Section Four:
Improving the System – Service

Service Strategies

The multi-destinational service concept relies on a network of core routes providing frequent, two-way, all-day connections between major King County destinations. A web of local services supports the core network. Local services connect residential areas to core routes, transit hubs, or activity centers. Peak-only routes provide additional speed and capacity during peak commute times on high ridership corridors.

Because of high ridership and park-and-ride utilization, there is a need for expanded peak period services. The plan emphasizes all-day mobility, with resources devoted to frequency and span of service improvements on all-day services. The plan supports a variety of new and modified products to meet travel needs that have not been well served by fixed-route transit.

Sound Transit bus routes provide limited-stop high-speed service between centers. Commuter rail provides peak-period service on freight and passenger rail tracks between Tacoma and Seattle via the Green River Valley. Both ST regional express bus service and Sound Transit commuter rail service will continue to be improved during this plan period. Strategy S-10 addresses integration of King County Metro services with Sound Transit services.

The service concept continues a reliance on transfers to provide efficient transit connections to varied markets. Improved service frequency reduces wait times, which is especially important for transferring riders. Improved on-time performance or service reliability can also reduce wait times. Improved transit facilities can make transfers more acceptable. Continuing to improve accessibility for riders with disabilities can also help reduce demand for paratransit services. They include shelter, seating, lighting, and customer information. Access to service can be improved by improvements to walkways, bicycle storage, and park-and-ride capacity.

The discussion in this section makes use of examples from a sample system network of bus routes, which illustrates one way to pursue strategies outlined in the Plan. (See Appendix A and B for a detailed description and maps of the sample network.)

The sample network assumes approximately 400,000 annual service hours of new service, more than is expected to be available during the period. The implementation strategies described in Section Six provide direction for the prioritization of the service and capital strategies. If additional resources become available, additional elements of the sample network will be proposed for implementation.

Specific service proposals will be developed through the subarea-based community planning process discussed in Section Six and may differ from the examples described in Appendix A. Also included in this section are descriptions of alternative commute products and specialized transportation programs.

Following is a discussion of each of the proposed service-related strategies designed to achieve the service concept.

Service Consolidation

Strategy S-1:

> **Pursue efficiencies in existing services in major transit corridors including, but not limited to, those listed in Table 4-1. Reinvest savings from these efforts within the planning subarea in which they are generated.**

The benefits of service consolidation include improved service frequency; better use of different types of fleet and the ability to improve service elsewhere in the subarea with saved hours.

During the 2002 - 2007 period, service consolidation will remain a key strategy. Table 4-1 summarizes key corridors for consolidation. Others may be identified during plan implementation. The sample network outlined in Appendix A describes the range of consolidation effects under consideration.

Corridor	Corridor	Corridor
Northgate to Seattle CBD via I-5	Twin Lakes - Seattle CBD via SE. 320th St/I-5	Lake City - U. District via Lake City Way/25th Ave NE.
SR-522	NE 45th St	Broadway Avenue E
Rainier Ave. S	SR-520	Roosevelt Way NE
Ambaum Blvd. SW	Delridge Ave. SW	West Seattle Bridge
California Ave. SW		

Table 4-1 – Major Consolidation Corridors

Recent experience implementing the service consolidation strategy points to principles that help improve the design of future consolidations. The main segments of routes must be as direct and frequent as practical. Service frequency helps mitigate the inconvenience of transfers to provide additional connections to other markets. Sufficient capacity must be provided on the main segment of routes so those riders can avoid having to stand for extended periods. Finally, in recent implementation efforts the scheduling of routes was shifted away from a "work start-quit time" system to a headway-based system, which means more evenly spaced trips throughout the day. The earlier system had emphasized the arrival and departure times at major centers at presumed shift change times.

Service Design

Strategy S-2

Improve transit on-time performance through service design, shortening of route length, splitting of unreliable through-route pairs, and schedule maintenance of existing services. Schedule maintenance hours shall be reserved in amounts equal to one-third of new service investments up to 0.5% of total annual service hours with the remaining two-thirds of new service hours allocated according to Strategy IM-3. The schedule maintenance hour allocation shall be achieved in accordance with the timetable established in Strategy IM-3 without regard to subareas. Schedule maintenance hours that are not used for schedule maintenance in each year shall be used for new service. To the extent that schedule maintenance requirements exceed the service hours available under this policy, reduction of existing services within the same subarea will be used to fund schedule maintenance needs.

In the event that schedule maintenance hours are proposed at a level exceeding 0.5% of total annual service hours by the Department of Transportation, the Regional Transit Committee shall review this proposal and recommend any change in allocation policy to the Metropolitan King County Council.

Transit operates in increasingly congested traffic throughout King County, and especially in the urban centers and on arterial roads leading to the interchanges of limited access freeways. This strategy addresses the role of route design and planning in improving service reliability. The capital elements of transit speed and reliability are addressed in Strategy C-3. Poor on-time performance discourages transit ridership by increasing the risk that trips will take longer to complete, that connecting transfers will not be made, or that a scheduled bus will not arrive at all. Riders respond to this risk by catching earlier trips, increasing overall trip time and discouraging the use of transit. The additional minutes of trip travel time related to poor reliability are equivalent to slower bus trips or the inconvenience of a transfer. Traffic congestion not only slows transit, but also does so in an irregular manner, so that trip times vary in unexpected ways. This makes scheduling transit trips difficult both for the agency and the rider.

Route design impacts service reliability in several ways. Route length affects reliability by exposing each trip to more traffic incidents, lift deployments, and other sources of intermittent delay. During recent implementations, several long routes were split for improved reliability. Although a few transfers were imposed upon through riders, the trips of most riders were improved by making them more reliable. Downtown Seattle is the primary transit destination but also a major source of traffic-related delay. Several downtown-oriented all-day routes have been through routed, or paired, so that inbound trips of one route become outbound trips of another route. Through routing has several advantages. It reduces operating costs, uses limited surface street capacity and fleet more intensively, and distributes loads from both routes throughout the central business district. Most trolley routes and many diesel routes operate this way. This practice works well as long as traffic congestion does not delay service.

The disadvantage of through routing is that outbound trips depend upon the inbound trips of partner routes to be on time. Many through-route pairs cross drawbridges, pass through points of congestion, attract an irregular number of lift deployments, or have long running times.

When traffic congestion delays a specific service on an ongoing basis, schedule maintenance resources may be added to the route. Time is added to individual bus trips in a route's schedule to ensure that each bus begins its next trip at the scheduled time. At any given time, traffic congestion affects many routes in the system, and these resources are added where and when they are needed most. These adjustments provide increased reliability for riders on currently scheduled service.

Core Service Connections

Strategy S-3

Improve service levels on existing routes and create new routes serving established urban and manufacturing/industrial centers and urban areas where, because of population or employment clusters, ridership and transit use is projected to be the highest. Improve frequencies to support existing demand and attract more riders on a core network of key connections as listed in Table 4-2 and shown in Figure 4-1.

The State Growth Management Act (GMA) requires the fastest growing counties and the cities within them to designate an Urban Growth Area (UGA) and then to prepare comprehensive plans that direct growth to the UGA. Growth is to be discouraged outside of the UGA in the rural and natural resource areas. In 1994, King County designated the UGA in coordination with the cities and established Urban and Manufacturing/Industrial Centers through adoption of the Countywide Planning Policies. Urban Centers are areas of concentrated employment and housing. Manufacturing/Industrial Centers are areas characterized by a significant amount of manufacturing, industrial, and technology employment. There are twelve Urban Centers and five Manufacturing/Industrial Centers in King County.

A major theme of this Six-Year Plan is the significant improvement of service frequency, with the aim of attracting more riders. Other ways of attracting riders include increasing the span of service, providing faster service, relocating or extending routes to higher concentrations of jobs and population, or improving service reliability or on-time performance. When service is frequent, it is more likely to be available when customers need it and reduces wait time between buses for riders who transfer. Both make using transit easier.

