential Urban Villages are smaller in scale for employment and residential development, respectively. Concentrations of both commercial activity and multifamily housing are planned for urban villages at lower densities than will be found in the urban centers. The two manufacturing/industrial centers provide opportunities for current and future industrial businesses to locate in Seattle, providing relatively high-wage jobs that are often accessible to workers without higher education.

Seattle's Comprehensive Plan includes additional land use data and resources. A link to the 2004 Comprehensive Plan Update can be found on-line at www.seattle.gov/transportation/tsphome.htm.

About Seattle

2000 CENSUS DATA

Population	563,374
# of Households	258,499
Median Household Income	$45,736
# of Jobs (2002)	479,241

2020 PROJECTED GROWTH

# of Households (18% increase)	305,499
# of Jobs (19% increase from 2002)	569,241

2.2 Roadway Data: Street Classifications and Traffic Volumes

Seattle is a built city and the opportunity to add new roadways is extremely limited. Many of the strategies, projects, and programs highlighted in the TSP address making the best use of the existing roadway network to move more people and goods. Transit, walking, bicycling, transportation demand management and the most efficient operation of the existing roadway network are all important components

Figure 3: Urban Centers, Urban Villages, and Manufacturing/Industrial Centers

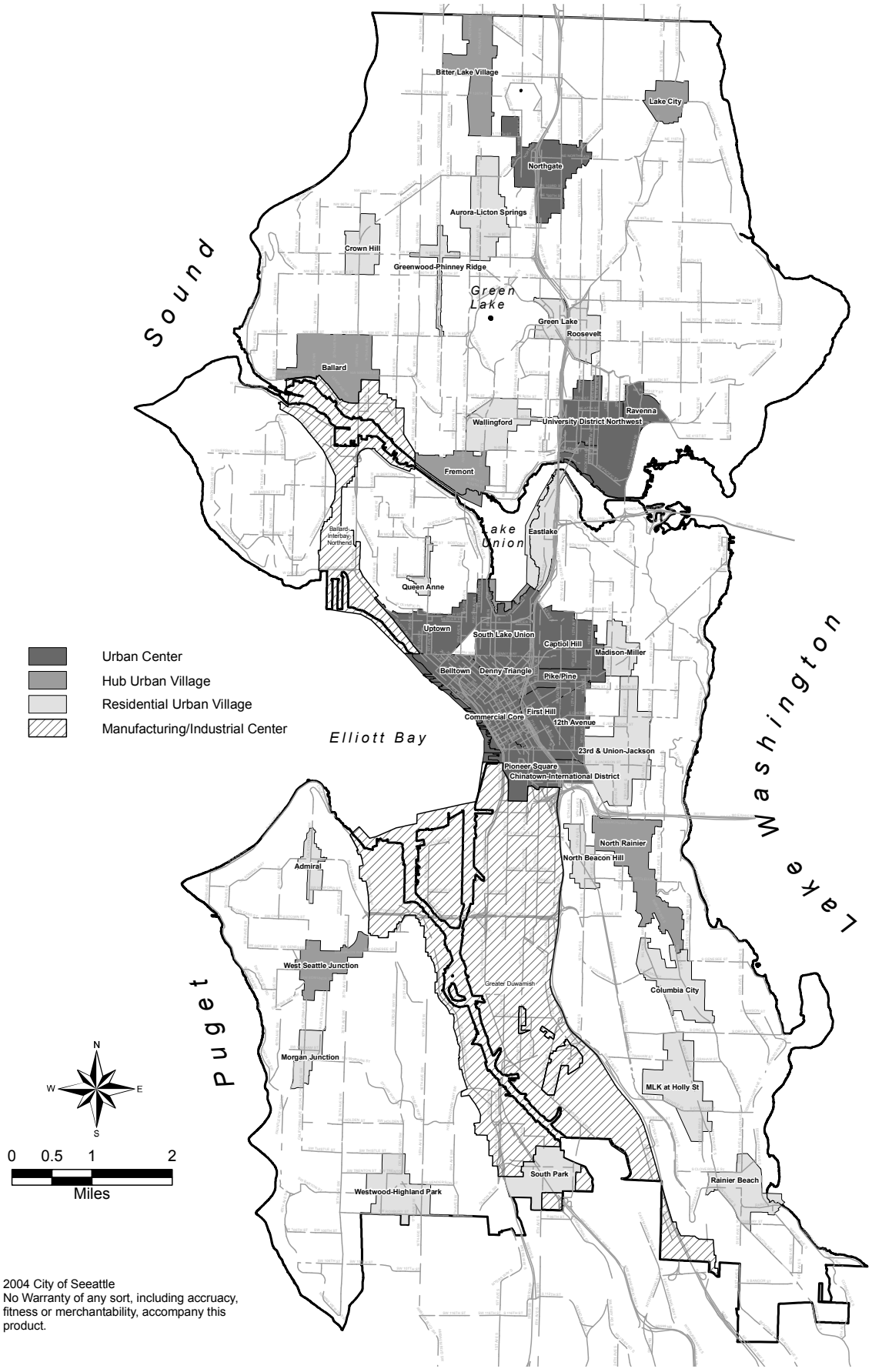
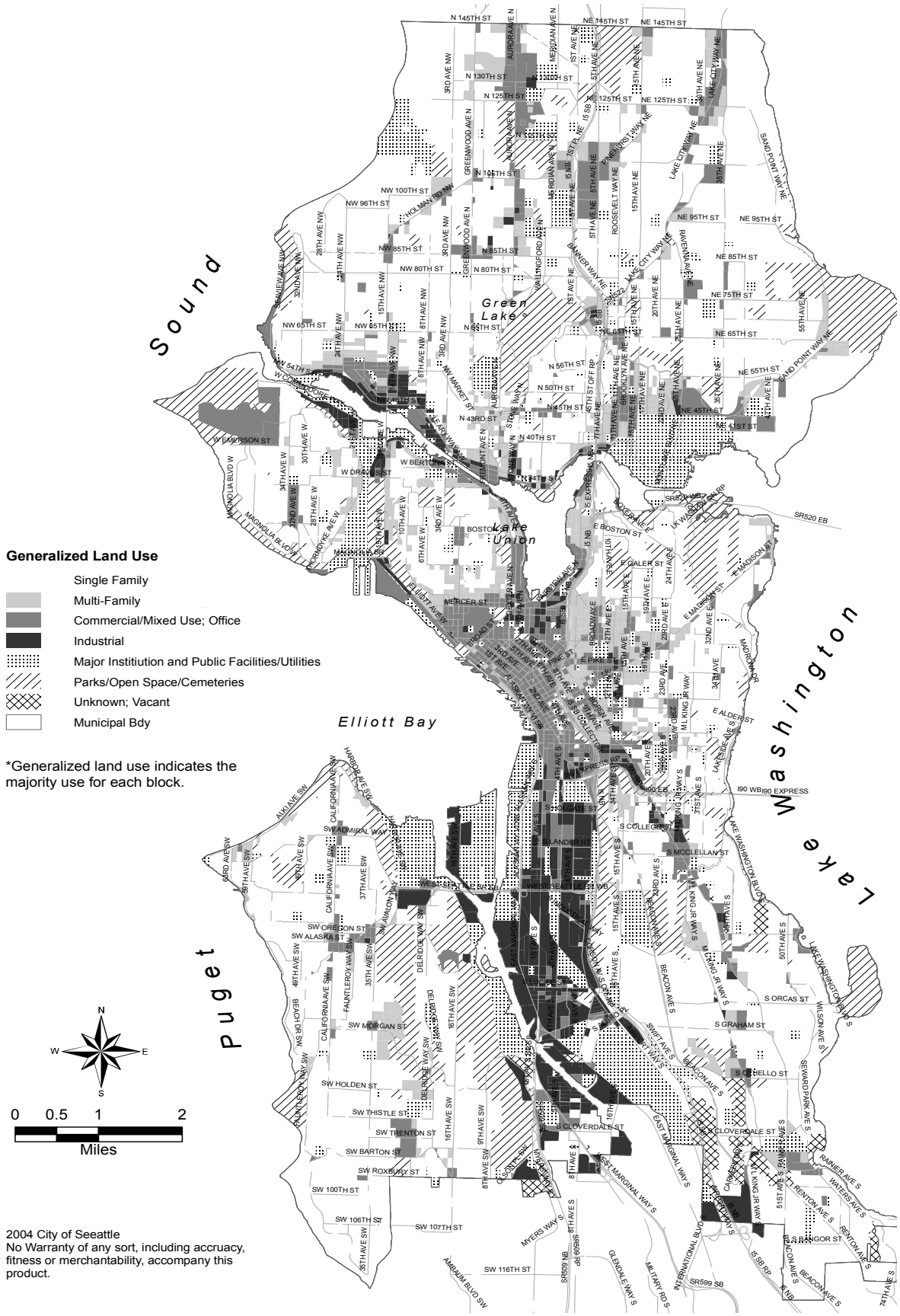


Figure 4: Generalized Existing Land Use



of making the most of our existing transportation network. There are separate sections for each of these here in Chapter 2.0.

Identifying the functions of streets through the development and application of street classifications is one tool SDOT uses to make the best use out of our existing networks. Seattle's street classification maps can be found in Chapter 3.2 of this plan, and the full definition of each street classification is included as Appendix B.

A key data element that helps SDOT plan for, design and manage the arterial street system is average annual daily traffic volumes. SDOT conducts machine counts of vehicle volumes regularly along screenlines (including cordons and corridor locations), for arterial streets analysis, for traffic flow map development, for signal inventory, and for special projects as needed. The volumes on the map segments represent the Average Annual Weekday Daily Traffic (AAWDT, 5-day, 24-hour) for that section of roadway for 2003. AAWDT maps (including from previous years) are available at www.seattle.gov/transportation/tfdmaps.htm

2.3 Automobile Availability and Mode Share

SDOT sponsors or participates in Transportation Demand Management (TDM) programs and services that encourage the use of travel modes other than the single occupant vehicle. Many of these programs happen in partnership with other agencies, such as King County Metro and the Downtown Seattle Association. Others are partnerships with community groups such as the Way to Go Seattle programs. Chapter 3.3TDM identifies these programs in more detail. A baseline data source for affecting people's transportation behavior is automobile ownership.

As shown in Figure 5: Automobile Availability, the U.S. Census tracks automobile vehicles available, and the data from the 2000 Census has been analyzed for Seattle urban villages.

"Vehicles available" is defined as the number of passenger cars, vans, and trucks kept at home and available for household use; dismantled or immobile vehicles are excluded. Vehicles per household is computed by dividing aggregate vehicles available by the number of occupied housing units.

Generally, in Seattle, the number of vehicles available per household decreases as residential density, access to transit, parking restrictions, and/or proximity to downtown Seattle all increase. According to the 2000 Census, there were 563,000 people or 270,500 households, and 363,500 vehicles in Seattle proper. That works out to less than one car per person or 1.34 cars per household. A total of 66,000 households have no vehicles at all.

The average vehicles available per household in the six designated urban centers is 0.68, and it is 1.29 in all other urban villages. Outside urban villages the vehicles per household is 1.62. The entire city average is 0.99 vehicles per household. These are 2000 year figures and are across-the-board lower than 1990 figures.

