Section Four:
Improving the System – Service Strategies

King County Metro provides an array of services to meet the many different travel needs of passengers, and supports the varying land uses throughout the county. All-day, limited stop express services operated by Metro and Sound Transit are supplemented by Metro's additional express service during peak periods, local services to and between activity centers, vanpools and ridesharing for trips that are less convenient by bus and *Access* service for citizens that are ADA eligible.

The backbone of Metro Transit service is a network of high ridership "core service connections;" transit routes with frequent, two-way, all-day service that connect concentrations of activity throughout King County. Local routes support the core network by extending transit coverage to residential areas, connecting more areas to transit hubs and activity centers. Peak-only routes, which include many express services, provide additional speed and capacity to expand the county's transportation options during commute periods. These services, along with vanpool, rideshare and *Access* paratransit, are designed to meet a variety of user needs that are the focus of service strategies within this section.

Planned improvements to Metro Transit service over the next ten years were funded by voter approval of the *Transit Now* initiative in November 2006. Service improvements are a core component of the *Transit Now* plan, which will increase the frequency and span of service on many core service corridors, implement five RapidRide bus rapid transit routes, and provide new service in developing areas. *Transit Now* also initiates a service partnership program that provides public and private partners an opportunity to improve specific services by contributing a portion of the cost, either financially or through speed and reliability investments that improve service and reduce costs.

The following fifteen service strategies describe how King County Metro plans to address the many public transportation service needs within King County. While these strategies describe discrete actions, in practice King County Metro attempts to advance multiple strategies whenever a service change is proposed. The process King County Metro uses to implement service and capital improvements is described in Section 6.

Strategy S-1: Service Consolidation

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

Reducing or eliminating poorly performing routes can free up service hours to improve more productive routes and address unmet service needs. And by consolidating services on parallel routes into a single route, it is often possible to create corridor service that is more frequent, productive and reliable. Service consolidation describes the continual improvement to service that results from using each service change as an opportunity to shift resources to stronger routes and more productive uses.

Recent experience implementing the service consolidation strategy points to principles that contribute to successful consolidations. First, the main segments of routes must be as direct and frequent as practical. Frequent service mitigates the inconvenience of transferring by minimizing wait time and facilitating convenient connections to other markets. Secondly, sufficient capacity must be provided on the main segment of routes so those riders can avoid having to stand for extended periods. And, finally, trips should be more evenly spaced throughout the day as is the case with a headway-based system rather than the "work start-quit time" system that was historically used by King County Metro. The earlier system had emphasized the arrival and departure times at major centers at presumed shift change times.

A recent example of a successful service consolidation was demonstrated in the Ambaum-Delridge corridor, where a restructure of core service provided higher frequency service in the corridor. Other service in the area was also restructured and connections between bus routes were improved through higher frequencies. The higher frequency service achieved through consolidation resulted in increased ridership and more efficient operations. Following the restructure, ridership along the Ambaum-Delridge corridor increased by over 40 percent on weekdays and the overall ridership in the area increased by 8 percent, notably higher than the system ridership growth of 2-3 percent for the same period.

King County Metro will continue to consider service consolidations for areas where there is a positive impact on service efficiency and transit ridership. The service consolidation strategy is considered for all Metro Transit service changes. Exhibit 4-1 summarizes key corridors for consolidation.

Exhibit 4-1
Major Consolidation Corridors

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		

Strategy S-2: Service Design

Improve transit on-time performance through: adjustments in routing, splitting of unreliable through-route pairs, adding of recovery time between trips, moving routes between operating bases, and adding time or trips to schedules to account for slower travel speeds or recurring overloads.

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.

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. Many factors impact service reliability including traffic congestion and changes in ridership. As traffic and ridership change, schedules must be adjusted to maintain on-time performance, and sometimes routes must be changed to maintain or restore reliable service.

Transit operates in increasingly congested traffic conditions throughout King County, especially in the urban centers, on freeways approaching urban centers, and on arterial roads approaching freeway interchanges. Traffic congestion slows transit and does so in an irregular manner that causes trip times to vary – so schedules need constant adjusting. 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 on time or at all. Riders respond to this risk by catching earlier trips, increasing overall trip time, or by reducing their use of transit.

When traffic congestion delays a specific service on an ongoing basis, schedule maintenance resources may be added to the route. Time is added in between bus trips in work assignment 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.

Route design also impacts service reliability. Longer routes have a greater cumulative exposure to traffic incidents, wheelchair lift deployments, and other sources of intermittent delay that become more severe as traffic worsens. Unreliable service also tends to be unevenly loaded, since a bus that is delayed starts to pick up passengers who were intending to take the following bus, while the following bus now has a lighter load causing it to operate ahead of schedule. When this occurs, buses bunch together, decreasing the effective frequency of the service.

Bus trips that enter downtown Seattle as one route and leave as another (known as "through-routing") are especially susceptible to reliability problems, because the combined trip covering two routes can be very long. Many downtown-oriented all-day routes are through-routed, and the practice does also have advantages, it: reduces operating costs, uses fewer buses to provide the same amount of service, distributes passenger loads from both routes throughout the central business district, and it provides

one trip access for riders to go from one side of the city to the other. Through-routing also reduces downtown bus volumes and the need for layover space in downtown areas where curbspace is difficult to obtain. Most trolley routes and many diesel routes operate this way. This practice works well as long as traffic congestion does not unduly delay service. But as traffic congestion worsens, through-routes become more difficult to operate reliably.

Schedule reliability is an important factor in the quality of transit service. The implementation of *Transit Now* will provide an increase in schedule maintenance hours, providing expanded resources for King County Metro to improve service reliability. These resources will be used to adjust schedules as congestion or overloads makes trip times longer, and to redesign routes when they can no longer operate reliably.

Strategy S-3: Core Service Connections

> **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 as listed in Exhibit 4-2 and shown in Exhibit 4-4 to support existing demand and attract more riders on a core network of key connections. Improvements in core services will be made consistent with the *Transit Now* program.**

The largest service investment in *Transit Now* in this strategic plan is dedicated to improvements to the high ridership core service connections. Core routes are primary two-way, all-day connections between activity centers throughout the county. Because core routes have transit attractions at both ends, they are productive in both directions. Core routes are strengthened by the service consolidation strategy, which aims to consolidate parallel routes to develop a stronger and more frequent all-day connection. By providing service to and between the county's activity centers, the core connection network advances the land use and transportation objectives of local and regional comprehensive plans.

Transit Now high ridership core service investments target routes serving and connecting urban and manufacturing centers. Service improvements include added trips, frequency upgrades and expanded hours of operation. 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. When service becomes very frequent, some riders will find they can use it spontaneously, without having to consult a timetable.

Service frequency is an important factor in ridership levels. 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[10]. Ridership levels are typically more responsive to changes in service frequency[11]. The target frequency for service on routes selected for *Transit Now* investment is every 15 minutes, seven days a week. Improvements funded by *Transit Now* are shown in Exhibit 4-2, and illustrated in Exhibit 4-4. All other core corridors are listed in Exhibit 4-3 and shown in Exhibit 4-5.

