



Image from Nelson\Nygaard

1 INTRODUCTION

The City of Seattle Transit Master Plan (TMP) is a 20-year plan that identifies the types of transit facilities, services, programs, and system features that will be required to meet Seattle's transit needs through 2030. Building from an extensive market analysis, review of future growth patterns, and evaluation of transit needs, the TMP identifies capital investment priorities needed to establish a network of top quality, frequent transit services that meets the travel needs of most Seattle residents and workers. The TMP evaluates and recommends preferred transit modes for high priority corridors and sets a framework for implementing corridor-based transit improvements in close coordination with other modal needs. The plan was developed with feedback from King County Metro and Sound Transit, the agencies that provide most transit service in the City of Seattle and whose partnership is critical to creating a seamless, fully integrated, and user-friendly Seattle transit system.



South Lake Union Streetcar

Image from SDOT

WHY A MASTER PLAN FOR SEATTLE?

MEETING CITY GOALS

The Seattle Transit Master Plan (TMP) is a 20-year plan designed to help meet Seattle's goals, including the development of a transit system that supports the mobility needs of Seattle residents and businesses and that serves as a backbone of sustainable urban growth. The TMP defines the critical role that transit plays in meeting city goals related to sustainability, equity, economic productivity, and livability. The plan recommends projects, strategies, and funding options to improve transit quality and delivery; as it is implemented, it will help to knit together the city's urban villages into an accessible network of great neighborhoods. Since all transit trips begin with walking or biking, the TMP considers important pedestrian and bicycle linkages to local and regional transit services and identifies ways to improve accessibility. The TMP recommends a heightened level of coordination for multimodal investments in Seattle under which pedestrian, bicycle, and transit investments are made simultaneously to optimize benefits in the City's most important mobility corridors.

FOCUS ON IMPLEMENTATION

The Seattle Transit Master Plan (TMP) updates and expands upon the 2005 Seattle Transit Plan. It identifies near-term and long-term strategies to improve the quality of transit options and increase transit mode share throughout the city. Serving as a blueprint for transit, the plan provides a vision for Seattle's transit network through 2030 and beyond and identifies transit capital, operational, and programmatic investments. The TMP establishes a strong policy framework for transit, in many cases confirming policy language already established in the SDOT 2005 Seattle Transit Plan, Move Seattle, the

Comprehensive Plan, and other approved plans. Building upon the 2005 plan, the TMP details specific capital projects that will improve transit speed and reliability in high ridership bus corridors citywide and develop rapid streetcar and BRT lines in several of Seattle's most promising transit corridors.

To a degree, the City of Seattle's own success dictates the need for the Transit Master Plan. The Seattle Department of Transportation's (SDOT) transit program has delivered capital improvements in key city transit corridors using funds from Bridging the Gap (BTG), grants, partnerships with King County Metro, and through a local improvement district that funded the starter line of a proposed streetcar network. BTG is a nine-year local transportation levy for maintenance and multimodal transportation improvements passed in 2006. BTG funds street and traffic signal improvements that increase the speed and reliability of bus travel in corridors that carry the most transit trips and connect Seattle's urban villages. Design and construction of improvements is already underway or complete in corridors around the city, including: Rainier Avenue, West Seattle, Ballard-Uptown, Third Avenue, and Market/45th Streets. The South Lake Union Streetcar is a 1.3 mile modern streetcar line that connects the rapidly developing South Lake Union Urban Center to the downtown retail core and regional transit system. Since opening in December 2007, the South Lake Union line has seen double-digit ridership percentage growth in each year of operation. The City completed construction of the First Hill Streetcar in 2015, connecting First Hill to Capitol Hill and transit connections in the International District.

Building upon these projects, the TMP outlines a capital investment program to be funded through other future sources and leverages opportunities with other projects and investments. The TMP will ensure continued progress toward a top quality, Frequent Transit Network for Seattle residents.

KEY OUTCOMES

The TMP lays out an aggressive plan for transit capital and program improvements that can start immediately, but may take 20 years or more to realize in full. Further, the plan addresses a number of other important outcomes identified through the work of the Transit Master Plan Advisory Group (TMPAG), a group of stakeholders that worked closely with SDOT and the consultant team to develop the TMP. The following TMP outcomes were prioritized by the TMPAG:

- Identify the city's most important transit corridors that carry high ridership today and have the greatest potential to serve transit needs that will emerge as Seattle's population and job base grows.
- Make transit more competitive with the private auto by enhancing transit speed and reliability and increasing service frequency in priority bus transit corridors. These corridors represent the City's most immediate opportunity to provide meaningful improvements in service quality for passengers.
- Expand the Seattle rail system. This was a strong sentiment among stakeholders as well as members of the public that responded to the TMP survey. Residents were attracted to the reliability and ride quality of rail and emphasized that Seattle should speed the development of its rail system.
- Improve Center City circulation. Many stakeholders want Seattle to prioritize expansion of the Center City streetcar, improve wayfinding and real-time information at transit stops, make right-of-way modifications to improve bus speed and efficiency, and improve coordination of transfers.
- Leverage transit investments to support urban development, enhance placemaking, and achieve environmental goals.
- Elevate the integration of transit capital development with the expansion of walking and biking infrastructure. In particular, use TMP priority transit corridors to guide multimodal corridor investment (see Chapter 5: Mobility Corridors) where corridor access, placemaking, and linear mobility investments are made simultaneously, using a "transit project" as the means to holistically transform a corridor.
- Coordinate with Metro and Sound Transit to create a seamless, fully integrated, and user-friendly network of transit services.
- Develop design standards for transit stops and stations to make the user experience safe, comfortable, enjoyable, and convenient.
- Develop or enhance education and financial incentive programs that support transit use in Seattle.
- Identify transit funding options for implementing TMP priorities while helping support existing local transit services.

- Create performance measures to allow the City to monitor TMP implementation and changes in transit performance levels and quality.

CHANGING TRANSIT LANDSCAPE

In 2010, the King County Council formed the Regional Transit Task Force (RTTF) to develop a policy framework to guide service investments or, if necessary, service reductions. The RTTF identified short-term and long-term objectives for transit service investment and developed policy guidance for service implementation based on those objectives. Among the most important for Seattle was the elimination of a formula approach to expending new operating dollars in three King County geographic subareas.¹ The new policy no longer identifies specific formulas for adding, reducing and managing service, but rather emphasizes that service reduction and service expansion decisions be made based on the following priorities:

1. Emphasize productivity due to its linkage to economic development, land use, financial sustainability, and environmental sustainability
2. Ensure social equity
3. Provide geographic value throughout the county

By approving a temporary \$20 vehicle license fee in August 2011 to supplement declining operating revenues, the King County Council prevented dramatic cuts to transit service in late 2011 and 2012 that would have been necessary to deal with operating fund shortfalls. This funding measure allowed Metro to avoid deep service cuts in 2012, but does not fully address longer-term financial challenges. In light of continued funding challenges, the City should consider expanding its role in funding service operations and capital development, the tradeoffs of which are discussed in Chapter 6 (Funding and Performance Measurement).

