

Section Three:

Plan Objectives and Managing the System

Introduction

This section reviews the policy basis and long-range vision guiding this Six-Year Plan, as set forth in the Long Range Policy Framework (LRPF), also known as the Comprehensive Plan for Public Transportation in King County. This section also includes strategies to be used to measure plan outcomes and evaluate service performance.

Six-Year Plan Objectives 2002 to 2007

The transit system is expected to serve a wide variety of travel markets and a diverse set of users. Commute, shopping, recreation, student, and social service trips are among the markets served. Services are designed within limited resources to balance and accommodate as many of these needs as possible, necessitating choices when needs compete. This plan directs the transit system to serve new and expanded markets, maintain quality service for established markets, and over time, improve ridership and cost-effectiveness.

This plan pursues system development strategies that are consistent with the following objectives for the six-year period from 2002-2007. The strategies set forth in this plan are derived from these objectives and are designed to result in measurable progress towards achieving these objectives and the long-range vision.

The following describes the objectives of the plan for 2002 to 2007, which emphasize four policy areas from the Long-Range Policy Framework (LRPF).

Cost and Efficiency

From the Long-Range Policy Framework:

“Provide the most efficient and effective services and facilities possible within available resources.”

Six-Year Plan Objective:

- 1. Design and modify services to be more efficient and effective. Reinvest resources from unsuccessful services in a manner which is consistent with the overall service concept.**

Growth Management

From the Long-Range Policy Framework:

“Support local and regional growth management plans and policies. Within each subarea, focus new and existing services and facilities to support targeted land use concentrations identified in local comprehensive and regional plans and within the urbanized growth area of King County”.

“Work with local jurisdictions to meet the goals and requirements related to transit services and facilities that are contained in the Growth Management Act, the Countywide Planning Policies and the Multi-County Planning Policies.”

Six-Year Plan Objectives:

- 2. Provide higher bus service levels to established urban and manufacturing/industrial activity centers in King County. Develop service improvements within urban areas along key freeway and Regional Arterial Network (RAN) corridors.**
- 3. Enhance service to and within jurisdictions that aggressively implement local land use plans, growth management strategies and regulations to facilitate development that is supportive of transit service and ridership.**

Market Share

From the Long-Range Policy Framework:

“Increase the portion of trips by people using transit and ridesharing within King County.”

Six-Year Plan Objectives:

- 4. Provide and support transportation demand management actions in conjunction with major employers, local jurisdictions, and other agencies.**
- 5. Improve public transportation access to travel destinations by reconfiguring current service, adding new services and passenger facilities, and pursuing innovative solutions and partnerships.**

Mobility

From the Long-Range Policy Framework:

“Improve transit access to jobs and other activities.”

“Increase travel opportunities on public transportation by developing a range of integrated and complementary services and facilities, and making the system easier to use and understand.”

Six-Year Plan Objectives:

- 6. Make improvements to the transit operating environment in locations and along corridors where actual or potential for high ridership exists and where local jurisdictions provide the necessary supporting plans, policies, permits and/or funding to do so.**
- 7. Improve access for pedestrians (including persons with disabilities) and bicyclists as well as the waiting environment at transit facilities with the highest use.**
- 8. Design and provide efficient service to major destinations and along corridors through an integrated network of service provided by King County Metro, Sound Transit, Community Transit, Pierce Transit, and the Washington State Ferry System.**

Keys to meeting the plan's objectives include the ability to be innovative, to improve the existing system, to balance changes geographically and among markets, and to concentrate investments and programs for significant impacts. Achieving cost-effective gains in ridership depends on improving service and service efficiencies to major markets, such as downtown Seattle the University District and downtown Bellevue, while designing and implementing productive services that benefit other markets. Increases in ridership are dependent on improved service reliability, frequency, span of service, travel times, connections, rider information, security, and travel options.

System Development Concept

The system development concept presented in this plan represents a continued shift away from the service structure of 1995, which offered many one-seat rides to a few key regional destinations, to a multi-destination network. The concept maintains the quality of existing investments, builds directly on the transit network changes of the last six years, and takes advantage of new technology applications to improve customer satisfaction.

The plan incorporates four initiatives to address congestion and mobility in King County. Three of these initiatives focus on countywide system development—increasing peak market share, expanding core network services, and integrating with Sound Transit. The fourth initiative—addressing local subarea priorities—respects the need for flexibility in established subareas to pursue additional priorities. In recognition of decades of growth and development and existing levels of service, a greater proportion of future transit service investments will be made in areas of King County outside of Seattle than that made in the past six years.