The US Census Journey to Work data is collected every ten years to analyze patterns of how people travel to work. Journey to Work data includes data on where people work, how they get to work, how long it takes to get from their home to their usual workplace, when they leave home to go to their usual workplace, and carpooling.

Figure 5: Automobile Availability (from US Census, 2000)

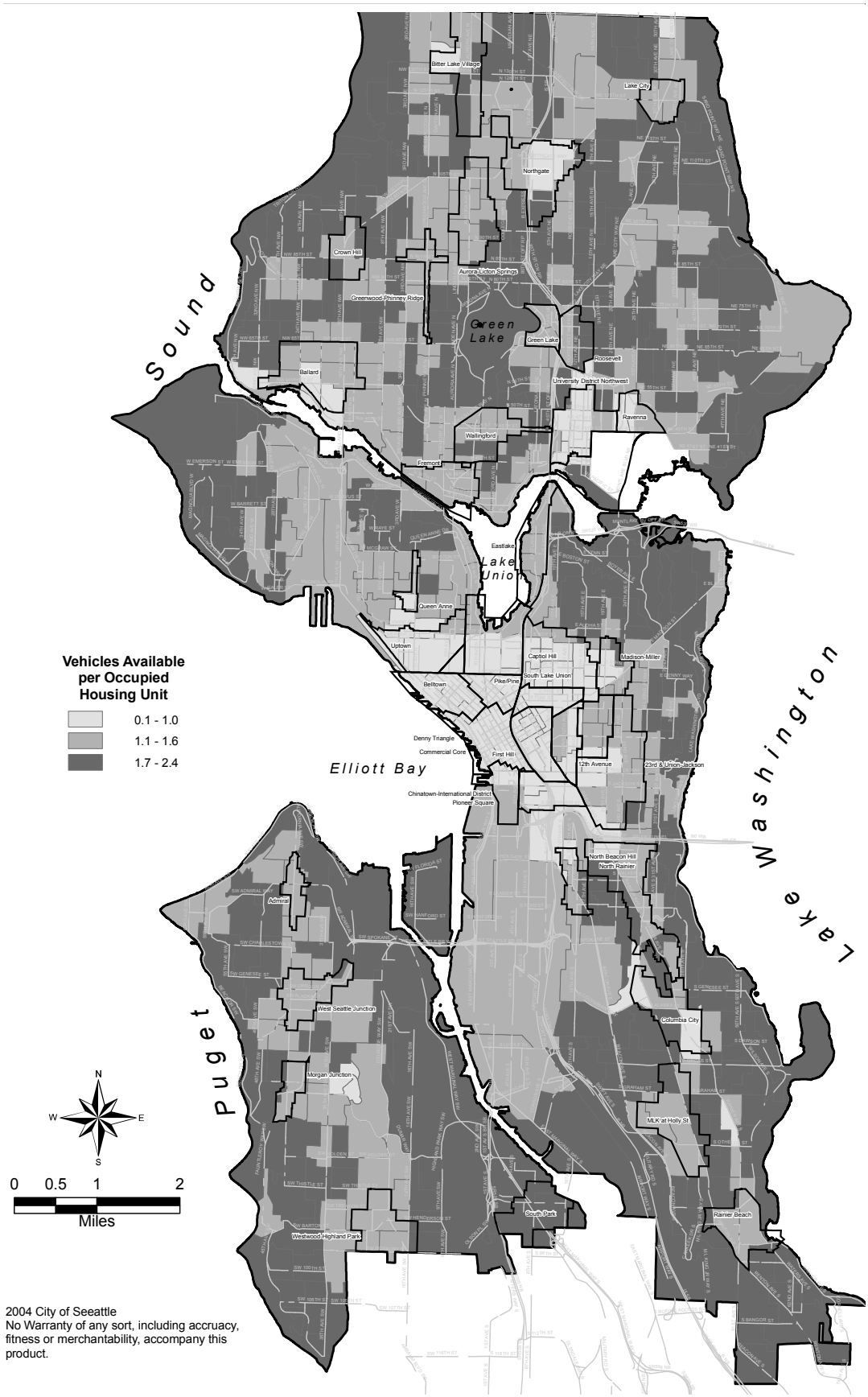


Figure 6: Mode Share by Census Tract

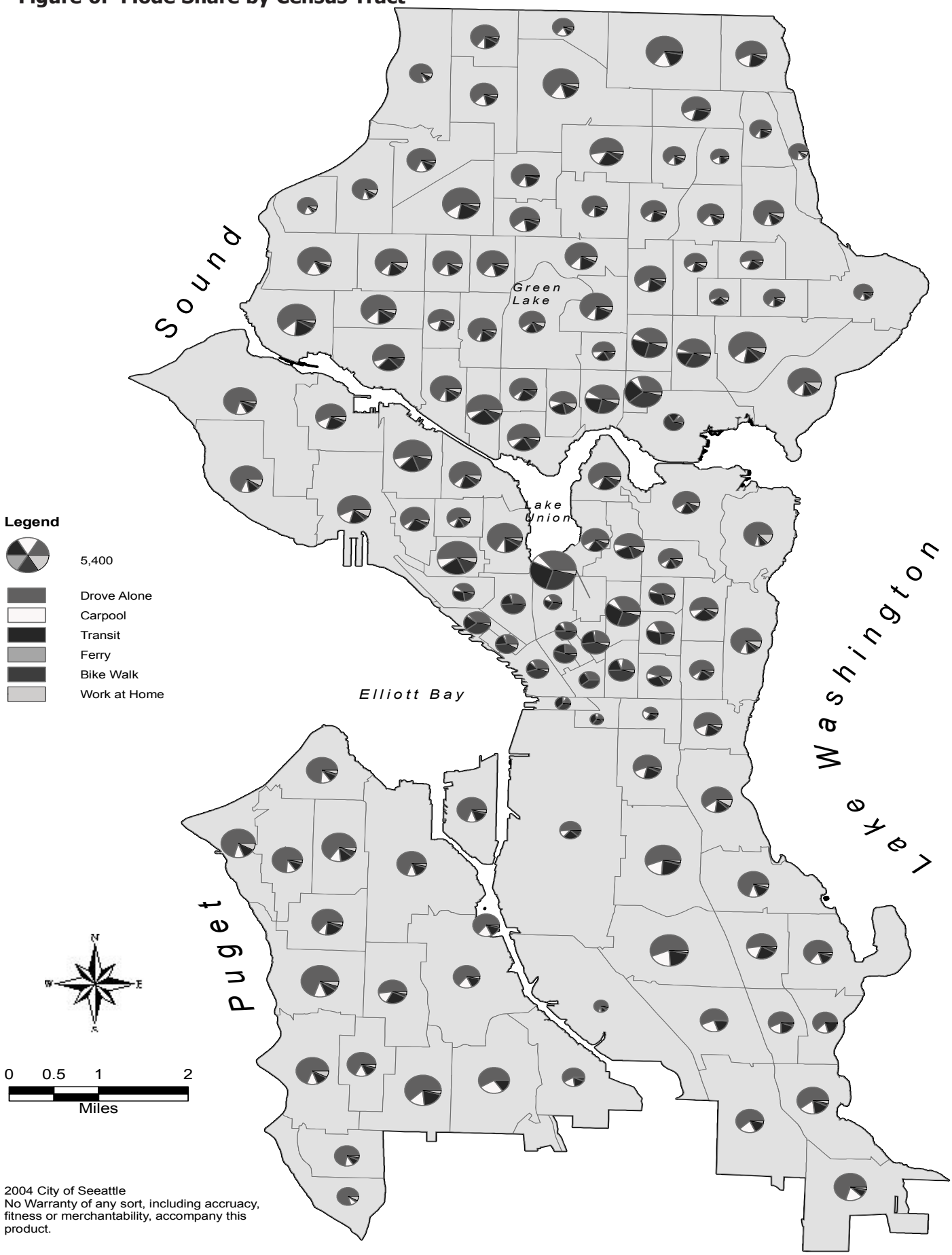


Figure 6: Mode Share by Census Tract, displays the mode of commute to work for Seattle residents based on 2000 Journey to Work data.

2.4 Local and Regional Transit System

The City needs a plan for developing a transit system that supports as well as leads the development of Seattle's urban villages, as set forth by the City's Comprehensive Plan. Clearly, Seattle will need good transit service to provide people a real mobility choice. The Seattle Transit Plan was approved in 2005 by SDOT to provide direction on how Seattle can achieve the transit system it needs.

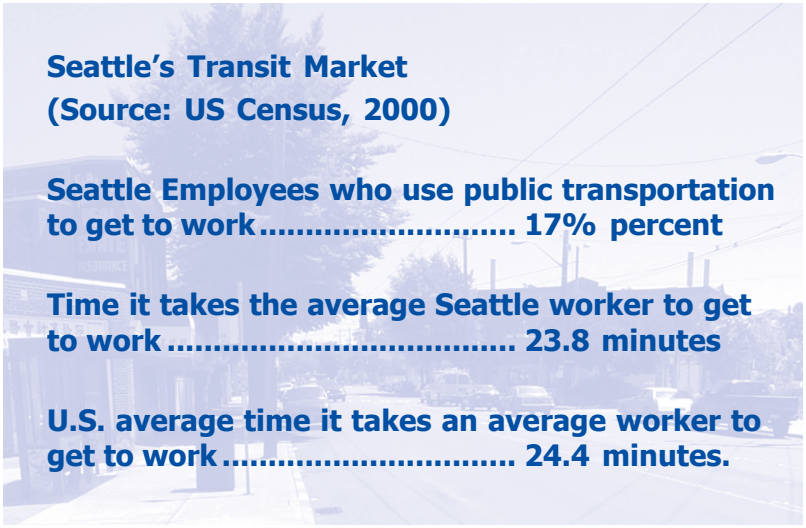
Seattle's transit system has taken many forms over the years and continues to expand to support an ever increasing demand for transit service. The City of Seattle is not the local transit operator but does work closely with local, regional and state public transportation and transit providers. SDOT works closely with transit providers to permit and construct transportation facilities that support transit use such as sidewalks near transit zones and bus pads.

In 2003-2004, SDOT worked with internal and external stakeholders to draft a vision of Seattle's future transit network. The vision is shown in Figure 7: Seattle's Future Transit Network, and shows Seattle's regional high and intermediate capacity transit corridors as well as key transit passenger facilities, e.g. multimodal hubs and transportation centers. Along with Seattle's Urban Village strategy, it provided the direction needed to develop the Seattle Transit Plan.

The following information summarizes the Draft Seattle Transit Plan Existing Conditions chapter:

2.4a Local Transit Service and Facilities

Bus: King County Metro Transit (Metro) provides most of Seattle's local (and local express) transit service (see Figure 8: Metro Bus Routes). Metro's bus system is primarily focused on four areas: 1) increasing peak market share, 2) expanding core network services, 3) integrating with Sound Transit, and 4) addressing local subarea priorities. In 2002, Seattle, Shoreline, and Lake Forest Park, (the West subarea), received almost 1.89 million annual service (platform) hours, generating slightly over 60 million annual rides. This was about 71 percent of Metro's total system ridership of slightly over 85 million annual rides (excludes ridership from Sound Transit buses operated by Metro and ride free area passengers). The West subarea generated about 66 percent of Metro's fare revenue in 2002. The core network for Seattle is listed in Table 1: Seattle's Core Service Connections.