Approval of the \$20 vehicle license fee carried the condition that the Downtown Seattle Ride Free Area (RFA) be eliminated in 2012. Elimination of the RFA will require significant changes to downtown transit fare collection and creates opportunities for Metro and the City of Seattle to rethink how transit operates in downtown. Elimination of the RFA will require a number of mitigation measures to ensure that new fare payment and boarding policies do not create undo congestion and transit delay. Mitigations on surface streets and in the Downtown Seattle Transit Tunnel may include further restrictions on vehicular traffic, increases in bus zone capacity, and changes to bus bay assignments. Elimination of the RFA could provide an opportunity for King County Metro, in partnership with the City of Seattle and Sound Transit, to consider more significant restructuring of bus route operations in downtown Seattle and enhancements to passenger amenities, information, and fare payment technology.

¹ The 40/40/20 funding split refers to a King County policy that was developed by Metro Transit to balance transit operating funds between Seattle, which had a well developed transit system, and the remainder of the county, where transit services were more limited. Specifically, "40/40/20" referred to the percentage split of new transit operating funds between South King County (40%), East King County (40%), and Seattle/Shoreline (20%).

CITY OF SEATTLE'S ROLE IN TRANSIT DELIVERY

Many large U.S. cities are served by transit providers that operate under separate governance from the municipality. Seattle is unique, however, in the active role SDOT takes in planning, funding, and delivering transit for its residents, visitors, and employees. The City's role in transit delivery includes funding and building capital transit speed and reliability projects, maintaining a current transit plan, and providing policy representation on regional transit boards and committees. The City allocates time and resources to the following transit programs and activities:

Funding

Seattle generates capital funding for transit corridor improvements through the Bridging the Gap funding package. SDOT regularly pursues federal, state, and other grants and partnerships for transit capital improvements. SDOT has successfully partnered with King County Metro to secure federal funding for RapidRide corridor improvements and other transit projects. The City also subsidizes transit service on the Seattle Streetcar and a number of frequent services provided by Metro and currently provides partial funding for the downtown Seattle Ride Free Area (RFA).



Bridging the Gap funds multimodal improvements along important transit and bicycle/pedestrian corridors.

Image from Nelson\Nygaard

Planning and Policy

SDOT maintains an active transit plan and has planning, policy, and design staff to support policy coordination with Metro and Sound Transit as well as development of bus corridor improvements, station area planning, and the Seattle Streetcar program.



The Transit Master Plan is a five-year update to the 2005 Seattle Transit Plan.

Image from Nelson\Nygaard

Seattle Streetcar

SDOT owns and contracts with King County Metro to operate the South Lake Union streetcar, which provides frequent transit service between Westlake Plaza and South Lake Union. SDOT is also designing and building the First Hill Streetcar, which was approved by voters in 2008 as part of Sound Transit's ST2 package. The First Hill Streetcar connects the diverse and vibrant neighborhoods of Capitol Hill, First Hill, and the Chinatown/International District, while serving medical centers (Harborview, Swedish, and Virginia Mason) and universities (Seattle Central Community College and Seattle University).



In 2008, SDOT released the Seattle Streetcar Network Development Report, which proposed four new streetcar lines. Funded as part of the Sound Transit ST2 package, construction of the First Hill line was completed in 2015.

Image from Flickr user Dan Haneckow

Transit Priority Corridor Improvement Program

Bridging the Gap and a vehicle licensing fee provide funding for street, signal, bus stop facility, and ITS improvements that will increase bus speeds and improve passenger comfort in key corridors. SDOT is currently improving four corridors, including one current RapidRide line and two corridors that are proposed BRT network expansion corridors. All four are part of the backbone of the Metro system and are critical elements of the Seattle Frequent Transit Network. Routes that serve these corridors carry high numbers of transit trips, connect Seattle's most populous neighborhoods, and are key routes to support sustainable growth. These corridor projects include Aurora Avenue N, NW Market and 45th Streets, Rainier and Jackson Avenues, and a series of improvements to the 3rd Avenue Transit Mall between Denny and Jackson. Additionally, SDOT is making transit spot improvements on Lake City Way, 15th Avenue NW, and Western Avenue W.



SDOT's investments in key transit corridors are aimed at improving transit speed/reliability and pedestrian access conditions along the corridors and at major stations. In 2011, SDOT installed nine raised bus stop platforms with passenger amenities and buffered bike lanes on Dexter (above) in conjunction with street resurfacing funded by Bridging the Gap.

Image from Nelson\Nygaard

Station Area Planning and Permitting

SDOT and the Seattle Department of Planning and Development (DPD) are the lead departments in access and land use planning, development review, and permitting for light rail station areas on the existing Sound Transit Central Link line and planned University and North Link extensions. A key focus of DPD activities in recent years has been to update Neighborhood Plans in areas where stations have been built, including areas along Martin Luther King, Jr. Way S and on Beacon Hill, and areas where RapidRide lines are planned, such as along Aurora Avenue. Rezoning, however, has lagged somewhat in taking full advantage of the opportunity to leverage transit-oriented development in station neighborhoods.



Notice of proposed land use action for developing a 4-story mixed-use building on Rainier Avenue near the Mt. Baker Link station. No parking is proposed.

Image from Nelson\Nygaard

CHALLENGES FOR TRANSIT IN SEATTLE

In addition to immediate challenges related to transit funding, Seattle faces obstacles to achieve the TMP outcomes described in the previous section. Several of those challenges are summarized below:

- **Difficult Choices About Use of Limited Street Space:**
Seattle is growing rapidly. The city is expected to add over 200,000 residents and as many jobs by 2030. Because of this growth, walking, biking, and riding transit are the ways Seattle can accommodate and move more people in the same amount of space. However, decisions about how to allocate limited street right-of-way require tradeoffs and inevitable conflict. Timing traffic signals to prioritize moving a bus filled with 60 passengers through an intersection rather than prioritizing 15 single-occupant vehicles is good policy, but in practice requires difficult discussions with drivers and freight haulers.

