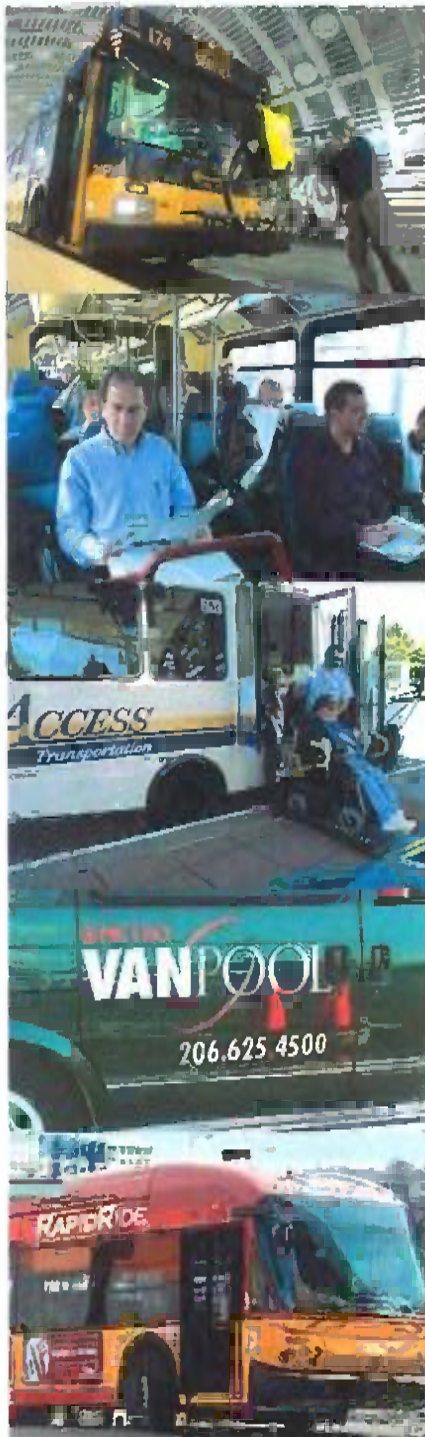




Regional Transit Task Force



Resource Notebook 2010

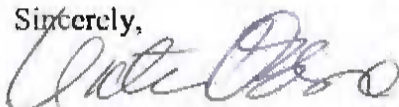
March 2010

About this Notebook

The Regional Stakeholder Transit Task Force is being asked to take on challenging issues to address the problems facing King County Metro. The purpose of this resource notebook is to provide background material to support task force discussion. It includes basic information about the King County Metro Transit Division and about planning and implementing public transportation services. It introduces the policy framework that has guided Metro over the years and how that policy framework along with other factors have shaped Metro. It also provides references and links to places on the King County website and elsewhere where additional information on related topics can be found.

We recognize that there will be questions beyond the scope of this notebook. As Transit Division staff, we are committed to providing the data and information needed to support the task force efforts and we will be available to provide further information as questions and additional topics arise. We look forward to working with you.

Sincerely,



Victor Obeso
Manager, Service Development

Metro Transit Division
Department of Transportation
KSC-TR-0422
201 S Jackson Street
Seattle, WA 98104-3856

(206) 263-3109

Regional Stakeholder Taskforce Resource Notebook

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Section 1: Regional Stakeholder Task Force Information

This section provides essential information for the Regional Stakeholder Task Force, including legislative action supporting the task force formation and work plan and information on key contacts.

Information you'll find in this section:

- The Task Force charge
- Regional Stakeholder Task Force Roster
- King County DOT and Metro Staff Contact List
- King County Council Legislation establishing the Regional Stakeholder Task Force and work plan
- Regional Stakeholder Task Force Membership

Links to Additional Resource Materials:

Regional Stakeholder Task Force website: www.kingcounty.gov/transportation/transittaskforce

The Task Force Charge

King County Metro Transit is facing unprecedented financial challenges. In 2008, sales tax revenues began declining at the same time that Metro experienced tremendous ridership growth, placing strains on the system. Sales tax revenues dropped even more dramatically in 2009 as the national recession worsened, further impacting Metro's ability to continue to provide transit service at the existing level.

Metro Transit grappled with this challenge as it developed its 2010/2011 budget. To balance the budget, Metro made difficult choices involving trade-offs. Because of the difficulty of those choices, the budget included an Expenditure Restriction prompting a work item to develop a task force of regional stakeholders to consider a policy framework to guide the growth and, if necessary, contraction of King County Metro Transit's system. The charge to the task force is to develop recommendations by September 2010 that will identify short term and long-term objectives for transit service investment, and formulate a service implementation policy implementing those objectives. The actual expenditure restriction is below. The work program developed in response to this proviso is in the following pages.

Expenditure Restriction (ER) 3

Of this appropriation, \$1,800,000 may not be expended until the executive transmits a motion establishing a detailed work plan for a regional stakeholder task force to consider a policy framework to guide the growth and, if necessary, contraction of King County Metro Transit's system. The work plan shall include a scope of work, tasks, schedule, milestones and the budget and appointment criteria/process for municipal and community stakeholders, and a coordinated staff-working group.

The charge to the task force shall be to develop recommendations by September 2010 that will identify short term and long-term objectives for transit service investment, and formulate a service implementation policy implementing those objectives.

The motion and work plan for the regional stakeholder process required to be submitted by this proviso must be filed in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all council members and to the committee coordinator for the physical environment committee or its successor. If the proposed motion and work plan are not transmitted by January 31, 2010, appropriation authority shall lapse for the \$1,800,000 million restricted by this proviso.

Updated 4/1/2010

Regional Stakeholder Task Force Roster			
Name	Phone	Email	Address
Suzette Cooke	253-856-5721	scooke@ci.kent.wa.us	Mayor, City of Kent, 220 Fourth Avenue South, Kent, WA 98032
Noel Gerken	206-898-0065	noel.gerken@maplevalliewa.gov	Mayor, City of Maple Valley, PO Box 320, Maple Valley, WA 98038
Tom Rasmussen	206-684-8808	tom.rasmussen@seattle.gov	Councilmember, City of Seattle, PO Box 34025, Seattle, WA 98124-4025
Chris Eggen	206-801-2213	chriseggen@comcast.net	Councilmember, City of Shoreline, 17500 Midvale Ave N, Shoreline, WA 98133-4905
Grant Degginger	425-452-7810	gdegginger@bellevuewa.gov	Councilmember, City of Bellevue, 450 - 110th Ave NE / PO Box 90012, Bellevue, WA 98009
Fred Butler	425-392-5775	fredb@ci.issaquah.wa.us	Councilmember, PO Box 1307, Issaquah, WA 98027
Tom Pierson	253-838-2605 x105	tomp@federalwaychamber.com	Chief Executive Office, PO Box 3440, Federal Way, WA 98063
Kate Joncas	206-623-0340	katej@downtownseattle.org copy on schedule requests : debil@downtownseattle.org	President, Downtown Seattle Association, 600 Stewart St, Suite 200, Seattle, WA 98101-1217
Christine Hoffmann "Chris"	425-885-4014	chrish@redmondchamber.org	CEO & President, Redmond Chamber of Commerce, 16210 NE 80th St, PO BOX 628, Redmond, WA 98073-0625
Larry Yok	206-878-3710 x.3545	lyok@highline.edu	Vice President of Administration, Highline Community College, PO Box 98000, Des Moines, WA 98198-9800
Josh Kavanagh	206-685-1567 cell: 206-427-2958	joshkav@u.washington.edu	Director of Transportation Services at the University of Washington, BOX 355212, 1127 NE Boat St, Seattle, WA 98105
Estela Ortega	206-957-4613	eortega@elcentrodelaraza.org	Executive Director, 2524 16th Avenue South, Seattle, WA 98144-5500
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Jim Stanton	425-707-5076 cell: 206-999-5389	jstanton@microsoft.com	Senior Community Affairs Manager, The Microsoft Corporation, 1 Microsoft Way, Redmond, WA 98052-8300
Sue Blazak	206-306-6987	substance@yahoo.com	405 SW 139th St, Burien, WA 98166
Carla Saulter	206-240-6306	buschick@gmail.com	103 - 23rd Ave, Apt. B, Seattle, WA 98122
Shiv Batra	425- 635-1000	s.batra@incainc.com	President, INCA Engineers, Inc. 400 112th Ave NE, #400, Bellevue, WA 98004-5540
Carl Jackson	206-205-2947	carl.jackson@kingcounty.gov	c/o ATU Local 587, 2815 Second Ave, Suite 230, Seattle, WA 98121
David Freiboth	206-441-8510	david@mlkclc.org office@mlkclc.org	ML King County Labor Council, 2800 1st Avenue, Ste. 206, Seattle, WA 98121
James Kelly	206-461-3792	jkelly@urbanleague.org	CEO, Urban League of Metropolitan Seattle, 105 - 14th Ave, Seattle, WA 98122
Steve Marshall	206-909-2019	marshallsj@comcast.net	Cascadia Center, 8150 West Mercer Way, Mercer Island, WA 98040
Jared Smith	206-382-5200	smithjar@pbworld.com	Parsons Brinckerhoff, 999 Third Ave, Suite 2200, Seattle, WA 98104
Ed Miller	206-318-5758	edmiller@starbucks.com	9707 S 242nd Ct, Kent, WA 98030
Bob Drewel	206-464-7090	bdrewel@psrc.org copy on schedule requests only: srogers@psrc.org ORobinson@psrc.org	Executive Director, PSRC, 1011 Western Ave, Suite 500, Seattle, WA 98104-1035
Rob Johnson	206-329-2336	rob@transportationchoices.org	Executive Director, Transportation Choices, 811 - 1st Ave, Suite 626, Seattle, WA 98104
Chuck Ayers	206-523-9495 cell: 206-851-4312	chuck.ayers@cascadebicycleclub.org	Cascade Bicycle Club, PO Box 15165, Seattle, WA 98115
Jane Kuechle	425-274-4030	janek@atworkwa.org	1935 152nd Place NE, Bellevue, WA 98007-4293
Non-voting Members			
Kevin Desmond	206-684-1619	kevin.desmond@kingcounty.gov	King County Metro Transit, 201 S. Jackson St., KSC-TR-0415, Seattle, WA 98104
Ron Tober	206-398-5037	ron.tober@soundtransit.org	Sound Transit, 401 South Jackson St., Seattle, WA 98104
Gene Baxstrom	360-786-7398	baxstrom.gene@leg.wa.gov	Joint Transportation Committee, P.O. Box 40937, Olympia, WA 98504-0937
Mary Fleckenstein* (alternate)	360-786-7312	fleckenstein.mary@leg.wa.gov	Joint Transportation Committee, P.O. Box 40937, Olympia, WA 98504-0937

Updated 4/1/2010

Facilitator Contacts				
Name	Title	Phone	Email	Address
John Howell	Partner, Cedar River Group	(206)233-7660 x 102	john@CedarRiverGroup.com	93 Pike Street Suite 315 Seattle, WA 98101
Rhonda Peterson	Associate, Cedar River Group	(206)233-7660 x 104	rhonda@CedarRiverGroup.com	93 Pike Street Suite 315 Seattle, WA 98101

King County DOT and Metro Staff Contact List				
Name	Title	Phone	Email	Address
Betty Gulledge-Bennett	King County DOT, Communications Manager	(206) 263-3436	betty.gulledge-bennett@kingcounty.gov	201. S Jackson St. KSC-TR-0824 Seattle, WA 98104
Victor Obeso	Manager, Metro Service Development	(206) 263-3109	victor.obeso@kingcounty.gov	201. S Jackson St. KSC-TR-0426 Seattle, WA 98104
David Hull	Supervisor, Metro Service Planning	(206) 263-4734	david.hull@kingcounty.gov	201. S Jackson St KSC-TR-0422 Seattle, WA 98104



File #: 2009-0649, Version: 2

Drafter

Clerk 02/02/2010

Title

A MOTION relating to a regional task force on King County's transit system.

Body

WHEREAS, King County operates a transit system comprised of more than three million annual service hours delivering more than one hundred ten million rides per year, and

WHEREAS, this transit system is an important element of meeting regional growth management objectives through the high-occupancy movement of people throughout the county and region, and

WHEREAS, this transit system, due to its dependence on the volatile revenue source of sales tax, has been assailed by financial challenges associated with the global recession, and

WHEREAS, the King County council has worked in close collaboration with the executive to address more than a \$200 million deficit for the 2010/2011 biennium, and

WHEREAS, Ordinance 16717 was adopted requiring the executive to transmit a work plan for a regional task force to consider a policy framework to guide the growth and, if necessary, contraction of King County's transit system;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

A. The executive should develop a work plan that convenes a task force by March 2010 that is charged with:

1. Exploring the transit system in King County based on key system design factors of land use, social equity and environmental justice, financial sustainability, geographic equity, economic development and productivity and efficiency;

2. Making recommendations on how and to what extent these factors should be reflected in the design of King County's transit system;

3. Exploring system integration and making recommendations regarding King County Metro's role within the region's public transportation and overall transportation system; and

4. Recommending a policy framework to the executive and council that reflects prioritization of the key system design factors. The framework should include:

- a. concurrence with, or proposed changes to, the vision and mission of the King County transit system;
- b. criteria for systematically growing the transit system to achieve the vision;
- c. state and federal legislative agenda issues to achieve the vision;
- d. strategies for increasing efficiency of the King County transit system; and
- e. criteria for systematically reducing the transit system should revenues not be available to sustain the King County transit system.

B.1. The executive should transmit by February 10, 2010, for council confirmation by motion, task force membership with the following executive-level representation:

- a. six currently elected officials with equal representation from each of the three King County transportation subareas, provided that at least one south subarea representative shall be an elected official of a city on the southwestern ridge and no more than one west subarea representative shall be an elected official of the city of Seattle, and no more than one east subarea representative shall be an elected official of the city of Bellevue;
- b. three representatives of business and economic development interests with equal representation from each of the three King County transportation subareas;
- c. two representatives of organized labor;
- d. six representatives of countywide rider interests with equal representation from each of the three

King County transportation subareas and including two representatives of educational interests with representatives from different King County transportation subareas, two representatives of social service interests with representatives from different King County transportation subareas, and two large employers representing commuter and commute trip reduction interests with representatives from different King County transportation subareas;

e. one representative of a good government civic organization;

f. two representatives of environmental concerns;

g. two transportation experts;

h. three rider or citizen representatives with equal representation from each of the three King County transportation subareas;

i. one member of the transit advisory committee representing the range of views of the committee;

and

j. one representative of the Puget Sound Regional Council.

2. The executive should strive to identify task force members who are broad thinkers that understand multiple stakeholder views, committed to livable communities, collectively represent a balanced geographic distribution, including rural representation and representation from the Rapidly Developing Areas as defined in the Strategic Plan for Public Transportation, and are open to addressing the charge of the task force without being bound by previously held positions. Additionally, the overall task force membership should reflect the racial, gender and economic diversity of King County.

3. The King County transit division manager, the Sound Transit senior staff member and a Washington state Legislature Joint Transportation Committee staff member shall be nonvoting members of the task force.

C. A third-party facilitator, who is not an employee of King County at time of hiring, should be hired by the executive to lead the work of the task force based on the guidance of the executive committee and the

support of the interbranch working group.

D.1. The executive committee should consist of the King County executive and three King County councilmembers with equal representation from each of the three King County transportation subareas, without designees.

2. The chair of the regional transit committee, without designee, should be the alternate to the executive committee.

3. The King County councilmembers shall be appointed to the executive committee by the chair of the King County council per OR-1-020 of the council's Organizational Compilation.

4. In a balanced legislative and executive branch approach, the executive committee is charged with overseeing the task force schedule and process relative to the council-approved work plan objectives and charge as transmitted by the executive in accordance with Ordinance 16717, without influencing the substance or content of task force deliberations; and offering to act as a sounding board during the development of actionable recommendations.

E.1. An interbranch working group shall support the executive committee and the task force through comprehensive review and preparation of data and materials.

2. The interbranch working group shall consist of King County executive, transit division and council staff.

F. The work plan transmitted by the executive in accordance with Ordinance 16717 should contain subject areas for meetings with the goals of:

1. Achieving task force comprehension of transit system building blocks by May 2010;
2. Developing policy options for discussion by July 2010; and
3. Adopting final policy recommendations by September 2010.

G. The agendas for the task force meetings shall be developed by the facilitator with guidance from the executive committee and support from the interbranch working group to achieve the objectives in subsection A.

of this motion.

H. The work plan should designate a project manager to oversee the day-to-day needs of the transit task force program, oversee the facilitator contract and coordinate the development and review of materials for the task force.



KING COUNTY

Signature Report

March 15, 2010

Motion 13189

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2010-0148.2

Sponsors Phillips

1 A MOTION establishing a work plan for a regional
2 stakeholder task force to recommend a policy framework
3 to the executive and council that reflects prioritization of
4 key system design factors.

5 WHEREAS, Ordinance 16717, adopting the 2010 King County Budget, including
6 Metro transit's 2010-2011 biennium budget, contains Section 131, Expenditure
7 Restriction ER3, which directs the executive to transmit a detailed work plan for a
8 regional stakeholder task force to consider a policy framework that reflects prioritization
9 of the key system design factors, and

10 WHEREAS, the work plan shall include a scope of work, tasks, schedule,
11 milestones, budget and appointment criteria and process for municipal and community
12 stakeholders, and a coordinated staff working group, and

13 WHEREAS, the policy framework for the regional stakeholder task force should
14 include:

- 15 1. Concurrence with or proposed changes to the vision and mission of the King
16 County Transit system;
- 17 2. Criteria for systematically growing the transit system to achieve the vision;
- 18 3. State and legislative agenda issues to achieve the vision;
- 19 4. Strategies for increasing efficiency of the King County transit system; and

20   5. Criteria for systematically reducing the transit system should revenues not be
21 available to sustain the King County transit system, and

22   WHEREAS, the task force shall explore the King County transit system based on
23 key system design factors and integration within the region's public transportation and
24 overall transportation system, and

25   WHEREAS, the task force shall develop recommendations by September 2010
26 that will give direction on how and to what extent system design factors should be
27 reflected in the design of King County's transit system, and

28   WHEREAS, the task force shall develop recommendations by September 2010
29 regarding King County Metro's role within the region's public transportation and overall
30 transportation system, and

31   WHEREAS, the task force shall develop a policy framework by September, 2010,
32 that reflects prioritization of the key system design factors, and

33   WHEREAS, Motion 13138 describes the details of the task force charge,
34 composition, oversight, facilitation and support, and

35   WHEREAS, the executive, with this motion, has transmitted to the council a work
36 plan;

37   NOW, THEREFORE, BE IT MOVED by the Council of King County:

38   The King County council hereby adopts the work plan for a regional stakeholder
39 task force to recommend the extent that key system design factors should be reflected in
40 King County's transit system, and to recommend King County Metro's role within the

- 41 region's public transportation and overall transportation system, and to recommend a
42 policy framework that reflects prioritization of the key system design factors.

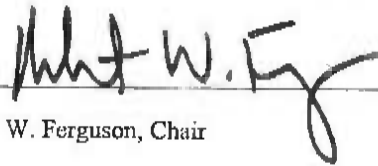
Motion 13189 was introduced on 3/1/2010 and passed by the Metropolitan King County Council on 3/15/2010, by the following vote:

Yes: 6 - Ms. Drago, Mr. Phillips, Mr. Gossett, Ms. Patterson, Ms. Lambert and Mr. Dunn

No: 0

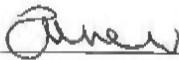
Excused: 3 - Mr. von Reichbauer, Ms. Hague and Mr. Ferguson

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON



Robert W. Ferguson, Chair

ATTEST:



Anne Noris, Clerk of the Council

Attachments: A. Regional Stakeholder Task Force Work Plan--Revised 3/9/10

Regional Stakeholder Task Force

Work Plan

Prepared for:
King County Executive
King County Council

Prepared by:
Metro Transit Division
King County Department of Transportation

FEBRUARY 2010



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Introduction

Document Purpose

The purpose of this document is to summarize the work plan for the regional stakeholder task force that will explore the transit system and its integration within the region's public transportation and overall transportation system, make recommendations on transit system design and function, and recommend a policy framework to the executive and the council that reflects prioritization of the key system design factors. This framework should include:

- Concurrence with, or proposed changes to, the vision and mission of King County Metro;
- Criteria for systematically growing the transit system to achieve the vision;
- State and federal legislative agenda issues to achieve the vision;
- Strategies for increasing the efficiency of King County Metro; and
- Criteria for systematically reducing the transit system should revenues not be available to sustain it.

This work plan includes a relevant scope of work, tasks, schedule, milestones, budget, and the appointment criteria/process for municipal and community stakeholders, and a coordinated Interbranch Working Group. This work plan was written in response to Expenditure Restriction ER3 of the 2010 King County Metro Transit budget, Ordinance 16717, Section 131.