Streetcar: The George Benson Waterfront Streetcar Line is operated by Metro. The streetcar line runs along Alaskan Way and South Main Street from Myrtle Edwards Park to the International District, with nine station stops. In 2003, it had 403,590 passenger boardings.

Water Taxi: In 1997, King County Metro began operating the Elliott Bay Water Taxi on a seasonal basis, running between Seacrest Park in West Seattle to Pier 55 in downtown Seattle. In 2003, the water taxi had 116,833 passenger boardings between April 21 and November 28.

Van Pool: King County Metro's vanpool program is the largest in the country and last year generated 1,793,748 passenger trips with 663 vans in service.

Figure 7: Planned and Potential High and Intermediate Capacity Transit Network

(**Note**: A color version of this map can be found in the Seattlle Transit Plan, Figure 10. It can be accessed online at www.seattle.gov/transportation/docs/Figure10SeattleFutureTransitNetwork2.pdf)

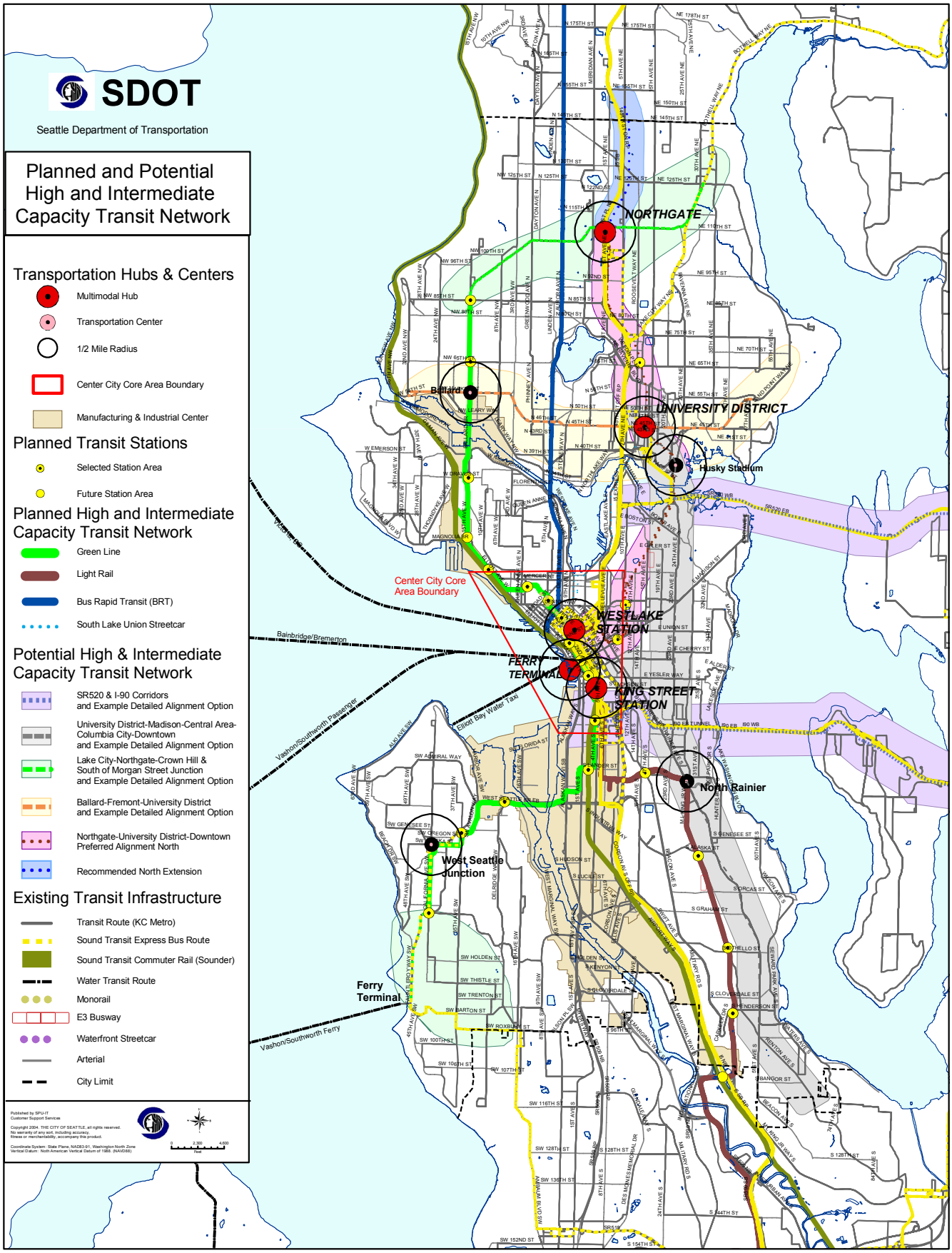


Figure 8: Seattle's Future Transit Network

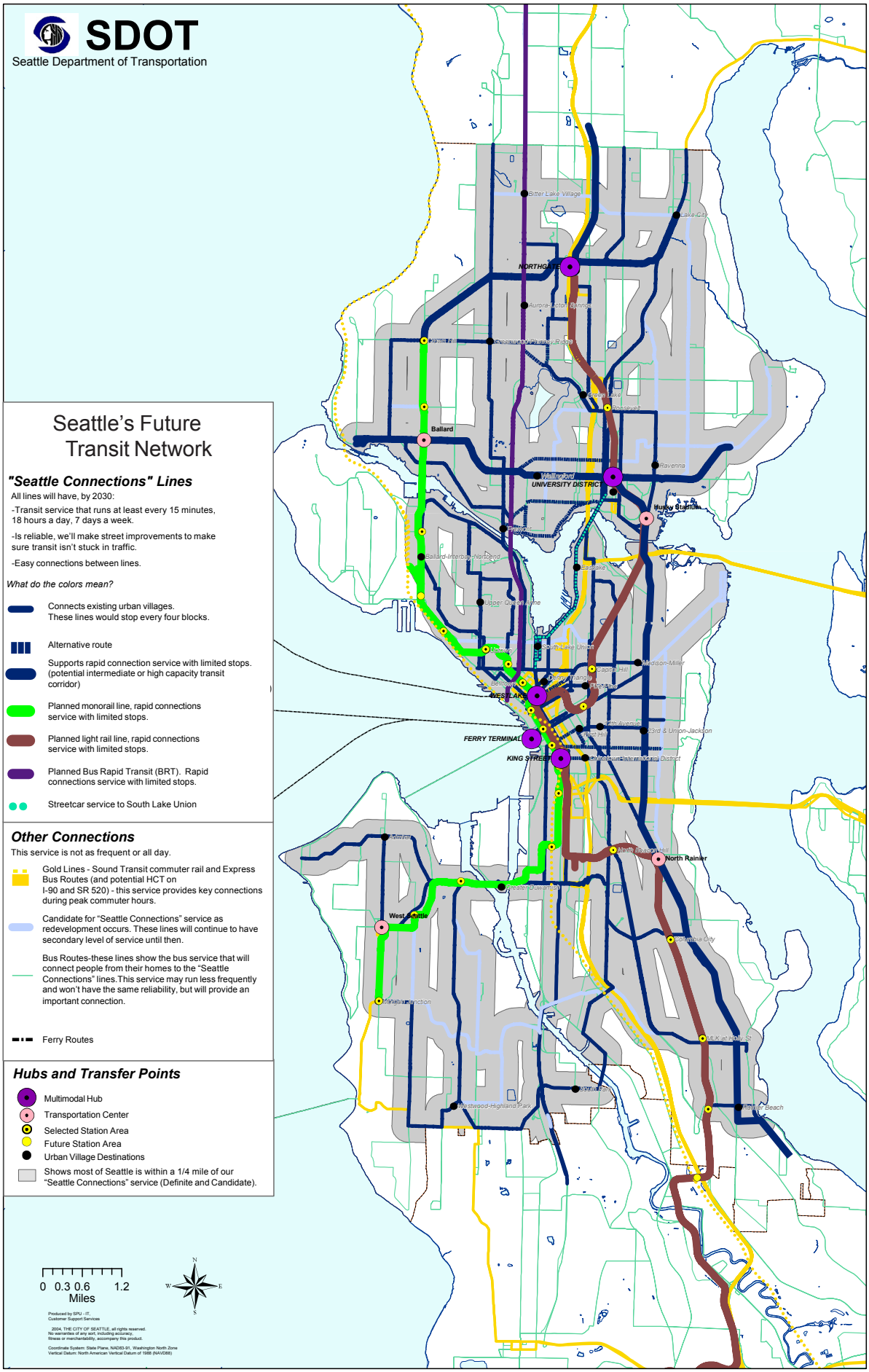


Table 1: Seattle's Core Service Connections
(Source: King County Metro Six-Year Transit Development Plan for 2002 to 2007, adopted December 2002)

Description			2001 Frequency
Between these places		**Via Primary Corridor and Destination**	**2001 Actual peak/mid/eve (min)**
Admiral	White Center	California Ave. SW	30/30/30
Aurora Village	Seattle CBD	Aurora Ave. N	10/20/30
Ballard	Northgate	24th Ave. NW, Holman Rd. NW	30/30/60
Ballard	Seattle CBD	15th Ave. W	10/10/30
Ballard	U District	NW Market St., N & NE 45th St.	10/15/15-30
Beacon Hill	Seattle CBD	Beacon Ave. S	5-10/10/20-30
Bellevue	U District	SR-520	15/30/60
Burien	Seattle CBD	Ambaum Blvd. SW, Delridge Way SW	15/30/30
Capitol Hill	Seattle CBD	15th Ave. E, Pine St.	10/15/30
Capitol Hill	Seattle CBD	Broadway E, Pine St.	10/10/30
Capitol Hill	Seattle CBD	Madison St.	10/15/30
Capitol Hill	Seattle Ctr.	Denny Way	15/30/30
Central Area	Seattle CBD	Jefferson - James	7-8/7-10/15
Federal Way	Seattle CBD	I-5	30/30/-
Fremont	Seattle CBD	Dexter Ave. N.	10-15/15/30
Greenwood	Seattle CBD	Greenwood Ave. N	15/15/30
Kent	Seattle CBD	W Val Hwy., Southcenter Blvd., Interurban, I-5	15/30/30
Kirkland	Seattle CBD	108th NE and SR-520	10-15/30/30
Loyal Hts.	U District	NW 85th St.–15th Ave. NE	10/15/30
Madrona	Seattle CBD	Union St.	15/15/30
Northgate	Seattle CBD	I-5	4-8/15/60
Northgate	Seattle CBD	Wallingford Ave. N., Aurora Ave. N	20/20/30
Northgate	U District	Roosevelt WY. NE, 5th Ave. NE	10-15/15/30
Queen Anne	Seattle CBD	5th Ave. N., Taylor Ave. N.	10-15/20/30
Queen Anne	Seattle CBD	Queen Anne Av. N	5-10/15/15
Rainier Beach	Seattle CBD	Rainier Ave. S	10/10/30
Renton	Seattle CBD	MLK WY., I-5	7-15/30/—
Sea-Tac Airport	Seattle CBD	I-5	30/30/30
U District	Seattle CBD	Pine St., 23rd Ave. E	10-15/15/30
U District	Seattle CBD	I-5	5-8/7-10/—
U District	Seattle CBD	Eastlake Ave. E, Fairview Ave. N	12/15/15
U District	Columbia City	23rd Ave. E, MLK Jr. Way S	10/15/30
U District	Woodinville	SR-522, Bothell	30/60/—
West Seattle	Seattle CBD	Fauntleroy Ave. SW, W. Seattle Bridge	15/15/30
Core Service Connections in King County Served by Sound Transit			
Bellevue	Seattle CBD	I-90, Bellevue WY. NE	5-8/15/30
Issaquah	Seattle CBD	I-90	30/30/60
Redmond	Seattle CBD	SR-520	15/30/30
Woodinville	Seattle CBD	SR-522, I-5	30/30/30

Paratransit: King County Metro provides curb-to-curb transportation for people who are unable to use regular bus service due to disabilities through the ADA Paratransit Program (Access Transportation). King County residents who are low income and are either age 18 to 64 and have a disability or are age 65 or over qualify for the Taxi Scrip Program, which offers a 50% subsidy for taxi service via pre-purchased scrip. In 2003, Metro provided about 1,024,500 ACCESS passenger rides and about 52,300 taxi passenger rides.