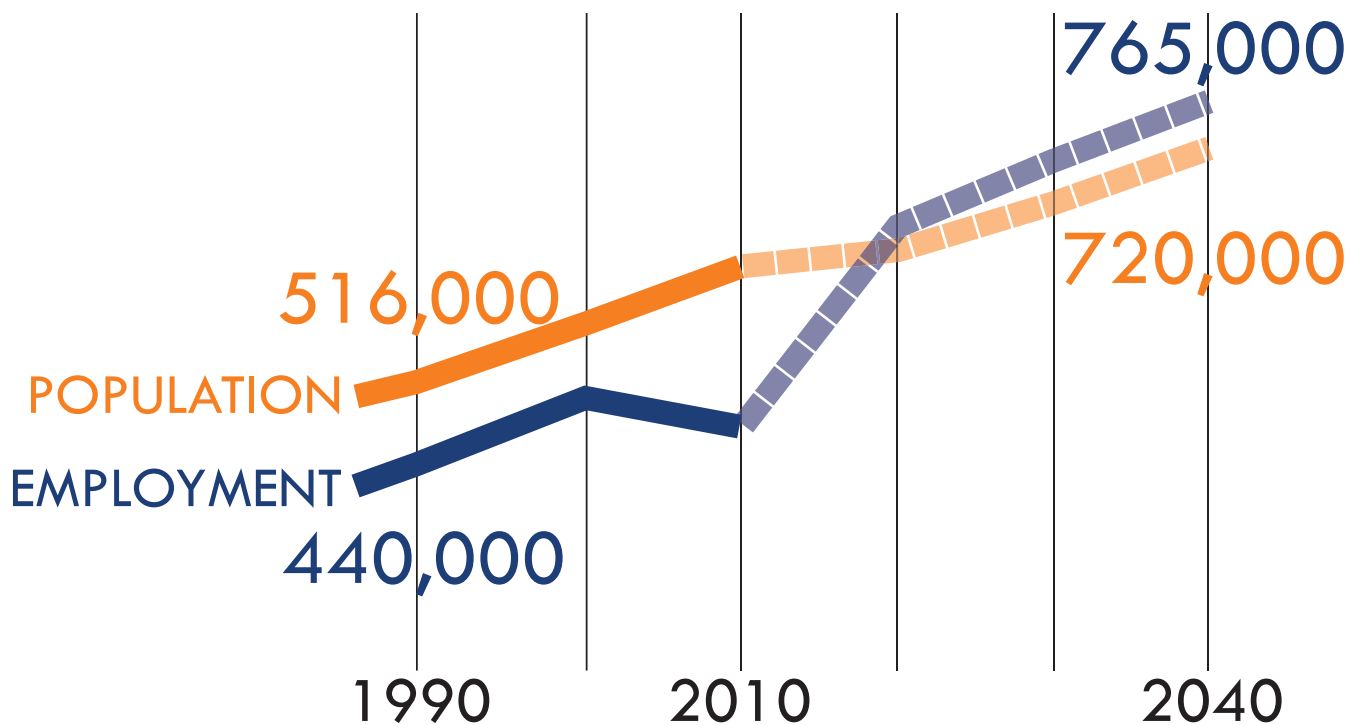
Stakeholders and members of the public who provided input to the TMP continually stressed the need for fast and reliable transit. Moving buses through congested business districts and transportation bottlenecks (such as at freeway ramp locations or at the outskirts of downtown)

more quickly and reliably requires difficult changes to right-of-way allocation that could impact other street users. For example, removal of street parking for transit lanes in neighborhood business districts can dramatically improve transit reliability. Yet, business owners may see this as a threat to business access, despite the opportunity to bring many more pedestrians and transit riders to their storefronts.

The City must develop clear policies that optimize use of limited rights-of-way for mobility, helping people understand that private automobiles are not the priority mode for accessing or moving within dense urban neighborhoods. Projects that favor automobile travel over transit in the Center City or other urban neighborhoods challenge the City's ability to make walking, biking, and transit the best choices for travel in Seattle.

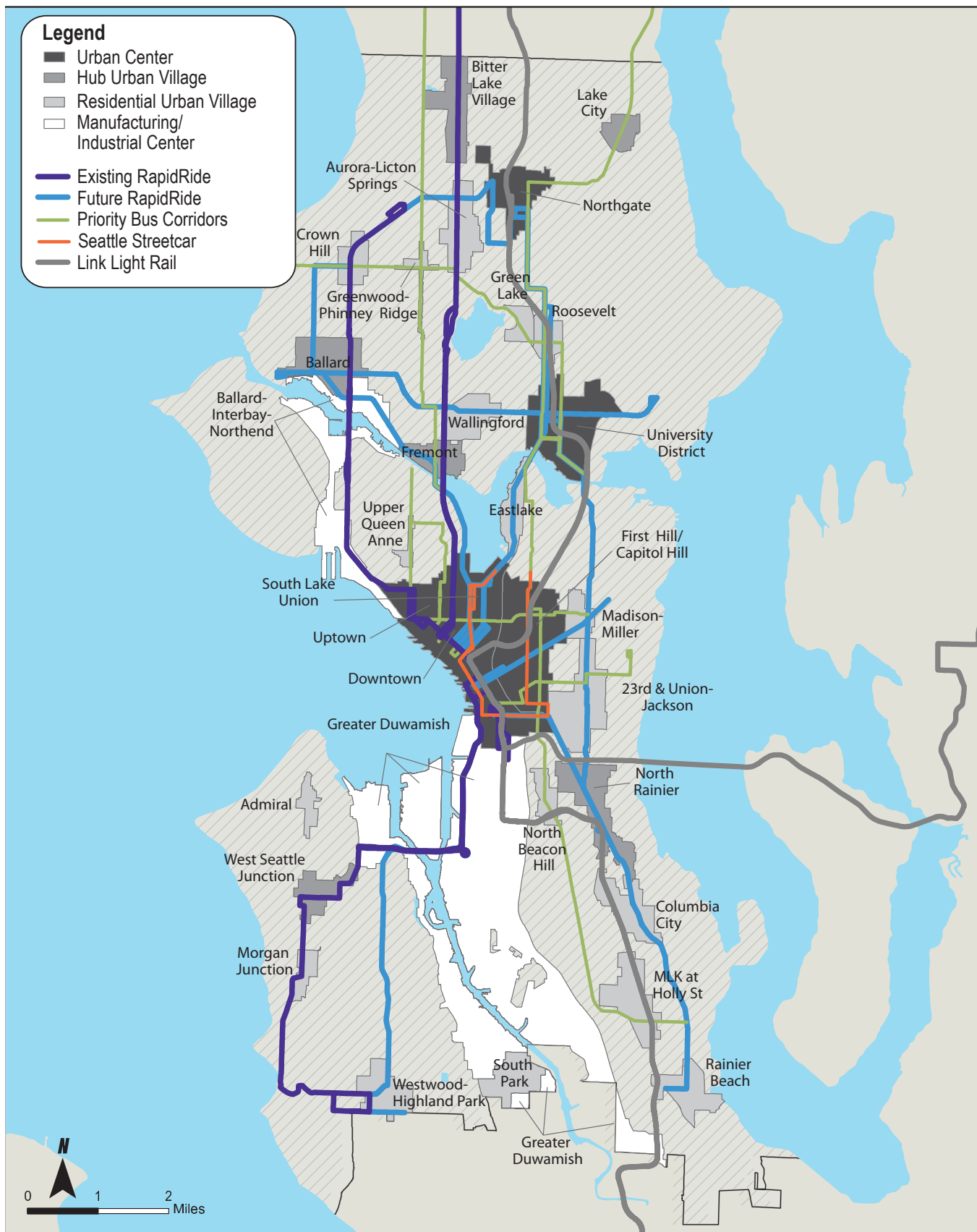
- **Growing Funding for Transit Operations and Capital:**
After years of growth in transit operating revenues, an economic downturn has severely diminished Puget Sound transit agencies' ability to grow service, as illustrated in Figure 1-3. It is likely that transit funding will cycle up and down several times during the course of this plan; however, it is clear that the next five to ten years will present transportation funding challenges greater than