Background

Since 2008, King County Metro Transit has faced unprecedented financial challenges. In 2008, sales tax revenues began to decline precipitously at the same time that Metro experienced tremendous ridership growth, placing strains on the transit system. Sales tax revenues declined even more dramatically in 2009 as a national recession further impacted Metro's ability to continue to provide transit service at the existing level. Preserving Metro's current system and finding a way to continue with plans for growth became priorities for King County.

2010 Metro Transit Budget

On November 23, 2009, the King County Council unanimously approved the 2010 budget for King County, including the 2010-2011 biennial budget for Metro Transit. The final 2010/2011 Metro Transit budget was balanced using numerous tools and strategies including eliminating staff positions, fare increases, cutting capital projects, using reserves, levying a new property tax, implementing operating efficiencies, and deferring some planned Transit Now investments. This budget allows Metro to maintain most current service over the next two years. However, due to the difficulty and trade-offs involved in balancing this budget, there were several Expenditure Restrictions that were also included as part of the adopted budget. This work plan was developed in response to one such restriction, the language of which follows.

ER3 EXPENDITURE RESTRICTION:

Of this appropriation, \$1,800,000 may not be expended until the executive transmits a motion establishing a detailed work plan for a regional stakeholder task force to consider a policy framework to guide the growth and, if necessary, contraction of King County Metro Transit's system. The work plan shall include a scope of work, tasks, schedule, milestones and the budget and appointment criteria/process for municipal and community stakeholders, and a coordinated staff working group.

The charge to the task force shall be to develop recommendations by September 2010 that will identify short term and long term objectives for transit service investment, and formulate a service implementation policy implementing those objectives.

The motion and work plan for the regional stakeholder process required to be submitted by this proviso must be filed in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all council members and to the committee coordinator for the physical environment

Definition of a Task Force

A task force is a group of people who are temporarily assigned to work together to achieve a very specific and clearly defined objective. Several things set a task force aside from other working groups.

1) A sense of autonomy; task force leadership and members are high-ranking enough to not need to constantly consult others to make decisions. This independence allows the task force process to transform as needed and provides members the liberty to communicate candidly so time is used efficiently.

2) A task force also typically contains a broad cross-section of people, integrating an assortment of skills into a single unit.

When a task force is formed, the goals of the task force are clearly spelled out, and the leader of the task force typically indicates the kind of staffing and funding that would be needed. When the desired goal is achieved, the task force is dissolved, with the members returning to their normal positions.¹

¹ (Adapted from:
<http://www.wisegeek.com/what-is-a-task-force.htm>)

committee or its successor. If the proposed motion and work plan are not transmitted by January 31, 2010, appropriation authority shall lapse for the \$1,800,000 million restricted by this proviso.

Expenditure Restriction ER3 of the 2010 King County Metro Transit budget calls for the development of a task force to develop recommendations by September 2010 that will identify short and long term objectives for transit service investment, formulate a service implementation policy to accomplish those objectives, and recommend a policy framework to the executive and the council that reflects prioritization of the key system design factors. A work plan for the task force is to be developed by February 10, 2010 that includes a scope of work, tasks, schedule, milestones and the budget and appointment criteria/process for municipal and community stakeholders, and a coordinated staff-working group.

Membership and Process

Task Force Membership

Membership of the task force will include approximately 25 executive level participants representing a variety of interests throughout King County. Members are not necessarily transit experts, but are reasonably familiar with how the transportation system affects quality of life, and transit's relationship to land use. Membership includes a mix of elected officials, transportation experts, corporate/business leaders, interest groups, and riders. Representatives will be identified through consultation with the County Council and will be recruited by the Executive's office and the King County Department of Transportation.

Members

The table below provides the list of regional stakeholder task force member categories and the approximate number of members for each category.

Interests	Number of Participants
currently elected officials	6
business/economic development	3
organized labor	2
countywide rider interests	-
educational interests	2
social service interests	2
large employers	2
persons with disabilities	1
good government	1
environmental concerns	2
transportation experts	2
riders or citizen representatives	3
Transit advisory committee representative	1
Puget Sound Regional Council representative	1
Metro General Manager, Sound Transit senior staff member, and Washington State JTC Staff	3 (non-voting members)
Total voting Membership	28

Appointment Process

The King County Executive is working with King County Councilmembers to identify potential task force members. Task force members should be broad thinkers that understand multiple stakeholder views and are committed to creating and sustaining livable communities. Task force members should collectively represent a balanced geographic distribution, including rural representation and representation from the Rapidly Developing Areas as defined in the Strategic Plan for Public Transportation. These members should be open to addressing the charge of the task force without being bound to previously held positions. Additionally, the overall task force membership should reflect the racial, gender, and economic diversity of King County. Potential task members will be recruited by the Executive's office and the Department of Transportation and will be approved by motion.

Executive Committee

An Executive Committee will consist of the King County Executive and three King County Councilmembers with equal representation from each of the three King County transportation subareas, without designees. These three councilmembers shall be appointed to the Executive Committee by the chair of the King County Council, per OR-1-020 of the Council's Organization Compilation. The chair of the Regional Transit Committee, without designee, should be the alternate to the Executive Committee. In a balanced Legislative and Executive branch approach, the Executive Committee is charged with overseeing the task force schedule meeting agendas and process relative to the County Council-approved work plan objectives and charge as transmitted by the Executive in accordance with Ordinance 16717. The Executive Committee should not influence the substance or content of task force deliberations, and should offer to act as a sounding board during the development of actionable recommendations.

Project Manager

The King County Metro Transit Manager of Service Development is designated as the project manager for the Transit task force process. The Project Manager will oversee day-to-day needs of the transit task force, supervise the facilitator contract, and coordinate the development and review of materials for the task force.

Supporting Interbranch Working Group

An interbranch working group will support the Executive Committee and the task force through comprehensive review and preparation of data and materials. The Interbranch Working Group will consist of King County Executive, transit division, and council staff.

Consensus-based Decision-making

The task force will use a consensus-based decision making approach which it defines when establishing its ground rules and procedures. Often the process undertaken in consensus decision-making is as important as the decision or recommendation itself.

Facilitation

The task force will be guided by a third-party professional facilitator with successful experience resolving differences and/or mediating to achieve policy level issue consensus involving participants from both the private and public sector. The facilitator will be selected based on guidance of the Executive Committee and in cooperation with King County Councilmembers. The work of the facilitator will be based on the guidance of the Executive Committee and the support of the Interbranch Working Group.

The facilitator/mediator will be responsible for the following list of tasks. This task list may be updated in the future.

Lay the Process Foundation

- Work with the Executive Committee to develop draft work plan and schedule.
- Develop preliminary task force ground rules and procedures, including provision for public comment.
- Meet with task force members to learn their opinions and perspectives, and to identify their interests and explore possible solutions that they may propose during the meetings.
- Produce a summary of member interviews that identify issues, problems and challenges of greatest interest to the majority of task force members, as well as a listing of member's mutual interests.
- Solicit reactions to the key findings and mutual interests.
- Prepare Initial meeting agenda -- submit for review.
- Work with the Interbranch Working Group to prepare and organize written materials that accompany the agenda.
- Prior to meetings work with those that are presenting.

- Connect with task force members to ensure members are comfortable and supportive of the process.

Build the Framework of Consensus

- Facilitate 6 to 10 task force meetings.
- Develop and submit draft agendas.
- Prepare a meeting summary of the key discussions, decisions and agreements, and distribute for comment.
- Edit meeting summary if needed then re-distribute the amended summary of the meeting with the draft agenda for the next session.
- Communicate with task force members between meetings as needed to maintain their engagement and move the group towards objectives.
- Coordinate with the Interbranch Working Group as necessary.

Finalize the Recommendations

- Prepare a summary report that documents the process, information provided to the task force, task force discussion summaries and the consensus recommendations.
- Circulate the draft report to all participants and solicit comments.
- Produce the final consensus report.
- Coordinate with the Executive Committee and the Interbranch Working Group on how the recommendations should be presented to the King County Executive and County Council, and the public.
- Work with the Interbranch Working Group to prepare presentation materials and messaging pieces.

Scope of Work

Objectives and Charge

The primary objective of the task force is to recommend to the King County Executive and County Council a policy framework that reflects the prioritization of key system design factors and to make recommendations about transit system design and function. These frameworks will be derived from an exploration of the transit system and its integration with the region's public transportation and overall transportation system. The overall framework should include:

- Concurrence with, or proposed changes to, the vision and mission of King County Metro;
- Criteria for systematically growing the transit system to achieve the vision;
- State and federal legislative agenda issues to achieve the vision;
- Strategies for increasing the efficiency of King County Metro; and
- Criteria for systematically reducing the transit system should revenues not be available to sustain it.

In the context of the overall transit and transportation system in King County as contemplated in the Puget Sound Regional Council 2040 plan, the task force is charged with exploring the following key factors for transit system design:

- Land Use;
- Social Equity and Environmental Justice;
- Financial Sustainability;
- Geographic Equity;
- Economic Development; and
- Productivity and Efficiency

The task force should make recommendations on how and to what extent these considerations should be reflected in the design of King County's transit system. The task force should explore system integration and make recommendations regarding King County Metro's role within the region's public transportation and overall transportation system.

Additional Efforts

Following efforts in 2010, the Task Force may be called for a second phase of work in 2011 related to the implementation of their recommendations, and the resulting policy. This second phase may be focused on identification of other policies or potential major investments such as the Eastside Rail Corridor that should be considered in future King County Metro Comprehensive or Strategic plans.

Tasks

Task Force Tasks

Specific tasks to meet the identified objectives and scope of work will depend on the facilitator/mediator hired to manage the effort. However, once basic information about Metro and the King County public transportation system is provided, it is expected the focus of the task force will be discussion among the members.

General overview of tasks

- I. Establish task force operating rules and meeting schedule.
- II. Review current vision, mission, objectives and performance of the Transit system in King County. Review basic transit planning principles and the regional transit planning and funding environment in the context of the key transit system design factors.
- III. Review Metro's criteria for growing and reducing the transit system.
- IV. Discuss and identify policies for achieving objectives, whether in a period of growth or contraction. Discuss and identify short and long term transit investment objectives. Discuss and identify legislative funding options.
- V. Reach consensus.
- VI. Make recommendations:
  - How and to what extent key system design factors should be reflected in the design of King County's Transit System.
  - Metro's role within the region's public transportation system.
  - Policy framework that reflects prioritization of the key system design factors.
- VII. Compile and develop report of recommendations.

Schedule and Milestones

Schedule

Given the September deadline established by the proviso, the task force's work needs to commence no later than March. The schedule is described below, with deliverables and intermediate milestones.

Process Timeline and Milestones

Month	Description of Activities	Deliverables
December 2009- February 2010	Process Development: Define what the task force will do, identify people who will be involved and secure their cooperation, prepare a motion for the King County council responding to the budget proviso and confirming details of the task force.	• Motion for King County Council • Contract with facilitator/mediator • Tentative agreements with members of task force

Milestone   **Completed and submitted motion to King County Council for approval.**

February/March 2010	Preparation for Task Force Discussions: Facilitator will consult with the Executive Committee and prepare the task force members for the process, including identification of salient issues, problems, challenges and interests. Task force members will be comfortable with and supportive of the process.	• Summary of interviews with task force members • Outline of process with member buy in • Meeting agendas • Finalized schedule • Written background materials

Milestone   **Executive Committee Meeting 1**
Milestone   Task force members are prepared for the process and have bought into the specifics of the process.

March 2010	Task Force First Meeting: The first meeting will establish the ground rules and procedures formally and will provide an overview of transit in King County.	• Presentations for meeting

Milestone   **First meeting completed.**

March-July 2010	Member Discussion: Task force members will identify and discuss short term and long term objectives for transit service investment, and formulate a service implementation policy putting these objectives into practice. Throughout the task force process the project manager and facilitator will meet with the Executive Committee and seek guidance and direction on the task force process.	• Draft report

Milestone   **Executive Committee Meeting 2**
Milestone   Draft report completed and submitted for review.

August 2010	Task Force Adopts Consensus Report: The report is approved by all task force members.	• Final Report

Milestone   **Executive Committee Meeting 3**
Milestone   Final report approved.

September 2010	Finding and Recommendations Presented: task force presents findings and recommendations to the King County Executive and the King County Council	• Presentation

Milestone   **Task Force work completed.**

Budget

Preliminary Project Budget*

Professional Facilitation	\$75,000
Meeting supplies and support	\$25,000
King County Staff time:	<u>No additional cost</u>
Total Budget	\$100,000

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* Funding for this effort was included in the 2010/2011 biennial budget adopted by the King County Council in November, 2009.

Regional Stakeholder Taskforce Membership

Representation Category	Proposed Task Force Member	Membership Motion Enacted	Primary Representation
Elected Officials			
6 Elected Officials	Suzette Cooke	13173	South - Kent
	Noel Gerken	13172	South - Maple Valley
	Tom Rasmussen	13171	West - Seattle
	Chris Eggen	13170	West - Shoreline
	Grant Degginger	13162	East - Bellevue
	Fred Butler	13163	East - Issaquah
total			6
Regional Interests			
PSRC	Bob Drewel	13156	PSRC
2 Environmental Interests	Rob Johnson	13157	Transportation Choices
	Chuck Ayers	13158	Cascade Bicycle Club
Good Government Interest	James Kelly	13159	Urban League
2 Organized Labor Representatives	Carl Jackson	13156	ATU
	David Freiboth	13167	Labor Council
2 Transportation Experts	Steve Marshall	13157	Cascadia
	Jared Smith	13160	Parsons Brinckerhoff
3 Economic Interests	Tom Pierson	13177	South - Federal Way Chamber
	Kate Joncas	13164	West - Downtown Seattle Assoc
	Christine Hoffman	13165	East - Redmond Chamber
Transit Advisory Committee	Ed Miller	13175	Transit Advisory Committee
Accessible Services	Jane Kuechle	13182	At Work Washington
total			13
Rider Interests			
3 Riders	Sue Blazak	13166	South
	Carla Saulter	13178	West
	Shiv Batra	13179	East
2 Social Services Rider Interests	Estela Ortega	13183	West- El Centro de la Raza
	Lynn Moody	13168	East - Hopelink
2 Student and Faculty Rider Interests	Larry Yok	13169	South - Highline CC
	Josh Kavanaugh	13163	West - UW
2 Trip Reduction and Commuter Interests	Liz Warman	13174	South - Boeing
	Jim Stanton	13161	East - Microsoft
total			9
Task Force Total Membership			28

Section 2: Overview of King County Metro

This section is a primer on King County Metro's programs and services. This section provides a snapshot of Metro's operational statistics and an overview of many of the programs and services the agency offers in addition to fixed-route bus service. This section is intended to offer a picture of the agency's role in providing transit service in King County and its current operating environment. The history of Metro, which is crucial to understanding factors continue to influence the organization's growth and operation, is included in this overview as well.

Information you'll find in this section:

- Overview of King County Metro Transit Division
- About King County and its Government
- King County Department of Transportation: Vision, Mission and Organizational Chart
- 2009 Metro Transit Facts
- Programs Up Close
  - Fixed route Services
  - Accessible Services
  - Commuter Vans, Custom Bus and Ridematch
  - Park and Ride Lots
  - Commute Trip Reduction
  - Employer Pass Programs
  - Central Puget Sound Regional Fare Coordination Project
  - Innovative Partnerships
  - Bicycle Programs
- History of Metro

Links to Additional Resource Materials:

- Metro website: <http://metro.kingcounty.gov/>
- About Metro: <http://metro.kingcounty.gov/am/metro.html>
- About King County: <http://www.kingcounty.gov/About.aspx>
- More about King County Department of Transportation:
<http://www.kingcounty.gov/transportation/kcdot.aspx>
- Metro milestones: <http://metro.kingcounty.gov/am/history/history.html>
- Better than promised: An informal history of the Municipality of Metropolitan Seattle
<http://metro.kingcounty.gov/am/history/history-btp.html>
- History Link: the free online encyclopedia of Washington State:
<http://www.historylink.org/>

Overview of King County Metro Transit Division

Mission: *Provide the best possible public transit services and improve regional mobility and quality of life in King County.*

King County Metro Transit is the largest public transportation agency in Washington State, serving more than 1.8 million area residents in King County. As of the end of 2009, Metro operated a fleet of about 1,100 vehicles within a 2,134 square mile area. Metro's fleet includes standard and articulated clean diesel coaches, electric trolleybuses, and hybrid diesel-electric buses. Annual ridership for 2009 was approximately 112 million. Metro serves riders who are disabled or who have special needs with accessible fixed route service (all Metro buses have wheelchair lifts or ramps and all routes and trips are accessible), as well as paratransit van service and a taxi scrip program.



Metro has twice been honored as the best-run large public transportation system in North America. One of the ten largest bus systems in the nation, Metro has nearly 10,000 bus stops and 130 park-and-ride facilities connecting riders to their destinations on more than 220 routes. In 2009 Metro had approximately 112 million boarding's and carried passengers an estimated 495 million miles. Metro is recognized as a leader in reducing pollution with its use of hybrid buses, electric trolleys, and cleaner fuels. All Metro buses are equipped with bicycle racks.

Beyond Buses

Metro Transit is more than buses. Metro also operates the largest publicly owned vanpool program in the country. By the end of 2009 Metro had more than 1,100 vans serving on an average weekday approximately 6,100 people, eliminating approximately 5,000 vehicle trips a day. It also supports the regional Ridematch program which helps commuters form and sustain new vanpools and carpools in seven counties by matching names in a computer data base. The agency provides extensive commute trip reduction services to 480 major employers and sells transit and commuter-van passes to more than 2,000 employers.



To help meet future needs and ease severe downtown traffic congestion, Metro operates a 1.3-mile transit tunnel underneath downtown Seattle, making stops at Convention Place, Westlake, University Street, Pioneer Square and the International District.

Regional Collaboration

Metro works closely with other transit and transportation agencies to provide efficient, integrated travel options throughout the region. Metro is also the contract operator of Sound Transit's Express commuter bus service and Link light rail and the City of Seattle's South Lake Union Streetcar.

About King County and Its Government¹

Located on Puget Sound in Washington State, and covering 2,134 square miles, King County is nearly twice as large as the average county in the United States. With more than 1.8 million people, it also ranks as the 14th most populous county in the nation.

King County Government Services

Regional services

Public transportation is one of many regional services provided by King County to all residents of the county, including people who live in cities.

Other regional services include courts and related legal services, public health services, the county jail, records and elections, property tax appraisals and regional parks and facilities, including the King County International Airport (Boeing Field). King County's responsibility for public transportation, as well as sewage disposal was assumed following the voter-approved merger of Metro and King County in 1993.

Subregional and local services

King County provides contract services in many suburban cities, such as law enforcement. In unincorporated communities, King County provides the services listed above and many local services, including land-use regulation, building permits, police protection, roads and local parks.

Governance

The **King County Executive** is the elected executive officer of county government. Every citizen of the county has an opportunity to vote for the Executive, who is elected on a countywide basis.

The **Metropolitan King County Council** is the legislative branch of county government. It adopts laws, sets policies and holds final approval over the budget. Councilmembers represent geographic districts. Every county citizen, including city residents, has an opportunity to vote for a representative on the County Council.

The **Regional Transit Committee (RTC)** reviews and makes recommendations to the Metropolitan King County Council on policies for public transportation operated by King County. The RTC is comprised of County councilmembers as well as elected officials from Seattle, Bellevue, and the Suburban Cities Association.