National research on travel behavior suggests that, in decision-making regarding whether to use the bus, time spent waiting for the bus is twice as important as time spent getting to or riding the bus.[5] In a 1995 Metro evaluation of customer requirements for bus service, nearly nine out of ten (89%) of survey respondents identified frequency as the most important of eleven identified service design elements.

This strategy targets core routes serving designated urban/manufacturing centers, and population or employment clusters for service improvements. Most core services operate along key freeway and Regional Arterial Network corridors. Several core routes lack the necessary frequency or span of service to be very attractive at off-peak times. Improved transit service levels can provide an incentive to local jurisdictions to provide improvements to their transit operating environments, such as the provision of bus queue jumps or transit signal priority at intersections, which improve the speed and reliability of service. It may also spur jurisdiction improvements in the pedestrian environment that help transit users get to and from their bus stop. Urban centers have long spans of transit demand, which are often not matched by current service. The sample network suggests improvements to the span, frequency, and reliability of transit service to several urban centers.

The improvement of service levels to and through the designated centers may act as an added incentive to cities and private developers to increase land use density in areas where growth management policies indicate such development should be focused. These services also support increased growth by enhancing the person carrying capacity of the Regional Arterial Network of key arterial corridors (RAN). In turn, coordinated efforts between local cities and King County Metro to improve transit's operating environment become more attractive and cost effective.

Figure 4-1 illustrates the core network, highlighting those core service connections identified as priority investments in this plan. Figure 4-2 illustrates direct connections between designated urban and manufacturing centers in King County currently operated as part of the core network. Figure 4-3 illustrates an analysis of the core service connections in King County that this plan prioritizes for service investment.

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[5] Patrick Mayworm, Armando Lago, and J. Matthew McEnroe. *Patronage Impacts of Changes in Transit Fares and Services.* Urban Mass Transportation Administration, Washington D.C., 1980.

This analysis shows that investment in the priority corridors will be of potential benefit to greater than one fourth of all King County households and serves almost one-half of all commercial development in King County.

Table 4-2 Core Service Connections in King County

Description			2001 Frequency		2007 Target Frequency		
Between these places		Via Primary Corridor and Destination	2001 Target peak/mid/eve	2001 Actual peak/mid/eve	Weekday Peak	Midday, Saturday	Evening
	Shading Indicates Core Service Priority Investment Corridor						
Admiral	White Center	California Ave. SW	15/15/30	30/30/30	15	15	30
Auburn	Kent	Auburn Way	30/30/30	30/30/30	30	30	30
Auburn/GRCC	Federal Way	15th St. SW, Lea Hill Rd.	30/30/30	30/30/60	30	30	60
Aurora Village	Seattle CBD	Aurora Ave. N	15/15/30	10/20/30	10	15	15
Ballard	Northgate	24th Ave. NW, Holman Rd. NW	15/15/30	30/30/60	15	30	30
Ballard	Seattle CBD	15th Ave. W	15/15/30	10/10/30	10	10	15
Ballard	U District	NW Market St., N & NE 45th St.	10/10/15	10/15/15-30	10	10	15
Beacon Hill	Seattle CBD	Beacon Ave. S	10/10/30	5-10/10/20-30	5-10	10	15
Bellevue	Bear Creek	Overlake	new	30/--/--	30	30	60
Bellevue	Eastgate/BCC	Lake Hills Connector, 148th Ave. SE	15/30/30	30/30/60	15	30	15
Bellevue	Factoria	112th Avenue, South Bellevue P & R	new	30/30/60	15	15	30
Bellevue	Redmond	Crossroads, Overlake	15/15/30	15/15/30	15	15	30
Bellevue	Renton	Coal Cr. Pkwy. SE, Factoria, Newcastle	30/30/30	30/30/30	15	30	30
Bellevue	U District	SR-520	15/15/30	15/30/60	15	15	30
Burien	Seattle CBD	Ambaum Blvd. SW, Delridge Way SW	15/15/30	15/30/30	15	15	30
Capitol Hill	Seattle CBD	15th Ave. E, Pine St.	10/15/30	10/15/30	10	10	30
Capitol Hill	Seattle CBD	Broadway E, Pine St.	10/10/30	10/10/30	10	10	15
Capitol Hill	Seattle CBD	Madison St.	10/15/30	10/15/30	10	10	30
Capitol Hill	Seattle Ctr.	Denny Way	15/15/30	15/30/30	15	15	30
Central Area	Seattle CBD	Jefferson - James	7-8/7-8/7-8	7-8/7-10/15	7-8	7-8	7-8
Federal Way	Seattle CBD	I-5	30/30/30	30/30/-	30	30	30
Federal Way	SeaTac	SR-99	15/15/30	20/30/30	15	15	20
Fremont	Seattle CBD	Dexter Ave. N.	new	10-15/15/30	10	10	15
Greenwood	Seattle CBD	Greenwood Ave. N	15/15/30	15/15/30	15	15	15
Issaquah	Bellevue	I-90, Lake Hills Connector, BCC	15/30/60	30/30/60	15	30	30
Issaquah	Redmond	228 Ave. SE/NE Sammamish			30	30	60
Kent	Burien	KDM Rd., S 240th St., 1st Ave. S	30/30/30	30/30-60/60	30	30	60
Kent	Renton	Smith St., Benson Rd., Carr Rd.	30/30/30	30/30/30-60	15	30	30
Kent	SeaTac	Orillia Rd., S 212th St.	new	N/A.	30	30	60
Kent	Seattle CBD	W Val Hwy., Southcenter Blvd., Interurban, I-5	15/15/30	15/30/30	15	15	30
Kirkland	Bellevue	Lk. Wash. Blvd. NE, Bellevue Way NE	15/15/30	15/30/60	15	15	30
Kirkland	Eastgate/Factoria	156th Ave, Overlake, Crossroads Mall, BCC, Eastgate	30/30/--	30/30/60	15	15	30
Kirkland	Seattle CBD	108th NE and SR-520	7–10/15/30	10-15/30/30	7	15	30
Kirkland	Totem Lake	124th Ave NE, Kingsgate P & R	new	30/30/60	15	30	30
Loyal Hts.	U District	NW 85th St.–15th Ave. NE	10/15/15	10/15/30	10	15	15

Table 4-2 Core Service Connections in King County							
Description			**2001 Frequency**		**2007 Target Frequency**		
Between these places		Via Primary Corridor and Destination	2001 Target peak/mid/eve	2001 Actual peak/mid/eve	Weekday Peak	Midday, Saturday	Evening
	Shading Indicates Core Service Priority Investment Corridor						
Madrona	Seattle CBD	Union St.	15/15/30	15/15/30	10	10	15
Northgate	Seattle CBD	I-5	10/15/30	4-8/15/60	4-8	15	30
Northgate	Seattle CBD	Wallingford Ave. N., Aurora Ave. N	15/15/30	20/20/30	15	15	30
Northgate	U District	Roosevelt WY. NE, 5th Ave. NE	15/15/30	10-15/15/30	10 - 15	15	30
Queen Anne	Seattle CBD	5th Ave. N., Taylor Ave. N.	new	10-15/20/30	7 - 10	15	15
Queen Anne	Seattle CBD	Queen Anne Av. N	15/15/15	5-10/15/15	5 - 10	15	15
Rainier Beach	Seattle CBD	Rainier Ave. S	10/10/30	10/10/30	10	10	15
Redmond	Eastgate/Factoria	148th Ave., Crossroads Mall, BCC, Eastgate	new	30/30/60	15	15	30
Renton	Burien	SW Grady Way, S. 154th St.	15/15/30	15-30/30/60	15	15	30
Renton	Seattle CBD	MLK WY., I-5	10/30/30	7-15/30/--	5 - 10	15	30
Sea-Tac Airport	Seattle CBD	I-5	30/30/30	30/30/30	15	15	30
U District	Seattle CBD	Pine St., 23rd Ave. E	10-15/15/30	10-15/15/30	10 - 15	15	15
U District	Seattle CBD	I-5	7–8/7–8/--	5-8/7-10/--	5 - 8	7-8	15
U District	Seattle CBD	Eastlake Ave. E, Fairview Ave. N	10/15/15	12/15/15	10	10	15
U District	Columbia City	23rd Ave. E, MLK Jr. Way S	10/15/15	10/15/30	10	15	15
U District	Woodinville	SR-522, Bothell	new	30/60/--	10 - 20	30 - 60	60
West Seattle	Seattle CBD	Fauntleroy Ave. SW, W. Seattle Bridge	15/15/15	15/15/30	15	15	15
White Center	Southcenter	Military Rd., S 144th St.	30/30/30	30/30/30	15	30	30
Core Service Connections in King County Served by Sound Transit							
Redmond	Kirkland	NE 85th St.	15/15/30	30/30/60	ST	ST	ST
Bellevue	Seattle CBD	I-90, Bellevue WY. NE	7–10/15/30	5-8/15/30	ST	ST	ST
Issaquah	Seattle CBD	I-90	new	30/30/60	ST	ST	ST
Bothell	Bellevue	I-405	15/30/60	15/30/60	ST	ST	ST
Lynnwood	Bellevue	I-405	new	15/30/60	ST	ST	ST
Bellevue	Sea-Tac	Renton, I-405	30/30/30	30/30/30	ST	ST	ST
Bellevue	Federal Way	Renton, Kent, Auburn	new	30/30/60	ST	ST	ST
Redmond	Seattle CBD	SR-520	new	15/30/30	ST	ST	ST
Woodinville	Seattle CBD	SR-522, I-5	30/30/30	30/30/30	ST	ST	ST
Federal Way	Sea-Tac	I-5	30/30/--	30/30/60	ST	ST	ST