FIGURE 1-1 SEATTLE POPULATION AND EMPLOYMENT GROWTH



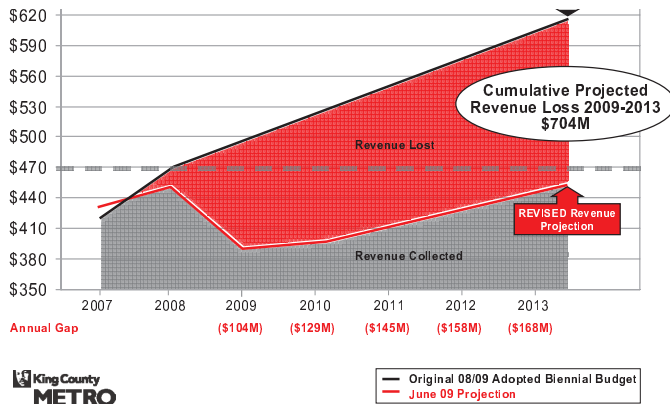
Source: Seattle Transit Communities, Seattle Planning Commission, 2010.

FIGURE 1-2 PROJECTED GROWTH IN SEATTLE URBAN CENTERS AND VILLAGES, 2008-2030



44% of population growth and 63% of job growth between 2008 and 2030 is expected to occur in the Center City and adjacent neighborhoods including Uptown, First Hill/Capitol Hill, and South Lake Union.

FIGURE 1-3 KING COUNTY METRO – SALES TAX REVENUE SHORTFALL



Source: King County Metro

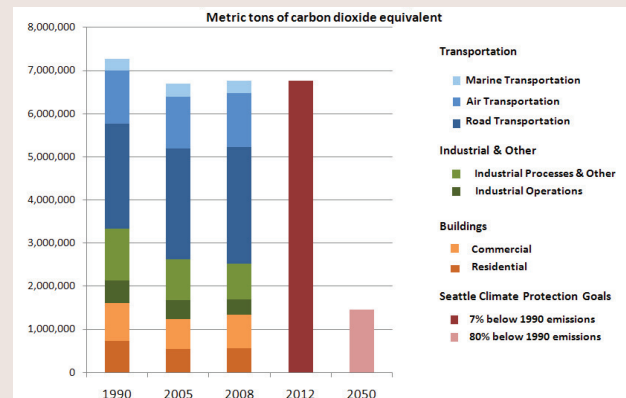
those experienced in the last decade. At the local level, Bridging the Gap funds will expire at the end of 2015. Without an aggressive strategy to address the need for increased transit capital and operating funds, the City and its partner transit agencies will struggle to fully implement the TMP and shift more people to riding transit. Chapter 6 (Funding and Performance Monitoring) sets forth a strategy for the City of Seattle to take a more active role in funding transit operations and developing capital projects in priority transit corridors.

- Accommodating Growth Gracefully and Sustainably:** The City of Seattle and its residents are committed to addressing climate change, reducing energy consumption, and improving public health, while continuing to expand the local economy. Transit plays a key role in moving more people in less space. It also brings communities together in new ways by organizing development more efficiently and creating new opportunities for people to travel around the city in a convenient, safe, social, and fun way. Implementing the TMP will help Seattle to grow in size, vitality, and accessibility. The TMP proposes that existing infrastructure be made more efficient, inviting, and accommodating. Moreover, the TMP calls for strategic infrastructure investments that are critical to support local economic development and manage growth in a sustainable manner. Plan implementation would be a dramatic environmental achievement, one that reduces the environmental footprint of the population even as its physical presence expands.
- Serving Seattle's Underrepresented Populations:** The TMP is a framework for a transportation system where mobility and access is provided equally and affordably to all residents. A basic tenet of the plan is that transportation is a right. All people, regardless of income or ability, need transportation services that include good mobility, equal access to opportunities, and affordable cost. People should not need to own a car to have mobility and access to services, jobs, and recreation. Even stakeholders who

SEATTLE'S COMMITMENT TO SUSTAINABILITY

Seattle has demonstrated its commitment to sustainability by reducing carbon emissions, increasing energy efficiency, and improving recycling rates even as the City and economy have grown. The charts below provide examples of the City's commitment.

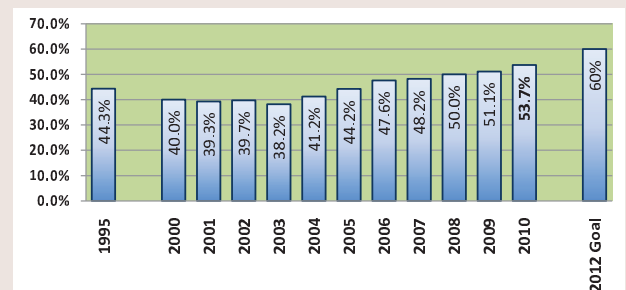
Citywide GhG Emissions by Sector



The City reduced its overall carbon emissions to 7% of 1990 levels as of 2008, meeting the City's 2012 goal (shown in the dark red bar). The City's goal for 2050 is to reduce emissions to 80% of 1990 levels. In addition, by 2005 Seattle City Light had purchased carbon offsets to match its greenhouse gas emissions, allowing it to meet a goal of net zero emissions.