King County Council Districts



¹ Adapted from the King County website

King County Department of Transportation: Vision, Mission, and Organizational Chart

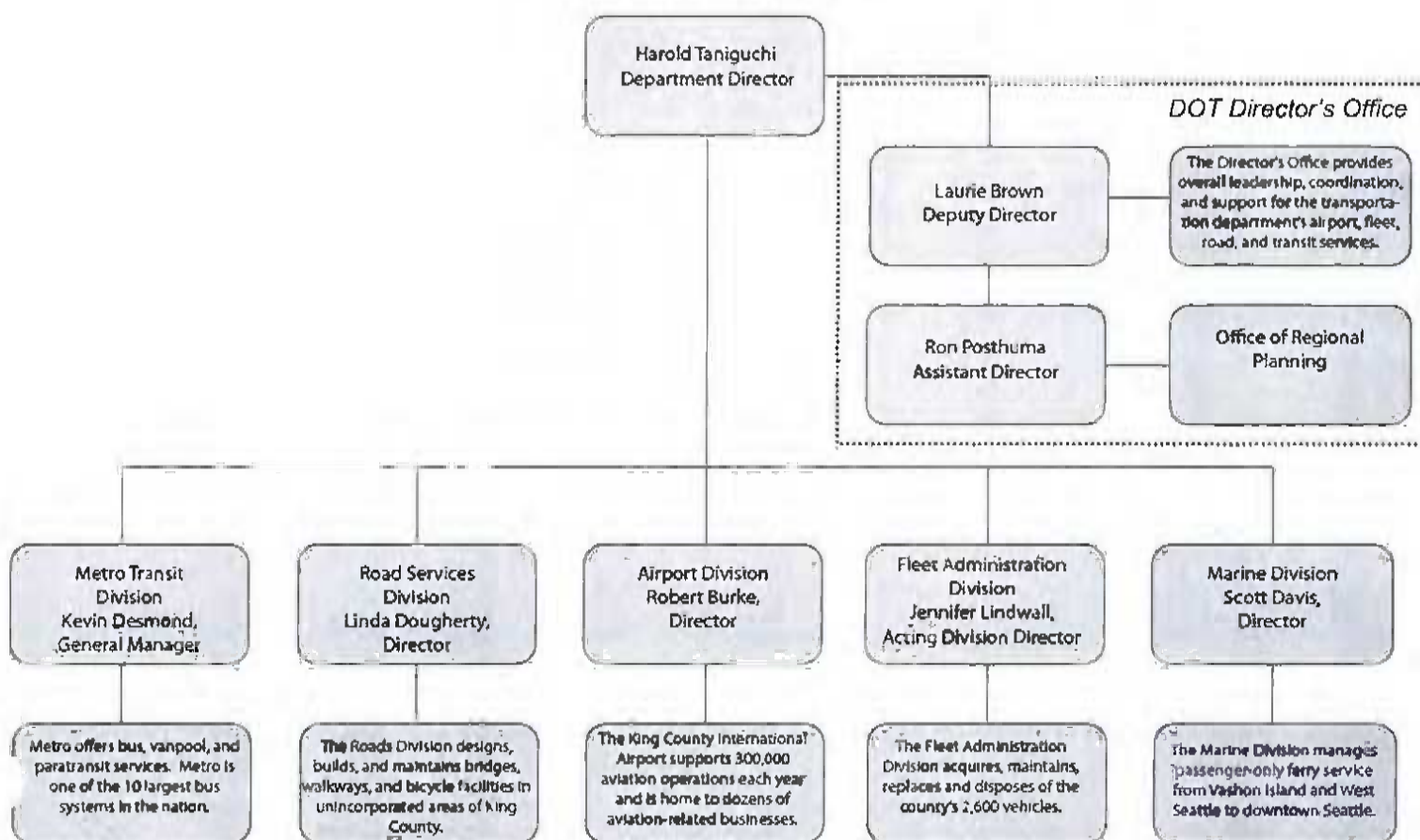
Vision: *The King County Department of Transportation will be known and recognized for its transportation innovations in sustaining a growing and vibrant economy and quality of life in the Puget Sound Region.*

Mission: *To improve the quality of life for citizens of King County by providing mobility in a way that protects the environment, helps to manage growth, and reduces traffic congestion.*

Goals:

- Provide and maintain safe and secure transportation services and facilities
- Efficiently move more people and goods throughout the region
- Deliver transportation services in a way that protects and enhances the environment, advances equity and social justice and promotes healthy and accessible communities.
- Manage costs and seek revenues to meet growing demand for services and facilities
- Employ, support and retain a highly skilled, diverse and productive workforce
- Ensure that excellent internal and external customer service remains front and center for the department.

Organizational Chart



2009 Metro Transit Facts

(Year-end 2008 figures)

General information (2007 year-end)

Area served (square miles)	2,134
Population served	1,884,200
Diesel coaches	907
Trolley coaches	159
Hybrid coaches	235
Other buses (inactive)	54
Vanpool vans	
Groups in operation	1,034
Available for groups	24
Transit vans (Diesel)	27
Paratransit vans	287

Metro Transit and Sound Transit bus service

Bus drivers (full- and part-time)	2,694
Passenger boardings (includes South Lake Union Streetcar)	126,936,630 est.
Platform hours	3,775,312
Platform miles	49,982,862
Boardings per service hour	32.9
Miles per trouble call	5,568
Diesel fuel used (gallons)	10,229,652

Metro Transit only bus service

Passenger boardings (includes South Lake Union Streetcar)	118,824,795 est.
Platform hours	3,435,032
Platform miles	43,180,783
Boardings per service hour	33.8
Electricity used (kwh)	16,277,945

Other Metro Transit service

Vanpool ridership	2,770,711 est.
Paratransit ridership	1,155,822

Metro Transit Employee Information

Total employees	4,644
Non-driver employees	1,871

Financial information (2008 year-end)

Operating expense (excluding Sound Transit and other funds)	\$501,162,739
Operations revenue	\$110,947,922
Bus operating cost per boarding	\$3.70
Bus operations revenue per boarding	\$0.89

Transit facilities

Bus stops (zones)	9,549
Transit centers	10
Park-and-ride lots used by Metro	132
Park-and-ride lot stalls	24,524
Stops with passenger shelters	1,536
Passenger shelters with murals	824
High-occupancy-vehicle lanes used by Metro (miles)	244.52
Trolley overhead—two-way wire (street miles)	>69
Transit bases	7

Downtown Seattle transit tunnel (reopened 9/24/2008)

Length	1.3 miles
Stations	5

Elderly and disabled riders program

Paratransit boardings	1,155,822
Access van passenger trips	1,121,776
Taxi passenger trips	34,046
Accessible coaches	1,443
Accessible routes	223
Wheelchair-accessible bus stops	7,318
Access vans	287

Ridematch program

Rideshare Online	
Home page visits	456,508
Logon sessions	109,680
New ridematch customers	27,022
New pool match for existing ridematch clients	20,201

VanPool program

Passenger boardings	2,770,711 est.
Vehicle miles	10,793,380
Vanpool vans in service	1,031
Direct operating cost	
Per van mile	\$0.44
Per passenger trip	\$1.78

Metro Transit Services

Customer Information	
Phone	206-553-3000
TTY	206-684-1739
Transportation community relations	
Phone	206-684-1162
TTY Relay	711
Metro Online	www.kingcounty.gov/metro
General Manager	Kevin Desmond

Metro Up Close: Fixed Route Service¹

Metro provides a network of fixed-route transit services throughout King County. With a combination of core, peak and local routes – approximately 220 routes in all – Metro provided 112 million rides in 2009. The **core** routes comprise the **backbone** of Metro's system, providing all-day, two-way **service** between residential, business and activity centers. **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. Metro works to coordinate its service with Sound Transit and other transit providers to **offer an integrated** transportation network and **connect** to regional systems such as Sound Transit's Sounder and Link light rail.



RapidRide

Metro is adding to its family of services with the launch of its new RapidRide bus rapid transit service in 2010. RapidRide will provide faster, more frequent service along key corridors. Everything about RapidRide—the buses, the stops, the way it operates—is being designed to keep people moving quickly throughout the day in these heavily used transit corridors. Buses will arrive frequently—at least every 10 minutes during the busiest morning and evening travel hours. Stations will have distinctive shelters, seating areas, and customer information. Electronic signs at the stations will provide real-time information about when the next bus will arrive.

Metro Transit Boardings (in Millions)

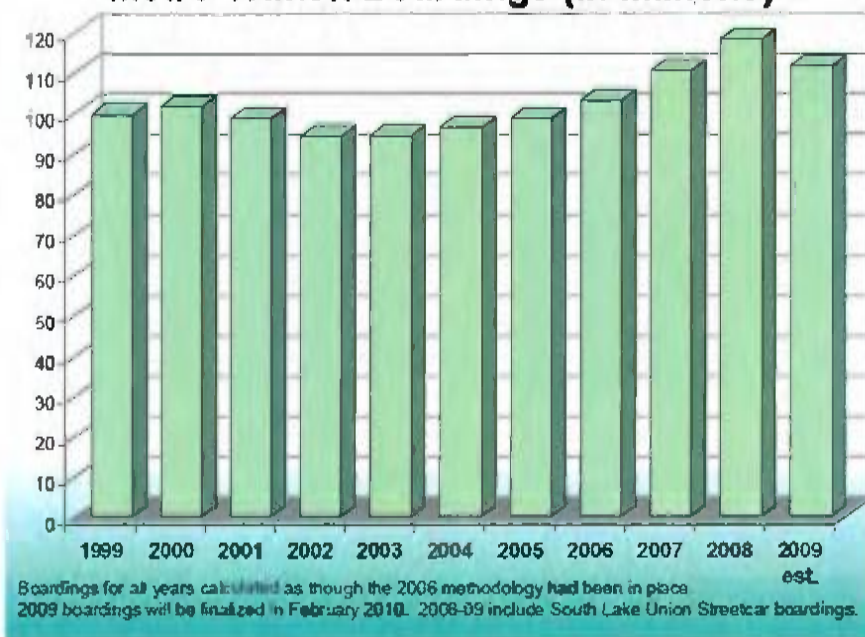


Figure 1: Metro Boardings

¹ Sources: King County Metro website; King County Metro 2007-2016 Strategic Plan; Metro staff

Metro's Service Concept

Metro's network of services that are in place today comprise a multi-centered system focused on connections to and between centers, with higher frequency services in key corridors. This multi-centered approach was first

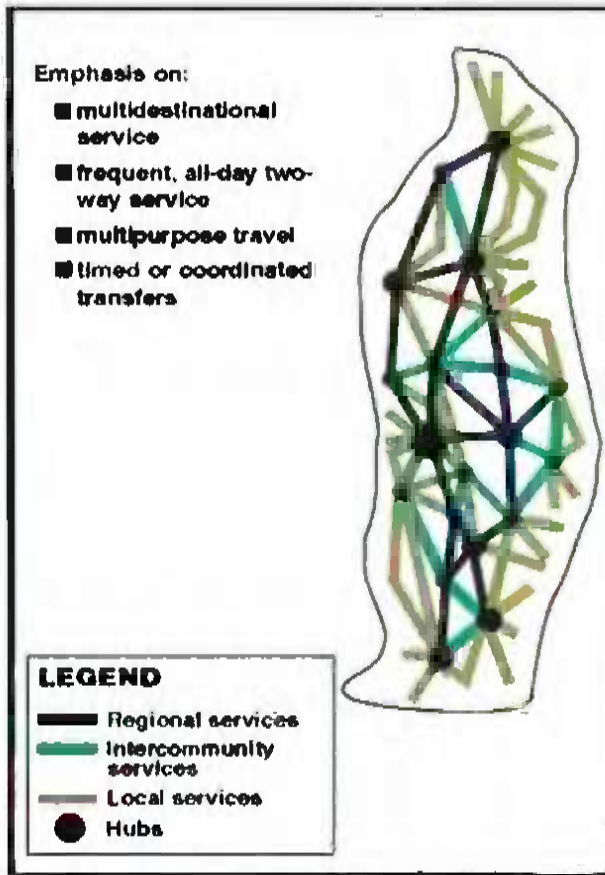


Figure 2: A multi-centered system

established through adoption of the 1993 Comprehensive Plan for Public Transportation and the subsequent 1996 Six-Year Plan, and has been expanded over the years.

This multi-centered network which relies on efficient transfers at key hubs and transfer points expands the range of destinations that can be reached by public transportation.

Metro also serves a network of park-and-rides across King County, primarily with peak-only services.

The extent of Metro's services is shown in the map below, along with the major transit centers and park and rides.

Fleet

As of the end of 2009, Metro operated a fleet of more than 1,100 vehicles, including standard and articulated coaches, electric trolleybuses, and hybrid diesel-electric buses.

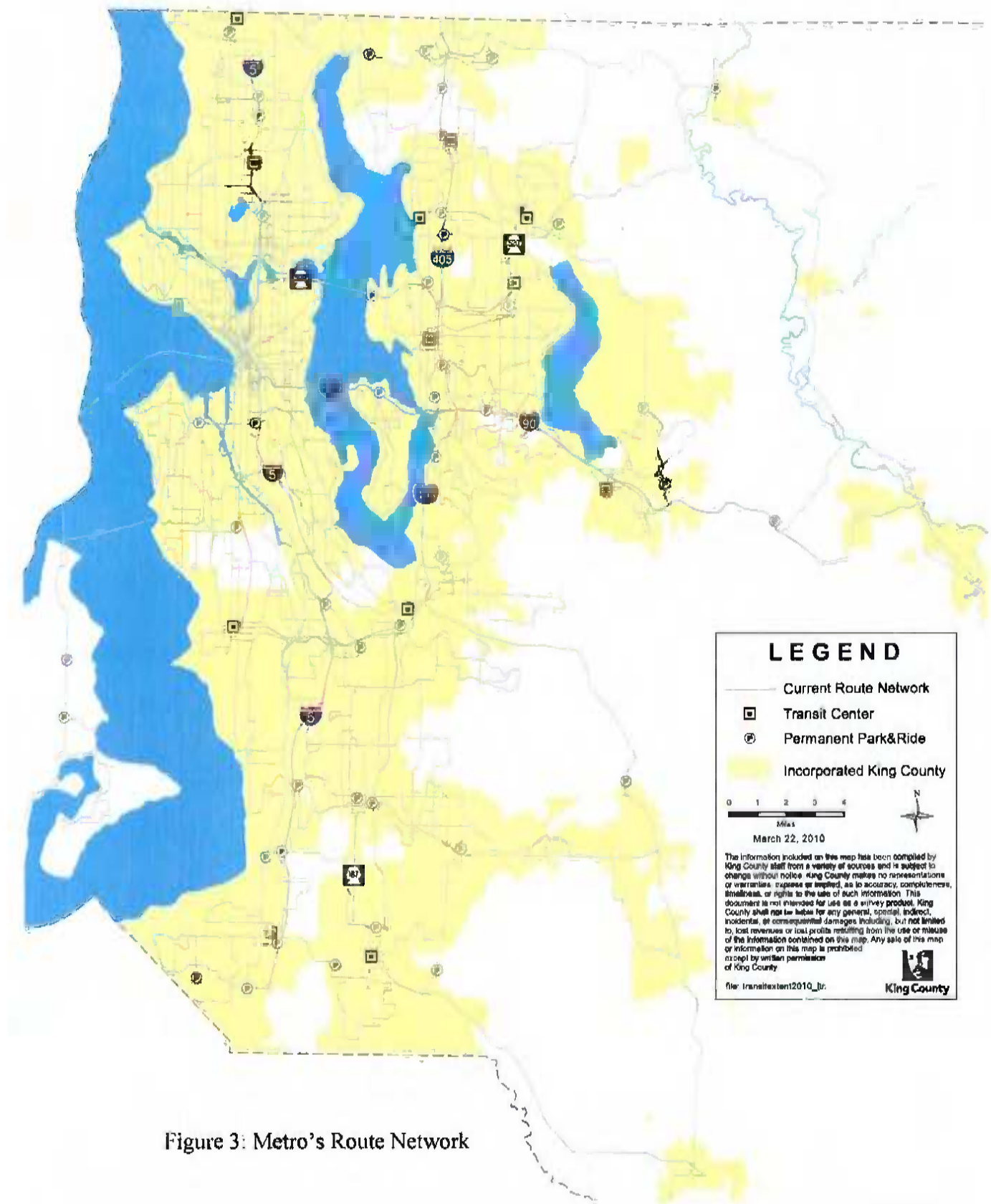


Figure 3: Metro's Route Network

King County Metro Route List and Performance

Metro provides hundreds of fixed routes all across King County. While all fixed routes have basic similarities, different routes have different functions and levels of service. This results in significant variation in the number of trips provided and productivity of a given route. The following pages provide a listing of all King County Metro fixed route services, excluding custom bus services, and the annual boardings, average weekday boardings, Saturday and Sunday boardings as well as weekday ridership per hour of transit service (Average Weekday Rides/Platform Hour) as of the end of 2009. These metrics show how routes with different functions have different ridership outcomes.

* Note: Ridership for all route variants, i.e. express, turnback etc. are accounted for under the single route number e.g. route 5 includes the Express, Northgate and Shoreline variants.

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
1	Queen Anne -- Downtown Seattle	891,800	2,880	1,610	1,300	57.7
2	Queen Anne -- Downtown Seattle -- Madrona Park	2,440,200	7,970	4,700	2,970	52.1
3	Queen Anne -- Downtown Seattle -- First Hill -- Judkins Park	2,316,400	8,240	2,560	1,440	58.5
4	Queen Anne -- Downtown Seattle -- First Hill -- Center Park	2,074,000	6,620	3,760	3,320	55.8
5	Shoreline -- Greenwood -- Downtown Seattle	1,818,500	6,030	3,270	2,070	37.4
7	Rainier Beach -- Columbia City -- International District -- Downtown Seattle	3,574,000	11,090	8,250	5,750	43.6
8	Seattle Center -- Capitol Hill -- Central District -- Rainier Beach	1,914,300	6,220	3,470	2,560	39.2
9	Rainier Beach -- Columbia City -- Capitol Hill	426,000	1,720	N/A	N/A	39.3
10	Capitol Hill -- Downtown Seattle	1,367,300	4,500	2,300	1,770	51.2
11	Madison Park -- Capitol Hill -- Downtown Seattle	1,046,100	3,430	1,890	1,280	50.3
12	Capitol Hill -- Downtown Seattle	1,132,200	3,950	1,390	970	49.7
13	Queen Anne -- Downtown Seattle	1,082,500	3,450	1,880	1,810	54.4
14	Summit -- Downtown Seattle -- Mount Baker	1,359,100	4,450	2,390	1,820	39.7
15	Blue Ridge -- Ballard -- Downtown Seattle	2,084,800	6,880	3,910	2,460	54.5
16	Northgate -- Wallingford -- Downtown Seattle	1,444,200	4,540	3,170	2,110	31.9

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
17	Loyal Heights -- Ballard -- Downtown Seattle	859,500	2,830	1,430	1,120	32.3
18	North Beach -- Ballard -- Downtown Seattle	1,643,800	5,240	3,430	2,230	47.8
19	Magnolia -- Downtown Seattle	73,400	290	N/A	N/A	31.4
21	Arbor Heights -- West Seattle -- Downtown Seattle	844,500	2,760	1,420	1,160	29.8
22	White Center -- West Seattle -- Downtown Seattle	484,500	1,590	980	470	26
23	White Center -- SODO -- Downtown Seattle	553,700	1,790	1,020	780	27.1
24	Magnolia -- Downtown Seattle	791,400	2,490	1,680	1,220	35.9
25	Laurelhurst -- University District -- Downtown Seattle	197,800	780	N/A	N/A	16.9
26	Green Lake -- Wallingford -- Fremont -- Downtown Seattle	1,005,500	3,230	1,760	1,570	41
27	Colman Park -- Leschi Park -- Downtown Seattle	432,300	1,380	870	600	32.2
28	Broadview -- Fremont -- Downtown Seattle	1,274,600	4,170	2,260	1,690	39.3
30	Sandpoint -- University District -- Seattle Center	834,100	2,670	1,620	1,200	29.8
31	Magnolia -- Fremont -- University District	404,100	1,470	670	N/A	32.9
33	Magnolia -- Downtown Seattle	399,600	1,390	540	310	30.4
34	Rainier Beach -- Columbia City -- Downtown Seattle	46,800	190	N/A	N/A	24
35	Harbor Island -- Downtown Seattle	10,100	40	N/A	N/A	14.4

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
36	Othello Station -- Beacon Hill -- International District -- Downtown Seattle	2,674,100	8,520	5,190	4,050	38.1
37	Alaska Junction -- Alki -- Downtown Seattle	77,500	300	40	N/A	16
38	Beacon Hill -- Downtown Seattle	45,900	150	160	N/A	17.4
39	Othello Station -- Seward Park -- Beacon Hill -- Downtown Seattle	373,300	1,260	560	400	23.6
41	Lake City -- Northgate -- Downtown Seattle	2,322,600	7,790	4,150	2,290	38.8
42	Columbia City -- Downtown Seattle	44,100	170	N/A	N/A	15.3
43	University District -- Capitol Hill -- Downtown Seattle	1,976,200	6,360	3,880	2,760	41.5
44	Ballard -- Wallingford -- University District	1,971,200	6,120	4,180	3,380	45.9
45	Queen Anne -- Wallingford -- University District	47,700	190	N/A	N/A	19.7
46	Shilshole -- Ballard -- Fremont -- Wallingford -- University District	87,200	350	N/A	N/A	18
48	Mount Baker -- Central District -- University District -- Greenwood -- Loyal Heights	3,718,700	12,730	5,460	3,310	52
49	University District -- Capitol Hill -- Downtown Seattle	2,029,500	6,250	4,290	3,700	44.9
51	Admiral District -- Alaska Junction -- Genesee Hill	77,600	250	120	120	17.7
53	Alki -- Alaska Junction	25,400	100	N/A	N/A	11.1
54	White Center -- West Seattle -- Downtown Seattle	1,067,600	3,430	1,900	1,720	33.5