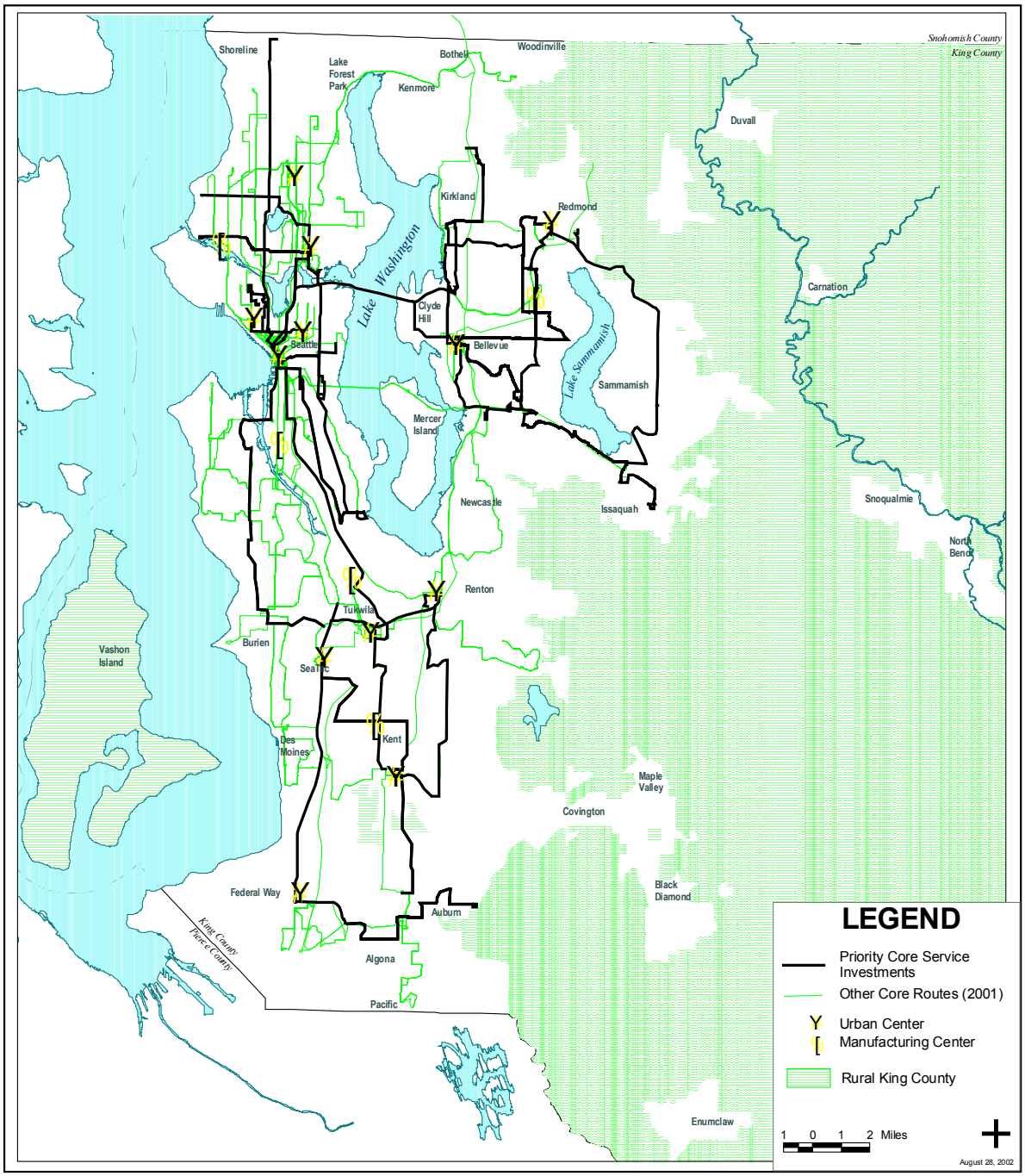

Figure 4-1: Core Service Priority Investment Corridors

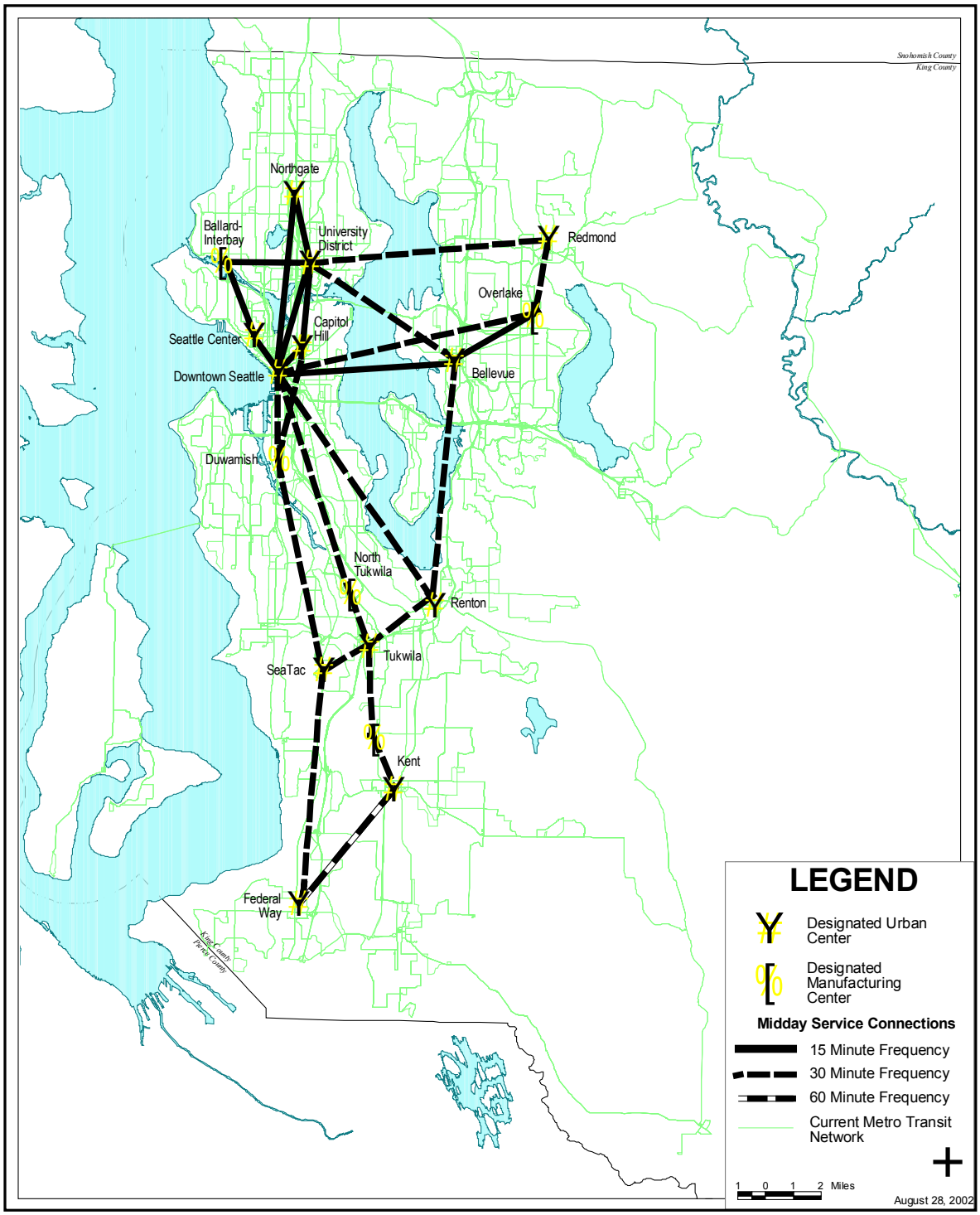

Figure 4-2: Direct Connections Between Designated Urban and Manufacturing Centers in King County

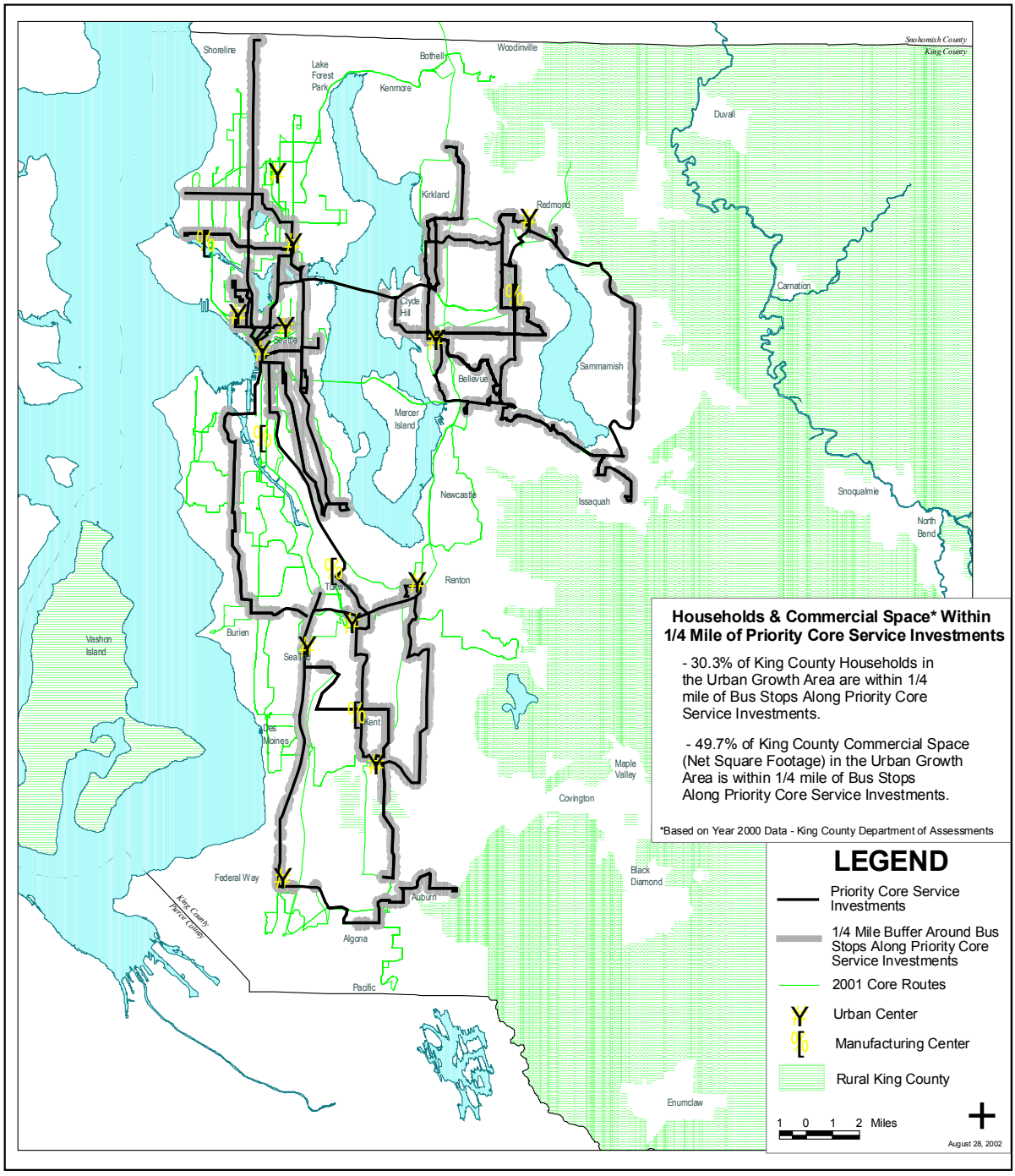

Figure 4-3: Core Service Priority Investment Corridors: Housing and Commercial Space Analysis

Transit Improvements and Land Use

Strategy S-4

Identify areas of urban King County to become eligible for enhanced transit service when they meet the following criteria:

- **By meeting or exceeding prorated established housing and population targets, or**
- **By encouraging higher density development and pedestrian activity through adopted regulations and policies that promote mixed-uses, establish minimum densities, reduce parking requirements, and carry out other efforts that support transit supportive development.**

Preference will be given to areas that realize community or neighborhood development consistent with these criteria.

A major cornerstone of the Growth Management Act (GMA) is that transportation planning be consistent with local comprehensive plans, which include neighborhood plans for some cities. More densely developed areas require higher levels of transit service. Further, areas of contiguous urban development emerge as significant transit markets. This is especially true of those areas that are on schedule to reach or exceed their housing and employment targets as established by the Countywide Planning Policies. In accordance with Destination 2030, additional transportation infrastructure and service is to be targeted to those areas that are accepting an increased share of the region's growth. In support of Destination 2030 and the GMA, transit service improvements will be targeted for improvement where routes serve centers and concentrations of population or employment in the Urban Growth Area (UGA). Additionally, transit service will be offered as an incentive to those jurisdictions that promote areas of higher density development, discourage parking, and improve the pedestrian environment of their communities.