Source: City of Seattle, Climate Protection Initiative Progress Report, 2009

City of Seattle Recycling Rate through 2010



Since 2003, Seattle's recycling rate has increased each year, working towards a recycling goal of 60% by 2012.

Source: City of Seattle, Recycling Rate Report, 2010

stressed the importance of high-quality, high-frequency corridor transit service also noted the important social human service aspects of transit that is delivered by providing good fixed-route coverage and paratransit service. Figures 1-4 and 1-5 illustrate two of the metrics used in assessing social equity as part of the TMP—an index of transit reliance and auto ownership rates in Seattle, shown at the Census block group level. Social equity considerations were fundamental in understanding Seattle's transit needs and developing TMP recommendations.

- **Developing a well-integrated, complete system in an environment with multiple non-City operators:** Seattle residents generally have access to high quality transit in most urban neighborhoods and major travel corridors. Most local transit services are provided by diesel bus or electric trolley bus. However, recent ongoing construction of regional light rail transit by Sound Transit and the development of Seattle Streetcar lines in South Lake Union and on First Hill/Capitol Hill (nearing construction) demonstrate that the transit landscape in Seattle is changing. It is imperative that the City of Seattle take an assertive role in coordinating the design and development of intermodal facilities and station access projects. Chapter 5 (Places: Access and Connections) sets a policy framework and identifies priority projects to improve the intermodal experience for transit travelers in Seattle.

TRANSIT AND CLIMATE CHANGE

The update to the Seattle Climate Action Plan currently under development identifies four types of impacts on GhG emissions from the recommended transit investments of the Transit Master Plan:

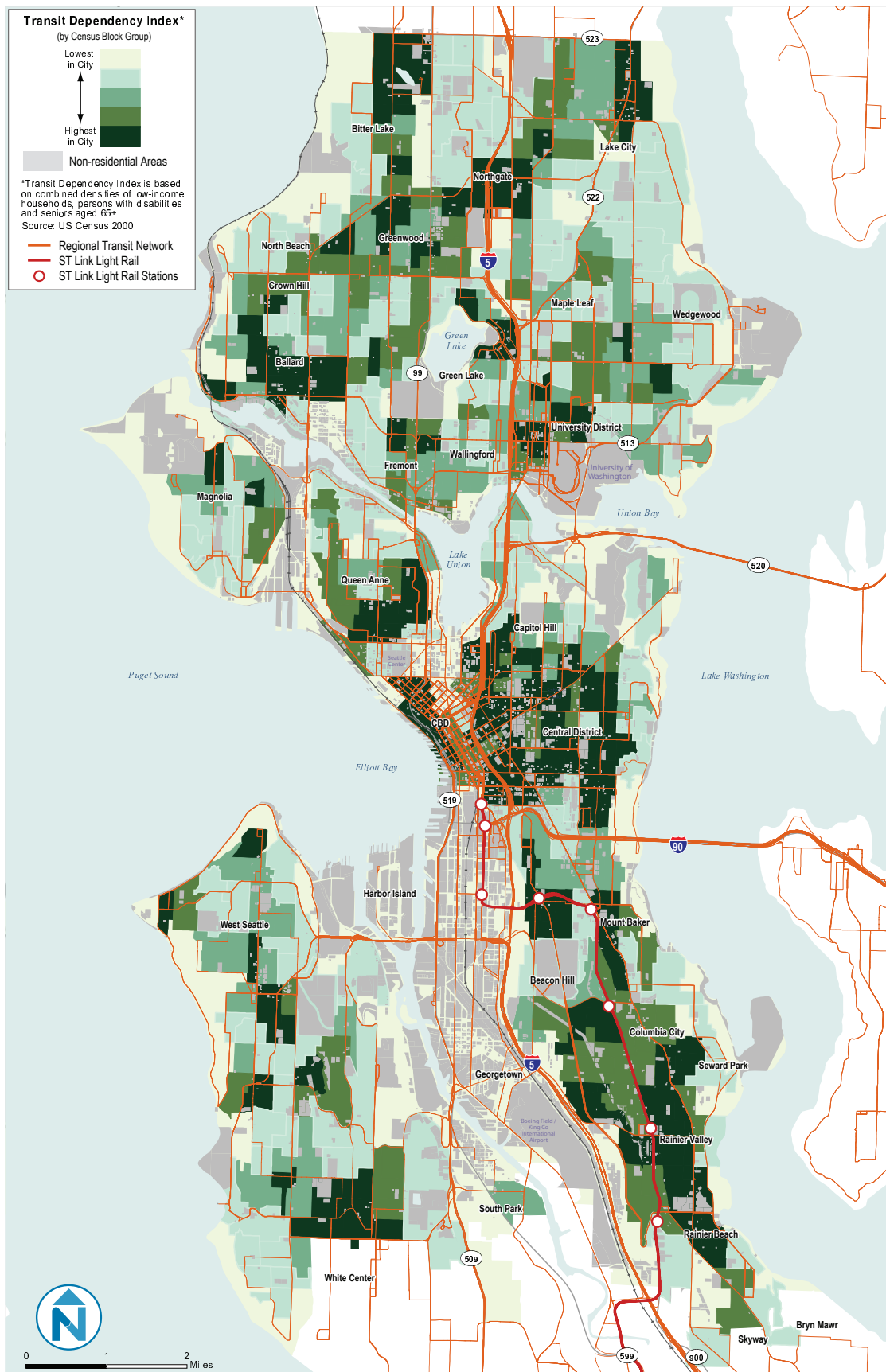
- **Reduced vehicle miles traveled (VMT) from private vehicles.** Improved bus and rail service reduce emissions by encouraging travelers to shift some trips from driving to transit.
- **Increased and decreased energy consumption from transit vehicles.** Service expansions require additional electricity for rail and trolley bus operations and new diesel fuel consumption for diesel bus operations. At the same time, the conversion of some diesel bus services to electric operations and service changes that make some routes more efficient reduce energy consumption.
- **Increased emissions from construction.** Building new transit facilities and vehicles uses materials that are energy-intensive to produce, resulting in significant up-front emissions.
- **Reduced VMT due to land use change.** Expanding high-capacity transit will change how Seattle uses land in the coming decades, with more homes and businesses able to locate in compact, walkable neighborhoods near high-frequency transit modes. The impact of land use changes could generally be expected to significantly increase the GhG reduction potential of transit expansion.

Viewed in isolation, transit-related GhG emission reductions justify only a fraction of the cost of high capacity transit (HCT) investment. The main reason to invest in HCT corridors in Seattle is that they provide benefits for mobility, transportation choice, and livable neighborhoods. The mobility benefits of these investments are necessary for the City to effectively pursue other transportation-sector strategies for GHG reduction—some of which are very efficient on a cost-per-ton basis—including land use and transportation demand management strategies.