King County Metro investments in core service routes support land use and growth management objectives by focusing transit service improvements on routes that serve transit and pedestrian-friendly activity centers. Improved transit service levels can also promote complementary actions by local jurisdictions and private developers to make transit service more attractive and effective, and to make improvements to pedestrian access and walkability. Local jurisdictions can improve transit by promoting density near transit lines, by providing queue jumps or transit signal priority at intersections to improve the speed and reliability of service, or by improving the pedestrian environment that help transit users get to and from their bus stop. Local jurisdictions and employers can make transit more effective through commute trip reduction programs and by managing the supply of parking. By identifying corridors where transit improvements will occur, local jurisdictions can adopt comprehensive plans that will focus development and improvements in places that will complement and support planned transit services.

---

[10] 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.

[11] John E. Evans *Traveler Response to Transportation System Changes*. Transportation Research Board, 2004.

Exhibit 4-2

Transit Now Investments for Core Service Routes

Between		Corridor	2016 Target Frequency		
			Peak	Midday & Sat	Eve & Sun
Level 3 Improvements (More than 15,000 annual hours): Major weekday frequency upgrades, new bus routes and/or route extensions					
Auburn	Kent	Auburn Way	30	30	30
Bellevue	Eastgate/BCC	Lake Hills Connector, 148th Av SE	10-15	15	30
Bellevue	University District	SR-520	10-15	15	30
Des Moines	Downtown Seattle	1st Ave S, SR-509, E Marginal Way	30	60	60
Issaquah	Bellevue	I-90, BCC	30	30	60
Issaquah	Redmond	228th Av SE, NE Sammamish	30	30-60	60
Kent	GRCC	E James St, 124th Av SE	30	30	60
Kent	Burien	KDM rd., S 240th St, 1st Av S	30	30	60
Kent	Four Corners	SE Kent Kangley Rd	30	30	60
Kent	Renton	Smith St., Benson Rd, Carr Rd	15	15-30	30-60
Kent	SeaTac	Orillia Rd, S 212th St	30	30	30
Kirkland	Eastgate/Factoria	156th Ave, Overlake, Crossroads Mall, BCC, Eastgate	15	15	30
Kirkland	Redmond	Avondale Rd NE, NE 85th St	30	30	30
Queen Anne	Downtown Seattle	Queen Anne Ave N	5-7	10-15	30
Renton	Burien	SW Grady Way, S 154th St	15	15	30
Level 2 Improvements (5,000 - 15,000 annual hours): Minor weekday frequency upgrades, expanded weekday hours of operations and/or added weekend service.					
Ballard	University District	NW Market St, N and NE 45th St	10	15	15-30
Beacon Hill	Downtown Seattle	Othello/New Holly Station, Beacon Av S	5-7	10-15	15-30
Bellevue	Bear Creek	Overlake	15	15-60	60
Bellevue	Kenmore	Finn Hill, Juanita, Kirkland, South Kirkland P&R	30	30	60
Bellevue	Renton	Coal Creek Pkwy, Factoria, Newcastle	15	30	30
Capitol Hill	Seattle Center	Denny Way	15	15	30
Kirkland	Bellevue	Lake Washington Blvd NE, Bellevue Way NE	15	30	60
Redmond	Eastgate/Factoria	148th Ave, Crossroads Mall, BCC, Eastgate	15	15	30
Renton	Downtown Seattle	MLK JR Way S, I-5	5-10	15-30	30
Redmond	Eastgate/Factoria	148th Ave, Crossroads Mall, BCC, Eastgate	15	15	30
University District	Downtown Seattle	Eastlake Ave E, Fairview Av N	12	15	15-20
Level 1 Improvements (5,000 annual hours or less): Added trips, expanded hours of operation and/or weekend frequency upgrades					
Auburn/GRCC	Federal Way	15th St SW, Lea Hill Rd	30	30	30
Burien	Downtown Seattle	Ambaum Blvd SW, Delridge Way SW	7-10	15	30
Kenmore	Shoreline	Ballinger Way, Aurora Village	15-30	30	60
Kent	Downtown Seattle	W Valley Hwy, Southcenter Blvd, Interurban Ave S, I-5	15	15	30
Kirkland	Downtown Seattle	108th Ave NE, SR-520	15	30	30-60
Northgate	Downtown Seattle	I-5	4-15	15	30

Exhibit 4-3
Other Core Service Corridors

Between		Corridor	2016 Target Frequency		
			Peak	Midday & Sat	Eve & Sun
Other Core Corridors served by Metro Transit					
Admiral	White Center	California Ave SW	30	30	30
Aurora Village	Downtown Seattle	Aurora Ave N	10	15	30
Ballard	Northgate	24th Ave NW, Holman Road	30	30	60
Ballard	Downtown Seattle	15th Ave NW	10	10	30
Bellevue	Factoria	112th Ave NE, South Bellevue P&R	30	30	60
Bellevue	Redmond	Crossroads, Overlake	15	15	30
Capitol Hill	Downtown Seattle	15th Ave E, Pine St.	10	15	30
Capitol Hill	Downtown Seattle	Broadway E, Pine St.	10	10	15-30
Capitol Hill	Downtown Seattle	Madison St.	10	15	30
Central Area	Seattle CBD	Jefferson-James	7-8	10	15
Federal Way	Downtown Seattle	I-5	30	30	30
Federal Way	SeaTac	SR-99	20	30	30
Fremont	Downtown Seattle	Dexter Ave N	10-15	15	30
Greenwood	Downtown Seattle	Greenwood Ave N	15	15	30
Kirkland	Totem Lake	124th Ave NE, Kingsgate P&R	30	30	60
Loyal Heights	University District	NW 85th St, 15th Ave NE	10	15	30
Madrona	Downtown Seattle	Union St	15	15	30
Northgate	Downtown Seattle	Wallingford Ave N, Aurora Ave N	20	20	30
Northgate	University District	Roosevelt Way NE, 5th Ave NE	10-15	15	30
Queen Anne	Downtown Seattle	5th Ave N, Taylor Ave N	10-15	20	15-30
Rainier Beach	Downtown Seattle	Rainier Ave S	10	10	15-30
Sea-Tac Airport	Downtown Seattle	I-5	15-30	15	30
University District	Downtown Seattle	Pine St. 23rd Ave NE	10-15	15	30
University District	Downtown Seattle	I-5	5-8	7-10	--
University District	Columbia City	23rd Ave NE, MLK Jr Way S	10	15	30
University District	Woodinville	SR-522, Bothell	30	60	---
West Seattle	Downtown Seattle	Fauntleroy Ave SW, W. Seattle Bridge	15	15	30
White Center	Southcenter	Military Rd, S 144th St	30	30	30
Core Service Connections in King County served by Sound Transit					
Redmond	Kirkland	NE 85th St	30	30	60
Bellevue	Downtown Seattle	I-90, Bellevue Way NE	5-8	15	30
Issaquah	Downtown Seattle	I-90	30	30	60
Bothell	Bellevue	I-405	15	30	30
Lynnwood	Bellevue	I-405	15	30	60
Bellevue	Sea-Tac	Renton, I-405	30	30	30
Bellevue	Auburn	Renton, Kent	15	30	60
Redmond	Downtown Seattle	SR-520	10-15	30	30
Woodinville	Downtown Seattle	SR-522, I-5	30	30	30
Federal Way	Sea-Tac	I-5	15	--	--