Areas meeting the criteria cited in Strategy S-4 will be considered for enhanced transit service along with areas meeting other criteria, such as strong ridership demand. Those areas that are able to satisfy many criteria simultaneously, such as strong ridership demand, meeting or exceeding targets, and promoting higher density development will be given preference for additional service.

Bus Rapid Transit

Strategy S-5

Coordinate with the appropriate jurisdictions and agencies to define the project elements and costs associated with the development of a Bus Rapid Transit (BRT) system identified in Figure 4-4. Utilizing West Subarea new and existing service hours, move towards full implementation of BRT service in the Aurora Avenue North Corridor and develop strategies for implementation of a future BRT system.

King County Metro intends to continue Bus Rapid Transit (BRT) development efforts on targeted arterial corridors not served by Sound Transit services. BRT is a term used to describe a focus of a variety of transit services and facility investments that are intended to achieve higher capacity and faster operation than traditional bus routes. Such corridors could also be targeted for land use enhancements to encourage ridership potential.

In September 2001, King County Metro identified three candidate corridors for the implementation of a starter BRT line. King County Metro solicited proposals from the jurisdictions and agencies responsible for the arterial environment along these three corridors (WSDOT, Federal Way, Kent, Des Moines, Seatac, Tukwila, Seattle, Shoreline, Bellevue and Redmond) and input from the subarea transportation boards (Eastside Transportation Partnership, SeaShore Forum and South County Area Transportation Board).