The transit system currently provides extensive service coverage to people who live within King County, particularly within the designated Urban Growth Area (UGA). Within this area, nearly 96% of all households fall within one-quarter mile of a bus stop or within one and one-half mile of a permanent park-and-ride lot² (See Figure 3-1, "King County Metro Bus System – Distance from Transit").

² King County Metro GIS Application – Transit service and park-and-ride coverage as of Fall 2001.

Additionally, Metro extends other transit and high-occupancy vehicle (HOV) services and products, including vanpool, rideshare services, and employer partnership programs, to all King County residents in order to provide them with options to driving alone. Also, paratransit service that meets federal requirements is provided to qualified persons with disabilities in a service area comparable to Metro's non-commuter fixed route service.

Supporting Growth Management

King County, in accordance with the Washington State Growth Management Act and in coordination with local jurisdictions, has implemented growth management policies to strengthen the link between transit service levels and land use. Development that creates higher concentrations of people and jobs provides economies of scale in the delivery of service. Implementation of related policies, such as limiting parking supply and establishing parking fees, increases the demand for transit alternatives. Within King County, areas where growth and growth management policies have combined to create strong, transit-supportive conditions include downtown Seattle and environs, the University District, and downtown Bellevue. These areas are the strongest transit ridership destinations in the county.

In recent years, policies that directed growth into the Urban Growth Area (UGA) have begun to show results – from 1990-1994, 89% of new housing growth occurred within urban areas; with adoption of new comprehensive plans and regulations in 1994-1995, new housing growth in urban areas has increased to over 93%³ of growth occurring. Rapid growth in many cities and urban, unincorporated King County is increasing pressure on the transportation system to provide additional bus and other transit services within the UGA.

The service design and supporting program emphases in the plan are a result of the experience gained during successful implementation of the 1996 - 2001 Six-Year Plan. The concept of a “transit-supportive area” developed by the Transportation Research Board⁴, is introduced in the plan to more closely link land use and transit investment

³ King County 2001 Benchmark Report

⁴ Transit Capacity and Quality of Service Manual. Transit Cooperative Research Program, Web Document 6, 1998.

where higher population, employment density and potential ridership support a higher level of transit service operating all day. In those areas where land use is not transit-supportive, attempts will be made to work with jurisdictions to improve land uses, and to design and provide service most appropriate to the transit market.

Transit-oriented, more densely developed areas can sustain higher levels of transit service. This is especially true of those areas which are on track to successfully reach their housing and employment targets established by the Countywide Planning

Policies, and those areas with limited parking supply, parking charges, and/or good pedestrian environments. By using the concept of a “transit-supportive area”, King County Metro can better work with local jurisdictions to identify how best to provide transit-supportive environments and land use to foster the development of convenient and well-used public transportation.