Exhibit 4-4

***Transit Now* Investments in Core Service Routes**

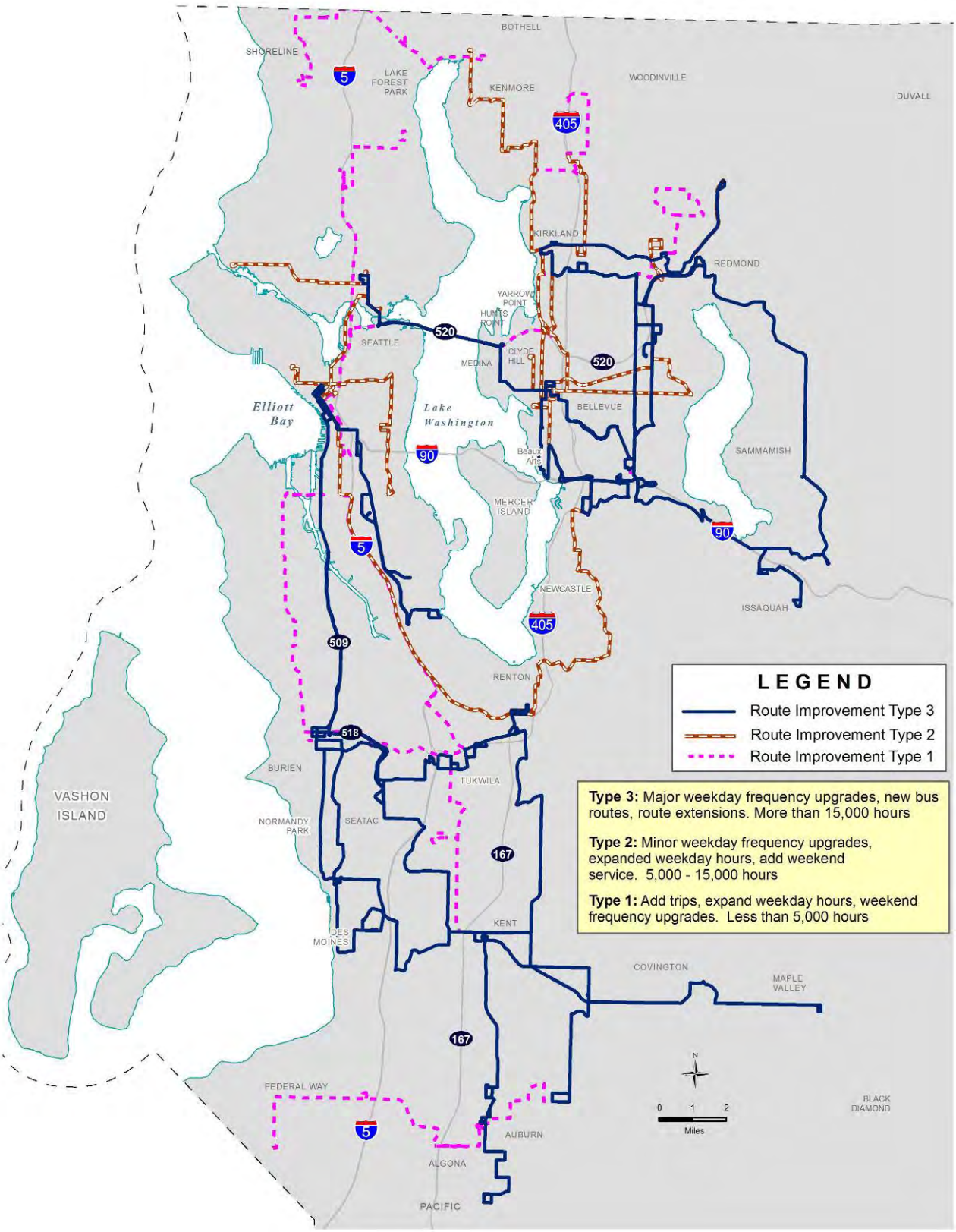
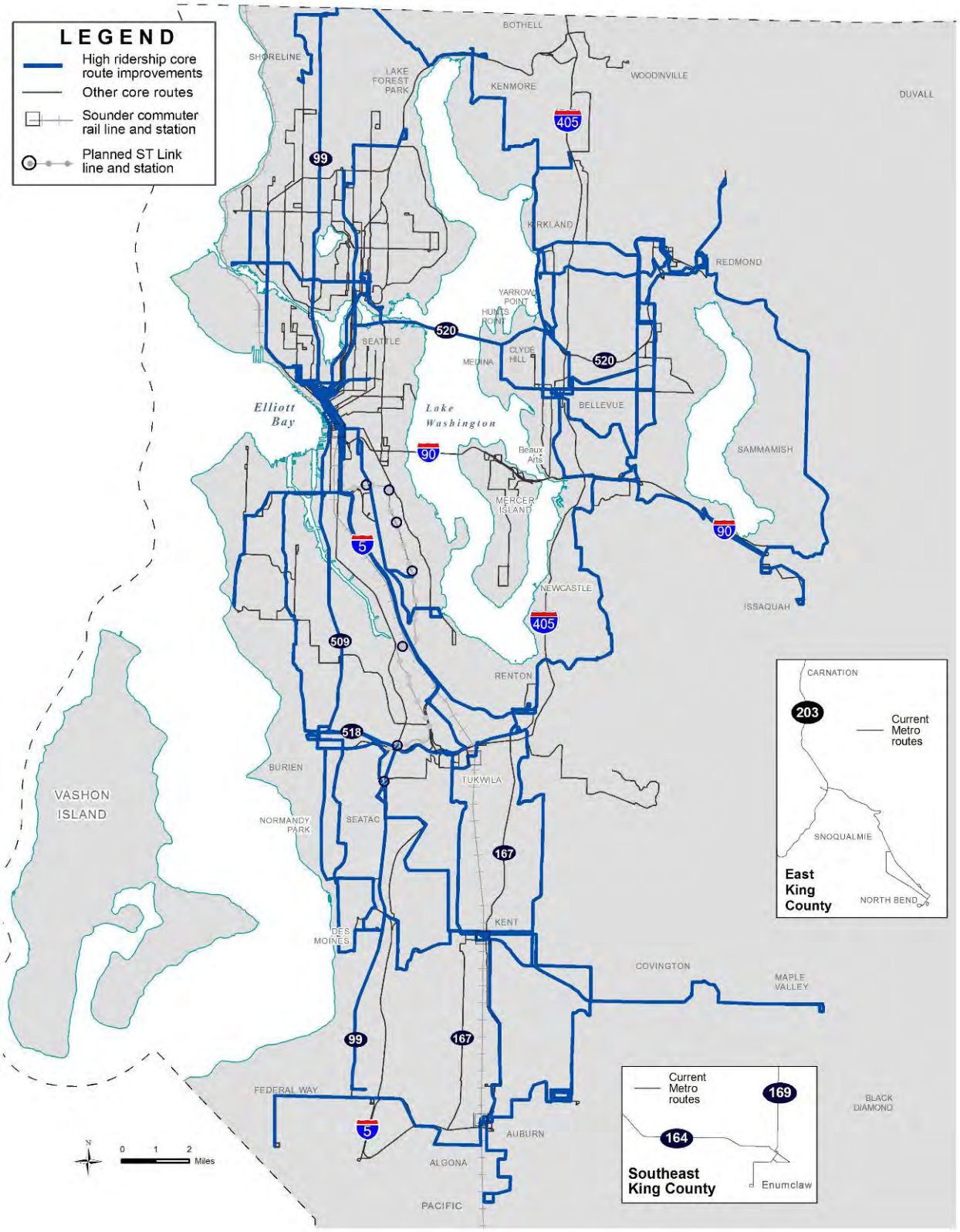


Exhibit 4-5
Core Service Corridors



Strategy S-4: Transit Improvements and Land Use

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 and complementary with local comprehensive plans, which include neighborhood plans for some cities. More densely developed areas require higher levels of transit service, and areas of contiguous urban development emerge as significant transit markets. This is especially true of those areas that will reach or exceed housing and employment targets as established by the Countywide Planning Policies.