Downtown is the heart of the region that captures 60% of the state's economic energy.

In the next half century, Downtown is expected to expand dramatically to the east (First Hill), north (South Lake Union, Denny Triangle) and south (SODO). This expansion will double downtown employment and quadruple residential occupancy. Reliance on auto access to and through Downtown limits the person capacity of available right of way. Improved transit access to the Center City and Seattle's urban village neighborhoods is critical to support the City's economic growth.

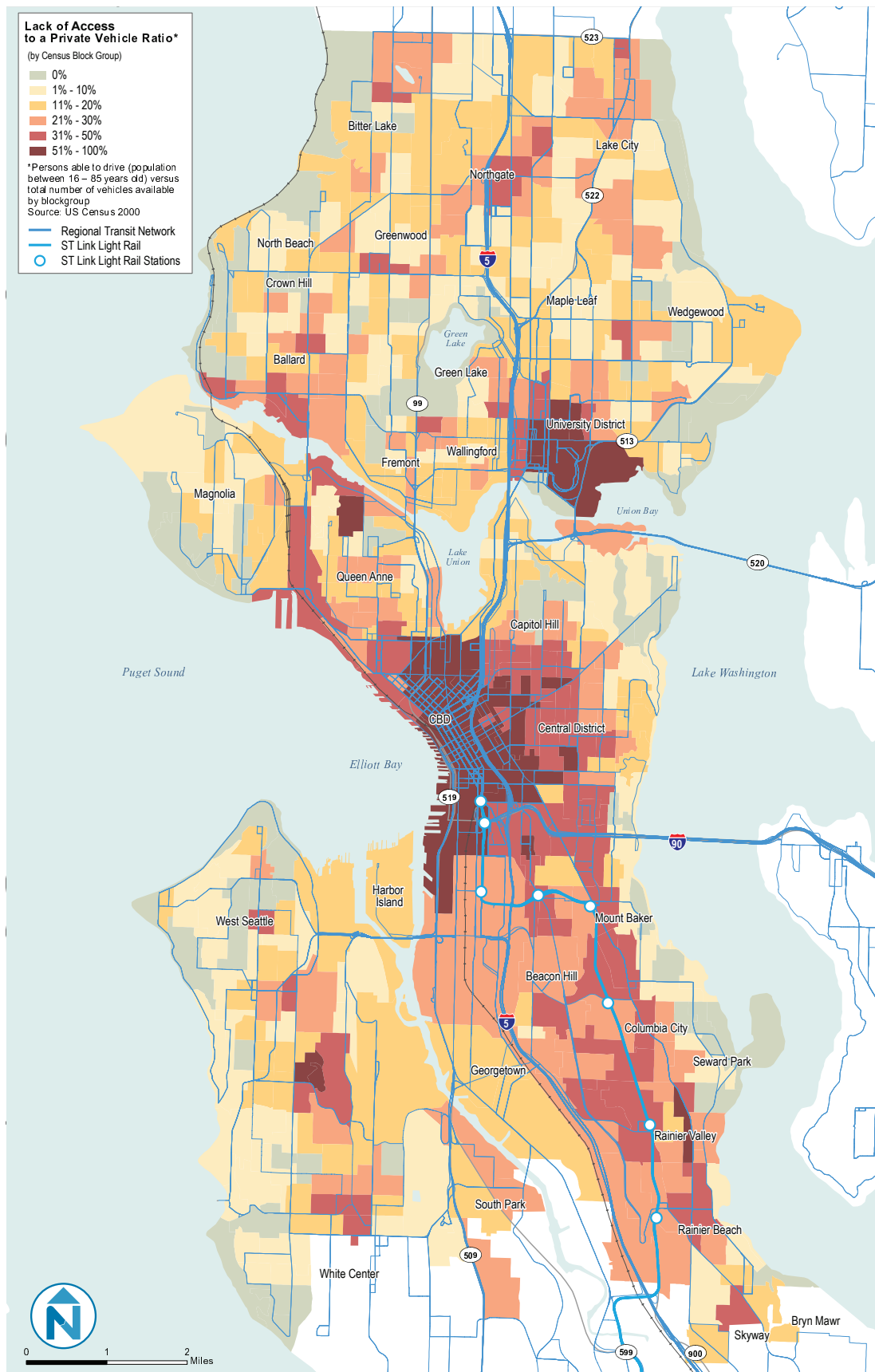
FIGURE 1-4 AUTO OWNERSHIP



This map shows the parts of the city in which residents are more likely to be reliant on transit as their primary means of transportation. This includes individuals that rely on transit because they are physically unable to drive and those that do not own a private automobile.

Source: King County, ESRI, US Census 2008

FIGURE 1-5 TRANSIT RELIANCE INDEX



This map shows the overall ratio of population to private vehicles, providing an indicator of auto ownership. It reflects people who are unable to own an automobile, those who chose to live without a car, and multi-adult households that have just one car.

Source: King County, ESRI, US Census 2008



Image from Flickr user Oran Viriyincy

HOW TRANSIT BENEFITS SEATTLE

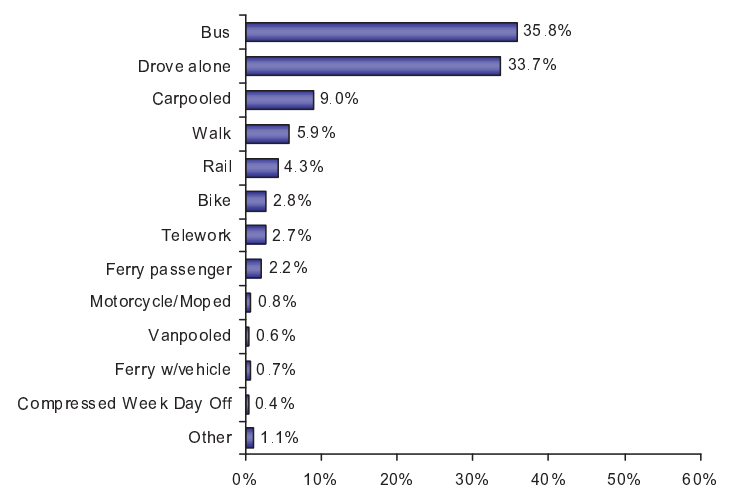
Seattleites use transit more frequently than residents of any other city in the Northwestern United States. Transit is particularly important for providing access to jobs and services in the Center City, but it also moves people between neighborhoods to attend school, shop, recreate, or simply explore the city. Seattle benefits from transit in ways that extend beyond basic mobility. This section summarizes some of the benefits Seattle residents and businesses receive from transit and illustrates the increasing need for and value of transit in a growing city.