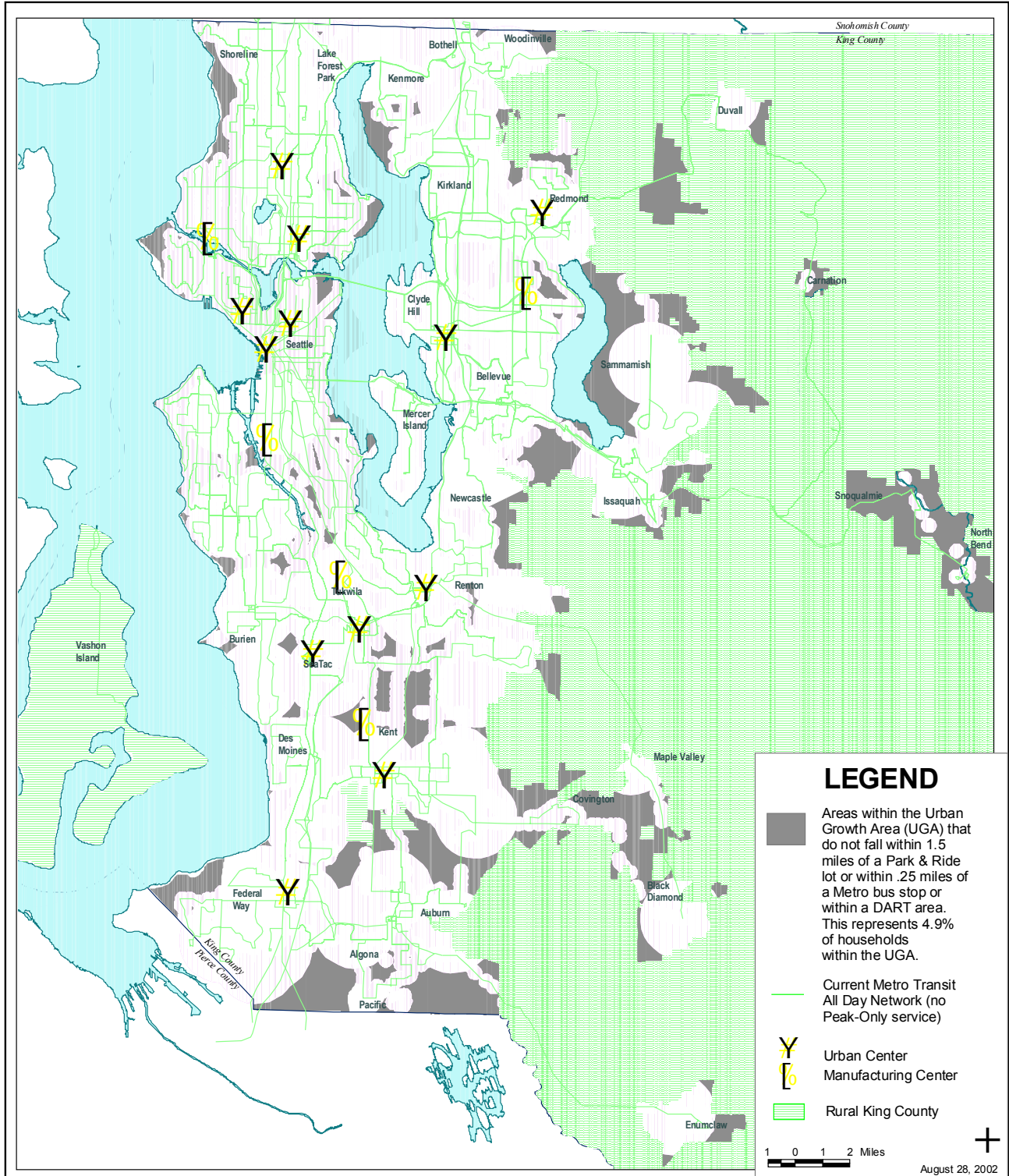


Figure 3-1 King County Metro Bus System - Distance from Transit

Management Strategies

The plan's management strategies provide methods to assess the success of plan implementation and the development of service and system improvements through ongoing performance and outcome measurement.

Measuring Plan Progress

Assessing the progress of the plan as a whole is different from measuring the performance of individual services. Table 3-1, as part of Strategy M-1, identifies the specific measures and targets for evaluating progress toward achieving the objectives of the plan. The targets assume the implementation of approximately 400,000 new service hours, consistent with the sample network.

Strategy M-1

Establish a series of targets for measuring success in meeting the objectives of the Six-Year Plan in each of four long-range policy areas, as shown in Table 3-1. Evaluate progress using these targets periodically and at the time of Six-Year Plan updates.

Cost and Efficiency

Three areas of measurement of plan progress in addressing cost and efficiency include transit ridership, cost and service effectiveness.

Ridership. Transit ridership is defined as the number of annual boardings on the bus system at the countywide level. The changes and improvements proposed in the plan are expected to increase ridership over time, as both existing and new customers benefit from more and improved travel choices.

Bus Cost. The cost of service per platform hour (relative to inflation) provides an overall measure of system cost efficiency. Various factors influence the labor, capital and administrative cost of service delivery. This indicator measures the average cost of the service supplied to the public per unit of service.

Bus Service Effectiveness. Two measures of service effectiveness are boardings per platform hour of service and total bus passenger miles traveled. The measure of boardings per platform hour indicates transit's effectiveness in the number of travel occurrences served per unit of service. A measure of total passenger miles indicates transit's effectiveness in limiting the private vehicle miles that might otherwise be driven on limited roadway space.

Changes and improvements proposed in the plan are designed to improve service effectiveness over time. The plan directs that a larger percentage of new services be implemented in the east and south subareas. These service investments are predominantly targeted at existing services with higher riders per platform hour within those two subareas. With relatively less new service investment going to higher ridership services in the Seattle/North King County subarea, systemwide productivity is projected to decline slightly. Conversely, services in the east and south subareas generate more passenger miles per passenger boarding. Therefore, total passenger miles is expected to grow at a rate similar to today's systemwide rate of about 5 miles per passenger boarding.