Consistent 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 Now* service improvements are targeted on core connection and RapidRide bus rapid transit routes that serve and connect 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, reduce parking requirements, and improve the pedestrian environment of their communities.

As transit investments are made to implement the *Transit Now* program, or as additional resources are freed up due to route consolidation or efficiency improvements, areas meeting the criteria cited in Strategy S-4 will be considered for enhanced transit service along with 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 the greatest preference for additional transit service if additional resources become available.

Strategy S-5: Bus Rapid Transit

Design, develop and implement RapidRide, a Bus Rapid Transit system identified in Exhibit 4-6. Pursue grant funds and work with local jurisdictions to leverage additional funds to enhance the service frequency, speed, reliability, amenity and identity of RapidRide services funding by the *Transit Now* program.

King County Metro is developing RapidRide in five corridors over the next ten years as part of *Transit Now*. RapidRide will provide improved frequency and a high quality of service that will significantly improve the customer's transit experience and make the transit system easier to understand and use. RapidRide incorporates transit service and facility improvements that achieve higher rider satisfaction than traditional bus services and will be designed to reduce travel times by 10-30 percent. Key features of RapidRide include:

- High frequency operation (target of 10 minutes or less during most hours of weekday operation)
- Faster, more reliable trip times obtained through HOV or Business Access and Transit (BAT) lanes, and/or priority at intersections through transit signal priority and queue jumps
- Improved shelter waiting areas with real-time information at stations
- Low emission hybrid diesel-electric buses
- Branded buses and facilities with a unique look and feel

Since the approval of *Transit Now* by King County voters, King County Metro has worked to further define further key attributes of RapidRide. This interdisciplinary planning work has including evaluation of other bus rapid transit projects elsewhere and multiple analyses evaluating how common attributes will affect Metro Transit service delivery. Planning and design work is currently underway to efficiently incorporate additional attributes of bus rapid transit, including:

- The option of three passenger doors and possible changes to the configuration of the coach interior in order to reduce delay caused by passenger turnover
- A potential change in fare payment policy to reduce dwell by allowing full utilization of passenger doors on inbound and outbound trips

- A potential proof-of-payment policy associated with changes in boarding, that enhances passenger security
- Stations and stops spacing similar to rapid transit systems elsewhere which allows for improvements of RapidRide to speed and reliability as well as to passenger safety and comfort

Further development of the RapidRide program will be a key focus of the 2008 update to this strategic plan.

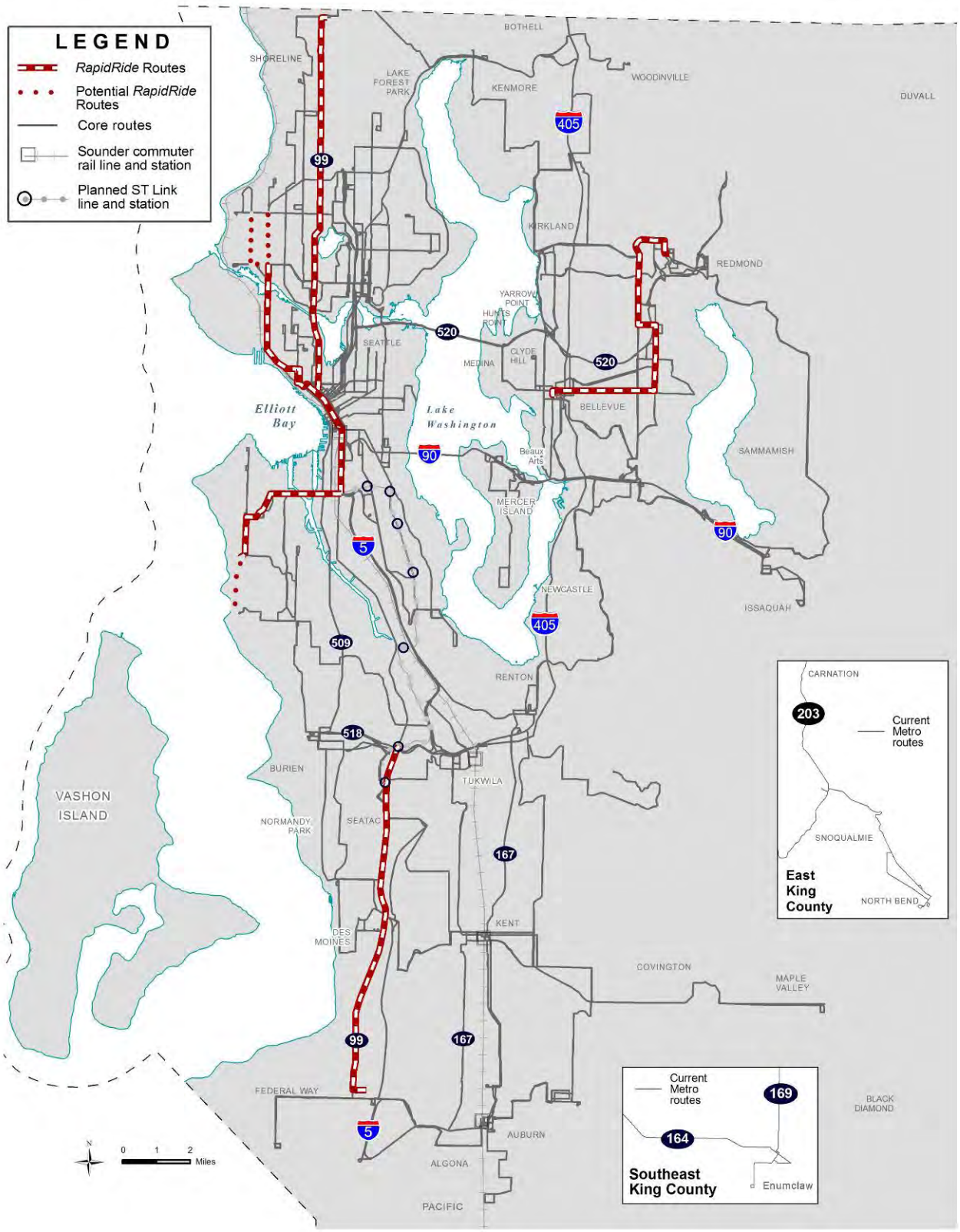
As identified in Exhibit 4-6, the five Metro Transit RapidRide corridors are:

- Aurora RapidRide, connecting Shoreline, north Seattle and downtown Seattle
- Ballard/Uptown RapidRide, connecting Ballard to downtown Seattle along 15th Ave NW and W Mercer Place
- Pacific Highway South RapidRide, connecting Federal Way, Midway, SeaTac and the South 154th Street Link light rail station.
- Bel-Red RapidRide, operating on Northeast 8th Street, 156th Avenue Northeast and 148th Ave NE, connecting downtown Bellevue Crossroads, Overlake and downtown Redmond
- West Seattle RapidRide, connecting West Seattle to downtown Seattle via the West Seattle Bridge

Besides numerous national and international examples of the benefits of bus rapid transit, King County Metro already has experienced the positive benefits of implementing some of the attributes of bus rapid transit. Enhancements in the Aurora Avenue N corridor have already provided more efficient bus service through the area in preparation for RapidRide implementation. Frequency improvements to popular routes serving the corridor have increased ridership in the area. The addition of transit signal priority technology at some intersections along Aurora Ave N and consolidation of stops has also improved transit speed and reliability. The provision of Business Access and Transit (BAT) Lanes on portions of the corridor will provide opportunities for implementing RapidRide services.