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
55	Admiral District -- Alaska Junction -- Downtown Seattle	687,900	2,350	950	750	38.6
56	Alki -- Admiral District -- Downtown Seattle	479,400	1,580	900	520	30.3
57	Alaska Junction -- Admiral District -- Downtown Seattle	80,700	320	N/A	N/A	28.6
60	White Center -- Georgetown -- Beacon Hill -- First Hill -- Capitol Hill	1,062,800	3,590	1,510	1,250	38.4
64	Lake City -- Wedgwood -- Downtown Seattle -- First Hill	174,600	690	N/A	N/A	32.2
65	Lake City -- Wedgwood -- University District	1,006,300	3,500	1,440	1,050	44
66	Northgate -- University District -- Downtown Seattle	784,700	2,370	1,800	1,500	26.7
67	Northgate -- University of Washington	491,700	1,960	N/A	N/A	44.1
68	Northgate -- Maple Leaf -- Ravenna -- University of Washington	652,300	2,430	990	N/A	61
70	University District -- Eastlake -- Downtown Seattle	935,100	3,430	1,200	N/A	29.3
71	Wedgwood -- University District -- Downtown Seattle	1,327,700	3,930	3,030	2,890	42
72	Lake City -- University District -- Downtown Seattle	1,266,300	3,990	2,810	1,770	47.1
73	Jackson Park -- University District -- Downtown Seattle	1,449,800	4,700	2,910	1,710	44.7
74	Sandpoint -- University District -- Downtown Seattle	238,500	940	N/A	N/A	44.8
75	Ballard -- Northgate -- Sandpoint -- University District	1,742,100	5,920	2,930	1,750	38.7

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
76	Wedgwood -- Ravenna -- Downtown Seattle	182,600	740	N/A	N/A	27.3
77	North City -- Maple Leaf -- Downtown Seattle	179,700	730	N/A	N/A	24
79	Lake City -- University District -- Downtown Seattle	44,600	180	N/A	N/A	12.9
81	Ballard -- Queen Anne -- Downtown Seattle (OWL)	16,600	50	50	40	13.2
82	Queen Anne -- Green Lake -- Greenwood -- Downtown Seattle (OWL)	14,100	40	30	30	12.6
83	University District -- Maple Leaf -- Ravenna -- Downtown Seattle (OWL)	19,200	50	60	50	18.2
84	Madison Park -- Madrona -- Downtown Seattle (OWL)	9,700	30	30	20	7.3
85	White Center -- West Seattle -- Downtown Seattle (OWL)	19,600	60	50	40	17
99	Seattle Waterfront -- Pioneer Square -- Chinatown/International District	204,100	670	390	220	21.5
101	Renton -- Downtown Seattle	1,173,900	3,880	2,050	1,370	33
102	Fairwood -- Downtown Seattle	191,100	750	N/A	N/A	32.4
105	Renton Highlands -- Renton	461,300	1,530	770	540	40.7
106	Renton -- Rainier Beach -- Downtown Seattle	1,197,000	3,790	2,480	1,750	29.4
107	Renton -- Rainier View -- Rainier Beach	462,600	1,500	850	670	24.6
110	Renton	47,800	190	N/A	N/A	12.1
111	Lake Kathleen -- Renton Highlands -- Downtown Seattle	172,900	690	N/A	N/A	19.6

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
113	Shorewood -- White Center -- Downtown Seattle	70,500	280	N/A	N/A	21.3
114	Renton Highlands -- Newcastle -- Downtown Seattle	69,700	280	N/A	N/A	15.9
116	Fauntleroy -- Downtown Seattle	93,700	370	N/A	N/A	17.2
118	Vashon Island -- Talequah	155,000	580	120	N/A	14.6
119	Vashon Island -- Dockton	84,100	330	N/A	N/A	17.4
120	Burien -- White Center -- Delridge -- Downtown Seattle	2,162,800	6,850	4,650	3,050	42.4
121	Highline CC -- Burien -- Downtown Seattle	262,400	1,030	N/A	N/A	26.3
122	Highline CC -- Burien -- Downtown Seattle	153,300	600	N/A	N/A	30.5
123	Gregory Heights -- Burien -- Downtown Seattle	55,900	220	N/A	N/A	16.1
125	Shorewood -- White Center -- Downtown Seattle	655,000	2,220	940	690	32.6
128	Admiral District -- Alaska Junction -- White Center -- Southcenter	963,800	3,210	2,010	710	32.2
131	Highline CC -- Burien -- South Park -- Georgetown -- Downtown Seattle	479,000	1,370	1,380	980	23.4
132	Highline CC -- Burien -- South Park -- Georgetown -- Downtown Seattle	658,300	2,090	1,340	960	25.7
133	Burien -- University District	58,100	240	N/A	N/A	18
134	Burien -- South Park -- Georgetown -- Downtown Seattle	81,400	320	N/A	N/A	18.7
139	Gregory Heights -- Burien	102,400	340	180	130	18.2

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
140	Burien -- SeaTac -- Southcenter -- Renton	1,070,400	3,310	2,440	1,760	25.2
143	Black Diamond -- Maple Valley -- Renton -- Downtown Seattle	123,400	490	N/A	N/A	21.4
148	Fairwood -- Renton	281,600	980	340	260	25.9
149	Black Diamond -- Maple Valley -- Renton	27,400	110	N/A	N/A	6.5
150	Kent -- Southcenter -- Downtown Seattle	1,671,400	5,250	4,070	2,150	27.8
152	Auburn -- Star Lake P&R -- Downtown Seattle	74,000	300	N/A	N/A	11.8
153	Kent -- Renton	182,800	720	N/A	N/A	19.2
154	Tukwila Sounder -- Duwamish -- Federal Center South	21,700	80	N/A	N/A	9.3
155	Fairwood -- Southcenter	132,600	450	330	N/A	16.1
157	Kent East Hill -- Downtown Seattle	35,500	140	N/A	N/A	9.3
158	Lake Meridian -- Kent -- Kent Des Moines P&R -- Downtown Seattle	139,200	550	N/A	N/A	18.3
159	Covington -- Kent -- Kent Des Moines P&R -- Downtown Seattle	109,700	430	N/A	N/A	16.3
161	Kent East Hill -- Tukwila -- Downtown Seattle	76,300	310	N/A	N/A	13.1
162	Kent -- Kent Des Moines P&R -- Downtown Seattle	38,000	150	N/A	N/A	15.1
164	Green River CC -- Kent East Hill -- Kent	384,400	1,330	850	N/A	48.8
166	Kent -- Highline CC -- Des Moines	595,600	1,940	1,200	660	33.5

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
167	Renton -- University District	77,700	330	N/A	N/A	18.2
168	Maple Valley -- Covington -- Kent	434,000	1,380	840	660	29
169	Kent - East Hill - Renton	1,159,800	3,410	2,850	2,460	44.2
173	Federal Way -- Boeing Industrial	21,000	80	N/A	N/A	13.8
174	Federal Way -- Des Moines -- Kent -- SeaTac -- Tukwila	1,668,900	4,980	4,250	3,090	46.4
175	West Federal Way -- Des Moines -- Kent -- Downtown Seattle	52,200	210	N/A	N/A	11.1
177	Federal Way/320th P&R -- Downtown Seattle	259,100	1,030	N/A	N/A	18.9
179	Twin Lakes -- Federal Way -- Downtown Seattle	99,700	400	N/A	N/A	12.2
180	Auburn -- Kent -- SeaTac -- Burien	1,322,000	4,060	2,990	2,280	30.9
181	Twin Lakes -- Federal Way -- Supermall -- Auburn -- Green River CC	798,100	2,450	1,870	1,310	27.8
182	Northeast Tacoma -- Federal Way	157,200	550	210	100	18.4
183	Federal Way -- Kent	229,800	830	350	N/A	25.1
187	Twin Lakes -- Federal Way	172,100	590	300	90	29.5
190	Redondo Heights P&R -- Downtown Seattle	78,800	310	N/A	N/A	14.2
192	Star Lake P&R -- Downtown Seattle	43,500	180	N/A	N/A	11.8
194	Federal Way -- SeaTac -- Downtown Seattle	1,379,300	4,260	3,030	2,380	30

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
196	South Federal Way P&R -- Downtown Seattle	74,600	300	N/A	N/A	11.2
197	Twin Lakes -- Federal Way -- University District	157,700	690	N/A	N/A	19.1
200	Issaquah	78,300	310	N/A	N/A	7.8
201	West Mercer Island	3,800	20	N/A	N/A	8.2
202	Mercer Island -- Downtown Seattle	56,500	220	N/A	N/A	9.9
203	North Mercer Island	40,700	150	40	10	18.3
204	Mercer Island	57,100	190	120	50	17.5
205	Mercer Island -- First Hill -- University District	48,100	210	N/A	N/A	17.3
206	Newport Hills -- Newport High School -- International School	13,000	70	N/A	N/A	40.5
207	Somerset -- Newport High School -- International School	17,400	100	N/A	N/A	49.1
208	Cougar Mountain -- Newport High School -- International School	19,800	110	N/A	N/A	54.9
209	North Bend -- Issaquah	82,800	270	260	N/A	6.6
210	Issaquah -- Factoria -- Downtown Seattle	44,700	180	N/A	N/A	10.3
211	Eastgate -- South Bellevue -- First Hill	45,100	180	N/A	N/A	10.7
212	Eastgate -- Downtown Seattle	366,600	1,470	N/A	N/A	31.9
213	North Mercer Island	20,400	70	50	20	46.1

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
214	Issaquah -- Downtown Seattle	155,800	620	N/A	N/A	15.7
215	North Bend -- Issaquah -- Downtown Seattle	92,000	360	N/A	N/A	15.1
216	Bear Creek P&R -- Sammamish -- Issaquah -- Downtown Seattle	99,900	400	N/A	N/A	15
217	Downtown Seattle -- Eastgate -- Issaquah	41,700	170	N/A	N/A	17.8
218	Issaquah Highlands -- Downtown Seattle	299,200	1,190	N/A	N/A	24.2
219	Newcastle -- Factoria	29,800	140	N/A	N/A	9
221	Eastgate -- Overlake -- Redmond	358,700	1,210	510	410	14.2
222	Eastgate -- Factoria -- Downtown Bellevue	256,200	900	300	170	19.6
225	Overlake -- Eastgate -- Downtown Seattle	67,300	260	N/A	N/A	29.1
229	Overlake -- Eastgate -- Downtown Seattle	93,200	370	N/A	N/A	30
230	Kirkland -- Downtown Bellevue -- Crossroads -- Overlake -- Redmond	1,319,000	4,300	2,350	1,820	30.3
232	Duvall -- Redmond -- Downtown Bellevue	105,700	420	N/A	N/A	17.3
233	Redmond -- Overlake -- Downtown Bellevue	205,400	780	120	N/A	15.8
234	Kenmore -- Downtown Kirkland -- Downtown Bellevue	359,500	1,250	480	300	15.1
236	Woodinville -- Totem Lake -- Downtown Kirkland	163,800	570	240	140	8.3
237	Woodinville -- Downtown Bellevue	23,600	100	N/A	N/A	14.5

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
238	UW Bothell -- Totem Lake -- Downtown Kirkland	203,700	740	150	130	10
240	Renton -- Newcastle -- Bellevue	707,500	2,270	1,560	860	22.6
242	Ridgecrest -- Northgate -- Overlake	101,900	410	N/A	N/A	14.5
243	Jackson Park -- Lake City -- Downtown Bellevue	55,800	230	N/A	N/A	22.2
244	Kenmore -- Totem Lake -- Overlake	54,100	210	N/A	N/A	11.5
245	Factoria -- Eastgate -- Crossroads -- Overlake -- Downtown Kirkland	706,800	2,380	1,060	790	18.9
247	Overlake -- Eastgate -- Renton -- Kent Boeing	21,300	90	N/A	N/A	6.9
248	Kirkland -- Downtown Redmond -- Avondale	294,200	910	640	490	15.1
249	Overlake -- Downtown Bellevue	148,900	550	180	N/A	13.8
250	Downtown Redmond -- Overlake -- Downtown Seattle	60,900	250	N/A	N/A	11.3
251	UW Bothell -- Woodinville -- Downtown Redmond	82,000	300	110	N/A	5.9
252	North Kirkland -- Downtown Seattle	131,900	520	N/A	N/A	19.6
253	Downtown Bellevue -- Crossroads -- Overlake -- Redmond	968,900	3,030	2,220	1,380	38.3
255	Brickyard P&R -- Kirkland -- Downtown Seattle	1,023,300	3,380	1,700	1,280	25.9
256	Downtown Seattle -- North Bellevue -- Overlake	54,700	220	N/A	N/A	16.2
257	North Kirkland -- Downtown Seattle	98,400	390	N/A	N/A	17

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
260	Finn Hill -- Juanita -- Downtown Seattle	43,000	170	N/A	N/A	14.5
261	Overlake -- Downtown Bellevue -- Downtown Seattle	73,300	300	N/A	N/A	16.5
265	Downtown Redmond -- Houghton P&R -- Downtown Seattle	67,100	270	N/A	N/A	12.3
266	Downtown Redmond -- Overlake -- Downtown Seattle	59,800	240	N/A	N/A	12.5
268	Bear Creek P&R -- Downtown Seattle	66,000	270	N/A	N/A	17.6
269	Issaquah -- Sammamish -- Bear Creek P&R -- Overlake	108,500	430	N/A	N/A	7.8
271	Issaquah -- Eastgate -- Downtown Bellevue -- University District	1,078,800	3,810	1,380	740	25.2
272	Eastgate -- Crossroads -- University District	99,100	410	N/A	N/A	18.6
277	Juanita -- Houghton P&R -- University District	57,900	250	N/A	N/A	13.4
280	Downtown Seattle -- Downtown Bellevue -- Renton (OWL)	13,500	40	20	40	12.6
291	Downtown Redmond -- Totem Lake	33,100	130	N/A	N/A	9.7
301	Richmond Beach -- Shoreline P&R -- Downtown Seattle	360,200	1,410	N/A	N/A	31.1
303	Shoreline -- Northgate -- First Hill	209,200	830	N/A	N/A	32.4
304	Richmond Beach -- Downtown Seattle	92,100	370	N/A	N/A	22.3
306	Kenmore -- Lake City -- Downtown Seattle	118,400	460	N/A	N/A	27.7
308	Lake Forest Park -- Lake City -- Downtown Seattle	56,300	230	N/A	N/A	20.8

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
311	Duvall -- Woodinville -- Downtown Seattle	155,200	610	N/A	N/A	15.4
312	Bothell -- Kenmore -- Lake City -- Downtown Seattle	381,500	1,540	N/A	N/A	27.4
316	Meridian Park -- Northgate -- Green Lake -- Downtown Seattle	152,400	620	N/A	N/A	26.4
330	Lake City -- Shoreline	84,200	330	N/A	N/A	23.6
331	Kenmore -- Lake Forest Park -- Shoreline	364,100	1,250	540	290	22.4
342	Shoreline -- Kenmore -- Bothell -- Downtown Bellevue -- Downtown Renton	81,700	330	N/A	N/A	13.8
345	Shoreline -- Northgate	414,000	1,430	590	340	38
346	Shoreline -- Northgate	430,800	1,430	810	450	32.5
347	Mountlake Terrace -- North City -- Northgate	579,000	1,870	1,210	690	33.6
348	Richmond Beach -- Shoreline -- Northgate	605,600	1,940	1,210	850	34.5
355	Shoreline -- Greenwood -- Downtown Seattle	183,400	740	N/A	N/A	24.1
358	Shoreline -- Green Lake -- Downtown Seattle	2,931,500	9,140	6,680	4,400	45.7
372	Woodinville -- Bothell -- Kenmore -- Lake City -- University District	942,900	4,000	N/A	N/A	32.2
373	Shoreline -- Jackson Park -- University District	217,300	880	N/A	N/A	29.3
600	Downtown Seattle -- Group Health Tukwila	11,400	50	N/A	N/A	6.9

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
885	South Bellevue -- Bellevue High School	6,600	40	N/A	N/A	20
886	Clyde Hill -- Bellevue High School -- South Bellevue	6,000	30	N/A	N/A	40.7
888	Eastgate -- Interlake High School -- International School --	16,500	90	N/A	N/A	35.8
889	Bellevue -- Redmond -- Sammamish High School -- International School	10,500	60	N/A	N/A	29.1
890	Bellevue -- Sammamish High School -- International School	12,400	70	N/A	N/A	32
891	Mercer Island -- Mercer Island High School	14,200	80	N/A	N/A	30.8
892	Mercer Island -- Mercer Island High School	18,100	100	N/A	N/A	42.9
901	Federal Way	118,300	390	210	120	20.8
903	Federal Way	163,200	540	320	170	19.1
908	Renton Highlands -- Downtown Renton	30,600	110	60	N/A	9.3
909	Renton Highlands -- Downtown Renton	44,300	160	80	N/A	11.3
912	Enumclaw -- Black Diamond -- Covington	4,200	20	N/A	N/A	2.2
913	Riverview -- Kent	23,017	90	33	N/A	3.5
914	Kent -- Kent East Hill	55,000	180	150	N/A	18.5
915	Enumclaw -- Auburn	119,000	440	N/A	N/A	16.4
916	Kent -- Kent East Hill	42,500	140	N/A	N/A	12.7

FALL 2009 ROUTE PERFORMANCE ORDERED BY ROUTE NUMBER						
Route	Areas Served	Annual Boardings	Average Weekday Boardings	Average Saturday Boardings	Average Sunday Boardings	Average Weekday Rides Per Platform Hour
917	Algona -- Auburn	54,200	200	N/A	N/A	14.3
918	North Kent -- Kent	24,000	90	N/A	N/A	11.9
919	North Auburn -- Auburn	36,500	130	N/A	N/A	15.3
921	Downtown Bellevue -- Eastgate -- Somerset -- Factoria	115,600	470	N/A	N/A	16.3
925	Newcastle -- Factoria	2,600	10	N/A	N/A	0.8
926	Crossroads -- East Bellevue -- Eastgate	44,600	180	N/A	N/A	8.8
927	Sammamish -- Issaquah	35,700	140	N/A	N/A	6.3
929	Fall City -- Carnation -- Duvall -- Downtown Redmond	20,400	80	N/A	N/A	4.3
935	Kenmore -- Finn Hill -- Totem Lake	43,350	170	N/A	N/A	5.2
941	Kent Des Moines P&R -- Star Lake P&R -- Tukwila P&R -- First Hill	137,700	540	N/A	N/A	24.9

Metro Up Close: Accessible Services

Metro serves customers with disabilities and special needs with accessible fixed route service (all Metro buses have wheelchair lifts or ramps), contracted ADA paratransit van service, community vans operated by local non-profit organizations, transit instruction and a taxi fare subsidy program. Metro's Access Transportation ADA paratransit service (**Access**) is available to customers with disabilities who are unable to use the regular fixed route bus system or light rail. It provides next-day shared rides along the same corridors and at the same times as regular fixed route bus service. Limited weekday service, funded through Transit Now, fills in eastern King County rural areas where there is no bus service. Access is provided by three contractors. First Transit operates the Access Control Center. Sold Ground and Veolia hire the drivers and maintain and operate the vehicles.



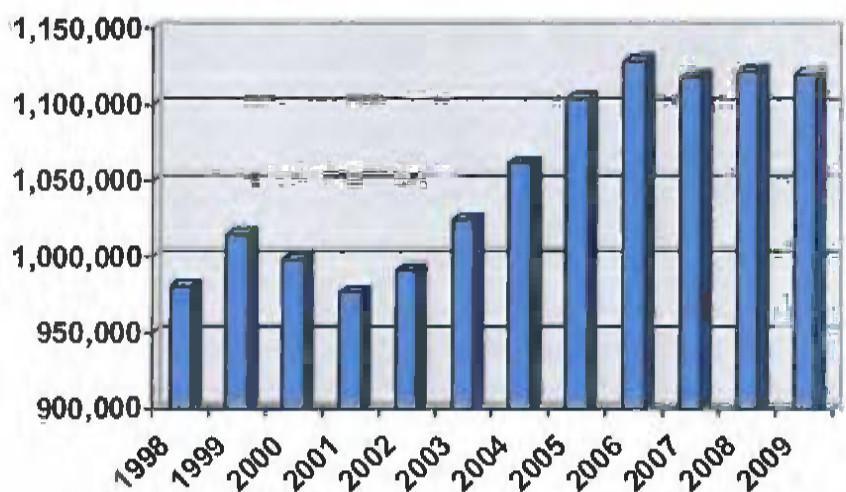
Access ridership increased over the last ten years but has remained flat since 2007. Implementing conditional eligibility and evaluating each applicant in-person for their ability to ride the bus slowed predicted growth.