Other King County Metro Services: Other King County Metro programs and services include custom buses, special event service, the U-Pass program with the University of Washington, bikes on buses, vanpools, and a ride-match service.

Transitways: The E-3 busway and downtown Seattle transit tunnel provide Metro, as well as Sound Transit, exclusive right-of-way for its bus operations. In addition, Seattle provides bus-only lanes on some arterial streets. Since 1994, transit-only or HOV lanes have been built along Aurora Avenue, Howell St. and 2nd Avenue (southbound only) in downtown Seattle, Pacific St. in the University District, and the West Seattle Freeway.

Park and Rides: King County Metro and WSDOT operate ten permanent and three leased park and ride lots in Seattle with approximately 2,300 parking spaces. The Northgate Transit Center south of the Northgate Mall provides almost 1300 of these spaces. The park and ride lots are free of charge.

2.4b Intermediate Capacity Transit Service

The City identifies intermediate capacity transit as enhanced-capacity transit services that would be interconnected, and operate faster and more reliably than existing bus service (City of Seattle, Seattle Transit Study for Intermediate Capacity Transit, Final Report 2001).

Monorail: In November 2002, Seattle voters approved an intermediate capacity transit project when they created the Seattle Popular Monorail Authority, also referred to as the Seattle Monorail Project (SMP). SMP's purpose is to fund, build, operate, own, and maintain a 14-mile monorail Green Line, connecting the Crown Hill Residential Urban Village, Ballard Hub Urban Village, Uptown/Queen Anne Urban Center, Downtown Urban Center, Duwamish Manufacturing/Industrial Center, West Seattle Junction Hub Urban Village, and the Morgan Junction Residential Urban Village.

Construction of the Green Line is expected to start in 2005. The entire Green Line is scheduled for full operation in 2009. Travel times will be approximately six minutes between Queen Anne and Pike Place Market, 20 minutes from downtown to West Seattle, and 12 minutes from downtown to Ballard. The Monorail Green Line is expected to attract approximately 69,000 daily trips.

The City of Seattle currently operates a monorail on a mile of elevated guideway between Westlake Mall in downtown Seattle and the Seattle Center. It carried about 2 million riders in 2002. The monorail is currently undergoing repairs due to a fire in early 2004.

2.4c Regional High Capacity Transit Service

Sound Transit is the regional transit authority for the Puget Sound area (which includes portions of King, Snohomish, and Pierce Counties). It was created in 1996 by voters within its boundary and has been planning and implementing the first phase of its "Sound Move" regional transit plan. The Sound Move plan includes: operation of a 24-mile light rail system (called "Link") between SeaTac and the University District (via downtown Seattle and the Rainier Valley), with possible extension to Northgate; peak period commuter rail services (called "Sounder") along existing rail lines between downtown Seattle, Tacoma and Everett; and regional bus services connecting major centers throughout Sound Transit's service area.

Link Light Rail: The initial segment of Link will be 14-miles long connecting Downtown , North Beacon Hill, North Rainier, Columbia City, MLK at Holly St., and south to the City of SeaTac. Link trains are expected to start service from downtown Seattle to South 154th Street by 2009 and by 2020 are projected to carry at least 42,500 riders a day.

Regional Express Bus: Sound Transit's Regional Express provides express bus service between suburban areas in the three-county service area and downtown Seattle, West Seattle, and the University District. Currently, there are a total of 20 bus routes that provide this all-day, two-way express service with limited stops.

Commuter Rail: Sounder commuter rail service between Tacoma and Seattle began in 2000 and between Everett and Seattle in 2003. Besides King Street Station, where Tacoma and Everett services will serve downtown Seattle, there are two provisional Sounder stations identified for Seattle in Georgetown and Ballard. In 2002, Sounder carried 817,405 annual passenger trips using 9,494 annual service hours.

2.4d Waterborne Transit

Ferries: Washington State Ferries (WSF) is operated by WSDOT's Marine Division. Ferries serve the Colman Dock Ferry Terminal in downtown Seattle and the Fauntleroy Ferry Terminal in West Seattle. More than half of the WSF ridership are commuters.

In 2002, Colman Dock averaged 27,510 ferry passengers per day and carried 8,022 vehicles per day. There are three routes that serve the Colman Dock: 1) Bainbridge-Seattle, 2) Bremerton-Seattle, and 3) Vashon-Seattle. The Seattle-Vashon route is a peak period, commuter passenger only ferry service for the weekdays and Saturdays. Only the Vashon Island ferry serves the Fauntleroy ferry terminal. The Fauntleroy-Vashon-Southworth route carried 3,108,107 in 2002.

In 2002, the annual ridership for WSF Seattle routes to Colman Dock was: Bainbridge-Seattle, 6,727,650; Bremerton-Seattle (passenger only); 681,830; Bremerton-Seattle, 2,212,150; Vashon-Seattle (passenger only), 228,327. Therefore, the total 2002 WSF ferry ridership at Colman Dock was 9,849,957.

Recent changes in state law and reductions in Washington State Ferries passenger-only ferry service have resulted in new operators of passenger-only ferry service across Puget Sound. Weekday, commuter service from Bremerton and Kingston now operates and planning for new service from Southworth is underway. In 2005, as part of a Six-Year Plan Transit Plan Strategy, King County Metro will conduct a study regarding the role of waterborne transit service in King County and will analyze from Vashon to Seattle, West Seattle to Seattle's Central Waterfront, and potential new markets serving Lake Union and Lake Washington**.**

The Elliott Bay Water Taxi runs between West Seattle and Seattle's Central Waterfront

2.5 Commute Patterns for Pedestrians and Bicycles

Walking patterns are documented within the US Census as part of the journey to work data. These data sources are helpful to identify areas for improving pedestrian conditions, among other purposes. Figure 9: Percentage of Workers Commuting by Foot, shows the US Census journey to work patterns for those that walk to work. Generally, walking commuting is higher surrounding major employment destinations such as downtown Seattle and the University of Washington.

The City of Seattle has, over the last 20 years built, and continues to build, an extensive urban trail system for bicyclists and pedestrians. One key data resource is the pattern of bicycle commuting across the city.

Generally, bicycle commuting is higher along urban trails such as the Burke-Gilman trail and surrounding major employment destinations such as downtown Seattle and the University of Washington. Figure 10: Percentage of Workers Commuting by Bicycle, shows such bicycle commuting patterns.

Figure 9: Percentage of Workers Commuting by Foot (Journey to Work, US Census, 2000)

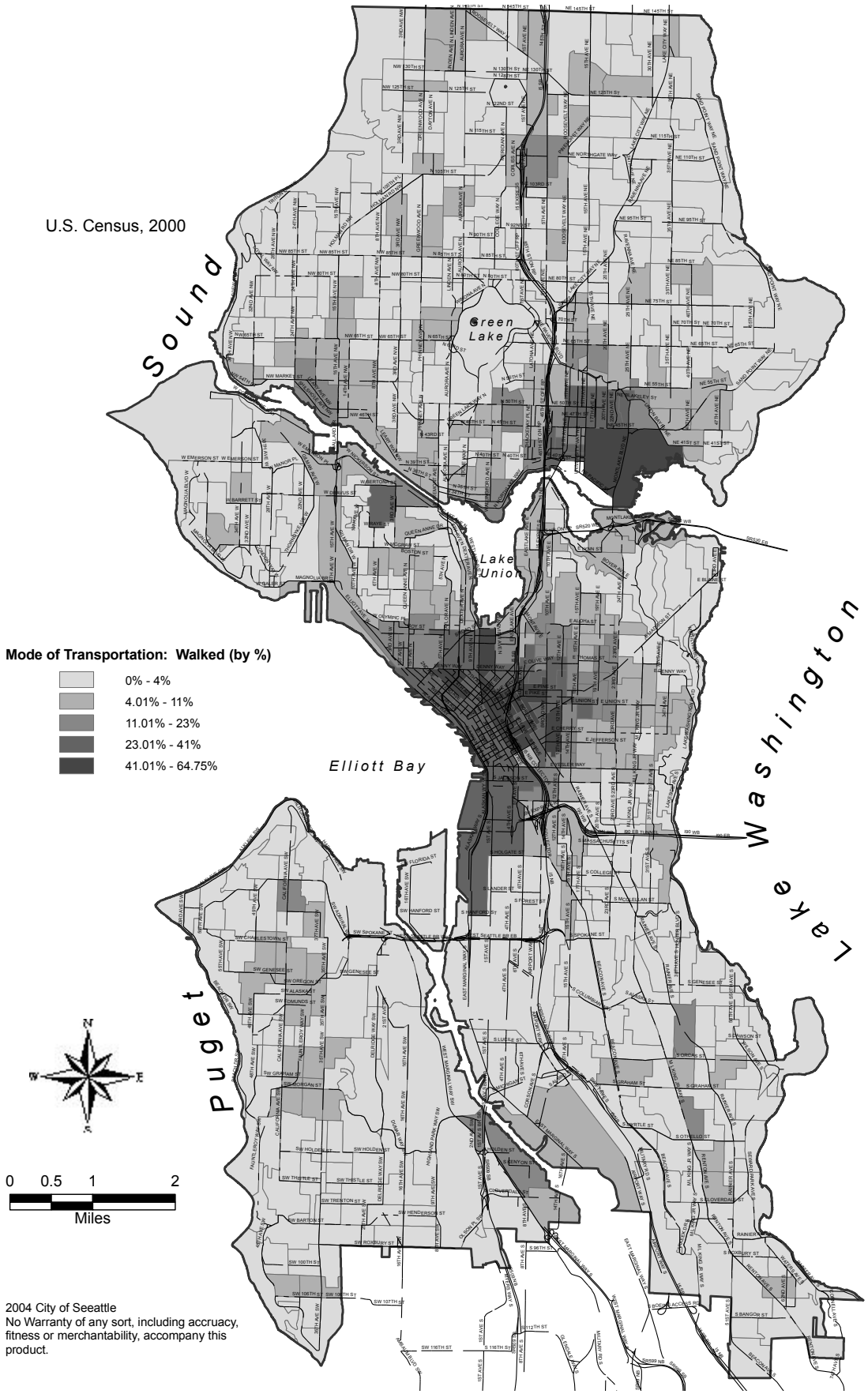


Figure 10: Percentage of Workers Commuting by Bicycle (Journey to Work, US Census, 2000)