Transit Supports Center City Growth and Prosperity

Transit Provides Safe, Convenient, and Reliable Access for Center City Jobs

Today, the Center City and directly adjacent neighborhoods have 230,000 jobs, expected to grow to 360,000 by 2030.¹ Transit provides safe, convenient, and reliable access for Center City employees from around the region. On a typical weekday, buses, trains, and ferries deliver 42% of Center City commuters starting work between 6 am and 9 am to their jobs. Without transit, Seattle's Center City economy would not be viable.

FIGURE 1-6 CENTER CITY COMMUTE MODE SHARE, % OF TRIPS BY MODE FOR EMPLOYEES STARTING WORK BETWEEN 6 AM AND 9 AM, 2010



Nearly 36% of Center City commuters rode the bus in 2010, the highest share of any mode. Only about 34% of commuters drove to work alone.

Source: Commute Seattle, Commuter Mode Split Survey Results, March 2011

Transit Provides Mobility for a Growing Number of Center City Residents

According to Puget Sound Regional Council (PSRC) projections, the Center City will grow to from 50,000 to approximately 80,000 residents by 2030. More transit capacity and more frequent service will be needed to provide mobility between Center City neighborhoods for new and existing residents and to ensure they have access to employment in Seattle and around the region.

Estimates show that by 2030, transit will need to carry an additional 8,000 people per hour into and within the Center City during the morning peak period (6 am to 9 am).² This is equivalent to approximately 150 additional buses per hour on downtown streets, and would require the equivalent of two new bus-only lanes.³ Alternatively, if this demand was met using rail vehicles, 20 two-car or 10 four-car rail vehicles would be required (assuming 160 passengers per car).⁴

Transit Makes Room for Historic and Productive Development

If this projected demand was met instead by building new roadway capacity instead of adding transit capacity, there would be demand for an estimated 5,000 additional vehicles during each hour of the morning rush hour traveling to or from the Center City.⁵ This does not include increases in traffic already assumed from growth. In perspective, seven or eight new lanes of arterial streets would be needed just to compensate for this increment of growth accommodated by transit.⁶

Given the assumption that all additional 2030 transit trips to the Center City would be made in private vehicles, new parking capacity would be required—approximately 15,000 additional parking spaces at a cost of \$240 million. These new parking spaces would require the equivalent of about eight 10-story parking garages covering an entire downtown Seattle block.⁷

Transit Makes Seattle a Better Place to Visit

Approximately nine million annual visitors spend \$5 billion in Seattle and King County, including nearly \$500 million on local transportation and gas. Tourism revenue supports jobs for more than 49,000 people in the region.⁸ Transit supports Seattle's tourism economy, helping make the city an attractive destination for regional, national, and international visitors.

Over half of these visitors arrive in Seattle by air, train, or means other than a private car. Many may prefer not to rent a car and want convenient access to major tourist destinations. International visitors —about 22% in 2009 —have high expectations that there will be quality public transportation to get around the city.

Out-of-state visitors who pay taxes in their destination state represent not only an economic benefit for Seattle, but also an unambiguous gain for the state.⁹ Visitors who remain in the Seattle area are more likely to spend money locally. Visitors stay an average of over five nights, spending over \$200 per day.¹⁰



There is limited ability to expand already congested arterial streets in downtown Seattle.

Source: Flickr user Oran Viriynicy

Endnotes for this section are provided following Chapter 6 of the TMP Summary Report.

Transit Supports Events at Seattle Center, Waterfront, and Stadiums

Transit supports Seattle's ability to host multiple large events in the Center City and the University District while allowing people to go about their daily lives. Seattle's many sporting and entertainment events enhance quality of life in Seattle and support business activity and jobs:

- Seattle Center attracts 12 million visitors per year, generating \$1.15 billion in business activity and \$387 million in labor income for King County.¹¹
- Waterfront attractions are a major draw for visitors. The Seattle Aquarium had over 835,000 visitors in 2009, including about 535,000 state residents and 300,000 out-of-state visitors.¹²

- Seattle's stadiums attract large numbers of people to sporting and other special events. Safeco Field seats over 47,000 people and CenturyLink Field and Husky Stadium both seat up to 72,000 people. A 2002 survey (predating Link service) found that 25% to 30% of those who attended events at the SODO stadiums used non-auto modes of transportation.¹³ In 2008, Sounder trains served an average of nearly 2,500 passengers for 26 sporting events. The Link Stadium Station has additional tracks to store trains for post-game departures.¹⁴



Transit reduces the need for long-term auto storage, making space for more productive economic uses. Parking garages do not add visual interest, contribute to an attractive walking environment, or increase pedestrian activity and “eyes on the street.”

Image from Flickr user Eric Kornblum



Attractions and events at Seattle Center are a draw for both Seattle residents and visitors.

Image from Flickr user Transcendental



Link light rail service from SeaTac to downtown Seattle and Amtrak Cascades service to Union Station offer travelers convenient transit connections to the Center City.

Image from Flickr user Michael @ NW Lens



Link and Sounder trains provide train service to SODO special events from the Stadium and King Street Stations. Without transit, professional sporting events would create more significant traffic delays and require more parking.

Image from Flickr user Oran Viriyincy



King County Metro operates 14 electric trolley bus routes using 70 miles of two-way trolley wire and 159 vehicles.

Image from Nelson\Nygaard

Transit supports sustainable, healthy, and equitable growth

Transit Encourages Compact Development

Numerous studies demonstrate that people living in compact communities where they can easily walk to basic services and recreation drive less than people living in more “sprawling” areas. Higher residential and employment densities and integrated land uses are associated with lower per capita miles driven.¹⁵ The 2010 U.S. Census shows that residents living in larger multifamily buildings increased far faster than any dwelling type and single family living is declining as a percent of all residents. Concurrent with this trend, and as the overall number of housing units increased by 30,000, total average daily vehicle trips declined in Seattle.

Compact Development has Environmental and Public Health Benefits

Compact development reduces carbon emissions, lowers particulate levels, decreases water pollution, and reduces overall land consumption. Studies show that people living in compact neighborhoods drive 40-50% less miles annually than suburban neighbors. A report by the Urban Land Institute explores the connection between driving and CO₂ emissions and conservatively assumes that a 100% reduction in miles driven is associated with a 90% reduction in CO₂ emissions.¹⁶

Transit and Clean Energy Make Seattle's Neighborhoods Cleaner and Quieter

A person riding transit in Seattle produces lower per-passenger emissions than a driver or passenger of a private vehicle. Electric transit vehicles have even lower per-passenger greenhouse gas (GhG) emissions than a diesel bus. Implementing TMP-recommended corridors and electrifying some of the city's existing diesel bus corridors would reduce GhG emissions by about 2,700 metric tons annually.¹⁷ Electrification of all diesel Metro bus routes within the city of Seattle would reduce GhG emissions by about 62,000 metric tons annually.¹⁸ Electric trolley bus service has the additional benefits of being quiet and providing fast acceleration on steep Seattle hills. SDOT should work to increase the number of electrified transit routes.