King County Metro is a nationally recognized leader in providing service for customers with special transportation needs. Recently Metro established Getting There, a transportation resource center available for customers with disabilities wanting help in getting around in their communities. Customers are first evaluated by a physical, occupational or recreational therapist for their ability to ride the bus. Getting There helps those customers needing additional assistance in making a transition to the bus or other community programs.

Metro's Community Access Transportation (CAT) program provides vans, maintenance and some operating funds to community organizations. CAT provided 211,417 boardings in 2009. The average cost per ride on CAT service is about one-ninth the cost of Access service. The Hyde Shuttle, operated by Senior Services through a CAT agreement, offers community shuttle service for seniors and people with disabilities in selected Seattle neighborhoods.

The Taxi Scrip Program pays 50 percent of the cost of a taxi ride for low income customers who are seniors or adults under age 65 with a disability.

Access Transportation Boardings



Metro Up Close: Commuter Vans, Custom Bus and Ridematch

Commuter Van Program

King County Metro administers the largest publicly owned and operated vanpool and vanshare program in the nation for commuters who live and or work in King County. In 2009, our VanPool/VanShare program had 1,088 commuter vans in operation at year's end. Despite a 10 percent reduction in fleet size, the Commuter Van Program set a ridership record with 3.18 million trips – 1 percent increase over 2008.



Commuter Van Statistics: 2008 – 2009

	2008 YE	2009 YE	YE% Change
Vanpools in Operation	1,031	937	-9%
Vanshares in Operation	176	151	-14%
Total Vans in Operations	1,207	1,088	-10%
Vanpool Riders	2,770,711	2,822,511	2%
Vanshare Riders	377,839	357,823	-5%
Total Van Ridership	3,148,550	3,180,334	1%

VanPool Program

The VanPool program provides vans, staff support, maintenance, fuel and insurance to groups of 5 to 15 people who commute together. One volunteer from the group drives the van and does not pay for the ride. All other members pay a monthly fee based on the round-trip mileage of the commute, the size of the van and the number of people in the vanpool.

VanShare Program

VanShare is a transportation solution designed to increase commute options for our region's commuters. VanShare addresses the connectivity needs of commuters riding the bus, rail, vanpool, or ferry. The program makes available to commuters 8, 12, or 15 passenger vans to bridge the distance between a transportation terminal and the workplace or home.

Van Distribution Center (VDC)

The VDC was constructed in the mid-1990s, and provides office space and about 530 paved parking spaces for vehicles at various stages in their lifecycle.

Environmental Benefits of Commuter Vans

Metro vanpools eliminate approximately 5,453 vehicles and more than 117,081 vehicle miles from Northwest roads daily. In addition, each vanpool commuter reduces private car use by about 14,000 miles per year, improving the situation for individual drivers as well. Would be

drivers are able to eliminate several oil changes, avoid a major tune-up, reduce wear on a set of tires by one third to one fourth, and achieve significant savings on personal auto insurance.

The Metro Vanpool Program produced the following substantial annual environmental benefits in 2008 (Analysis provided by Green Car Company - Bellevue, WA) by removing over 5,680 regular commuters from our roads:

- Saved 23,237 Tons of green house gases (GHG) from being produced.
- Saved 2,442,588 of equivalent gallons of fossil fuel from being consumed.
- Experienced a 70% reduction in all regulated emission categories.
- Saved our citizens \$8,861,482 in vehicle fuel and maintenance costs.

Annual Vanpool Survey

- **94%** agree vanpooling is better for the environment.
- **94%** agree vanpooling reduces traffic congestion.
- **93%** expressed satisfaction with their vanpool experience.
- **96%** said yes when asked if they would recommend vanpooling to friends, relatives and co-workers.

Custom Bus Program

The Custom Bus program was established to serve King County commuters and students who travel to locations not well served by fixed route transit. Employers and schools contract with King County Metro for these customized express bus routes. Fares are set to cover 100% of the operating costs and riders pay for the service with a monthly pass or daily cash fare. This can be done through a cost-sharing arrangement with the employer. There are 10 routes, which provided 188,707 passenger trips in 2009.

Statewide Ridematch Program

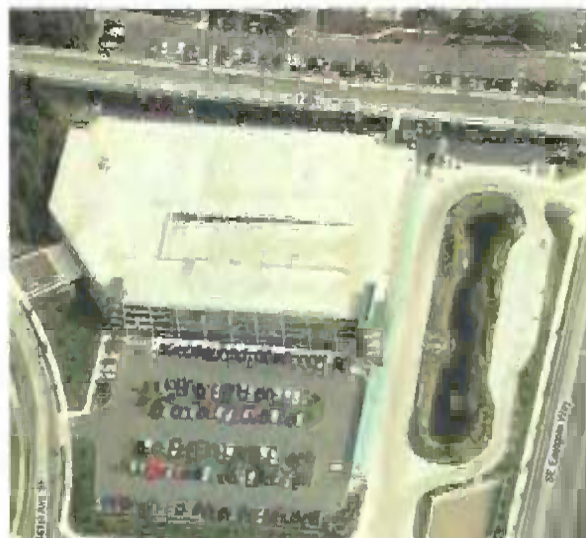
This program helps increase the number of commuters who use carpools and vanpools traveling to and from work or school. To accomplish this objective, King County Metro established a regional ridematch service in 1990 and maintains a database of people interested in ridesharing. In 2005, the program was extended statewide. In 2008, service was extended to all of Idaho. The online ridematch system will match an individual's commute information with other registered commuters who live nearby and have similar work schedules and destinations. By logging on to Ridematch for commute needs at the www.RideshareOnline.com website, commuters can register to instantly receive names of others with a similar commute that want to carpool or vanpool. A toll free rideshare phone number, 1-888-814-1300 is also available statewide. Special access to RideshareOnline.com is provided to employers to assist their employees with finding rideshare partners.

New RideshareOnline.com in 2010

Metro is working with WSDOT on replacement software for RideshareOnline.com. The ridematch software selected through the RFP process is iCarpool.com, which will provide improved and expanded matching capability and commute program management tools for employers.

Metro Up Close: Park-and-Ride Lots

Park-and-ride lots within King County are built, owned and maintained by many different agencies. King County Metro provides transit service to park-and-ride lots owned by the County, WSDOT, Sound Transit, and private owners. As of the end of 2009 there were approximately 130 park-and-ride facilities operating within the King County Metro Transit service area. Roughly half of these facilities are permanent facilities that are publicly owned or operated under a long-term lease with a private owner. The other half are leased lots where Metro leases parking spaces from churches or other shared private parking lots or public jurisdictions.



Eastgate Park and Ride lot and garage can accommodate up to 1,646 vehicles

While the total number of facilities is approximately evenly split, because of the size difference between permanent and leased facilities, permanent facilities provide almost 90 percent of the more than 25,000 total parking spaces. Compared to leased lots, permanent facilities also tend to be more utilized. More than half of the 65 permanent facilities average utilization rates of 80 percent or higher while only 9 of the leased lots average utilization rates of 80 percent or higher. The utilization charts below highlight the difference in size and utilization between leased lots and permanent facilities.

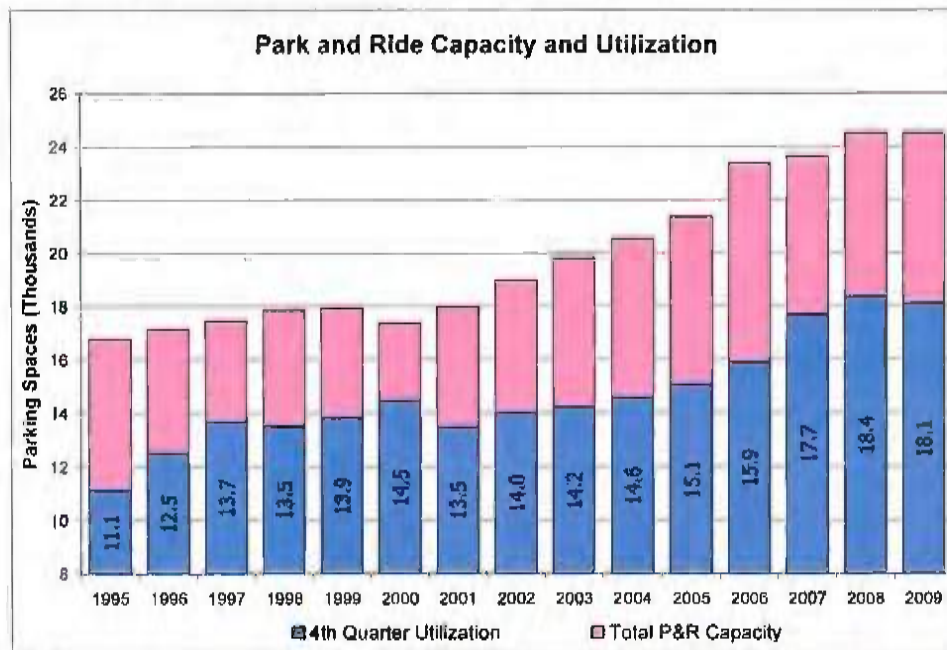
Leased Lot Capacity and Utilization			
FOURTH QUARTER 2009	Capacity	Used	Percentage
North District (11 lots)	510	418	82%
East District (23 lots)	763	243	32%
South District (31 lots)	1,307	727	56%
TOTAL (65 lots)	2,580	1,388	54%

Permanent Facilities Capacity and Utilization			
FOURTH QUARTER 2009	Capacity	Used	Percentage
North District (14 lots)	3,311	2,956	89%
East District (23 lots)	8,956	6,733	75%
South District (28 lots)	10,279	6,537	64%
TOTAL (65 lots)	22,546	16,226	72%

Park-and-rides serve as collection points where people from many different places can come together at a single location and take transit for the shared portion of their trip. Park-and-rides can be particularly well suited for collecting people in lower-density areas in a way that supports higher levels of transit service.

Encouraging Greater Transit Use

Park-and-rides play an important role in facilitating peak period commute-oriented travel. To take full advantage of this, in 2002, Metro added a park-and-ride expansion strategy to its strategic plan. The strategy was designed to specifically target park-and-ride capacity in congested corridors. Since 2002, over 5,500 parking stalls have been added to the inventory of park-and-ride spaces served by Metro and Sound Transit. Even with this expansion, park-and-ride utilization has remained fairly constant since 2002 at approximately 74 percent. The Park – and-Pide Capacity and Utilization chart below shows how park-and-ride capacity and utilization have changed since 1995.



Successful Park-and-Rides

The 2002 park-and-ride expansion program was specifically designed to further tap the commute market. High peak period utilization of park-and-ride stalls is largely influenced by the appropriate placement of the park-and-ride facility. There are at least five things that successful King County park-and-rides share:

1. The location provides frequent direct peak service to major employment centers.
2. The location provides users convenient and easy access in the approach to their ultimate destination.
3. Transit vehicles have quick entry onto a limited access roadway or urban arterial for direct connection to the destination.
4. The park-and-ride lot is served all day with at least 30 minute service
5. Users feel safe and secure.

Bothell, South Bellevue, South Kirkland, and Mercer Island Park and Rides, for example, all share these elements and all had utilization rates of 100 percent or more in the 4th Quarter of 2009.

Other Uses

In addition to the 25,000 parking spaces these park-and-rides provide, park-and-ride facilities can be defacto transit centers, incorporating bus layover areas, route terminals and pedestrian amenities. Because park-and-rides can encourage higher levels of transit service in an area, they can also serve as catalysts for transit oriented development. King County Metro's Transit



Oriented Development Program (TOD) works in concert with local jurisdictions to identify park-and-ride facilities that offer opportunities for transit oriented development. Some recent examples include projects at downtown Redmond and Northgate which included the development of affordable housing. Metro is also pursuing innovative uses of park-and-rides such as providing charging stalls for electric vehicles and allowing for other parking uses in off-peak periods in shared use lots.

Park and Rides are Available Across the County

King County Metro Transit park-and-ride facilities are located throughout the Metro service area. They are in communities such as Black Diamond, Snoqualmie, Federal Way, Auburn, Kent, Renton, Issaquah, Bellevue, Kirkland, Kenmore and Northgate. Where these facilities serve to concentrate potential transit users into common corridors, they help extend high quality transit service across the entire service area. A map of park-and-ride map can be found on the next page.

Metro Transit's website lists King County park-and-ride lots with bus and rail routes that service them by area. Park-and-ride lot information is available online at:

<http://metro.kingcounty.gov/tops/parknride/parknride.html>.

More information on Metro's TOD program can be found online at:

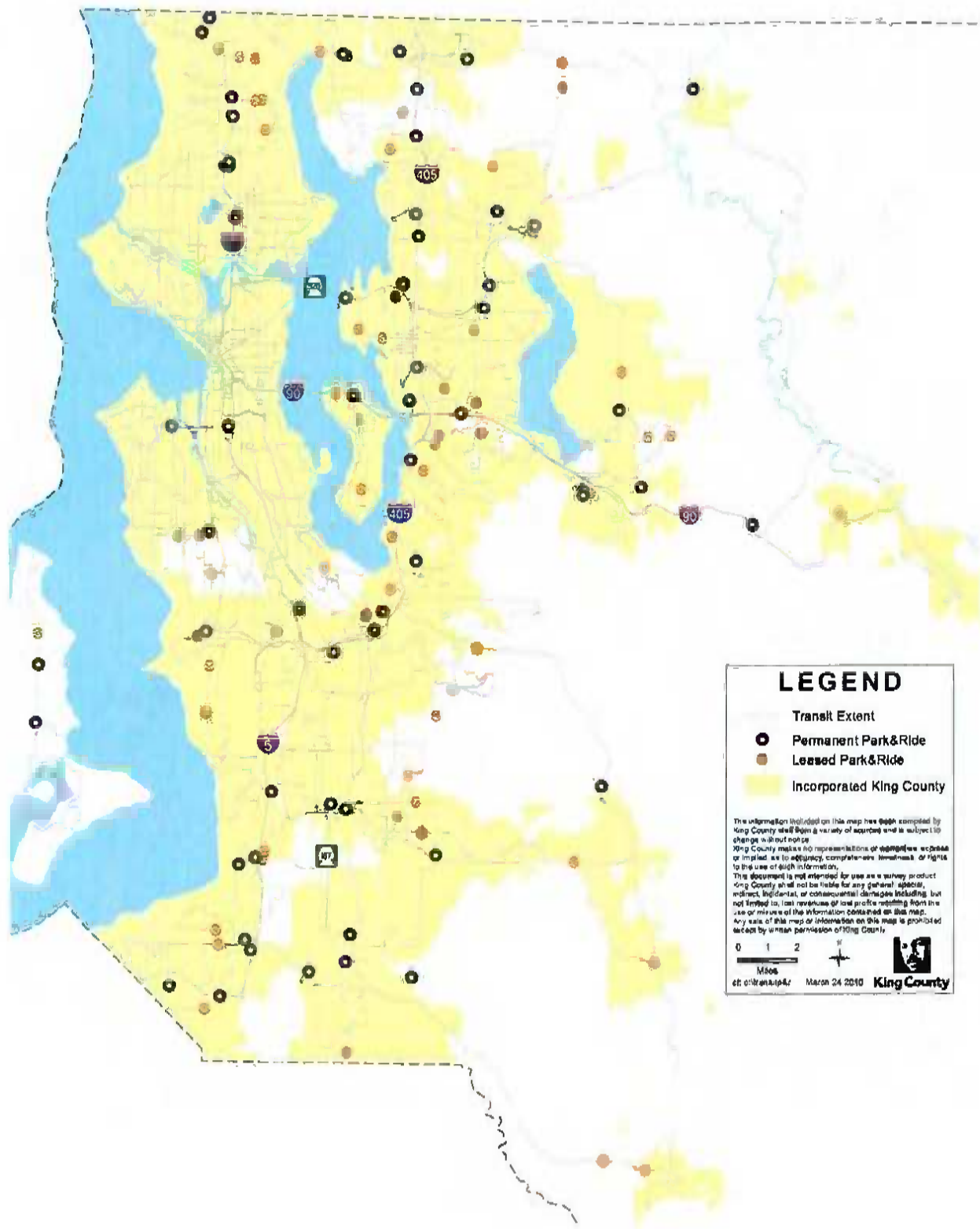
<http://www.kingcounty.gov/transportation/kcdot/PlanningAndPolicy/RegionalTransportationPlanning/TransitOrientedDevelopment.aspx>

Quarterly Reports

The 2009 4th Quarter report for Park-and-Ride Utilization of permanent Park and Rides is included after the Park and Ride map. More information about the park-and-ride program and Quarterly Park-and-Ride utilization reports are available online at:

<http://metro.kingcounty.gov/am/reports/reports.html>

Permanent and Leased Park and Ride in King County



FOURTH QUARTER 2009/2008 COMPARISON FOR PERMANENT PARK AND RIDES

The following information shows the average number of vehicles using park-and-ride lots on a daily basis. Counts are performed once each month, and the three months are averaged for the quarterly total. P&R changes during the quarter are highlighted; NA-Counts are not available; **These lots are counted once quarterly.

Capacity for King County and State lots reflects spaces available; it does not include accessible spaces or spaces reserved for other uses. In Sound Transit lots the total number of spaces in each lot is included. Also shown are the Lot Inventory Number, Lot Ownership (KC=King County, S=State, ST=Sound Transit) and alteration dates. These may reflect an expansion (E); restriping (R); or modification (M)-usually a change in capacity.

LOT#	NORTH DISTRICT	2009 Fourth Quarter			2008 Fourth Quarter		
		Capacity	Used	% Util.	Capacity	Used	% Util.
703	I-5/NE 65th St./Green Lake (S)	411	368	90%	411	410	100%
704	Kenmore (KC)	603	567	94%	603	571	95%
705	North Jackson Park (S)	68	57	84%	68	66	97%
706	North Seattle (S)	143	130	91%	143	140	98%
707	Northgate P&R (KC)	Closed 5/30/09			418	414	99%
707.1	Northgate North Garage (KC)	Closed 5/30/09			63	54	86%
709	Shoreline (S)	384	280	73%	384	343	89%
710	5th Ave NE/NE 133rd St (S)	46	15	33%	46	10	22%
744	SW Spokane St. (S)	55	33	61%	55	27	49%
749	Spokane/Airport (S)	25	21	83%	25	25	100%
753	Northgate Transit Center (KC/S)	296	297	100%	296	294	99%
753.1	Northgate TC Extension (KC)	398	395	99%	393	391	99%
753.2	Northgate TC Extension, Carpool (KC)	50	49	97%	24	24	100%
754	Aurora Village Transit Center (KC)	202	199	99%	202	213	105%
758	Northgate Mall Garage	280	283	101%	280	272	97%
760	Thornton Place Garage	350	262	75%	Not Open		
North District Permanent Park-and-Ride Totals		3,311	2,956	89%	3,411	3,254	95%

LOT#	EAST DISTRICT	2009 Fourth Quarter			2008 Fourth Quarter		
		Capacity	Used	% Util.	Capacity	Used	% Util.
701	Bothell (KC)	220	220	100%	220	218	99%
702	Brickyard Rd (KC/S)	219	206	94%	242	254	105%
711	Woodinville (S)	438	168	38%	438	161	37%
712	Bear Creek (KC)	283	270	95%	283	310	110%
713	Eastgate (S)	1614	1313	81%	1614	1159	72%
715	Evergreen Point Bridge (S)	51	47	93%	51	35	69%
717	Houghton (S)	470	135	29%	470	153	33%
719	Kingsgate (S)	502	426	85%	502	500	100%
720	SR 908/Kirkland Way (S)	20	17	85%	20	11	55%
722	Newport Hills (S)	275	165	60%	275	178	65%
724	Overlake (KC)	203	113	56%	203	65	32%
725	Preston (S)	53	34	64%	53	36	68%
726	Redmond (KC)	377	208	55%	Closed for Construction		
726.1	Redmond Interlm (KC)	Closed 7/10/09			110	110	100%
727	South Bellevue (S)	519	558	108%	519	547	105%
728	South Kirkland (KC)	596	630	106%	596	590	99%
729	Wilburton (S)	186	149	80%	186	184	99%
731	Duvall (KC)	49	18	37%	49	27	55%
755	Tibbetts Lot (KC)	170	20	12%	170	20	12%
759	Issaquah Highlands (KC)	1010	786	78%	1001	760	76%
818	Issaquah TC (ST)	819	522	64%	819	493	60%
830	Mercer Island (ST)	447	447	100%	447	447	100%
851	Overlake TC at NE 40 th (ST)	170	175	103%	170	175	103%
854	South Sammamish (ST)	265	106	40%	265	142	54%
East District Permanent Park-and-Ride Totals		8,956	6,733	75%	8,703	6,575	76%

LOT#	SOUTH DISTRICT	2009 Fourth Quarter			2008 Fourth Quarter		
		Capacity	Used	% Util.	Capacity	Used	% Util.
730	Auburn (KC)	358	142	40%	358	211	59%
732	Burien TC (KC)	334	278	83%	260	240	92%
733	Federal Way/S. 320th Street (S)	877	417	48%	877	517	59%
734	Kent/James Street (KC)	713	134	19%	713	182	26%
735	Kent/Des Moines (KC)	370	342	92%	370	374	101%
736	Maple Valley (S)	122	96	79%	122	120	98%
737	Ober Park** (KC)	48	46	96%	48	44	92%
738	Olson Place SW/Myers Way (KC)	98	112	114%	98	110	112%
739	Peasley Canyon Rd/West Valley Highway (S)	54	31	58%	54	49	91%
740	Renton Highlands (S)	146	111	76%	146	139	95%
741	South Federal Way (KC)	515	277	54%	515	379	74%
742	Twin Lakes (S)	600	88	15%	600	131	22%
743	South Renton (S)	373	361	97%	373	373	100%
745	Star Lake (S)	540	425	79%	540	493	91%
746	Tukwila (KC)	255	242	95%	255	255	100%
747	Valley Center** (KC)	55	48	87%	55	48	87%
748	Lake Meridian (KC)	172	43	25%	172	63	37%
751	SR 18/Auburn-Black Diamond Road (S)	26	4	17%	26	11	42%
752	Tahlequah** (S)	36	21	58%	36	34	94%
756	Renton P&R (Metropolitan Place) (KC)	150	131	87%	150	145	97%
757	Redondo Heights P&R (KC)	697	47	7%	697	50	7%
871.1	Tukwila Surface Lot at Tukwila Station (ST)	208	166	80%	185	146	79%
872	Kent Garage at Kent Station (ST)	877	748	85%	874	819	94%
872.1	Kent Surface Lot at Kent Station (ST)	224	157	70%	227	213	94%
873	Auburn Garage at Auburn Station (ST)	517	463	90%	500	461	92%
873.1	Auburn Surface Lot at Auburn Station (ST)	114	114	100%	114	114	100%
877	Federal Way TC (ST)	1200	1015	85%	1200	1107	92%
890	Tukwila International Blvd Station (ST)	600	478	80%	Not Open		
South District Permanent Park-and-Ride Totals		10,279	6,537	64%	9,565	6,828	71%
PERMANENT PARK-AND-RIDE TOTALS		22,546	16,226	72%	21,679	16,657	77%

Metro Up Close: Commute Trip Reduction (CTR)

Washington State's Commute Trip Reduction (CTR) Law was passed by the Legislature in 1991 with goals to improve air quality, reduce traffic congestion, and reduce the consumption of petroleum fuels through employer-based programs that encourage the use of alternatives to driving alone. Alternatives include riding the bus or train, carpooling, vanpooling, bicycling, walking, working a compressed work week, or teleworking. There are currently 561 worksites in King County affected by the CTR law, representing over 300,000 employees.