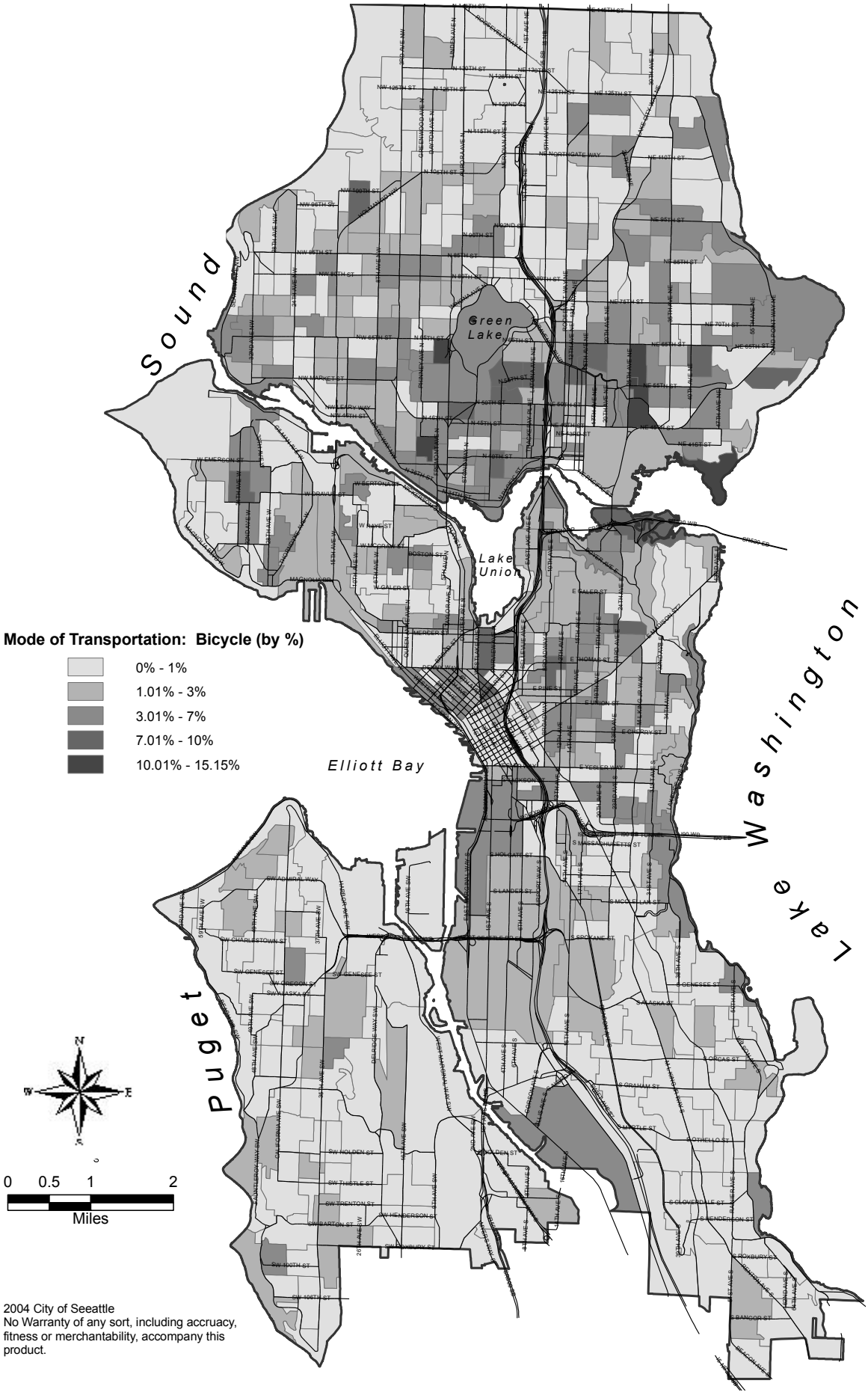
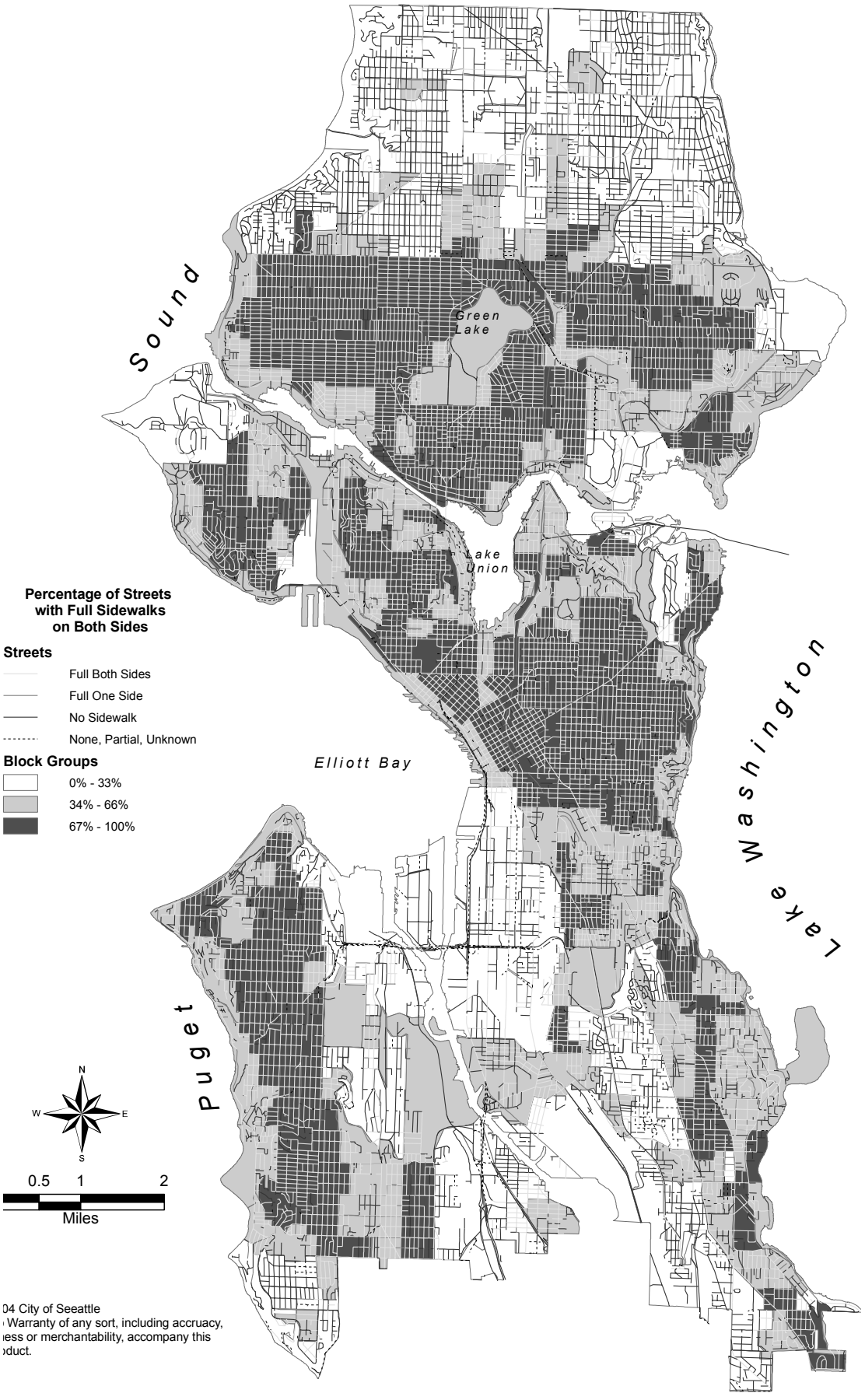


Figure 11: Percentage of Streets with Full Sidewalks on Both Sides



2.6 Sidewalk Inventory

SDOT collected a sidewalk inventory using aerial photographs and GIS. Since it is only about 85% accurate, a field check is always needed to confirm whether a sidewalk actually exists at particular location. The inventory mapped in Figure 11: Percentage of Streets with Full Sidewalks on Both Sides, describes those areas of Seattle where most streets have sidewalks and where there are major deficiencies.

2.7 Seattle's Topography

Seattle's topography is a key factor influencing transportation patterns, especially walking. The map in Figure 12: Seattle's Topography, gives a citywide view of topography.

2.8 On and Off Street Parking

As part of the implementation of recent citywide parking studies and neighborhood parking management programs, SDOT is working to create a citywide inventory of on-street parking controls, including the location and usage of parking pay stations and meters, time-limit (1, 2, 3, 4-hour) signs, load zones (passenger, commercial vehicle, 30-min), and residential parking zones (RPZs). While not complete, this parking inventory is used several ways and is continually added to by fieldwork or use of Department asset management programs. The following highlights the parking data available to date.

2.8a Existing On-Street Parking Supply

In 2003, there were about 9,000 on-street parking meters in Seattle. About 70% are in downtown Seattle. Many of the existing on-street meters are being replaced by new parking pay stations. Most neighborhood business districts have either paid parking or 1- and 2-hour parking signs to provide customer parking for nearby businesses. There are 22 Residential Parking Zones (RPZs) in Seattle, most surrounding hospitals, universities and other major traffic generators. Figure 13: Parking Classifications...North Seattle, and Figure 14: Parking Classifications...Central Business District, indicate the locations of the RPZs and on-street meters and pay stations.