Growth Management

The plan includes a measure of and a countywide target for service orientation, which assesses the nature and amount of service investment, or supply. Over time, implementation of the plan is expected to result in a higher proportion of total system resources being invested in core service connections to and between centers.

A key part of growth management is the coordination of plans to achieve common objectives. King County Metro will work with cities that receive transit services and capital facilities to ensure plans are consistent. This will provide improved certainty for planning transit services and facilities with local land use and transportation decisions.

Service Orientation. Shifts in service orientation show how the overall system structure is changing. Service orientation shifts are measured by changes in the amount (total annual platform hours) of service investment during this plan period made for core connections, peak-only services and local/other services.

For the purposes of system description, services within the transit network are categorized by the general nature of the service offered and the function they serve. In reality, all services serve multiple functions and these general descriptions may not apply for a particular rider or riders of the service.

- **Core services** provide frequent, two-way, all-day service to and through urban centers and other activity centers. Core routes run on arterials and freeways and, in many cases, core routes are operated at higher service levels during peak periods.
- **Peak-only, also called “peak overlay” services** provide improved speed and capacity during peak commute times. Most often, they operate in a single peak direction. They provide improved travel time by skipping stops or using freeway HOV lanes. They often serve park-and-ride lots and improve the efficiency of the highway system.
- **Local services** connect neighborhoods to core and regional services and provide circulation within neighborhoods. These include fixed-route buses, demand-responsive services, and subsidized taxis or neighborhood shuttles. Local services focus on activity centers and transit hubs.
- **Regional services** cross subarea or county lines and provide access to and between urban and manufacturing centers within King, Snohomish, and Pierce Counties. These direct and higher-speed services generally operate on rail lines, freeway high occupancy vehicle (HOV) lanes and major arterials, and include commuter rail, regular and custom bus, vanpools, and carpools. Most all-day regional services are included in the core network and therefore are not separately measured.

Targets for this indicator address whether system changes measured over time reflect the initiatives providing the basis for this plan, the priorities for service implementation and the amount of resources available to provide new services. Additionally, the relative share of each type of service reflect the system connectivity in all subareas, improving connections between key activity centers (core services), local communities and neighborhoods (core and local/other services) and the relative orientation to peak period increases in service (peak-only services).

Market Share

Evaluation of Market Share includes tracking work trip high occupancy vehicle (HOV) mode share. Work trip HOV mode share is the percent of workers commuting by ridesharing or transit modes. Mode share will be tracked at employment sites affected by state Commute Trip Reduction requirements and some additional employment sites. This measure will be tracked both countywide and by subarea.

Work Trip HOV Mode Split. The state Commute Trip Reduction Act is intended to increase the portion of commuters who use public transportation. Efforts are targeted at commuters to make their trips to and from work at designated sites within employment target areas where CTR requirements apply. King County Metro will focus resources to capture a higher percentage of total trips taken and reduce reliance on the single-occupant automobile. Progress toward the CTR law targets in the percent of HOV work trips is expected over time.

Mobility

The plan's progress towards meeting Mobility objectives is assessed using Market Penetration and Overall Transit Share measures. These measures will be tracked at both countywide and subarea levels.

Market Penetration. The changes and improvements proposed in the plan are intended to increase market penetration by increasing service levels (frequency and span of service) in transit markets with strong ridership or indicators of strong demand. If the changes are effective, the number of households with people who have used transit in the last month will increase over time.

Overall Use. The usefulness of public transportation to people throughout King County is increasingly important. An upward trend in transit boardings per capita is expected over time and is indicative of how well public transportation is capturing all kinds of travel demand.

Customer Satisfaction

Strategy M-2

Regularly monitor customer satisfaction using measures that assess system changes and improvements through regular surveys of riders and non-riders.

Customer satisfaction provides a measure of service quality and acceptance of system changes and improvements. It is particularly important in retaining riders who have other transportation options (almost 75% of current riders) and in attracting new riders to the system.

Rider/Non-Rider Survey

Metro's Annual Rider/Non-Rider Survey will be used to assess satisfaction levels with system changes and improvements overall and at the subarea level in areas including:

- Directness of travel
- Wait time between transfers
- Safety, comfort, and convenience
- On time performance
- Service frequency (headway) - the time between buses

Additionally, customer satisfaction should be considered in the context of service evaluation, as an element of each area that is evaluated. This approach will utilize the information gained from regular customer surveys to link the evaluation of service with a corresponding evaluation of the customer's viewpoint under Strategy M-3.