The Washington State Legislature passed the CTR Efficiency Act in 2006 and revised the goals for trip reduction. According to this legislation, each city and county must reduce drive alone trips at major worksites by 10 percent by 2011. Local jurisdictions have revised their CTR ordinances and published new CTR goals for employers.

The law requires major employers to develop and implement employee commute programs to reduce the number and length of drive-alone commute trips made to their worksites. Local jurisdictions (cities and counties) implemented ordinances to define how the law would apply to worksites in their area. Local jurisdictions are required to provide training and technical assistance for employers.

The CTR Law is working

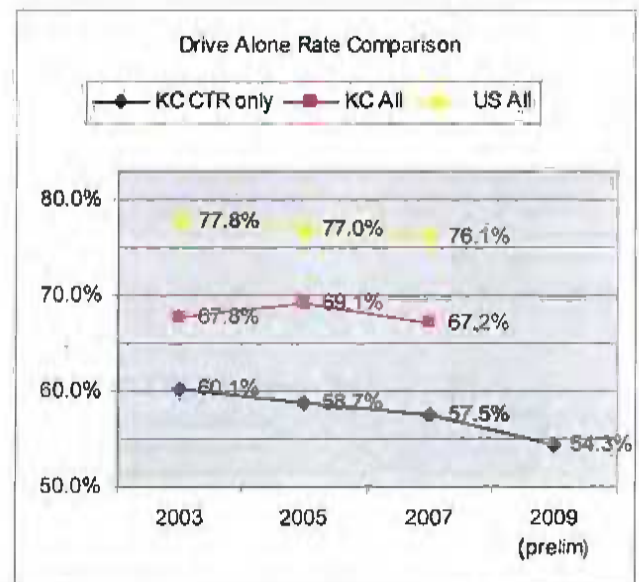
- CTR removed 28,000 vehicles from Washington roadways every weekday morning in 2009.
- CTR reduced 12,900 hours of delay in the Central Puget Sound Region in 2009, saving \$99 million for the region in congestion-related costs due to lost time and wasted fuel.
- Statewide, CTR reduced 62 million vehicle miles traveled (VMT) annually, equivalent to 27,490 metric tons of greenhouse gasses and three million gallons of fuel.
- Each morning peak travelers in Central Puget Sound saved \$59 in 2009 due to increased system efficiency provided through the CTR program.

CTR employers and jurisdictions are making progress. Figure 1 shows the reduction in drive-alone rates among all commuters in the U.S., all commuters in King County, and all commuters that work at worksites affected by the CTR law. The results show that engaging employers and helping them develop and maintain employee commute benefits programs leads to a reduction in drive-alone rates.

CTR-Affected Employers

The following guidelines define when an employer is affected by the CTR law:

- Located in a county with a population of at least 70,000
- Located within a designated urban growth area, per the Growth Management Act
- Located near a state highway corridor where commuters experience at least 100 hours of delay per year
- Has 100 or more employees that arrive to work between 6:00 and 9:00 am and regularly work 12 months per year (exempts schools and seasonal employers)





Washington State Commute Trip Reduction Board



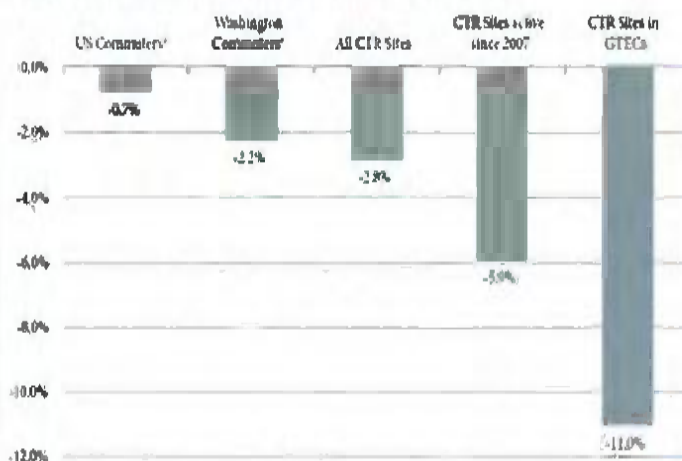
History

Since the passage of the Commute Trip Reduction Act in 1991, Washington State's employers and local and state partners have effectively converted solo trips to other modes and choices. Programs created by the CTR Board focus on removing solo driving trips from state highways by encouraging employers and local jurisdictions to develop plans that motivate employees to commute by rail, bus, vanpool, carpool, biking and walking. Washington's CTR programs are a national model for outstanding performance and public/private partnerships.

"Commute Trip Reduction efforts are vital for businesses looking to make the most of their human and financial resources. Employers take strongly into consideration the importance of conservation and a commitment to livable growth centers as they make their operational decisions. Smart commuting has become a business imperative."

-David Graybill, President & CEO, Tacoma-Pierce County Chamber

Percent Change in Drive Alone Rate from 2007 to 2009



* Change from 2007 to 2008.

Sources: U.S. Census Bureau and CTR survey database

"It is my priority to pursue programs and projects that enhance the City's sustainability while keeping the economy vibrant. The GTEC program is a great, successful partner for achieving those goals."

-Mayor Mary Verner, City of Spokane



Performance Highlights from 2009

- **CTR continues to perform**, removing nearly 28,000 vehicles from state roadways every weekday morning

- **Focused resources drove record program success.** Growth and Transportation Efficiency Centers (GTECs), authorized by the Legislature in 2007 to enhance CTR activities within compact urban centers, have shown promising initial success. CTR worksites within GTECs were about nine times more successful than all other CTR sites.

- **CTR's increasing performance bolsters the state's congestion, emissions and energy consumption goals.** CTR reduced 12,900 hours of delay in the Central Puget Sound Region in 2009, saving \$99 million for the region in congestion costs due to lost time and wasted fuel. CTR reduced 62 million VMT annually, equivalent to 27,490 metric tons of greenhouse gasses and three million gallons of fuel.

- **CTR provides economic benefits.** Each traveler in morning peak traffic in the Central Puget Sound saved \$59 in 2009 due to the increased system efficiency provided through the CTR program.

- **CTR creates, strengthens, and leverages partnerships.** In 2004, employers invested \$49.4 million dollars in CTR, more than \$18 for each dollar invested by the state.

- **CTR is cost effective.** In 2009, state investment in CTR provided a congestion reduction benefit in Central Puget Sound worth \$35 for every \$1 invested.



Recommendations to the Legislature



- Continue to invest in CTR as a key low-cost/high performance to get more out of our state and local corridor investments
- Retain the current definition of a major employer in the CTR law
- Explore funding and policy opportunities for 2011 as part of a broader transportation strategy

CTR Programs Work!

- ✓ **Reducing Congestion-** CTR quickly and inexpensively frees up capacity on the transportation system, resulting in cost and time savings for individuals, employers, and the community. CTR reduced delay by 7.6 percent in the Central Puget Sound Region in 2009, saving each morning peak traveler \$59 a year in wasted fuel and lost time.
- ✓ **Boosting Economic development** - Economic efficiency and transportation efficiency are closely linked. CTR success supports business vitality and economic development by offering an employee benefit, reduced taxes, and savings in construction and maintenance of parking. For example, downtown Vancouver has set an aggressive goal for job growth coupled with a target to reduce drive-alone trips to downtown from 88 percent to 65 percent. If these targets are realized, adding jobs while reducing drive alone trips would save the businesses in downtown \$136 million in parking construction.
- ✓ **Reducing Emissions-** (GHG) from the transportation sector account for nearly half of the state's total emissions. By reducing 62 million VMT each year between 2007 and 2009, CTR participants reduced 27,490 metric tons of GHG annually – equivalent to about 144 railcars' worth of coal or to the carbon sequestered annually by 5,861 acres of pine or fir forests.

Urban growth areas and designated GTECs in the CTR program



Metro Up Close: Employer Pass Programs

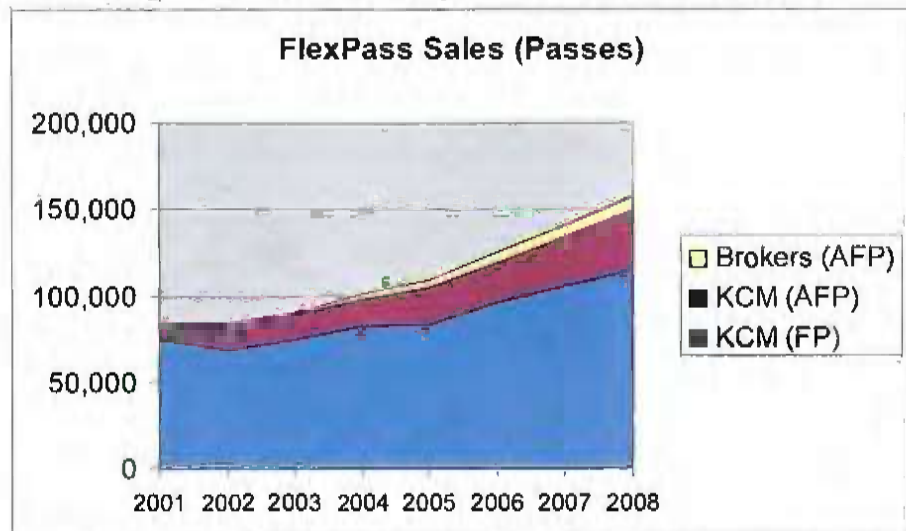
Metro has a long history of building ridership by reaching commuters through their employers. Employers in King County may purchase employee transit benefits from Metro either through retail or custom program options. Over 2,000 employers purchase some form of employee transit pass or commute benefit product from Metro. Metro's success in growing its market share through these pass programs is unparalleled among Metro's peer agencies.

The custom employer program at Metro grew out of Metro's experience with the University of Washington UPASS.

Faced with challenges to campus expansion (permits, traffic management, and the cost of building parking) the University engaged in a process with Metro and others to figure out how to get more people to campus in fewer vehicles. The result was the UPASS.

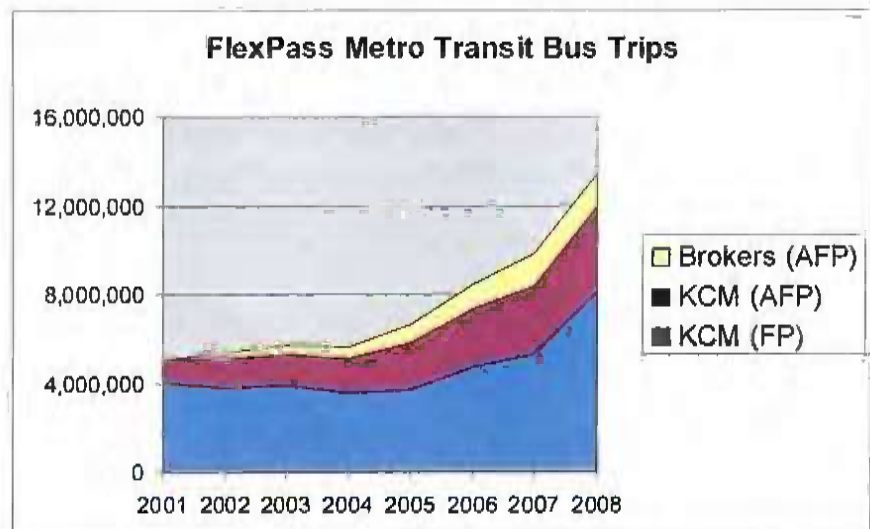
Under UPASS, every student, staff and faculty member may purchase a

quarterly transit pass at a fraction of the retail value. The UPASS also has vanpool, carpool, emergency ride home, night shuttle, and other benefits associated with it. The UPASS has been so successful that today fewer cars arrive to campus each day than did in 1991, while the student population has grown by almost 15 percent and the number of faculty and staff has increased as well.



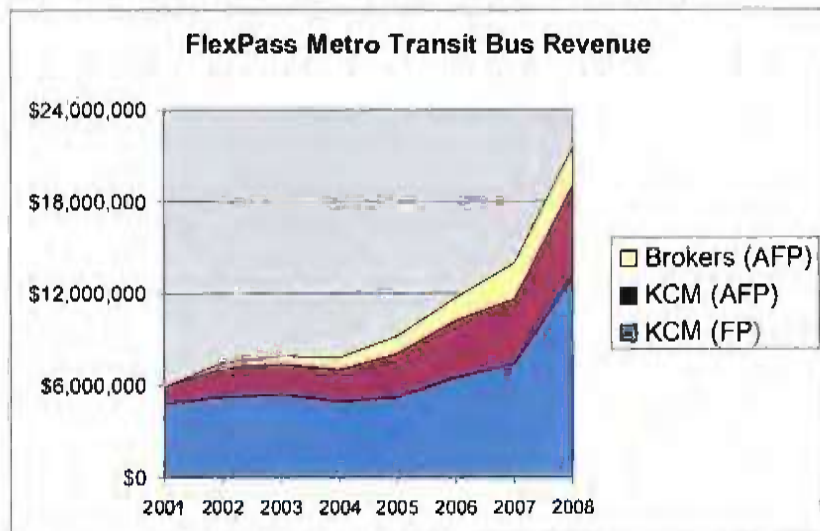
Extending the Success of UPASS:

Metro began to replicate the success of the UPASS with its FlexPass program. The premise for FlexPass was simple: put a pass in as many hands as possible at a worksite, associate multiple benefits with the pass so that each potential user could find value in it, and require that the employer subsidize at least 50 percent of the cost to the employee. Among the most significant developments in the



product packaging was that Sound Transit participated in every FlexPass account, and other agencies participated on a case by case basis. Also, all FlexPass agreements included Metro vanpool subsidies and a guaranteed ride home service. Metro offered FlexPass to employers at a fixed annual cost, so the cost of new trips during the year was absorbed by Metro. Because ridership increased very steeply in the early years of FlexPass, Metro's fare policies were changed to phase in the rate of cost increase to the employer.

Figures 1, 2, and 3 show the rate of participation in FlexPass in terms of passes, trips, and contract revenue from 2001 through 2008. In 2009 the region launched the ORCA smart card program and customers began to transition from FlexPass to ORCA. Thus, 2008 is last year of complete data for the FlexPass program.



Legend Key

Brokers. Brokers are third party organizations contracted to sell FlexPass on Metro's behalf. Brokers traditionally targeted employers with fewer than 100 employees. The Downtown Seattle Association (Commute Seattle) and the Bellevue Downtown Association (TransManage) performed this role for Metro. The brokers made huge inroads into their respective markets: between them the brokers managed over 400 Area FlexPass accounts.

KCM (AFP). The AFP "Area FlexPass" designation means that the pass price was determined by geographic area. The popularity of the FlexPass program led Metro to meet a business need to simplify the product's pricing and maintenance. This product was targeted to employers with 25-499 employees.

KCM (FP). These are classic FlexPass agreements where the cost to the employer was based on data specific to that employer's employees' use of Metro and other services. There were fewer than 60 such accounts in 2008, but these accounts represent a huge proportion of the program's trips and revenues.

Metro Up Close: Central Puget Sound Regional Fare Coordination Project

Project Purpose

Seven transportation agencies have implemented 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 allows linked trips between transit, ferries and rail significantly expands each agency's strategic fare policy capabilities.



System Status

- **April 20, 2009:** The Agencies launched the ORCA system in revenue service. For additional information please visit the website www.orcacard.com [external link] or call 1-888-988-6722 (ORCA)/ TTY Relay: 711/ 888-889-6368. The Contract Administrator can be reached at 206-684-1562.

Project Schedule

- Contract Award: 2003
- Revenue Service Beta Test: 2006 - 2007
- Final System Design: 2008 - 2009
- Full system revenue operations: April 20, 2009

About the Card

The ORCA card offers the convenience of one-stop shopping for your Puget Sound-area public transportation needs. Whether you commute by ferry, train, rail or bus – or any combination of transportation modes – the ORCA card has you covered. That's because ORCA is a collaborative regional fare system involving seven Western Washington public transportation agencies – Community Transit, Everett Transit, King County Metro Transit, Kitsap Transit, Pierce Transit, Sound Transit and Washington State Ferries.

No more worries about carrying correct change. The ORCA card is like a computer that can simultaneously keep track of value equivalent to cash and passes. One card is all you need.

Best of all, ORCA is safer than cash. By registering your ORCA card, you receive balance protection: If your registered card is lost or stolen, report it immediately to an ORCA Customer Service Office, online or by phone, and they will assist you with replacing your ORCA card and restoring the lost value, subject to the ORCA Terms of Use. Customers will be charged a replacement fee for the new card.

The ORCA card contains built-in intelligence that processes and stores information for three different types of transactions:

- A regional pass product like PugetPass (which ORCA replaced).
- An agency-specific pass product like a Kitsap Transit or Washington State Ferries monthly pass.
- Stored transportation value known as an E-purse. Value is deducted from your E-purse each time you take a ride, just as if you were using cash (except for WSF vehicle, bicycle and surcharge fares).

The ORCA Card is:

Quick. Get on the bus, train or ferry faster. Just tap your ORCA card, valid on Puget Sound-area buses, commuter trains and ferries, on the ORCA logo at the card reader.

Convenient. Move smoothly between seven public transportation systems, with no worries about different fares, lost tickets or misplaced transfers.

Worry-free. Ride without worrying about having exact change. The ORCA card monitors the remaining value of E-purse and passes, so you don't have to. And, if you register your card, you receive balance protection with the security of balance replacement if your card is lost, stolen or damaged.

ORCA for Businesses:

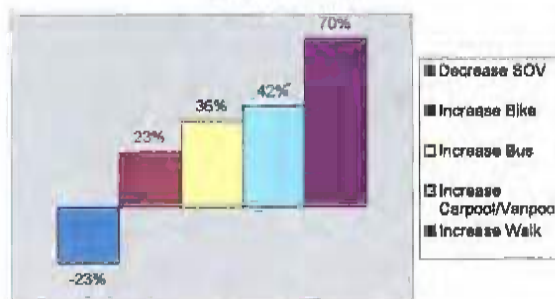
The ORCA card is a smart choice for businesses and their employees. About the size of a credit card, it automatically calculates any fare due and is valid for rides on Community Transit, Everett Transit, King County Metro, Kitsap Transit, Pierce Transit, Sound Transit and Washington State Ferries.