The three King County Metro candidate corridors are:

- Aurora Avenue North, connecting Shoreline, north Seattle and downtown Seattle
- Pacific Highway South and South 154th Street, connecting Federal Way, Midway, SeaTac and Southcenter
- Northeast 8th Street, 156th Avenue Northeast and SR-520, connecting Bellevue, Overlake and downtown Redmond

In addition to the three candidate corridors identified by Metro, the City of Seattle has identified other candidate corridors for Seattle:

- Aurora-Greenwood-Downtown (via Aurora Avenue North),
- Ballard-Fremont-U-District,
- Downtown & West Seattle,

- U-District-Columbia City, and
- Lake City-Northgate-Ballard-Downtown.

In the West Subarea, BRT service implementation will begin with the Aurora Avenue North corridor because of its high ridership, high level of service, existing and planned roadway improvements, and the willingness of the Cities of Seattle and Shoreline to make additional investments. Continuing development of additional corridors makes sense for two reasons. First, the current revenue forecast indicates that the ability to implement BRT could be compromised or would come at the expense of nearly all other potential service improvements during this period. Second, input received from the affected jurisdictions as well as from the subarea boards consistently stated that BRT is a very promising service concept, but that more time should be spent in development and scoping of the concept, and that it should not directly compete with other system priorities financed from current revenue sources in this timeframe.

Park-and-Ride Services

Strategy S-6

Provide more service capacity at newly built or expanded park-and-ride lots as warranted by ridership demand at those locations. When identified as a subarea priority, make a portion of the new service investment available for innovative vanpool programs to support park-and-ride lot based transit service.

King County Metro operates service to over 100 permanent and leased park-and-ride lots containing over 17,000 parking spaces. These lots provide locations for people who do not live near a bus route or who might otherwise commute by auto to access the bus system and to meet their carpool and vanpool partners.

Peak period demand for service and/or parking in a number of regional corridors exceeds capacity, as evidenced by many overcrowded trips and by park-and-ride lots at or over capacity. The park-and-ride facilities with the most frequent service are filled beyond capacity. King County Metro will expand park-and-ride capacity by adding service and parking spaces at the most popular sites. Expanded commuter parking capacity and related service will move more people through corridors with limited available roadway capacity.

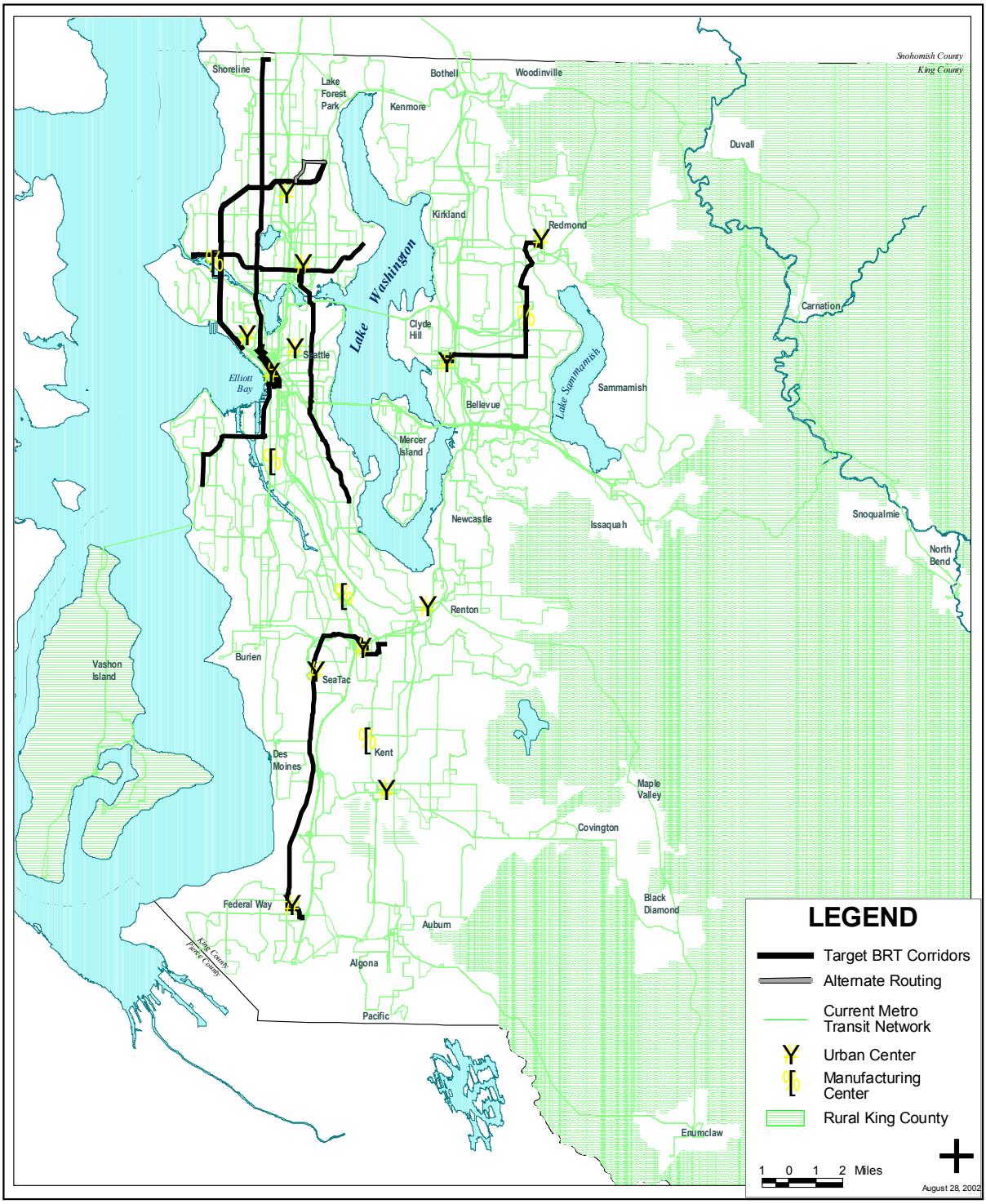

Figure 4-4: Targeted Bus Rapid Transit Arterial Corridors

Between 2002 - 2007, park-and-ride capacity in King County is expected to increase by about 6,000 spaces, about 3,000 being financed directly by King County Metro. Sound Transit will finance the balance of these spaces. Services targeted for improvement to existing park-and-rides that are programmed for added capacity and new park-and-ride locations during this period are shown in Table 4-3.

Area or Park & Ride Served	Description
Northgate P&R	Add peak period service on route 41.
Skyway P&R	Add AM and PM peak period service on either Route 101 or Route 143.
Redondo Heights	Extend route 190 to serve Pacific Hwy P&R, increase service.
Twin Lakes P&R	Consolidate express routes and increase service on route 179.
Eastgate P&R	Add AM and PM peak period service on route 212.
Issaquah Highlands P&R	New express route to Seattle CBD
Eastgate P&R to U. District	Improve peak period frequency on route 271 (both directions)
Issaquah Highlands P&R to Bellevue	New express route to Bellevue
North Bend P&R	Add AM and PM peak period service on appropriate routes as necessary.

Table 4-3 – Peak Service Increase Targeted to Increases in Park-and-Ride Capacity

Community Mobility

Strategy S-7

Improve community mobility options through increase in service levels on existing routes or through the creation of new services in transit-supportive higher household and/or employment density areas. Within each subarea, develop service proposals to serve residential and employment areas with the highest ridership demand and to promote circulation within communities. In the communities where flexible service and other King County Metro mobility products and services connecting to the all-day service network can be provided more cost-effectively than fixed-route service, those services should be expanded in conjunction with modifications and improvements to the existing system.

The effectiveness of fixed-route transit in attracting local trips is dependent on several factors, including the population and employment density, the street and sidewalk grid, and the number of common destinations that people want to access. Typically, fixed-route transit serves trips better in urban areas where people and destinations are more concentrated. In lower density areas where people and destinations are more dispersed, fixed route service has been difficult and expensive to provide. Alternative public transportation options, such as flexible local bus service, vanpooling services or carpooling services may provide a more cost-effective way to serve lower density areas.