Policy Area	Measure & Method	Evaluation Level	2001 Baseline	Target (w/ 400,000 annual hours of new service)	Target (w/ no new service)
Cost & Efficiency ²	Transit Ridership <i>Annual Boardings</i>	County	96 million	105.5 million	
	Cost <i>Cost per platform hour of service</i>	County	\$88.41	≤ \$88.41 + inflation	
	Service Effectiveness <i>Boardings per platform hour</i>	County	29	28	
		East Subarea	13	14	
		Seattle–N. King Co. Subarea	33	33	
		South Subarea	21	23	
Service Effectiveness <i>Annual Passenger Miles</i>	County	470 million	520 million		
Paratransit Services					
Growth Management	Service Orientation <i>Annual platform hours by service type</i>	County	Core Services: 1,663,000 Peak-only Services: 556,000 Local/Other Services: 1,051,000	Core Services: 1,949,000 Peak-only Services: 547,000 Local/Other Services: 1,177,000	
Market Share ³	Work Trip HOV Market Share <i>% High Occupancy Vehicle (HOV) mode split to designated employment sites</i>	East Subarea	22%	38%	
		Seattle–N. King Co. Subarea	52%	58%	
		South Subarea	18%	36%	
Mobility	Market Penetration <i>Percent of households that use transit</i>	County	33%	35%	
		East Subarea	21%	23%	
		Seattle–N. King Co. Subarea	50%	52%	
		South Subarea	24%	26%	
	Overall Use <i>Boardings per capita⁴</i>	County	57	58	
		East Subarea	16	18	
Seattle–N. King Co. Subarea		112	115		
Vanpool Program					

1 Targets assume the implementation of 400,000 annual hours of new services, about a 12% increase over 2001 system levels. Some baseline data are estimates for 2001. When final 2001 data are available, final baselines will be established.

2 Includes DART subcontracted transit service, special events, and the Waterfront Streetcar. Excludes Sound Transit, Accessible Services, Vanpool, and the Water Taxi. Annual Passenger Mile calculations exclude special events. Subarea breakdowns exclude the Seattle Ride Free Area.

3 Indicators represent average HOV mode split for CTR employment sites and other designated sites within each subarea, which were surveyed in 1999. Targets represent weighted average CTR law targets for current CTR sites in each subarea. Changes to CTR law may affect targets.

4 Baseline Per capita figures use 2000 U.S. Census data and Puget Sound Regional Council "Forecast Analysis Zones (FAZ)" for subarea breakdowns. Target per capita calculations use interpolated projection of population for 2007, using Jan. 2002 Washington State Office of Financial Management "intermediate" population estimates for 2005 and 2010. Countywide ratio based on target ridership of 105,500,000 total system-wide.

Table 3-1 – Six-Year Plan Progress Targets

Service Performance Evaluation

Strategy M-3

Regularly monitor and report bus service performance and ridership system-wide and at the route level to identify services that may require modification, expansion or termination based on their performance. Develop and recommend to the RTC an approach to peer agency comparison that identifies:

- **the appropriate measures of performance;**
- **the major factors, internal and external, that vary among transit agencies and affect performance;**
- **the extent to which those factors can be tracked for a small group of peer agencies to inform the performance comparisons, and**
- **a list of five peer agencies considered to be most comparable to King County Metro Transit based upon agency characteristics and the ability to track major performance-related factors.**

King County Metro monitors service performance on an ongoing basis, incorporating detailed route characteristics and data as well as system level indicators such as the customer satisfaction research described in Strategy M-2. An effective service evaluation process looks at both existing and new services and should include the following:

- selection of reliable long-term data sources
- consistent monitoring, evaluation, and reporting procedures
- high performance threshold(s) above which services should be improved to serve more riders
- minimum performance threshold(s) below which service will be modified or eliminated
- use of both traditional service performance indicators, customer research data and comparison with peer agencies

Implementation of the 1996 to 2001 six-year plan included the development of guidelines for the annual evaluation of all bus routes in the King County Metro system.

These guidelines, developed with the assistance of local jurisdictions and other stakeholders, use two primary indicators of route performance. These are 1) riders per revenue hour and 2) the ratio of operations revenue to operations cost. The Fall 2000 Route Performance Report is included in Appendix C.

To better assess the degree to which transit services contribute to the reduction of total vehicle miles traveled on King County's local and state roadways, two additional indicators will be added to the annual route performance assessment process.

Incorporation of an indicator to measure passenger miles per revenue seat mile and one to measure passenger miles per revenue hour will be made. "Route effectiveness" shall be defined as the sum of the number of standard deviations above or below the median of each subarea of each of the four measures.