ORCA offers businesses a menu of transportation product options - all in a single card. ORCA's accurate ridership data provides valuable information for program planning and budgeting. Since ORCA cards are good for approximately four years, businesses no longer have to worry about handing out monthly passes or multi-rides and may simply distribute the card once and use a reload option that's most convenient. And if a business has multiple offices, it can manage all these accounts through a single interface on the ORCA Business Accounts website. There are two great programs for businesses to choose from, Business Choice or Business Passport.

Metro Up Close: Innovative Partnerships

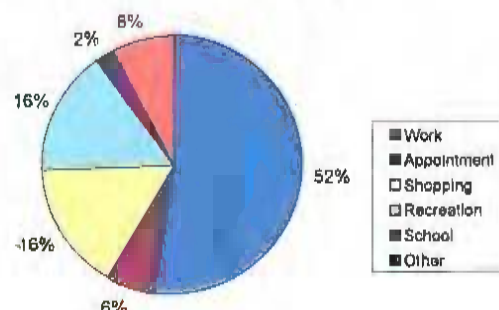
King County Metro Transit's In Motion program uses community-based social marketing techniques to affect people's transportation awareness and behavior. The In Motion approach focuses on neighborhood-based outreach, rather than the more typical employer-based approach. In addition, In Motion addresses the potential to change any trip from drive alone to an alternative mode, rather than focusing exclusively on commute trips. The In Motion program provides residents in selected neighborhoods with incentives to try driving less, raises individual awareness of alternate travel choices, and helps break the automatic reflex to drive for all trips.

Average Behavior Change as reported by all participants



The program was designed to be easily adapted to different neighborhoods with minor modifications in message and materials. King County has been operating In Motion programs since 2004, and to date has completed over 20 projects in neighborhoods throughout King County, including many in the City of Seattle, and in Bellevue, Lake Forest Park, and Renton. In recent years, In Motion programs have been used to promote transit service additions and changes, and to mitigate impacts of major construction projects such as the WSDOT I-405 expansion project. In Motion is funded through a variety of grant funds, and with contract funds from WSDOT for construction mitigation. The program leverages other fund sources, either as cash or in-kind contributions, from employers, local businesses, and local jurisdictions. In Motion programs generally last between 10 and 12 weeks, and garner participation from 8% of households canvassed. Participants report that their drive alone trips are reduced by about 20%. Increases in bus, walk, bike and ridesharing vary depending on the neighborhood, but all alternative modes see increases. In 2009, In Motion implementation in Southeast Seattle focused on partnering with local non-profit groups to reach a high percentage of limited English proficient populations. In 2010, In Motion will be implemented in the Tukwila to SeaTac corridor in support of Rapid Ride Line A, and in Kent. The program will be modified to employ social networking tools to increase communications with and between participants over the course of the programs.

Reasons for Trip, All Projects



Additional information is available at www.kingcounty.gov/inmotion.

Jobs Access Reverse Commute (JARC)

The Job Access Reverse Commute (JARC) Transportation Program is a comprehensive approach to providing transportation to low-income and welfare reform clients transitioning into employment. Metro's JARC Program works with social service agencies, employers, jurisdictions, and housing authorities to provide travel options by supporting the costs associated with leased vans, with mobility assistance programs, and other programs to help individuals overcome transportation barriers to employment. JARC partners, including Neighborhood House, Casa Latina, Puget Sound Educational Services District, Youthcare and Hopelink provide over 16,000 trips a year. JARC has worked with King County Housing Authority, Seattle Housing Authority and ARCH housing to bring travel information and options to residents. JARC provides assistance in joining or forming carpools and vanpools for individuals who might otherwise not have this option. JARC programs improve access to information about transportation options, especially for non-English speaking clients by creating custom brochures and maps with human service agencies, with Metro's In-Motion projects, and by supporting multi-language travel tools that Metro uses to encourage transit use. These tools have proven especially effective in helping communities adapt to bus service revisions within a neighborhood. Metro's JARC program has partnered with Zipcar to expand car sharing to low-income individuals and communities in the region.

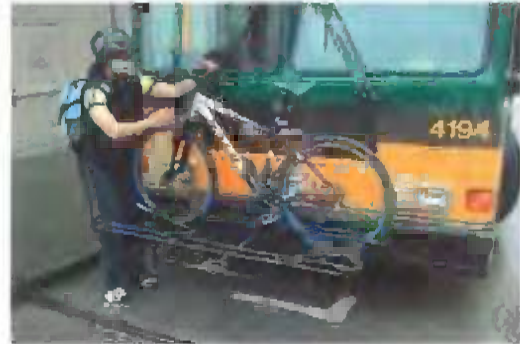
Partners in Transit

The Partners in Transit program reaches new markets to promote transit and other transportation alternatives by partnering with member-based organizations. The program uses partners' communication channels to reach their members with messages about driving less and using transit, carpooling, biking and walking more. Members are asked to take a pledge to drive less, and the program provides them with incentives and information to help them get started. Metro has successfully partnered with the Woodland Park Zoo (40,000 households), PCC Natural Markets (24,000 households), Entercom Radio (The End), and the Seattle Art Museum (28,000 households). Each program is custom tailored to use messages that will reflect the interest of their membership or audience. Survey results have shown that individuals and organizations that participate continue to use and promote transit as an alternative to driving. The organizations continue to promote transit on their websites, in their newsletters, and in their on-going communication with their respective communities.

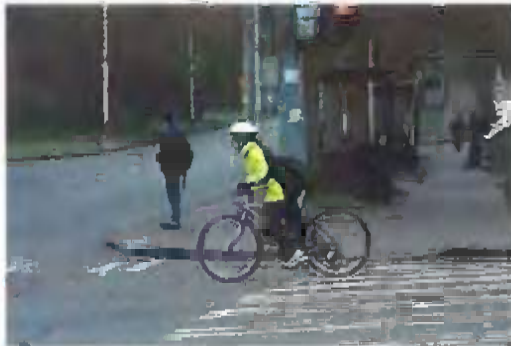
Metro Up Close: Bicycle Programs

Bicycle commuters are a growing market for King County Metro. A system-wide count conducted in Summer, 2007 indicated that Metro buses carry over 14,000 bicycles weekly during the peak season.

There are two ways bicyclists link their trips with transit: 1) they can take a bike on the bus if riding on either end of their trip, or 2) they use a bicycle as a means of access to transit, store the bike at a transit facility, and take the bus the rest of the way to their destination.



To respond to the growing demand for bikes on buses, Metro has received federal funding over the past five years to retrofit all of its coaches with three-position bike racks. This project is due to be completed in March, 2010. In February, 2010 Metro's long-time policy of restricting bike loading in Downtown Seattle's Ride Free Area was also changed to allow bikes to be loaded and unloaded at any regular bus stop, including stops within the Ride Free Area, at all times of the day.



For commuters who do not need to take their bike on the bus, Metro provides 230 secure bicycle lockers at 29 different transit facilities, including freeway stations, transit centers and park-and-ride lots. Lockers are normally 90 – 95% leased during the peak season. King County Metro currently has grant funding to test on-demand bicycle lockers, which would allow multiple users to share a single locker and provide greater flexibility in travel patterns.

Metro is also pursuing implementation of a bike sharing program in King County with a team of partners, including the Cities of Seattle, Redmond, Bellevue and Kirkland, Children's Hospital, Microsoft, and the University of Washington. An RFP for a vendor is slated to be issued in 2010.

Other components of Metro's bicycle program include sponsoring the Downtown Seattle bike station facility (in partnership with the City of Seattle and Sound Transit), support for the Major Taylor program (an Equity & Social Justice initiative aimed at creating a more diverse cycling community), and encouragement of cycling through events and creation of promotional materials.

History of Metro

Metro Transit was authorized by a public vote in 1972, but its history can be traced back to the beginning of transportation in King County. From the mosquito fleet, to Seattle Municipal Railway to the Seattle Transit Systems, each iteration of transit set the stage for those that followed. Many of Metro's routes, particularly those in the City of Seattle, closely follow the historical routes laid out by the streetcars and early bus lines. In addition to routing, transit systems in Seattle and the surrounding areas have also struggled with funding, infrastructure, and the balance between service quality and efficiency. When Metro first took over for the Seattle Transit System in early 1973, it inherited a run down system that had declining ridership and low appeal for a population that largely depended on automobiles for mobility.

1970's: Metro Begins

Metro Transit was authorized in 1972 by a citizen vote that provided .3 percent sales tax revenue for transit service in King County. This vote was monumental for King County as it was the first transit measure to pass since 1918 and it had been precipitated by several failed initiatives in the 1960's and a final no vote on Forward Thrust¹ in 1970. Through the vote in November, 1972, Metro was authorized to take over Seattle Transit and suburban bus companies, which were in severe decline. Metro was born at the beginning of 1973 and was charged with implementing the "1980 Transit Plan" which had a goal of carrying 54 million annual riders by the end of 1980.

With new funding and a new outlook, Metro reinvigorated a transit system that had long been struggling. Transit ridership began to rise with an immediate increase of 4.5% in 1973 and more than 8% in 1974 and 1975. In 1976, the zone and fare collection system was simplified and 145 diesel articulated buses were ordered by Metro to carry more passengers. This order was the first of any American transit system and the largest purchase of this type of bus in the world. With the addition of paratransit in 1977 and the conversion of the transit fleet to be fully wheelchair accessible, Metro's services were beginning to resemble those of the present transit system. By 1979, there were 58 million riders on the system, 4 million more than the goal set in 1973 when Metro was created.

1980s and 1990s: Metro Develops

During the 1980's and 1990's, Metro continued to grow and develop. Funding for transit increased as more sales tax revenue was authorized and the Intermodal Surface Transportation Efficiency Act (ISTEA) was passed which aided transit through grants and flexibility in comprehensive planning.

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¹ Forward Thrust was a series of bond proposals in the late 1960's and early 1970's, that were designed to fund improved transportation, water, community housing, and other capital improvement programs. The major transit initiatives of 1968 and 1970 would have brought 500 miles of bus routes and 49 miles of rail to the region. This would have been matched by nearly \$900 million in Federal Funding had it been passed.

The system was expanded through approval of the Downtown Seattle Transit Tunnel, completed in 1990. More people were encouraged to use transit through the Clean Air Act and the Commute Trip Reduction laws that led to new incentives for ridesharing and transit.

At the end of the 1990's, Metro was absorbed by King County, resulting in the current system. Virtually all of the factors that influence transit planning for King County Metro have been affected by the high population growth that this region has experienced since the 1980's. Since 1980, the population of King County has grown 44.5% from 1,269,898 to 1,835,300. In response to this overwhelming population growth and the accompanying effects on increased traffic congestion, state, regional and local governments crafted legislation in an effort to manage regional growth. The growth management act (GMA), passed in 1990, directs development to designated urban growth areas and limits growth in rural and resource land areas.



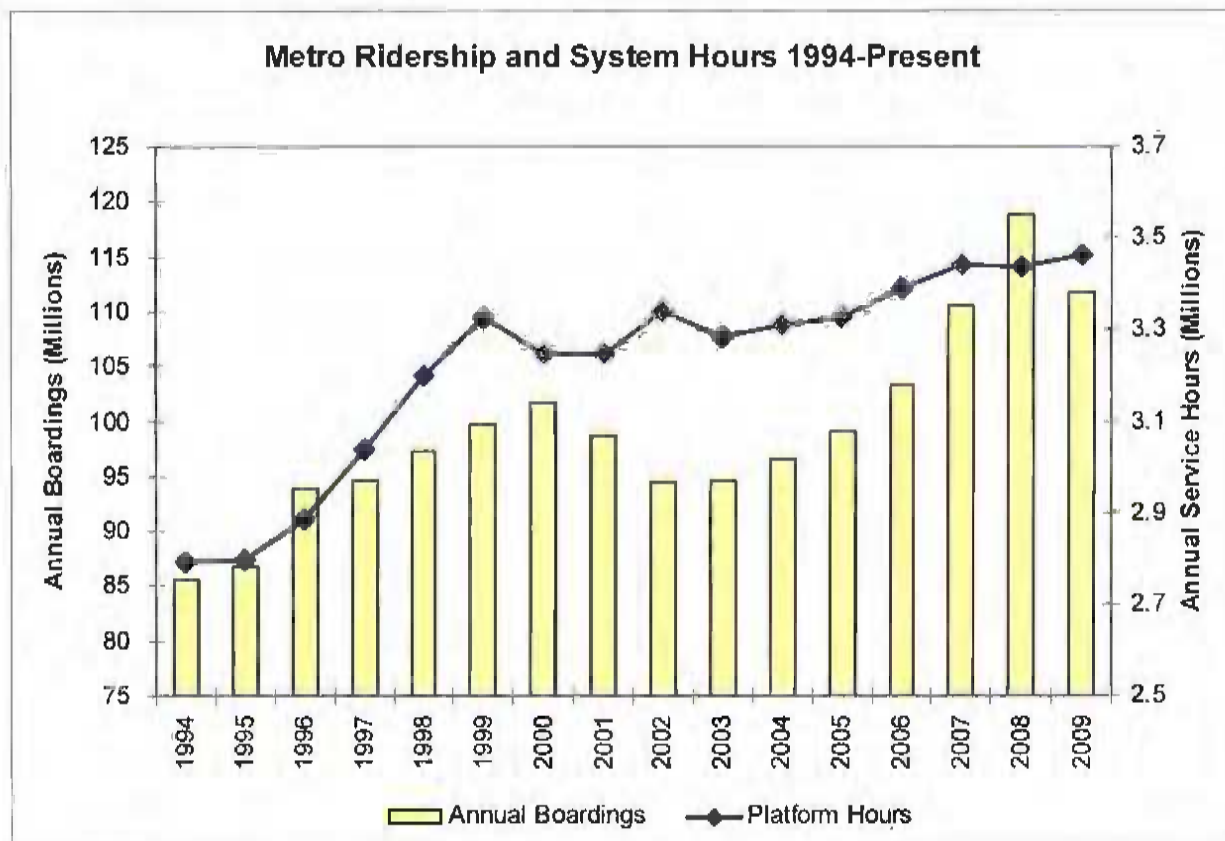
Metro adopted its first Comprehensive Plan for Public Transportation in the form of the Long Range Planning Framework (LRPF) in 1993. The long range plan established the foundation for transit planning and identified goals, objectives and policies to enhance mobility, support regional and local growth management efforts, and build partnerships at all levels of governments. It also provides policy guidance for the six-year and annual planning process. Building on the long-term policy foundation, Metro adopted its first six year plan to serve as an implementation guide and establish the basis on which annual operating and capital decisions are made.

Following the adoption of the LRPF and the first six-year plan, Metro initiated a major shift to a "multi-centered" system focused on connections to and between transit hubs, with higher frequency services in key corridors. Changing demographics of King County and rapid growth in areas outside the city of Seattle prompted the shift to provide access to a broader range of destinations with more efficient use of fleet and service hours. Much of the region's growth has occurred outside of Seattle, in south and east King County. Between 1994 and 2005, roughly 50 percent of the growth in population has occurred in South King County, with 30 percent in East King County. Twenty percent of the overall growth occurred in Seattle and West King County. Since 2005, this growth trend has continued. Following the shift, there were notable ridership gains and Metro has continued to build on this system. Metro has also worked to increase service on a core network of routes connecting major centers and to integrate with Sound Transit services.

Following the initiation of the new system structure, there were notable gains in ridership and productivity due in large part to core route improvements, consolidations and restructures. Transit use increased and single-occupant vehicle travel was reduced, primarily as a result of an increased number of partnership efforts. There was also an increase in the number of households with residents using transit. Between 1994 and 2000, the proportion of households using transit increased to 31 percent from 28 percent.

Beyond 2000: King County Metro's Current System

Metro faced a significant funding crisis in 2000, with the repeal of the Motor Vehicle Excise Tax (MVET) by the Washington State Legislature following a statewide voter-initiative, I-695, in 1999. The loss of MVET revenues cut Metro's funding by about \$110 million per year, representing about 29 percent of Metro's total operating funds. A dip of 150,000 service hours occurred in the year 2000 resulting from Metro's loss of Motor Vehicle Excise Tax (MVET). In spring 2000, the Washington State Legislature provided King County with about \$36 million in one-time "bridge" funding. In 2001, a King County voter-approved sales tax, Proposition 1, restored some of the lost funding by providing an additional two-tenths sales tax for transit but made Metro more reliant on sales-tax, a more volatile source of funding.



Though the automobile remains the most heavily utilized mode of transportation in the Puget Sound Region, rising concerns for the environment, coupled with increasing

consumer prices have again led many people to rethink their transportation options. Traffic congestion is on the rise, as population and employment growth, has led to significant increase in travel demand. Traffic congestion is reported to cost the average Seattle-Everett area commuter 46 hours of delay per year which in turn translates to a cost of \$792 annually in excess fuel and lost time.² Biking and walking have gained prevalence, automobiles have lost appeal, and people are driving less. Although the future is uncertain, costs of living will almost certainly continue to increase. King County residents may begin to permanently shift their transportation habits to a reliance on public transportation.

In order to enable Metro to keep pace with the growing demand for transit, Transit Now was approved by voters in November 2006. Metro Transit delivered the first service additions just three months later, and has been expanding service ever since. People have been using this expanded transit. In the first two years of the program, with only a 2% increase in service, Metro has almost achieved *Transit Now's* ten year goal of 20% more riders. By the end of 2009, Metro expanded service by 135,000 annual hours through Transit Now.

Up until the middle of 2008, King County Metro had every intention of continuing the growth and development of the system started in the 1970's. However, the past two years have been times of extreme challenge for King County Metro. A deep recession, severely affecting transit agencies across the nation, led to a reduced budget that included job losses, fare increases, digging deeply into reserves, and cuts to Metro programs. Moreover, the steep decline in sales tax receipts beginning in the second half of 2008 has created a well-documented structural imbalance in Metro's finances. Since sales tax revenue makes up 70% of Metro's operating budget, Metro is facing a difficult reality. The revenue that Metro will collect from sales tax receipts between 2008 and 2013 is projected to be \$700 million less than originally predicted.

Even as funding has decreased, transit demands in King County remain strong and will continue to grow as the regional economy rebounds and more people move into the area. Before 2017, the county is expected to add 250,000 new jobs and more than 150,000 new residents. At a time when transit has become a more popular way to travel and more people are moving to the region, King County Metro should be poised to grow to meet this demand. However, the reality is that it is likely that Metro will have a difficult time sustaining existing services if the revenue outlook does not improve substantially.

Thus far, with the passage of the 2010 Metro Transit Budget, Metro has been able to retain the same number of service hours to provide transit throughout King County. Since resources are so scarce, some of the service hours have been reallocated from their current trips and routes to better serve the overall transit needs of the County. In this way, the 2010 Metro Transit Budget allows transit to continue some planned growth over the next two years in areas where Metro has made a commitment to the public to implement improved transit service.

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² The 2005 Urban Mobility Report, Texas Transportation Institute, May 2005;
<http://mobility.tamu.edu/ums/>

For example, RapidRide bus rapid transit, which was originally part of Transit Now, will continue as scheduled. RapidRide is Metro Transit's new, streamlined bus service which will provide frequent, all-day service in six popular transit corridors throughout King County. Four of the six RapidRide bus rapid transit lines will start service between 2010 and 2012, increasing the overall number of service hours operated by Metro. As we move forward into the future, Metro will continue to improve and change service to better meet the mobility and travel needs of King County residents.

Section 3: Agencies in the Region

This section gives an overview of the transportation system in the Puget Sound region, including other transit agencies that operate in the area as well as state and regional entities involved in transportation. This section helps to demonstrate Metro's role in the region's transportation system and how agencies work together in the system.