The Pacific Highway South RapidRide line is scheduled to be the first RapidRide line in operation, with implementation targeted for early 2010. RapidRide implementation in other corridors will continue throughout the ten-year period of *Transit Now*.

Exhibit 4-6
RapidRide Corridors



Generally, RapidRide will provide enhanced service in corridors already served by Metro Transit, though modifications to existing transit route paths are expected. The financing and staging plan has assumed that existing service investments will go towards RapidRide implementation. Because in most cases this means changes to existing routes, King County Metro is undertaking a planning process with community members in advance of final approval of RapidRide route paths and station/stop locations. An affirmative and advanced recognition of these basic corridor-specific attributes is a pre-requisite for applying specific capital investments in each corridor that will improve the speed, reliability and passenger interface of RapidRide.

Beginning in Fall 2007, King County Metro and jurisdiction staff will establish advisory panels and technical advisory groups to consider technical and public feedback associated with route design attributes. Current work is focused on RapidRide lines that are scheduled for earlier implementation, namely Pacific Highway South, Bel-Red, and West Seattle. King County Metro will seek King County council approval of the specific RapidRide line travel alignment and stop/station locations for these three corridors by early 2008 in order to begin necessary capital improvements in these corridors.

RapidRide implementation for each route will occur in two phases. The first phase will establish the final route, street and facility improvements that require a significant lead time to complete. The second phase will occur between 12 and 18 months prior to implementation of each route, and will consider potential restructures of other Metro Transit routes in conjunction with RapidRide service startup, following King County Metro's regular service change process and public outreach process.

Strategy S-6: Transit Access in Rapidly Developing Areas

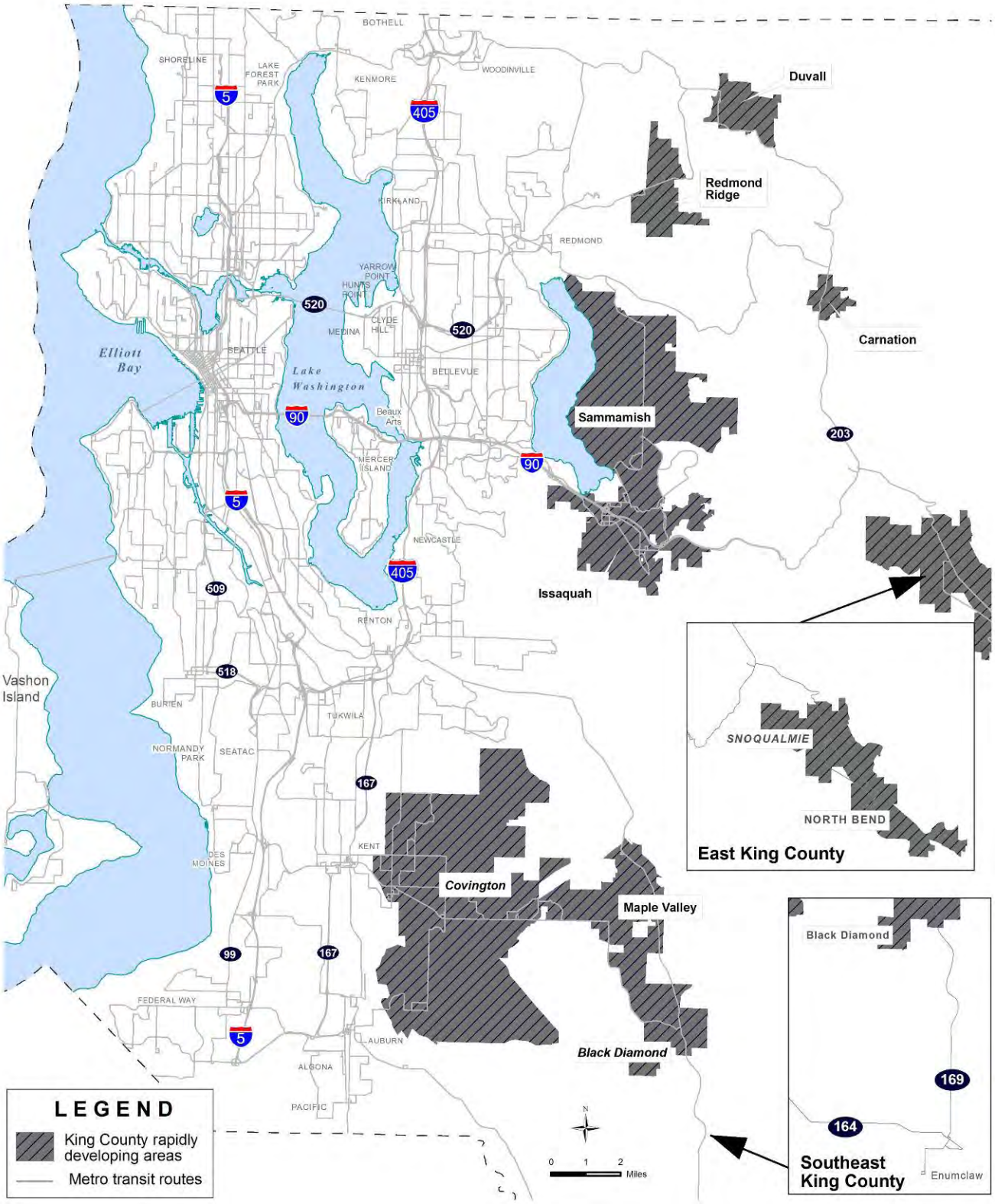
Expand service coverage in areas with rapidly developing population growth of sufficient density to support transit service, and with a street network that accommodates non-circuitous transit routing and pedestrian access. For developing areas that do not meet these criteria, provide service capacity at newly built, expanded or leased 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.

As part of *Transit Now* implementation, King County Metro plans to increase service to growing residential areas within the Urban Growth Area (UGA). These developing areas are illustrated in Exhibit 4-7. The addition of peak service in areas not currently served and the expansion of midday service in some areas with peak only service will provide developing areas with increased transit service. Specific improvements in developing areas will be developed as part of the 2008 update to this Strategic Plan.

King County Metro operates service to 130 permanent and leased park-and-ride lots containing over 23,000 parking spaces. From 2002 - 2007, park-and-ride capacity in King County was expanded by nearly 7,000 spaces. Park-and-ride locations provide access to the bus system for people who do not live near a bus route or who might otherwise commute by auto. These lots also serve as a meeting place for carpool and vanpool partners.

In 2007, park-and-ride system-wide utilization reached 68 percent of capacity. Peak period demand for service and/or parking still exists in some regional corridors where there are overcrowded trips or park-and ride lots at or over capacity. The park-and-ride facilities with the most frequent service are filled beyond capacity. New service hours were added to serve park-and-ride lots throughout 2004-2006. Further improvements to park-and-ride transit service will be evaluated as needed as a result of ridership trends.

Exhibit 4-7
Developing Areas



Strategy S-7: Community Mobility

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.