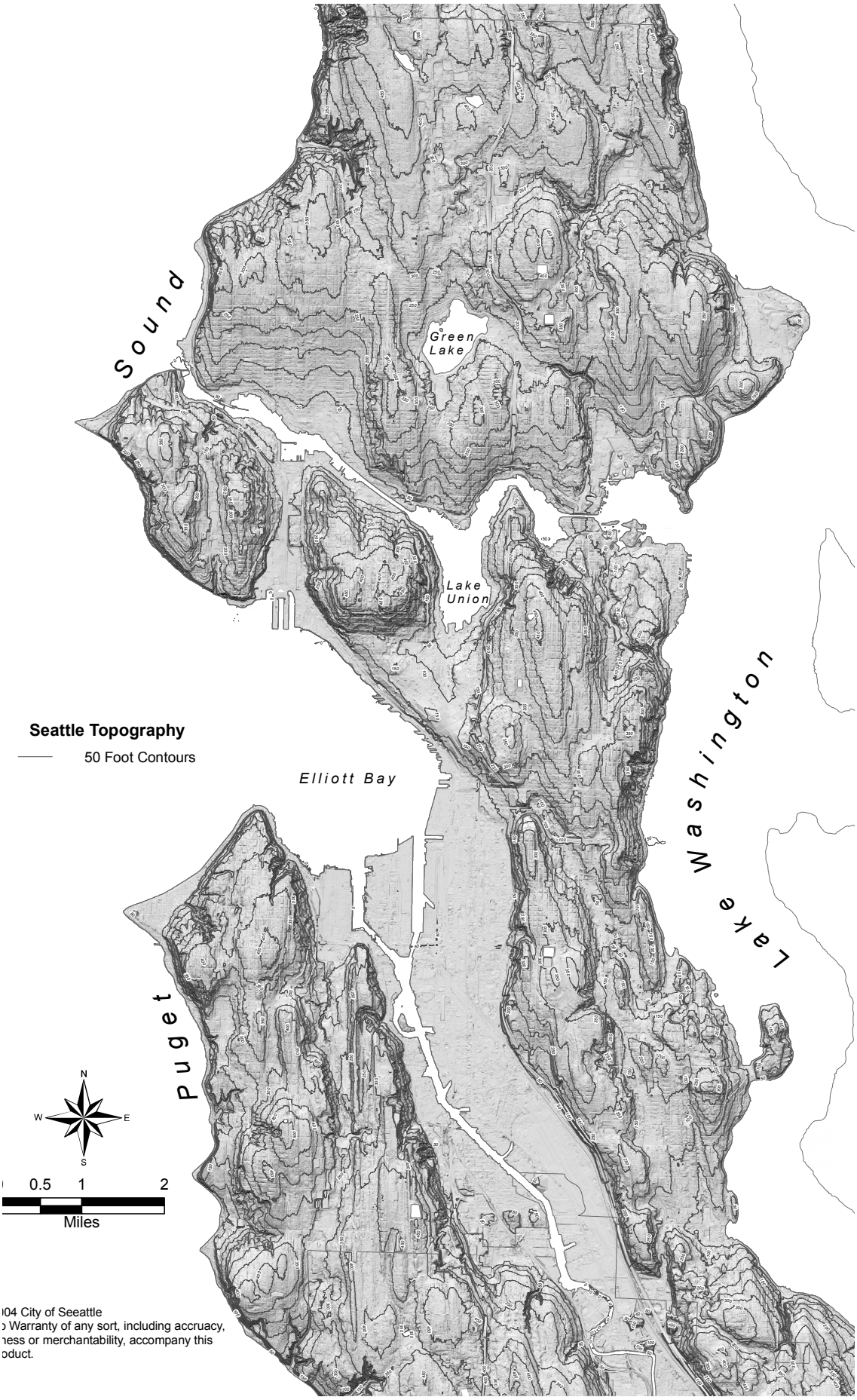
2.8b Existing Off-Street Parking Supply

The Puget Sound Regional Council examines off-street parking in Seattle's Central Business District, First Hill, Uptown, South Lake Union, and the University District neighborhoods, as well as other regional urban centers. Their study is one of the best available to gauge the level of parking use in the more congested parts of Seattle.

In the Seattle Central Business District (CBD) in 2002, there were about 58,500 off-street parking spaces with an average occupancy rate for the downtown Seattle CBD of 64 percent. Occupancy rates for First Hill, Uptown, South Lake Union and the U-District varied, especially with the extent of event parking in Seattle Center and surface parking lots in South

New Parking Pay Stations are in place in Downtown and several neighborhood business districts.

Figure 12: Seattle's Topography



Lake Union. This data is displayed in Figure 15: Parking Survey--Off-Street, Center City Area, and Figure 16: Parking Survey--Off-Street, University District Area . In comparison, Downtown Bellevue had about 32,600 parking spaces and had an average occupancy rate of 60 percent.

2.8c Neighborhood-Based Parking Studies

In 1999, based on a 1998 TSP parking strategy, the City of Seattle completed the Comprehensive Neighborhood Parking Study (CNPS). This study documented on and off-street parking conditions in 26 Seattle neighborhood business and residential districts from parking data collected in the fall of 1999. The study areas were samples within the urban village areas, representing typical neighborhood commercial, residential and office development in the broader neighborhood. The data found that the majority of neighborhoods were using between 40 to 70 percent of their overall parking capacity, although there were eight study areas that were using more than 75 percent of their on-street parking capacity. Table 2 provides parking supply, utilization and duration for the surveyed areas.

2.8d Carpool Parking

City-registered carpools qualify for discounted parking in specially designated on-street parking areas in and surrounding downtown Seattle and other major employment centers.

2.9 Main Freight Connections from Port of Seattle Facilities

Freight mobility is a central consideration in all transportation infrastructure decisions. A considerable amount of freight activity is generated by, or destined for, the Port of Seattle facilities adjacent to Seattle's Center City neighborhoods. The Port of Seattle facilities are unique among West Coast ports: the container operations are within the urban core, adjacent to a busy downtown, a tourist-friendly waterfront, and two sports stadiums that attract millions of people to Seattle each year.

The Port's container business is growing rapidly, and it is expected to double annually, within the time frame of this Plan. The growing trade brings family-wage jobs, supports service providers, and contributes to the tax base of the City. In 2003, the Port's marine terminals directly provided about 9,700 jobs, generating $480.7 million in wages and salaries with an average salary of about $50,000—well over the statewide average. This activity generated almost $1.44 billion in revenue for local businesses. The City in turn received $13.1 million in taxes from these activities. The success of the Port's cargo operations is highly dependent on a well-functioning transportation system that allows for efficient and reliable truck access to intermodal facilities, warehouse and distribution centers, and the freeway system.

The maps in Figure17: Existing Connector Routes between Port Terminals and the Freeway Network, and Figure 18: Existing Connector Routes between Port Terminals and Railroad Intermodal Facilities, describe key routes that connect Port of Seattle terminal facilities to the regional and statewide highway network, and to railroad intermodal facilities.

Freight mobility is critical to Seattle's economic health. Intermodal connections including those between Port of Seattle terminals, regional and statewide highways and rail intermodal facilities are all key components of the freight network.

Figure 13: Parking Classifications: Residential Parking Zones and Parking Pay Stations and Meters, North Seattle (as of December 2004)

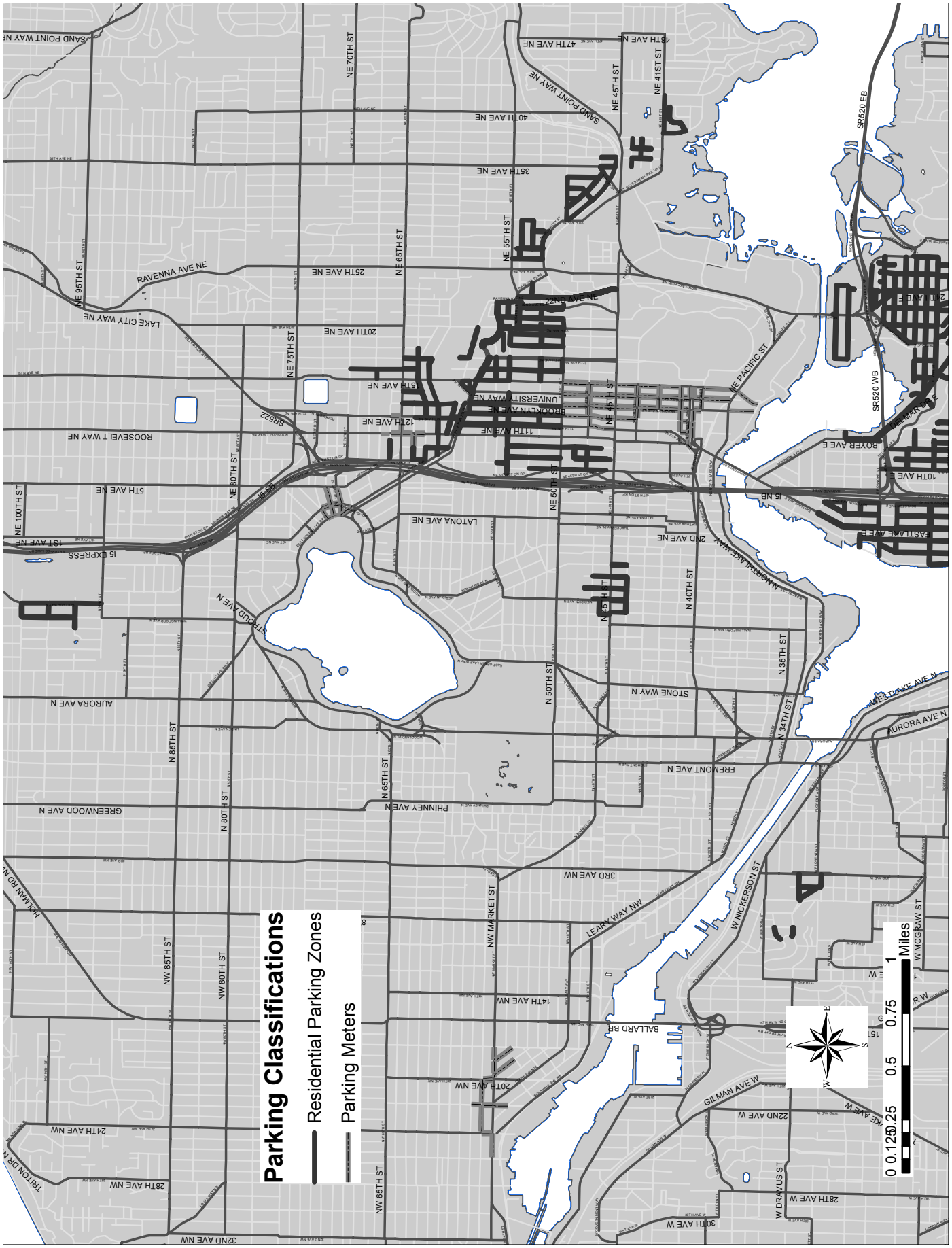


Figure 14: Parking Classifications: Residential Parking Zones and Parking Pay Stations and Meters, Central Business Districts (as of December 2004)