The sample network includes examples of new or improved service connections. A number of these are in areas serving suburban population clusters or designated urban centers, such as connections between Auburn, Kent and SeaTac. Other examples include the extension of peak or all-day routes or the addition of new trips to areas such as Sammamish, Maple Valley and Covington.

Other local mobility examples are not included in the sample network but have been described by some jurisdictions as potential subarea service priorities. These include consideration of the West Seattle Water Taxi and other water taxi services as permanent or seasonal services that connect areas where this service concept is feasible and can be provided cost effectively. These also include local shuttles or circulators in communities such as Kent and Tukwila.

Specialized Transportation Services

Strategy S-8

Develop cost-effective alternatives to supplement federally mandated paratransit service and to provide transportation services to persons who are transportation-disadvantaged due to age, disability or income. Explore ways to include paratransit-eligible persons and other persons with disabilities and seniors on mobility products available to the general public, such as vanpools.

King County Metro has provided supplemental transportation services to persons with disabilities and seniors since the late 1970's. The federal Americans with Disabilities Act (ADA) of 1990 mandates that public transit agencies make transportation services for the general public accessible to persons with disabilities as well provide

"complementary paratransit" service for those whose disability prevents use of the service for the general public. Significant paratransit improvements were phased in over several years.

In 1996, a process was begun to identify program and policy changes that could re-direct some growth to more appropriate and cost-effective forms of transportation, including regular bus service, as well as innovative new programs. The result was King County Ordinance 13441, approved by the King County Council in March 1999. The ordinance defined two programs: The ADA Paratransit Program and the King County Community Transportation Program (KCCTP).

The council also approved Motion 10728 in July 1999, establishing within the transit program financial policies a policy to phase in increases to paratransit fares over 6 years until parity with fixed route bus fares is reached.

ADA Paratransit Program. The ADA Paratransit Program contains those minimum elements required of a complementary paratransit program by federal regulations. The program serves persons who are unable due to a disability to use accessible non-commuter fixed route transit service some or all of the time. Service is provided by Access Transportation, which uses private contractors to operate the call center, and vehicles purchased and owned by King County.

Complementary paratransit service must be comparable to non-commuter, fixed route service for the general public in several ways, including service area, response time and fares.

Eligibility criteria include:

1. Inability to board, ride or deboard an accessible bus
2. Need for an accessible bus or zone but one is not available, and
3. An interaction between the disability and the environment, which prevents travel to/from, a bus zone.

Persons can be found "fully" eligible or "conditionally" eligible, meaning they qualify for a ride only when certain conditions exist. ADA-eligibility extends to neighboring counties.

The ADA Paratransit Program changes being phased in as a result of Ordinance 13441 include:

- Applying a more stringent eligibility evaluation process
- Screening ride requests for conditions of eligibility, resulting in referral of a portion of the demand to other transportation alternatives

King County Community Transportation Program. The King County Community Transportation Program (KCCTP) contains service that supplements the complementary paratransit service provided by the ADA Paratransit Program as well as additional services for persons who are transportation disadvantaged due to age, disability or income, whether or not they are registered for the ADA Paratransit Program. The King County Community Transportation Program includes:

- The ADA Paratransit Program enhancements such as subscription service for recurring trips, limited door-to-door and hand-to-hand service, and an expanded weekday service area;
- The Paratransit OPTIONS program which provides subsidized taxi scrip and limited "feeder-to-fixed route" paratransit service;
- The Community Participation Program which provides operating, capital (including vehicles) and technical support to public and private agencies serving people with special transportation needs;
- Funding for services such as bus travel training, volunteer transportation and transportation information and referral.

Additional projects include exploring the use of the vanpool system for persons taking *ACCESS* to work and working with the City of Seattle, the Port of Seattle and King County to provide accessible vehicles to local taxi operators. Metro will continue to work with state departments and local agencies to develop better coordination of specialized transportation services funded or operated by a variety of sources.

When the ADA Paratransit Program changes and KCCTP programs are fully operational, more transportation options will be available in the community and, where appropriate, trips will be shifted to a lower cost service that meets the rider's needs. This should reduce the demand for more costly paratransit services.

Several technological improvements have been implemented recently or will be implemented in the next few years that are anticipated to result in improved productivity, on-time performance and customer service. These improvements, in conjunction with improvements to fixed route customer information technology, such as the on-line Trip Planner, will allow *ACCESS* Transportation to begin to offer trip-specific travel options to paratransit riders and will also provide more timely, reliable connections to bus service.

Commute Partnerships

Strategy S-9

Using a combination of fixed route bus service, transportation demand management actions, and additional transit and HOV products, develop transportation alternatives to reduce single-occupant vehicle (SOV) use in the targeted areas shown in Figure 4-5. Develop partnerships with local jurisdictions, employers and institutions, using pricing strategies and packaging services and products so that these alternatives benefit the partners and their employees, residents or community.

Attracting work trips at employment sites outside of central business districts presents numerous challenges for public transportation. These employment sites are often located in low-density, campus style developments offering free parking, and are difficult to serve with fixed-route transit. Improving the frequency and span of two-way all-day core routes (see S-3) is key to offering more travel flexibility.

The sample network in Appendix A depicts several improvements to these work trips to suburban destinations.

This sample network includes a substantial increase in suburb-to-suburb and some crosstown connections. Such services allow travel between two areas without a transfer in the central business district, which, in Metro's system, has traditionally been either downtown Seattle, and to a lesser extent, the University District and downtown Bellevue. These connections are provided on both new and improved all-day services that are part of the core network of routes.

Some peak-only, one-way routes have shifted over time to two-way service, especially in the suburban areas. Previously, many routes operated one-way service—to downtown Seattle in the morning, and from downtown Seattle in the evening. Because

some of these services now operate in two directions, workers are able to reach suburban employment sites from Seattle. Additionally, a number of ST Express Bus services now provide two-way all-day service, linking many Eastside locations with Seattle, with several South King County communities, as well as with Snohomish and Pierce counties.

While these improvements to the fixed-route transit system substantially enhance access to suburban employment sites, in many areas, the effectiveness of the service is limited by the low-density nature of the employment sites served. New ideas are being generated for products that address the specialized employment-related travel needs of non-CBD work sites. These products respond to different aspects of the commute need, from long-distance trips to midday circulation.

Ridesharing Services. Ridesharing services support transit investments and offer travel options for areas that are difficult to serve efficiently with transit. Ridesharing services complement the fixed route system by filling in gaps in coverage and they help develop markets that are currently beyond the reach or not served well by the fixed route system. King County's ridesharing services can also be effective for most employers; not just those with trip reduction requirements. Ridesharing services also support regional inter-modal passenger facilities by connecting commuters of various modes to their ultimate destination.

Public and Private Partnerships. Employers, educational institutions, and other organizations choose to participate in King County Metro Commute Partnership subsidy programs for a number of reasons. One primary motivation is to reduce parking. If more employees begin to participate in commuting by HOV modes, then more parking is available to customers. Employers may then reduce the expense of providing parking to employees, which is a significant cost to business. A second motivation is to comply with state Commute Trip Reduction Law program requirements. Though the law does not require that employers provide subsidies for transit or other HOV modes, many employers find the ease of participating in King County's subsidy programs to be the most effective means of reducing drive-alone trips. Finally, employers have found that employees value a benefits package that includes subsidies for alternative commuting.

Table 4-4 illustrates how strategies that broaden employee access to the transit system increase ridership. Two specific employment areas illustrate this point: SeaTac and

Eastgate. Neither of these areas have traditionally had high transit ridership in the commuter market. However, by increasing the availability of employer sponsored FlexPass benefits, new riders began to use what service was there. In SeaTac, transit's market share among commuters who had access to a FlexPass reached seven percent of morning commute trips in 2001. By contrast, commuters who did not have access to a FlexPass only rode transit during the morning peak three percent of the time. In Seattle, Eastgate, and downtown Bellevue the results were similar.