Aside from core routes and peak services, King County Metro provides a network of local transit routes that provide broader service coverage and connect neighborhoods to nearby activity centers. The effectiveness of fixed-route transit in attracting local trips is dependent on several factors, including population and employment density, the design of the street and sidewalk grid, and the number of common destinations people want access to. 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 is often difficult and expensive to provide. In some areas of the county fixed-route service is impractical because the street network does not allow a non-circuitous transit pathway, or because a lack of pedestrian connections makes transit access difficult. Alternative public transportation options, such as flexible local bus service, vanpooling services or carpooling services often provide a more cost-effective method to serve low-density areas.

Strategy S-8: Specialized Transportation Services

Provide complementary paratransit services that comply with federal regulations to people who have disabilities that prevent use of regular public transportation in the service area shown in Exhibit 4-8.

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 within King County. Explore ways to include paratransit-eligible persons and other persons with disabilities and seniors on mobility services available to the general public, such as vanpools.

The federal Americans with Disabilities Act (ADA) of 1990 mandated that public transit agencies make transportation services for the general public accessible to persons with disabilities as well as provide "complementary paratransit" service for those whose disability prevents use of the fixed route service some of all of the time.

In 1999, King County Ordinance 13441 defined two programs: The ADA Paratransit Program and the King County Community Transportation Program (KCCTP).

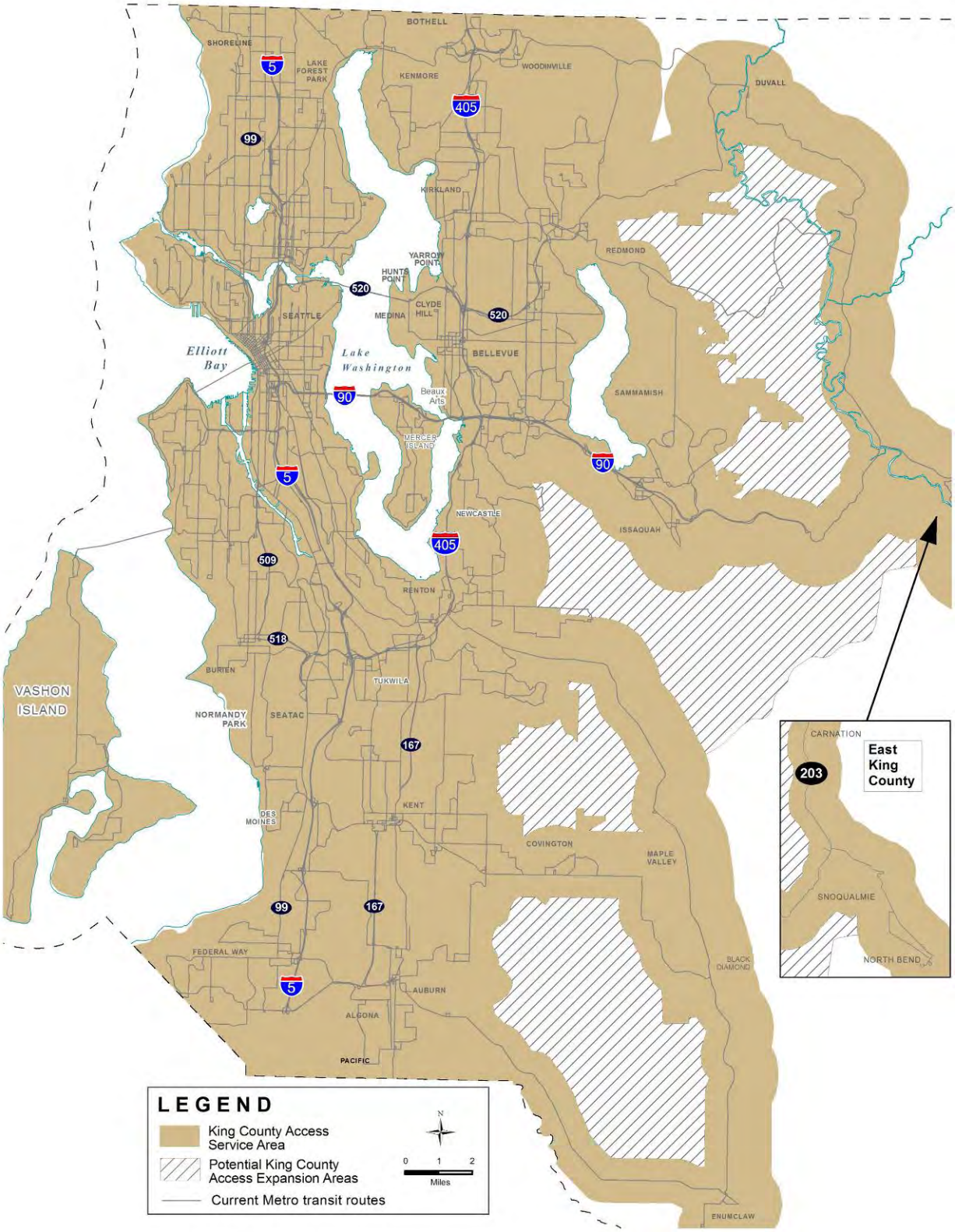
ADA Paratransit Program

The ADA Paratransit Program, also called *Access* Transportation, contains those minimum elements required of a complementary paratransit program by federal regulations. This service must be comparable to non-commuter, fixed route service for the general public in several ways, including service area, response time and fares. 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.

Because the ADA paratransit program is tied to transit availability and service levels, "islands" have existed where *Access* service has not been available. *Transit Now* includes funds to extend service to these areas, shown in Exhibit 4-8.

A registration process evaluates under what conditions the applicant's disability prevents use of regular bus service. An eligible individual can be 'fully' eligible for all rides or 'conditionally' eligible, meaning they qualify for a rider only when certain conditions exist. Regional agreements extend ADA-eligibility to neighboring counties. Private contractors operate the call center and use vehicles owned by King County.

Exhibit 4-8
Specialized Transportation Service Areas



King County Community Transportation Program

The King County Community Transportation Program provides service that supplements 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. Program components include:

- **ADA Paratransit Program** enhancements for ADA-eligible riders that exceed federally-required minimum service criteria, such as subscription service for recurring trips, limited door-to-door and hand-to-hand service, and an expanded weekday service area;
- The **Taxi Scrip program** which provides subsidized taxi scrip to low-income King County resident who are ages 18 to 64 and have a disability or who are 65 and older;
- **Bus travel training**, volunteer transportation and transportation information and referral.
- The **Community Access Transportation (CAT) Program**, which provides transportation options for seniors and people with disabilities. The program provides lift-equipped vans and small operating grants to agencies that serve seniors and those with disabilities.

Service Enhancements

Between 2002 and 2007, King County Metro implemented the following service improvements, technology enhancements and other initiatives:

- Implementing a more comprehensive eligibility process, including referring a greater percentage of applicants for an in-person evaluation of their ability to perform the tasks needed to ride the bus and re-certifying active riders every three years;
- Applying conditions of eligibility to routine trips. A 'path of travel' review is conducted to determine if there are any barriers that will prevent the rider from taking the specific trip by bus. King County Metro has received national recognition for the design and effectiveness of this process;
- Installing Mobile Data Terminals (MDT's) on all *A*ccess vehicles and support infrastructure in the dispatch center. The MDT's are equipped with Global Positioning Systems, digital text and voice communication and on-board

mapping. This technology has greatly improved our ability to manage the service in real time as well as providing detailed information to allow for system adjustments to maximize efficiency;

- Increasing the availability of bus travel training to teach paratransit riders the skills needed to ride the bus. State grant funds have supplemented this effort;
- Providing high-quality retired King County Metro vans, as well as new vans, to non-profit agencies and local government entities to provide program-specific transportation to seniors and people with disabilities. A specific number of ADA-eligible rides must be provided. As of 2006, 47 vans have been provided to 20 eligible entities; an estimated 129,500 rides will be provided annually, with 40 percent going to *Access*-eligible riders.
- Implementing a one-year Wheelchair Accessible Taxicab demonstration project in 2007 to evaluate the demand for accessible taxis within the county. King County Metro, the King County Licensing Division and the City of Seattle were partners in the project, which may be extended through 2008. A more permanent solution may be in place by 2009.