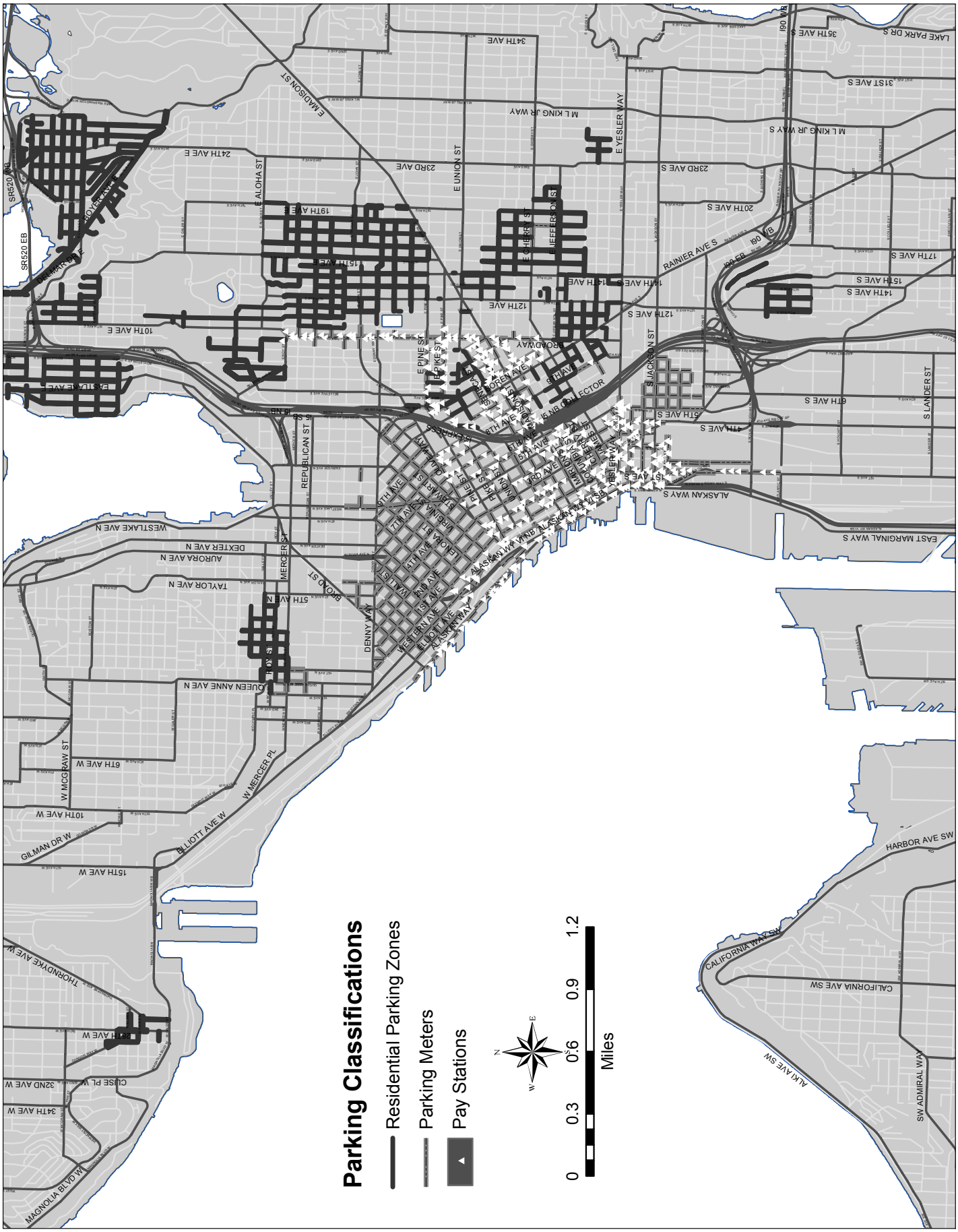
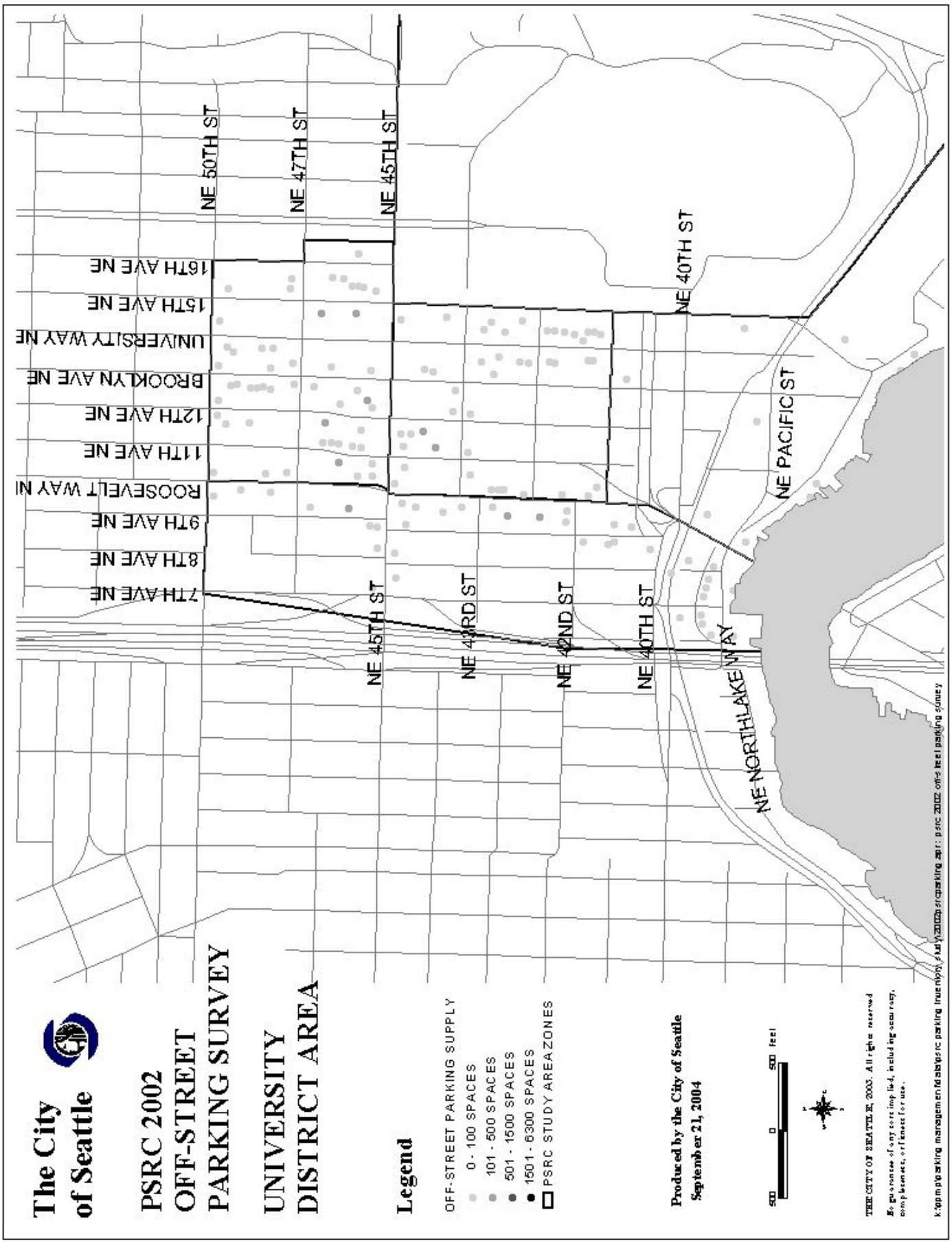


Figure 15: Parking Survey--Off Street, Center City Area

Figure 16: Parking Survey--Off Street, University District Area



Parking Usage

Table 2: On- and Off-street Parking Supply and Utilization Data
Comprehensive Neighborhood Parking Study, City of Seattle, 1999

		Parking Spaces				Average			Peak Hour			Peak Hour
Area		On-Street	Off-Street	Loading	Total	On-Street	Off-Street	Total	On-Street	Off-Street	Total	
Urban Center Neighborhoods												
1	U-District University Way	323	1,280	77	1,680	57%	47%	49%	70%	64%	63%	12 – 1 pm
2	U-District Greek Row	452	1,191	49	1,692	93%	32%	49%	96%	36%	53%	1 – 2 pm
3	U-District West Residential	240	1,573	14	1,827	77%	60%	63%	83%	72%	73%	12 – 1 pm
4	Uptown - Lower Q Anne	376	1,838	40	2,254	69%	66%	66%	76%	81%	80%	1 – 2 pm
5	Uptown West Residential	285	676	15	976	88%	65%	71%	96%	76%	81%	11 – 12 pm
6	Pike-Pine	495	497	35	1,027	84%	59%	71%	91%	79%	81%	6 – 7 pm
10	Northgate	109	793	2	904	62%	57%	58%	77%	74%	72%	9 – 10 am
13	Capitol Hill - Broadway	269	893	43	1,205	69%	51%	55%	75%	65%	66%	1 – 2 pm
14	Capitol Hill West Residential	260	452	16	728	87%	61%	70%	94%	96%	89%	4 – 5 pm
15	Capitol Hill East Residential	264	297	5	566	75%	33%	53%	84%	40%	58%	5 – 6 pm
16	First Hill	559	2,421	49	3,029	71%	73%	72%	79%	89%	85%	5 – 6 pm
17	Denny Triangle	210	1,540	24	1,773	61%	76%	74%	71%	90%	87%	12 – 1 pm
21	Belltown	361	1,188	55	1,604	62%	68%	66%	87%	75%	73%	6 – 7 pm
Total spaces/Average rates		**4,203**	**14,639**	**424**	**19,266**	**75%**	**61%**	**64%**	**84%**	**75%**	**75%**	
Residential Urban Village Neighborhoods												
8	Crown Hill	320	991	4	1,315	31%	34%	34%	40%	43%	40%	9 – 10 am
18	Rainier Beach	276	879	0	1,155	17%	17%	17%	18%	18%	18%	5 – 6 pm
22a	North Beacon Hill (S. Atlantic)	385	576	0	961	78%	64%	69%	86%	76%	80%	11 – 12 pm
22b	North Beacon Hill (S. Lander)	208	226	3	437	31%	40%	36%	39%	62%	49%	1 – 2 pm
23a	Columbia City (MLK Jr Way S.)	186	134	0	320	61%	29%	48%	74%	39%	58%	6 – 7 pm
23b	Columbia City (S. Rainier)	388	757	13	1,158	45%	41%	43%	52%	52%	52%	12 – 1 pm
24	MLK @ Holly	671	1,615	0	2,286	20%	44%	37%	23%	50%	42%	4 – 5 pm
25	Henderson station area	142	96	3	241	16%	15%	15%	20%	29%	22%	8 – 9 am
26	Green Lake	181	239	18	438	76%	48%	60%	83%	55%	64%	11 – 12 pm
27	Eastlake	425	971	20	1,416	69%	51%	56%	78%	59%	64%	11 – 12 pm
28	Roosevelt	561	413	20	994	66%	45%	57%	74%	53%	64%	1 – 2 pm
29	Upper Queen Anne	548	499	12	1,059	69%	55%	62%	76%	73%	73%	12 – 1 pm
30	Wallingford	550	382	18	950	56%	47%	52%	62%	60%	61%	1 – 2 pm
Total spaces/Average rates		**4,841**	**7,778**	**111**	**12,730**	**51%**	**42%**	**45%**	**57%**	**51%**	**53%**	
Hub Urban Village Neighborhoods												
7	Broadview/Bitter Lk/Haller	347	2,489	0	2,836	32%	28%	28%	40%	37%	37%	9 – 10 am
9	Ballard	486	1,702	35	2,223	55%	20%	28%	59%	22%	30%	9 – 10 am
31	North Rainier	248	2,347	3	2,598	38%	36%	36%	50%	47%	47%	12 – 1 pm
32	Fremont - North of Canal	426	1,498	22	1,946	73%	62%	64%	82%	82%	80%	11 – 12 pm
33	Fremont - Sea Pac Univ	400	1,346	15	1,761	57%	73%	69%	67%	83%	79%	12 – 1 pm
34	Lake City	550	1,294	20	1,864	49%	38%	41%	51%	45%	46%	5 – 6 pm
35	South Lake Union - Cascade	398	1,355	21	1,774	73%	47%	53%	88%	67%	72%	9 – 10 am
36	South Lake Union - Mercer	365	891	31	1,287	73%	37%	47%	91%	48%	60%	12 – 1 pm
37	West Seattle Junction	629	1,338	14	1,981	50%	39%	42%	53%	48%	49%	12 – 1 pm
Total spaces/Average rates		**3,849**	**14,260**	**161**	**18,270**	**56%**	**40%**	**44%**	**64%**	**51%**	**53%**	
Grand total spaces/average rates		**12,893**	**36,677**	**696**	**50,266**	**60%**	**49%**	**56%**	**68%**	**61%**	**66%**	

There are two categories of routes:

Existing Seaport Highway Connector — identifies routes that provide safe, reliable, efficient and direct access between a Port marine facility and the state highway or interstate system.

Existing Seaport Intermodal Connector – identifies routes that provide safe, reliable, efficient and direct access between a Port terminal and a railroad intermodal facility located in Seattle or other area in King County.