Transit Makes Seattle More Affordable

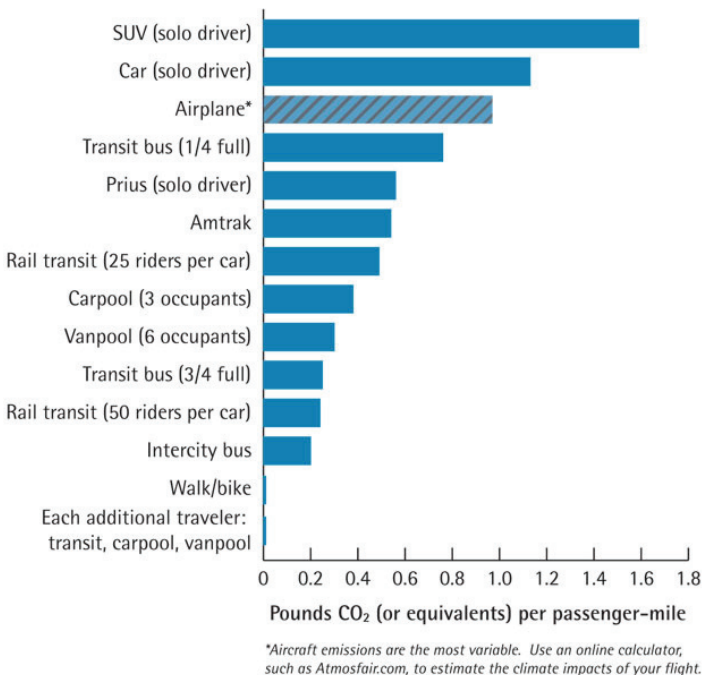
According to research by the Center for Neighborhood Technology (CNT), households in cities where jobs and services are readily accessible by transit are better able to respond to gas price increases.¹⁹ Access to transit helps reduce household transportation costs, saving families money and helping make Seattle a more affordable place to live. CNT's research shows that transportation costs can range from 15% of household income in compact, accessible neighborhoods to over 28% in locations with auto-oriented land patterns and limited access to public transit.

Transit Boosts Seattle's Economy and Creates Jobs

Reducing household spending on fossil fuels allows money to be spent in economic sectors that return a stronger benefit to the local economy. TMP transit corridor and service recommendations would reduce private vehicle gasoline consumption in Seattle by over a million gallons annually.²⁰ At \$3.50 a gallon, local residents could save millions of dollars annually by increasing spending power on local goods and services.

Operating transit services and investing in transit and street infrastructure projects create local jobs. A recent report by Smart Growth America analyzed stimulus-funded infrastructure projects and found that each dollar spent on public transportation created 31% more jobs and resulted in 70% more job hours than a dollar spent building roads. Investments in improving/maintaining existing streets generated 16% more jobs per dollar than building new roads.²¹

FIGURE 1-7 GHG EMISSIONS PER PASSENGER MILE



Average emissions per passenger mile are lower for transit than for passenger vehicles (assuming one or two occupants). Electric-powered transit offers Seattle a low-emissions transportation option.

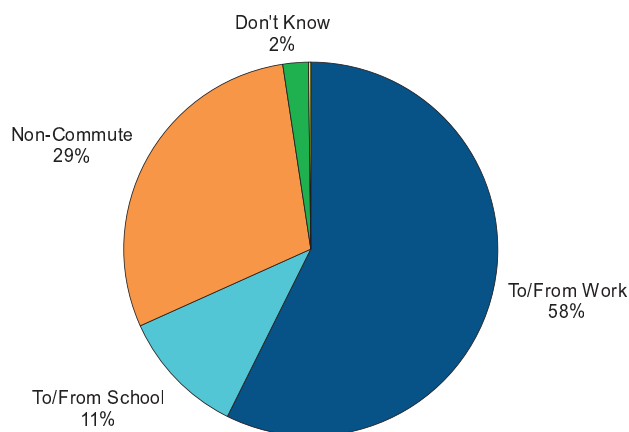
Source: Sightline Institute

Transit Provides Mobility for Everyone

Transit is not just for commuting; about 32% of regular riders use Metro for all of their transportation needs. About 40% of households in Metro's West Subarea (Seattle, Shoreline, and Lake Forest Park) have a regular Metro rider. Regular riders make an average of 25 trips per month, compared to two trips per month for infrequent riders.

Although transit is heavily used for commuting and school trips (about 70% of trips among regular riders), a large share of transit trips serve non-commute purposes at all times of the day.

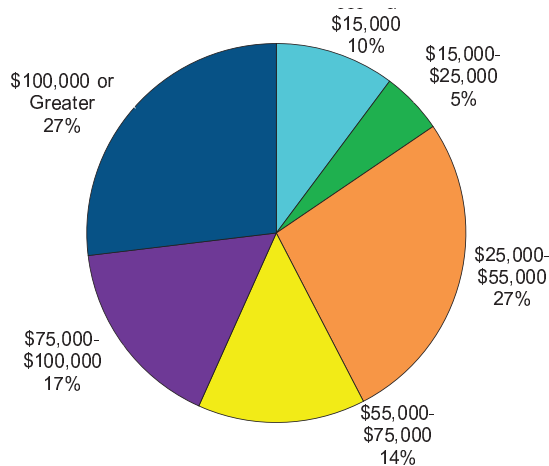
FIGURE 1-8 WHY PEOPLE RIDE METRO TRANSIT



In the West Subarea, 58% of regular Metro riders use transit for commuting, while 29% use it for non-commute purposes.

Source: Metro, 2009 Rider/Non-Rider Survey

FIGURE 1-9 HOUSEHOLD INCOME OF METRO TRANSIT RIDERS (SYSTEMWIDE)



In many cities, transit use is associated with lower-income levels, however transit riders in Seattle are distributed across a wide range of income levels. Frequent riders are less affluent than infrequent riders (median income of about \$67,000 compared to about \$73,000).

Source: Metro, 2009 Rider/Non-Rider Survey

TRANSIT INVESTMENT FRAMEWORK

The Transit Master Plan Summary Report is organized around the five areas of transit investment and policy development shown in the graphic below.