During the 10-year plan 2007-2016, King County Metro will continue to invest in technology to increase the efficiency and reliability of *A*ccess service while also supporting better connections with fixed route service and increased community transportation options. These changes are anticipated to occur over the next six years:

- As part of *Transit Now*, Access service will be provided on weekdays during the midday in several rural areas of the county that are not currently served, as shown in Exhibit 4-8.
- King County Metro will continue to refine the ADA-paratransit eligibility process to more accurately evaluate each applicant's level of eligibility while educating applicants and their support systems (family, caregivers, etc.) about other community transportation options;
- Investment in technology solutions to improve paratransit efficiency and timeliness will continue;
- Also, starting in 2007, the Community Access Transportation (CAT) program will provide additional vans over 4 years to eligible entities. By 2010, over 75 CAT vans will be in service. By 2013, this program is projected to carry 184,400 trips annually at less than the average cost of an *Access* ride.

Strategy S-9: Partnerships

Develop partnerships with local jurisdictions, employers and institutions to increase public transportation services and improve service effectiveness.

- ***Transit Now* partnerships: Solicit and enter into partnership agreements with public or private entities to mutually fund new or improved transit services, where the partner contribution may be in the form of direct funding or investment that results in transit speed or reliability improvements. Dedicate a portion of new service hours for this purpose.**

- **Commute partnerships: Enter into partnerships to improve public transportation use and reduce single-occupant commuting by developing and promoting alternate commute programs; and by managing parking and traffic to make public transportation options more attractive.**

Transit Now Partnerships

Transit Now partnerships are one of several ways in which service hours will be added as part of the *Transit Now* package. These partnerships provide an opportunity for King County Metro to work with public and private organizations to share the costs and responsibilities of providing additional transit service.

Two types of service partnerships are defined under *Transit Now*:

- **Direct financial participation:** Public and/or private partners will contribute one-third of the fully allocated cost of a new Metro Transit route or new service hours on an existing Metro Transit route for at least five years. King County will contribute the other two-thirds of the cost.

- **Speed and reliability partnerships**: One (or more) of 20 eligible cities commit to improving traffic operations on one or more Metro Transit RapidRide corridors or core service connections (see Exhibit 4-2 and 4-3) so that buses move at least 10 percent faster throughout the day. In return, King County Metro will increase bus service in the city by 5,000 annual hours for each route on that core connection that has gained and maintains a 10 percent transit speed improvement.

Transit Now allocates 90,000 annual transit service hours for these partnerships that will be phased between 2008 and 2013. King County Metro will select from among partnership proposals by potential partner entities. Final proposals for service partnerships are expected in late 2007.

King County ordinance 15756 directs that direct financial partnerships will have priority over speed and reliability partnerships, and establishes a set of criteria for prioritizing funding opportunities. The following pass-fail criteria for entering into *Transit Now* partnership agreements, in priority order:

1. The partnership service will improve access to, from or between designated Urban and Manufacturing Centers.

2. The partnership service will improve service on the network of core service connections as defined in Service Strategy S-3, which include RapidRide corridors.

3. The partnership service by a public agency will improve access and circulation within designated Urban and Manufacturing Centers or will provide service consistent with Service Strategy S-13. A circulator or ride-free service partnership with a public agency also will provide service in a manner that supports enhancement of existing transit centers by providing frequent connections between a transit center and major destinations within the urban center.

4. The partnership service will improve other services that support the goals and objectives of this strategic plan.

5. The partner or partners will commit to continue the partnership for more than five years.

6. The partner or partners will agree to fund more than the minimum one-third share of the fully allocated service cost.

7. The partner or partners will commit to implementation of additional actions that are likely to increase ridership on the new services, such as:

    - Conducting promotional activities,
    - Providing incentives to employees and riders,

- Establishing limits on parking supply or price for single occupant vehicle parking within the area served by the new service,
- Implementing parking management to increase the attractiveness of transit and ridesharing,
- Taking other policy actions that support the new service, or
- Taking other actions that are likely to increase ridership on the new services.

8. Projected ridership gain in annual boardings over the term of the agreement.

Proposals for speed and reliability partnerships that meet the eligibility requirements above will be evaluated according to the following criteria, in priority order:

1. The partner's capital investment or traffic operations change will create a transit speed and reliability benefit along a continuous RapidRide bus rapid transit corridor;

2. The partner will commit to additional traffic operations management actions that achieve transit priority in excess of the required projected ten percent travel time savings;

3. The improvements can be completed within five years; and

4. The partner will commit to provision of complementary actions that improve transit operations or ridership, such as:
   - Implementing innovative transit signal phases and timing,
   - Providing the infrastructure, preferably fiber, required to support communication between transit signal priority equipment in the field and from the field back to the applicable agency and to King County Metro,
   - Adding curb space for transit terminal or layover,
   - Establishing limits on parking supply or increasing prices for single occupant vehicle parking within the area served by the new service,
   - Implementing parking management to increase the attractiveness of ridesharing,
   - Implementing pass subsidy and promotional programs that achieve higher ridership, or
   - Taking actions that improve the pedestrian environment.

Commute Partnership Programs

Employers, educational institutions, and other organizations choose to participate in King County Metro commute partnerships for a number of reasons. These include managing limited parking supply and increasing parking costs, complying with requirements of the state Commute Trip Reduction Law, and providing a highly valued benefit to employees in the form of subsidies for alternative commuting. Many employers find the ease of participating in King County's commute partnership programs to be an effective means of reducing drive-alone trips.

Described below are some of the commute partnership programs that the King County King County Metro Market Development group is involved with:

- **Downtown Transportation Alliance (DTA)**: a partnership between King County Metro, the City of Seattle and the Downtown Seattle Association. The DTA has set a goal to increase transit's share of downtown trips by 6 percentage points by 2015, and works on varied fronts including street operations, transit service improvements, parking management, building outreach, incentive programs and land use and parking regulation to reach this goal.

- **Construction Mitigation**: a partnership with the Washington State Department of Transportation to develop and implement mitigation strategies as part of major highway construction activities. Initial efforts on I-405 have included adding transit service, park-and-ride management and vanpool promotions.

- **Commute Trip Reduction**: partnerships with local jurisdictions to achieve their commute trip reduction goals, including support for the development of Growth and Transportation Efficiency Centers.

- **Residential Outreach and Incentives**: includes In Motion, a community-based program providing residents with incentives to try travel options and the Residential Transportation Coordinator program, providing transportation information to neighborhoods and populations with limited English skills.

Expanding the Public Transportation Market for Current Products

Historically, efforts focused on increasing ridership and participation by larger employers in funding employees' commuting by modes other than single occupant cars. However, much of the employer market remains untapped. The following will be pursued in order to reach new markets:

- Ensure the transition to Smartcard operations will provide customers attractive employee pass and incentive programs.
- Coordinate the definition and operating rules for implementation of the service partner program. Additional efforts include coordinating on the definition of RapidRide corridors, and facilitating future partnerships to support the new service in these corridors.
- 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.