Area	% Transit Ridership without FlexPass	% Transit Ridership with access to FlexPass
SeaTac	3%	7%
Eastgate	3%	6%
Downtown Bellevue	11%	39%
Downtown Seattle	55%	60%

Source: 2001 Washington State Commute Trip Reduction Survey

Table 4-4 Ridership Gains in Various Employment Areas

Filling the gaps. In environments where regular transit service is limited or does not meet the mobility needs of commuters or other travelers, commute partnerships led to aggressive marketing of vanpools and carpools in suburban employment centers with great success in the 1996 – 2001 period. For example, from 1999 to 2001, King County Metro formed over 50 new vanpools to serve employment centers in Bothell and Redmond. This success depended in part on support from the local jurisdictions and employers, who partnered to provide HOV commuting benefits to their employees.

Expand Market for Current Products. Recent efforts focused on increasing ridership and participation by larger employers in funding employees' non-SOV commuting. However, much of the employer market remains untapped. The following will be pursued in order to reach new markets:

- Expand market outreach beyond major employers to smaller employers, developers and property managers
- Continue to simplify the provision of mobility products and services and financial partnering packages

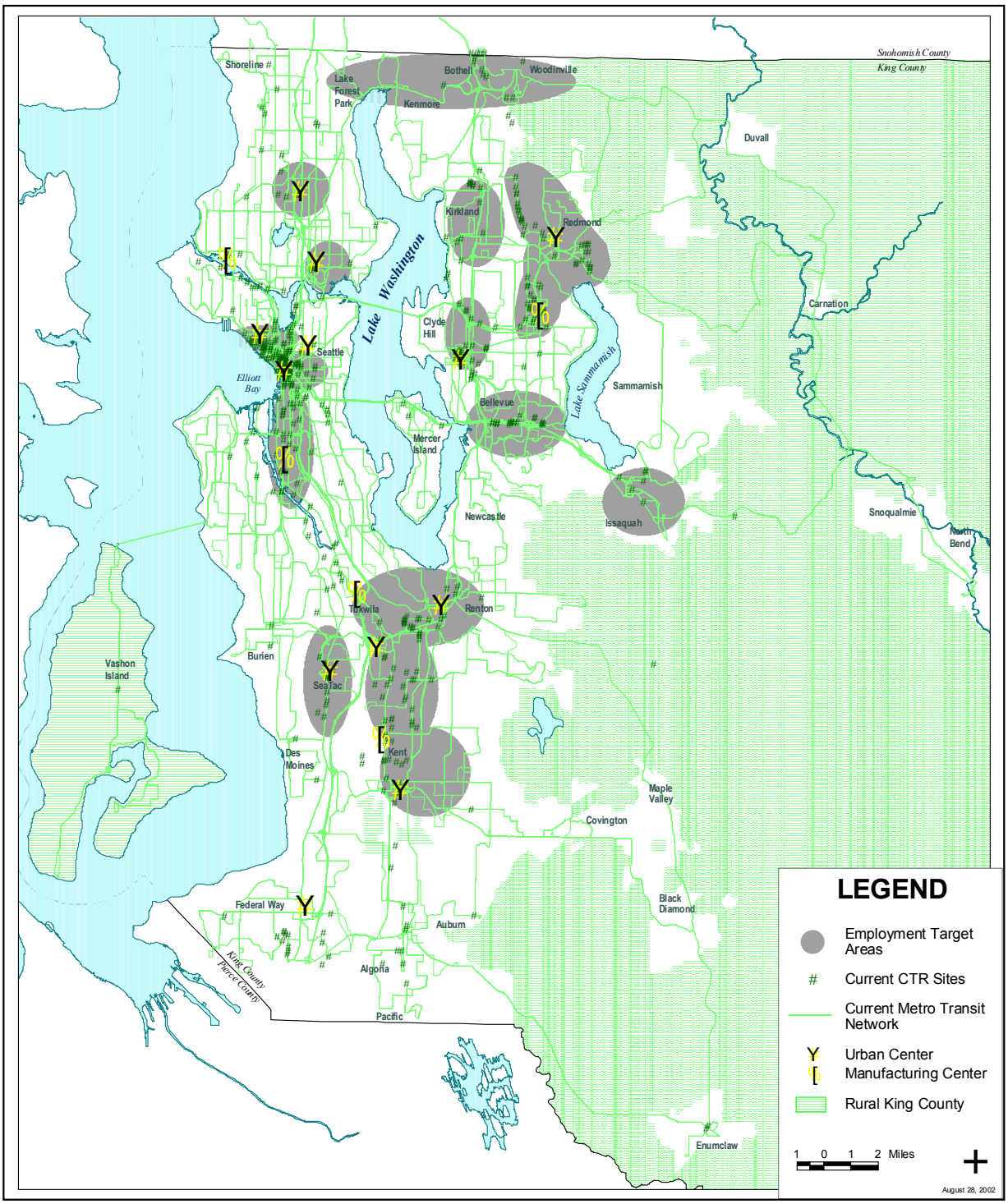

Figure 4-5: Employment Target Areas and CTR Sites [1]

[1] Employees throughout King County will be eligible to buy commute products and participate in partnership opportunities.

Additional New Products and Strategies. King County Metro will continue to look for opportunities to expand Commute Partnership efforts through the development of new products and demand management strategies. Some potential areas of development include the following:

- Addressing construction impacts of major public facilities with aggressive transportation demand management strategies
- Broadening application of the financial partnership approach with local jurisdictions, similar to the successful Redmond Trip Reduction Incentive Program (R-TRIP)
- Stationing Vanshare or Flexcar vehicles at park-and ride lots, rail stations and ferry terminals to link riders with destinations
- Using multiple vanpool vehicles along a travel corridor, operating at different times, allowing flexibility in participants' work hours
- Address regional vanpool fare equalization and or standardization issues and recommend approaches for action and implementation. Explore further subsidies for people with disabilities who switch from paratransit use to vanpools.
- Creating value-added benefits for ridesharing, such as frequent-flyer miles or other affinity programs
- Instant ridematch service in a travel corridor, where participants could use technology to arrange rides
- Shared-ride taxi service between transit centers and work or residential locations
- Application of FlexPass pricing to residential markets via condominium or home owners' associations, in partnership with local jurisdictions
- Neighborhood transportation networks which would facilitate ridesharing information among residents
- Technologies that increase customer access to services and reduce administrative customer requirements and operational support costs will be researched, evaluated and where appropriate, tested.
- Demonstration projects and partnerships will be leveraged to obtain service, customer and system requirements.

Appendix A identifies current and developing mobility products and services and outlines activities for the period 2002 - 2007.

Regional System Coordination

Strategy S-10

Work with the appropriate agencies to achieve integrated, cost-effective and efficient operation of public transportation services in King County addressing the needs of current and potential riders. Participate in transportation system planning efforts including state and regional projects of countywide significance to identify potential transit service and capital elements and funding.

To achieve integrated public transportation services, ongoing coordination and planning with other agencies is necessary. This strategy encompasses activities that King County Metro will engage in to identify appropriate transit services and products in the context of local and regional travel.

Major Planning Activities. The Puget Sound region is currently facing many potential transportation systems changes. Major projects such as Sound Transit's Link Light Rail, the Trans-Lake Washington and the I-405 corridor studies, the Elevated Transportation Company's Monorail project and others are progressing and may have significant impacts on the King County Metro transit system. While the specifics of those impacts are not known, King County Metro will continue its participation in these and other local planning activities as an active planner of and stakeholder in the countywide and regional transit system.

Sound Transit (ST) Integration. Several ST bus routes were implemented between 1998 and 2001, resulting in restructuring of King County services. For example, in September 1997, ST Route 550 replaced Metro Route 226, a core route between Bellevue and downtown Seattle. In September 2000 services between Seattle and Overlake and along I-405 were integrated with new ST Express services. ST Route 522 is planned for implementation in September 2002 in the SR-522 corridor. Integrated planning for the implementation of changes to King County Metro routes in coordination with ST Route 522 in is currently underway.