These routes have a number of common characteristics: they are on designated arterial streets, have a high frequency of use by freight, provide two-way travel and direct access between Port facilities and the regional interstate system, and provide road access to marine facilities. Some Highway Connectors and Intermodal Connectors are located on the same street. These routes describe existing conditions, and they do not represent a distinct street classification or Street Type (see Chapter 3.2: Making the Best Use of the Streets We Have to Move People, Goods and Services, Strategies S.3. and S.4.).

2.10 Transportation Infrastructure

Successful operation and maintenance of the transportation system promotes safety, efficiency, infrastructure preservation, and a high quality environment. Maintenance costs consume 75 to 80% of the SDOT annual operating budget. This investment represents a significant and recurring commitment to the conservation of our city's transportation facilities, as dollars spent on maintenance today help ensure that more dollars are not needed for premature replacement later.

Effective maintenance of the transportation system means the City will have to plan for future maintenance activity and must also address the significant backlog of unmet maintenance needs that currently exists. The City's highest transportation priority is to take care of its existing transportation infrastructure — valued at an estimated $7.6 billion. A breakout of this inventory by major cost elements is as follows:

- Pavement: $4.7 Billion
- Roadway Structures: $2.4 Billion
- Traffic Management Control Devices: $113 Million
- Pedestrian & Bike Facilities: $314 Million
- Neighborhood Traffic Control Devices: $8 Million
- Street Trees & Landscaping: $123 Million

2.11 Pavement Conditions

This section details existing conditions of much of the transportation system, including arterial and non-arterial street pavement conditions and maintenance needs, the traffic signal system and optimization corridors completed, the bridge structures inventory, and high collision accident data.

The SDOT Pavement Engineering and Management Section develops and maintains the pavement management database system; acquires and analyzes field data on pavement condition; keeps records on paving accomplishments; maintains and updates City priorities for maintenance paving; and participates in the development, execution and acceptance of paving

Maintaining and improving Seattle's transportation facilities is fundamental to supporting a vibrant, livable city in the future. Following are examples of the major elements comprising Seattle's transportation system:

3,946	lane miles pavement	4,700	crosswalks
1,534	arterial lane miles	24,000	curb ramps
2,412	non-arterial miles	32 miles	bike trails
148	bridges	90 miles	bike routes
479	stairways	800	traffic circles
561	retaining walls	80	traffic diverters
22	miles sea walls	30,000	street trees
1,000	signalized intersections and traffic controllers	1.6 million	lane markers
		1,100 miles	lane stripes
9,000	parking meters and pay stations	120,000	signs

Figure 17: Existing Connector Routes between Port Terminals and the Freeway Network

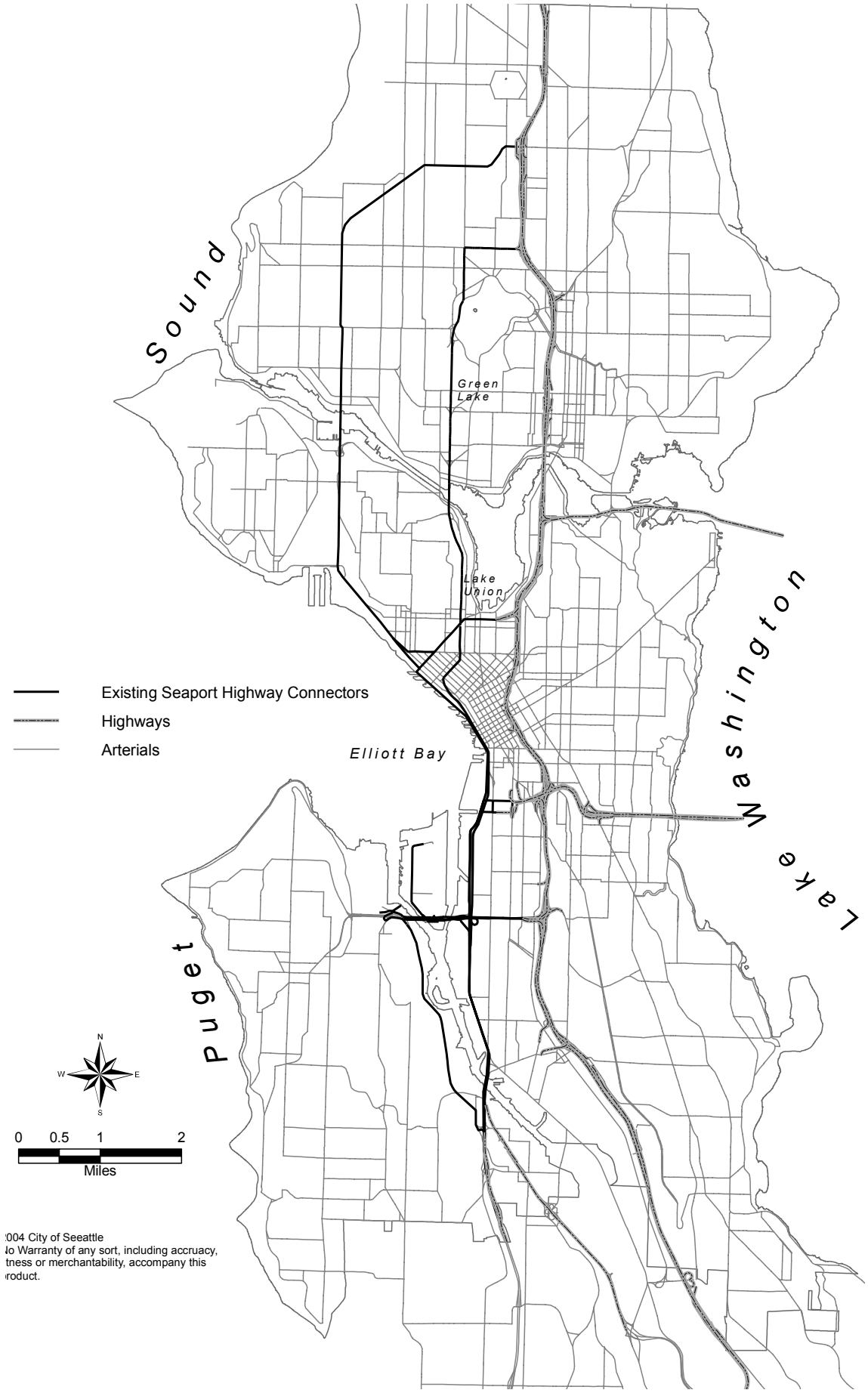


Figure 18: Existing Connector Routes between Port Terminals and Railroad Intermodal Facilities

projects. The Pavement Management System provides an accepted and generally employed technical basis for decision-making concerning the maintenance and rehabilitation of Seattle's 3,946 12'-wide lane-miles of streets.

The City relies on the pavement management system to make cost-effective decisions concerning street maintenance and rehabilitation. The system takes into account such factors as the type of street, the traffic, the physical condition of the pavement, the presence or absence of utility cuts and similar spot intrusions and repairs, the time that has elapsed since the last major maintenance, and other factors. Table 3 summarizes Seattle's pavement area by functional classification.

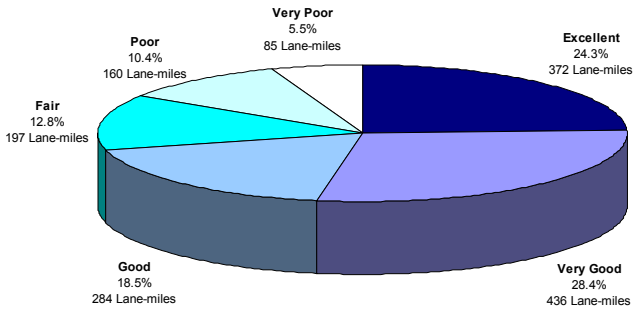
Table 3: Pavement Area by Functional Classification, 2004

Functional Classification	Pavement Area (12' Lane Miles)	Fraction of Network
Principal Arterial	620	15.7%
Minor Arterial	566	14.3%
Collector Arterial	348	8.8%
All arterial streets	**1,534**	**39.0%**
All non-arterial streets	**2,412**	**61.0%**
All Pavements	**3,946**	**100.0%**

An objective of pavement management is to maintain streets classified as fair or good so that they do not become poor or failed streets that are much more expensive to rehabilitate. Figure 19: Rating Seattle's Pavement Condition, describes the condition of Seattle's pavement. The data from Figure 19 and Table 3: Pavement Area by Functional Classification, are taken from the City of Seattle Pavement Condition Report published by SDOT in 2004.

Street Maintenance has an operational pavement management system including a high resolution video log of the entire arterial street system. This tool allows City staff to quickly evaluate existing pavement conditions throughout the arterial street system.

Figure 19: Rating Seattle's Pavement Condition, 2004



2.15 Seattle Tree Inventory

Since 1989, almost 15,000 street trees have been planted. Approximately 54% of the trees have been paid for by residents or volunteer organizations. The City of Seattle's General Fund, Capital Improvement Projects and Federal Grants have accounted for another 45%. The remaining number of trees have been installed by private developers. Today, approximately 98,000 trees exist along Seattle's streets. Less than 1,000 trees have been removed along Seattle's streets in the past five years.

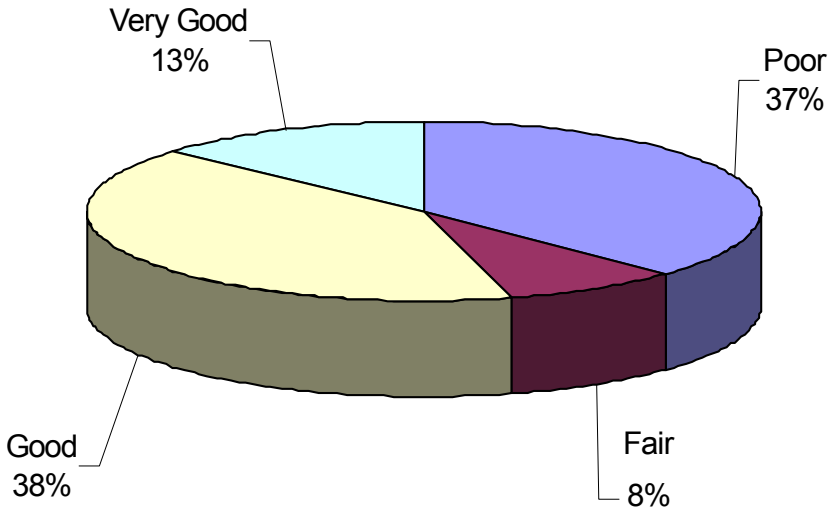
A Seattle resident plants a new street tree in her neighborhood. Over half of Seattle's street trees are planted and cared for by residents or volunteer organizations.

2.16 Structures

The Access Database for Structures and Bridge Inventory provides an accepted and generally employed technical basis for decision-making concerning the maintenance and rehabilitation of Seattle's 149 vehicle and pedestrian bridges, 561 retaining walls, and 479 stairways.

The structures maintenance database system takes into account such factors as the load capacity (number and weight of vehicles that the structure can bear), the physical condition of the structure, the maintenance records of the structure, the time that has elapsed since the last major maintenance, and other factors. A rating of Seattle's bridges is summarized in Figure 20: Structures Rating. The structures rating is determined using factors including structural adequacy, volume of traffic, detour length and public safety.

Figure 20: Structures Rating



2.17 Traffic Signals

SDOT has mapped existing traffic and pedestrian-only signals and proposed signal optimization projects. These are shown in Figure 21: Traffic Signals.

Figure 21: Traffic Signals