Strategy S-10: Streetcar System

Consider opportunities for system integration when planning improvements to the existing King County streetcar line, identify the factors contributing to successful streetcar service and develop criteria to guide decisions to initiate or participate in future streetcar projects or, where necessary, to authorize other entities to provide streetcar service. Criteria should address land use, economic, environmental and social equity considerations along with transportation impacts and other factors.

Strategy S-11: Regional System Coordination

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.

King County Metro participates in ongoing coordination and planning with other agencies. King County Metro is active in the Transit Integration Group (TIG), a committee of the region's transit operators that coordinates policies, practices and services to provide a more consistent transit experience for customers traveling throughout the Puget Sound region. TIG committees coordinate service, fare payments, technology, service for transportation disadvantaged riders, and other matters.

Seven transportation agencies are collaborating to plan and implement a regional fare collection program which enables customers to use one fare card on multiple systems throughout the four county Central Puget Sound area. Smart card fare collection technology will be used to allow linked trips between transit, ferries and rail and to significantly expand each agency's strategic fare policy capabilities. Called the "One Regional Card for All" (ORCA) smart card, the new multi-agency fare media is expected to be introduced in 2008.

King County Metro also participates in local, regional and state projects to ensure that transit and roadway investments are coordinated and that transit customer and operation needs will be met as the roadway system is improved. The Puget Sound region is currently facing many potential transportation system changes, each of which is likely to impact transit service. Over the life of this strategic plan, changes in the transportation environment will require King County Metro to respond flexibly and to revise service to minimize impacts and maximize opportunities to improve service to customers. Responding to changes in the transit environment will be an important focus of the 2008 update to this strategic plan.

Some of the changes that will impact transit service include the following:

- The downtown Seattle transit tunnel will reopen in September 2007 when construction needed for future light rail is completed. King County Metro will adjust several routes serving downtown Seattle.
- Sound Transit's Link Light Rail is scheduled to begin operation between downtown Seattle and Sea-Tac Airport in 2009. Local routes, including some electric trolley routes will be changed to reduce redundant service and improve local feeder connections. King County Metro will begin joint bus-rail operation in the downtown Seattle tunnel.
- Sound Transit and the Regional Transportation Investment District (RTID) plan to place a measure on the November 2007 ballot that would initiate a major transit and freeway construction program. If it passes, King County Metro will need to adjust services to avoid construction impacts, and add new service to reduce construction traffic impacts.
- Major arterial and freeway projects are also in planning or design including the Alaskan Way Viaduct Replacement Project, State Route-520 bridge replacement and HOV project and construction projects on I-5 and I-405. Each has potential to change transit service and effectiveness in both positive and negative ways.

Other Coordination Efforts

In jurisdictions adjoining or straddling other counties, 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 to integrate service 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 while increasing service frequency and improving schedule coordination reduces rider wait time. Operating service reliably is also crucial.

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.

Strategy S-12: Student Mobility

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.

King County Metro works with local school districts to meet student transportation needs. When school districts rely on public transit to transport students to school, increased demand for transit service is expected. King County Metro will review existing route capacity to determine if sufficient resources are available to serve the student population. If additional service is required, King County Metro will review existing services to determine if opportunities exist to reallocate hours to meet increased student trip needs. Improvements needed beyond what can be provided for by this strategic plan or through service consolidation can be made if school districts provide for the incremental expense, using a combination of direct payments or student pass subsidies.

As of 2007, King County Metro currently contracts for enhanced student transit services with the Bellevue and Mercer Island School Districts. The Lake Washington School District and Seattle School District have shifted some of their students to Metro Transit service. These services operate within the existing route structure. In the 2006-2007 school year, King County Metro operated pilot programs with five high schools in the Seattle school district. King County Metro plans to continue to provide service with these schools in the 2007-2008 school year. The Seattle school district continues to supplement Metro Transit service with several yellow bus routes to serve students.

Strategy S-13: Special Events

Work with private and public agencies to develop strategies for using public transportation services to offer alternatives to single-occupancy vehicle travel to special events. Strategies may include street use, transit priority, and other strategies under the jurisdiction of King County Metro or local governments.

King County Metro provides special service to multiple sporting events and other special events, such as Seattle Mariner and Seahawks games, the Seafair Hydroplane races and the Torchlight Parade. Overall program size depends on demand as well as the total

number of available service hours, established each year during the budget process. Specific activities are coordinated with individual event organizers and sponsors throughout the year.

In addition to services or fares subsidized by special event sponsors, King County Metro also regularly looks for opportunities to assign larger coaches or provide trips on routes that serve a special event in order to reduce traffic congestion and minimize impact to normal service. Examples include connections from the Northgate Park-and-Ride to major festivals such as the Bite of Seattle, Folklife and Bumbershoot. Adopted transit financial policies require recovery of 100 percent of the marginal operating costs of special service operations unless otherwise authorized by the Executive.

Strategy S-14: Activity Center Mobility

> **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. Streetcars, fixed route transit service, ridesharing, vanpool and *Access* services can 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

The issues and impacts associated with expansion or creation of new ride-free areas were evaluated in 2003. 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

King County Metro has had mixed experience with shuttles and circulators. Shuttles and circulators operated by King County Metro or in partnership with others have in some cases 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

Seattle's South Lake Union Streetcar is an example of an activity center circulation improvement King County Metro will provide in partnership with the City of Seattle. The new streetcar will provide service between Westlake Center and South Lake Union. Seattle has secured full funding for the capital cost and will provide full operating funding for an initial period, after which King County Metro will provide three-fourths of the operating cost and Seattle will provide for the remaining one-fourth. King County Metro's share of this cost will be reallocated from other West subarea services in conjunction with changes to achieve service integration with Link light rail in 2009.

Seattle's Waterfront Streetcar also provides circulation along the Alaskan Way waterfront. King County Metro, Seattle, and a private developer are working together to provide for a new maintenance base, and streetcar service is planned to restart when the maintenance base becomes available.

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
- 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

Strategy S-15: Vanpooling and Ridesharing Services

Provide vanpool, vanshare and ridematch services; especially for trips that are not accessible or convenient by fixed-route transit service. Provide services to help form and maintain carpools and vanpools, and develop or promote other innovative and/or customized ridesharing services that provide alternatives to driving alone.

Transit Now also includes rideshare investments aimed at doubling the program from 2007-2016. Rideshare projects include:

- Van Technology Improvements - Identify and use technology to increase administrative efficiency, reduce vehicle-operating costs and minimize the amount of work required of volunteer commuter van drivers and bookkeepers.

- Van Distribution Center Improvements - Pave some or all of the remaining property at the Van Distribution Center in Redmond to provide additional stalls for vanpool vehicles as the program expands.
- Smaller Employer Support - Work with smaller and non-CTR-affected employers in King County to promote commuter vanpools
- Van Expansion Start-Up Support – Devote new resources to commuter vanpool rider recruitment and retention. Commuter van ridership not only increases with adding new customers, but can also be increased by retaining more existing customers.
- Simplification Strategies - Several elements have been identified to simplify and streamline current commuter van program practices. The first project to create an on-line training course for vanpool drivers and bookkeepers.
- Regional Fare Media Integration –Demonstration project that integrates vanpools with Sound Transit train and express bus service under the regional Puget Pass.