Sound Transit also plans to implement a longer span of peak-period two-way commuter rail service in the Green River Valley. Full commuter rail implementation is

expected to allow the restructure of many peak-only routes in the Green River Valley. Hours used to carry commuters to downtown Seattle will be available for other existing or new South King County transit services. King County Council Motion No. 10584 will serve as the applicable guideline for the use of re-deployable resources resulting from integration of services.

Other Coordination Efforts. In jurisdictions adjoining or straddling other counties (e.g., Federal Way, Auburn, Shoreline, Lake Forest Park, Kenmore, and Bothell), there is the challenge and opportunity to coordinate local services with other operators locally and in adjacent counties. Transfer facilities are provided in Auburn, Federal Way, Bothell, and Shoreline. Service coverage can most cost-effectively be provided with a service pattern integrated between King County Metro, Sound Transit, Pierce Transit, Community Transit and other operators.

In order to encourage regional travel by rail and ferry, it is important that intermodal transfers be comfortable, convenient, and safe. Bringing transit close to the facility reduces rider walk time. Increasing service frequency and improving schedule coordination reduces rider wait time. Operating service reliably is also crucial. For example, in 1997 and 1998, two routes were restructured to terminate at the Washington State Ferry's Colman Dock in downtown Seattle and were shortened to improve their reliability.

Additionally, efforts are increasing at the state and local level to coordinate public transportation services for people who are transportation-disadvantaged due to age, income or disability.

Student Mobility

Strategy S-11

Ensure that the mobility requirements of student passengers are recognized on a par with those in school districts that choose to participate in Student Transit programs. Participating districts will reimburse King County for all student transit expenses.

As the County develops new partnerships with local school districts and cities that bring additional riders and revenues to Metro transit, it is important to make certain that sufficient resources are available for these riders. In addition to normal student

fares for existing routes, school districts will be fully responsible for all additional costs, including capital costs, of adding custom routes or facilities to serve students' travel demand.

Special Events

Strategy S-12

Work with private and public agencies to develop strategies for using public transportation services to address congestion due to special events. Strategies may include street use, transit priority, and other strategies under the jurisdiction of King County Metro or local governments. By March 2003, report on these potential strategies to the Regional Transit Committee. The strategies shall address extending tunnel operating hours for expanded special event service where current requirements for 100 percent cost recovery are met.

Activity Center Mobility

Strategy S-13

Enhance circulation within activity centers through changes in transit service design and other programs to encourage transit use including, but not limited to, proposals for consideration of ride free areas. Preserve existing revenues and encourage financial partnerships with others to cover additional expenses associated with the provision of new services and programs for this purpose.

Providing for circulation within activity centers extends the range of pedestrians and enhances livability of downtown areas. Fixed route transit service, ridesharing, vanpool and Access services all contribute to mobility within activity centers. Opportunities to improve circulation in activity centers will be a consideration when bus route changes are considered.

Expansion or Creation of New Ride Free Areas

Expansion or creation of new ride-free areas has been proposed as a means to make access to existing bus service in activity centers easier. The issues and impacts associated with this were evaluated during 2003. Fare collection in new ride free areas

would be accomplished by collecting outbound fares on exiting the bus (as is done for routes serving the Seattle CBD). The 2003 analysis concluded that new ride free areas in Seattle would not be viable without significant or costly changes to current fare collection methods. Others may be feasible, but should be assessed in comparison with other options that would accomplish the same objectives.

Expanded or new ride free areas may be considered when:

- The likely mobility benefits outweigh impacts on existing riders and transit operators
- Routes do not serve more than one ride free area
- Ability to understand the fare payment system will not be significantly reduced
- Consideration of all options shows that a ride free area will be the most effective
- Full incremental cost is borne by local jurisdiction or public-private partnership

Expanded or new ride free areas are more favorable when:

- Using all doors for loading will speed operation or reduce costs
- All transit agencies serving the area agree to participate
- Significant increase in transit use will result within the activity center

Shuttles and Circulators

Metro has had mixed experience with shuttles and circulators. In many cases shuttles and circulators operated by Metro or in partnership with others have experienced low ridership and have failed to sustain partner financial participation.

Special routes that serve only a circulation function have been successful only in cases where they have been designed to do at least one thing well – they serve at least one demonstrable market need effectively. Ridership will be further enhanced if other travel needs can also be met without compromising this primary purpose.

Shuttles and circulators may be considered when:

- Services meet minimum productivity guidelines for regular transit routes
- Speed or design of regular transit service will be enhanced
- More expensive fixed-route service can be replaced or deferred
- VanShare and FlexCar options will not serve the same purpose at lower cost

Other Options

Several other options are available to local jurisdictions interested in enhancing activity center circulation. Options to be considered as alternatives to ride free areas and circulators include:

- A single route operated fare-free (with local funding replacing anticipated fare revenue)
- Broad application of employer transit pass incentives, making fares less of a barrier
- Residential pass programs
- Token programs providing transit fares to shoppers
- Shared-use parking programs that reduce auto trips between parking lots within a center
- Pedestrian and bicycle improvements and incentive programs
- Privately-operated and funded shuttles and circulators using vans or taxis
- Parking for Vanshare vans at transportation terminals to shuttle commuters to worksites

Waterborne Transit

Strategy S-14

Carry out a work program to determine the conditions when King County investment in waterborne transit may be appropriate and determine under what conditions and circumstances King County could choose to participate in the provision of passenger ferry service.

Coordinate the work program with appropriate stakeholders and others currently working on waterborne transportation issues.

The study will analyze costs, ridership, benefits and impacts of representative passenger ferry services under different operating, funding and policy assumptions. The study will assess the risks, costs and benefits of each option; and recommend next steps. The results will provide policy-makers with information needed to decide when County investment in waterborne transit is justified and under what terms.

The study will also analyze potential markets, operating and funding strategies, and possible public and private roles. Based on findings, staff will propose recommended policies, criteria, and potential next steps. This effort will be coordinated with the Discovery Institute's Cascadia Project work on waterborne transit. Additional stakeholder and industry input and comment will be solicited on the options to be considered, evaluation methods, and proposed study recommendations.

Work Program – January-June 2005

Task 1 – Inventory and synthesis of previous studies. Catalog work done to date on Puget Sound passenger ferry options to take maximum advantage of previous work. Include the history of passenger ferry service locally and nationally; a summary of previous studies; and a summary of analyses and findings related to passenger demand, operating models, financing options, fares, service levels, landside facilities, land access, etc.

Task 2 – Explore and review possible operating, financing and partnership options. Identify approaches to operating and financing passenger ferry services in King County. Operating options will include direct county operation, contracted, or franchised private operation, or purely private operation. Financing options will include use of transit funds (including implications of subarea service allocation policies), ferry district revenues, and use of different fare structures. Public-private partnership options will address possible terms of County participation, including provision of capital facilities, direct service or fare subsidies.

Task 3 – Develop sample routes and implementation strategies. Work with the stakeholders to develop representative passenger ferry routes to serve Vashon, West Seattle, Lake Union, and Lake Washington travel markets and reasonable implementation scenarios.

Task 4 – Assess relative costs and effectiveness of each option. For each combination of service and implementation strategies, identify service hours, vessel and terminal needs, projected usage, fare revenue, subsidy requirements, and other relevant evaluation data. Assess potential opportunity costs of waterborne investment vis-à-vis other public transportation solutions, and possible key criteria for determining which should be implemented. Summarize strengths, weaknesses, and issues related to each option.

Task 5 – Conduct stakeholder outreach. Conduct two workshops and other outreach to stakeholders including potential service providers, cities, major institutions, labor, regulatory agencies, the King County Council, and other interested parties. Stakeholders will assist in the development and analysis of options, and comment on proposed project recommendations.

Task 6 – Develop recommendations

- Conditions when County participation in water transportation should be considered
- Institutional and operating options and recommendations
- Financing and fare options and recommendations
- Source and nature of County subsidy, and expectations of other partners
- Next steps