Information you'll find in this section:

- Transit Agencies in the Puget Sound Region
- Sound Transit
- Puget Sound Trends
- King County and Transportation
- About the Washington State Department of Transportation
- WSDOT Programs and Metro Transit
- About the Puget Sound Regional Council

Links to Additional Resource Materials:

- Community Transit: www.commtrans.org
- Everett Transit: www.everett.wa.org/default.aspx?ID=290
- Kitsap Transit: www.kitsaptransit.org
- Pierce Transit: www.piercetransit.org
- Sound Transit: www.soundtransit.org
- Washington State Ferries: www.wsdot.wa.gov/ferries
- Puget Sound Regional Council: www.psrc.org
- Washington State Department of Transportation (WSDOT): www.wsdot.wa.gov
- WSDOT 2007 Key Facts: www.wsdot.wa.gov/About/KeyFacts/

Transit Agencies in the Puget Sound Region

Community Transit provides bus service in Snohomish County, operating 33 local and 31 commuter bus routes, carrying 57% of all Snohomish-Seattle commuters to work and back. In 2008, there were more than 11.8 million passenger trips on Community Transit buses. The agency serves a 1,305 square mile area and the nearly 500,000 residents in that service area. Community Transit currently collects a 0.9% sales tax to fund transit service in Snohomish County. In November 2009, Community Transit opened Swift, a bus rapid transit system serving the busy Highway 99 corridor between Everett and Shoreline with frequent service every 10 minutes. For more information: <http://www.commtrans.org/>



Everett Transit offers transportation in the City of Everett, including fixed-route and paratransit bus service. Everett Transit is funded through 0.6% sales tax. In 2008, Everett transit carried over 2.5 million riders on its 16 fixed-bus routes. For more information: <http://www.everettwa.org/default.aspx?ID=290>

Kitsap Transit is a public transportation benefit area and has been providing public transportation service since 1983. Kitsap Transit is funded through a 0.8% sales tax and operates fixed-route, paratransit, vanpool, dial-a-ride service, worker/driver subscription bus service and foot ferry service. There are 43 fixed routes operating Monday through Friday, 15 of which are commute-hour only routes, timed to meet ferries and during the weekends, 20-24 routes are in service with hourly headways. In 2008, Kitsap Transit experienced a 5% increase in ridership, carrying 3.6 million passengers. For more information: <http://www.kitsaptransit.org/>

Pierce Transit is a public transportation benefit area corporation, formed in 1979, to serve Pierce County residents. Funding for Pierce Transit is provided by a 0.6% sales tax. Pierce Transit provides 52 local bus routes, paratransit service, vanpool and ridematching programs. The agency also operates 11 Sound Transit routes and intercounty express service to Seattle, Sea-Tac Airport, and Olympia in cooperation with Sound Transit and Intercity Transit (Thurston County). Pierce Transit's fixed route system serves a 414 square mile area with an estimated population of 767,000. In 2008, Pierce Transit carried nearly 19 million passengers. For more information: <http://www.piercetransit.org/>

Sound Transit was created by the Washington State Legislature to build mass transit that connects major regional job and housing centers in King, Snohomish and Pierce counties. Sound Transit services include Central and Tacoma Link light rail, Sounder commuter rail, and Sound Transit Regional Express bus routes. Sound Transit is funded through a 0.4% sales tax and a 0.3% motor vehicle excise tax within the three-county region (Snohomish, Pierce and King counties). Through voter approval of the Sound Transit 2 plan, Sound Transit will be expanding light rail service within King County and into Snohomish County, as well as expanding Sounder and Regional express service. More detailed information on this agency is included on the following page. For more information: <http://www.soundtransit.org>

Washington State Ferries operates the largest ferry system in the United States. The ferry system includes 10 routes, crossing Puget Sound connecting Seattle to Bremerton and Bainbridge, Edmonds to Kingston and reaching the San Juan Islands and British Columbia. Washington State Ferries carried over 22 million walk-on and auto passengers along their routes in 2009. For more information:

<http://www.wsdot.wa.gov/ferries/>

Sound Transit

Adapted from Sound Transit website: www.soundtransit.org

Sound Transit was created by the state legislature to build a mass transit system that connects major job and housing centers in King, Pierce and Snohomish counties. In 1996, voters approved a plan that provides the foundation of that system – regional express buses, commuter rail and light rail. Then, in November 2008, voters in urban King, Pierce and Snohomish counties approved adding 36 miles of light rail to the nearly 16-mile system that opened in 2009. Voters also approved a 17 percent expansion of ST Express bus service and increases to Sounder commuter rail service¹. Today, Sound Transit carries more than 18 million riders a year on its trains and buses.



- ST Express buses connect the region's major job and population centers. In addition, new transit centers, park-and-ride lots and HOV access projects improve transit speed and service. Operation of express bus service is provided via contracts with Community Transit, and Pierce Transit, with King County Metro operating both light rail and express bus service².
- Sounder commuter trains run 74 miles every weekday between Everett and Tacoma. On the north line, four round-trips connect Everett, Mukilteo and Edmonds with Seattle. On the south line, nine round-trips run between Tacoma, Puyallup, Sumner, Auburn, Kent, Tukwila and downtown Seattle; a future extension south to Lakewood is scheduled to open in 2012.
- Tacoma Link light rail trains began running in downtown Tacoma in 2003 and ridership quickly exceeded expectations.
- In 2009, trains began running on the Link light rail line between downtown Seattle and SeaTac International Airport. A light rail extension north to the University of Washington is under construction and scheduled to begin carrying passengers in 2016³.

Ridership

Total ridership for 2009 was 18.8 million boardings, an increase of 17% compared with 2008⁴.

Boardings by Service Type	Fourth Quarter			Year-to-Date Through December			2009 Annual SIP Projections ¹
	2008	2009	%Δ	2008	2009	%Δ	
ST Express Bus	3,243,391	3,332,836	3%	12,528,887	12,896,712	3%	13.2 mil.
Sounder Commuter Rail	700,034	621,270	-11%	2,668,623	2,492,362	-7%	3.1 mil.
Central Link	N/A	1,270,864	100%	N/A	2,501,211	100%	2.4 mil.
Paratransit	N/A	15,437	100%	N/A	31,030	100%	60,000
Tacoma Link	232,300	220,859	-5%	930,632	889,320	-4%	0.9 mil.
Total Boardings	4,175,725	5,461,265	31%	16,128,142	18,810,635	17%	19.7 mil.
Average Weekday Bgds	57,602	72,248	25%	55,953	63,719	14%	74,718

¹-Annual projections established in the 2009 Service Implementation Plan (SIP) starting third quarter include Central Link and Paratransit projections.

¹ Sound Transit: About Us. <http://www.soundtransit.org/About-Us.xml>

² Sound Transit 2009 Adopted Budget

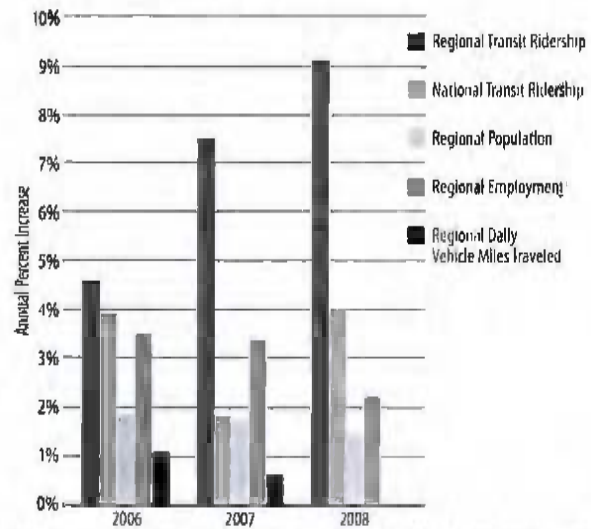
³ Sound Transit: About Us. <http://www.soundtransit.org/About-Us.xml>

⁴ Sound Transit 2009 Quarterly Ridership Report. <http://www.soundtransit.org/News-and-Events/Service-News/Quarterly-Ridership.xml>

Transit Ridership

During the last four years, transit ridership in the region grew a total of 23%, outpacing a strong national increase in transit ridership of 10%. This increase in transit ridership appears to be due to the large increase in gasoline prices. Transit ridership increased more than regional population, employment, transit service and highway usage by automobiles. Gasoline prices for the Seattle area were about \$2.45 in June 2005 and rose to about \$4.35 at the pump for a gallon of regular gas in June 2008, then fell sharply to below \$1.90 by the end of 2008 (seattlegasprices.com). The increase in regional transit ridership exceeded population growth of 5%, employment growth of 9% and transit service hours increase of 4% during the same four years (see Figure 1 and Table 1). Regional transit ridership grew 5% and 8% for 2006 and 2007, respectively, growing faster than regional daily vehicle miles traveled, which increased 1% for the same two years.

Figure 1. Annual Growth Trends



Sources: American Public Transportation Association Ridership Reports, Washington State Office of Financial Management, Washington State Employment Security Department, Washington State Department of Transportation Highway Performance Monitoring System

Table 1. Regional Annual Service Hours, 2005-2008

Year	King County Metro	Sound Transit Bus	Sound Transit Commuter Rail	Sound Transit Tacoma Link	Pierce Transit	Community Transit	Kitsap Transit	Everett Transit	Regional Total
2005	3,097,000	418,000	14,000	10,100	669,000	539,000	144,000	90,000	4,983,000
2006	2,968,000	424,000	17,000	10,200	670,000	551,000	135,000	101,000	4,875,000
2007	3,098,000	523,000	19,000	10,000	700,000	568,000	136,000	106,000	5,159,000
2008*	3,115,000	489,000	32,000	10,200	728,000	575,000	134,000	107,000	5,190,000
Percent Increase in Annual Service Hours from Previous Year									
2006	-4%	1%	21%	1%	0%	2%	-6%	12%	-2%
2007	4%	23%	12%	-2%	4%	3%	1%	5%	6%
2008*	1%	-7%	68%	2%	4%	1%	-1%	1%	1%
Percent Increase in Annual Service Hours, 2005-2008									
2005-2008	1%	17%	129%	1%	9%	7%	-7%	19%	4%

* Year 2008 service hours estimated.

Source: WSDOT Summary of Public Transportation 2007

Puget Sound Regional Council

information center 1011 Western Avenue, Suite 500 • Seattle, Washington 98104-1035 • 206-464-7532 • fax 206-587-4825 • info@psrc.org • www.psrc.org

PSRC collects transit ridership data from area transit agencies' monthly and quarterly ridership counts. These data are supplemented by annual WSDOT Summary of Public Transportation reports that are issued annually.

Transit ridership has increased for most of the region's transit agencies. Sound Transit bus ridership has increased 42%, due in large part to a 17% increase in service (see Table 1). Sounder commuter rail, which started in September 2000, increased its ridership by 110% over the last four years and grew 24% during 2008 (see Table 2). The Tacoma Link light rail, which started in January 2004 in downtown Tacoma, has experienced a 5% growth in ridership over the last four years.

Table 2. Regional Annual Transit Ridership, 2005–2008

Year	King County Metro	Sound Transit Bus	Sound Transit Commuter Rail	Sound Transit Tacoma Link	Pierce Transit	Community Transit	Kitsap Transit	Everett Transit	Regional Total
2005	98,957,000	8,816,000	1,268,000	885,000	12,263,000	7,853,000	3,672,000	1,957,000	135,671,000
2006	103,242,000	9,603,000	1,683,000	873,000	12,429,000	8,437,000	3,497,000	2,107,000	141,871,000
2007	110,600,000	10,689,000	2,157,000	919,000	13,323,000	9,059,000	3,486,000	2,228,000	152,461,000
2008	118,825,000	12,529,000	2,669,000	931,000	14,998,000	10,192,000	3,667,000	2,517,000	166,328,000
Percent Increase in Ridership from Previous Year									
2006	4%	9%	33%	-1%	1%	7%	-5%	8%	5%
2007	7%	11%	28%	5%	7%	7%	0%	6%	7%
2008	7%	17%	24%	1%	13%	13%	5%	13%	9%
Percent Increase in Ridership, 2005–2008									
2005–2008	20%	42%	110%	5%	22%	30%	0%	29%	23%

Source: Transit agency monthly and quarterly reports

Pierce Transit, Community Transit and Everett Transit ridership grew 22%, 30%, and 29% respectively, exceeding the regional average. Only Kitsap Transit showed no significant change in transit ridership over the past four years. This was mostly due to a substantial fare increase in February of 2006 and a smaller fare increase in August of 2008. There was also a small decline in service of 7% during the same time period.

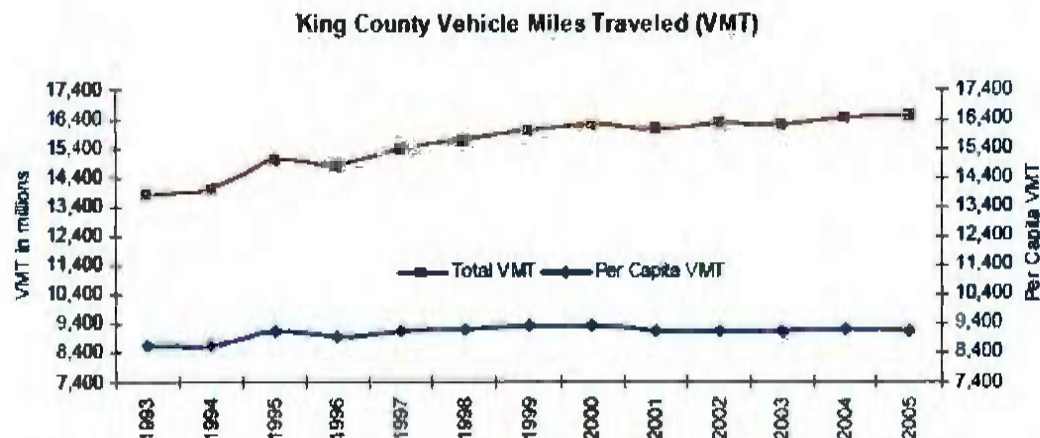
Copies of this *Trend* are available on the web at psrc.org or from the Information Center at 206-464-7532 or info@psrc.org. For more information, contact Mark Charnews at 206-971-3285 or mcharnews@psrc.org.

King County and Transportation

(Adapted from 2008 and 2009 King County Annual Growth Report)

Vehicle Miles Traveled

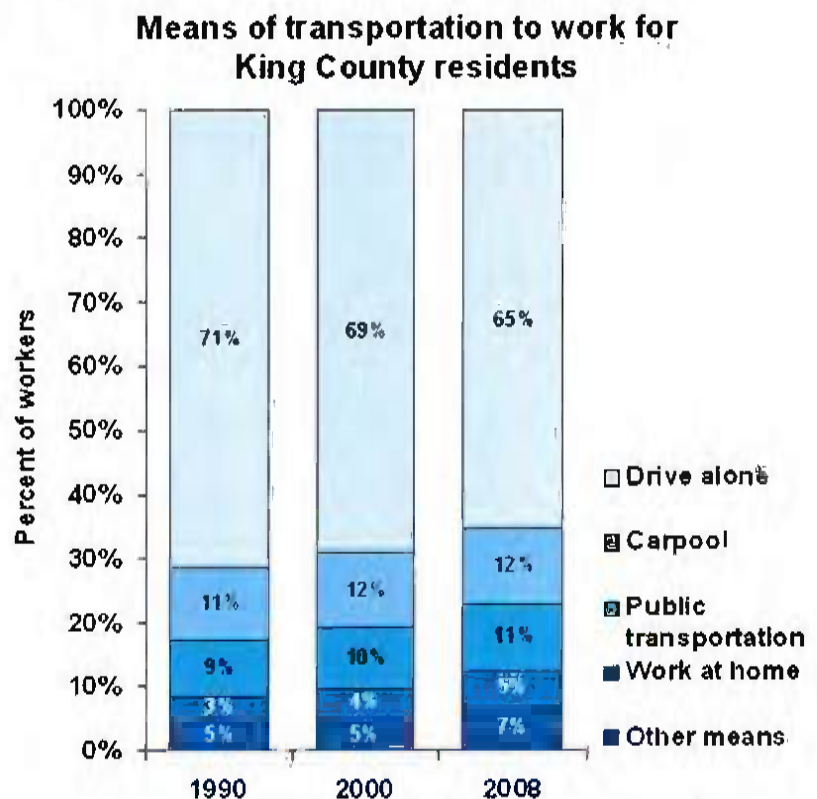
Total Vehicle Miles Traveled (VMT) has crept ahead slightly since 1995. Per capita VMT has been on a nominal downward trend since 1999.



Percent of residents who commute by means other than single-occupancy vehicles

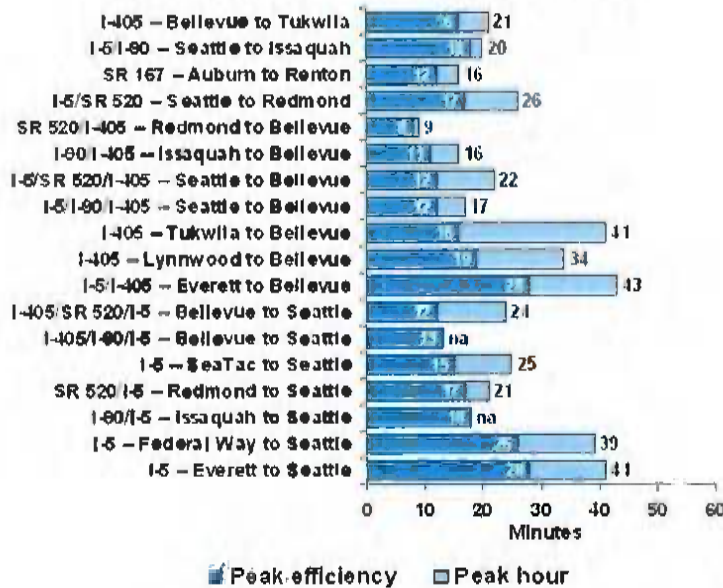
This indicator estimates the number of King County residents who use modes of transportation other than the single occupancy vehicle as a means of transportation to work.

- Percent of King County residents who use public transit as their means of transportation to work: 10.7% (2008)
- Percent of King County residents who carpool to work: 11.5% (2008)
- Percent of King County residents who walk to work: 4.4% (2008)
- Percent of King County residents who bicycle to work: 1.3% (2008)



Average commute lengths for major destinations in King County

Peak efficiency travel time and peak hour travel time for major morning commute routes (2008)



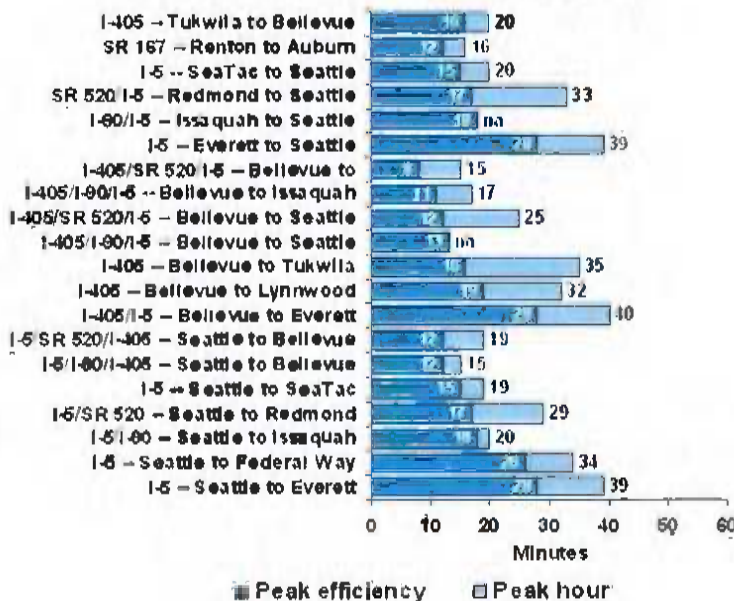
This indicator estimates the length of typical morning and evening commutes in King County; as compared with peak efficient commute length.

Commute times decline on most morning commute and evening commute routes from 2007 to 2008

- Disparity between peak efficient travel time and peak morning hour commute time from Tukwila to Bellevue on I-405: 156% (2008)
- Average speed of travel during morning hour commute from Tukwila to Bellevue on I-405: 20 m.p.h. (2008)

Last updated December 2009

Peak efficiency travel time and peak hour travel time for major evening commute routes (2008)



For more information on the 2008/2009 Annual Growth Report and Benchmark Highlights:

Annual Growth Report:

<http://www.kingcounty.gov/exec/strategy/PerformMgmt/KCGrowthReport.aspx>

Benchmark Highlights

<http://www.kingcounty.gov/exec/strategy/PerformMgmt/BenchmarkProgram.aspx>

About the Washington State Department of Transportation

(Adapted from WSDOT website: <http://www.wsdot.wa.gov/about/>)

The Washington State Department of Transportation (WSDOT) is the steward of a large and robust transportation system, and is responsible for ensuring that people and goods move safely and efficiently. In addition to building, maintaining, and operating the state highway system, WSDOT is responsible for the state ferry system, and works in partnership with others to maintain and improve local roads, railroads, airports, and multi-modal alternatives to driving.

WSDOT works towards achieving five goals: safety, preservation, mobility, environmental quality, and system stewardship. These goals are consistent with the statewide transportation policy goals established by the Legislature for all transportation agencies.

WSDOT, working closely with private contractors, is in the midst of delivering the largest capital construction program in our history—more than \$15 billion in projects, including 391 highway projects valued at \$11 billion. Currently, we are in year five of this twenty-year program.

As WSDOT delivers transportation services, we also work to preserve environmental quality. Programs such as stormwater treatment, construction site erosion control, fish passage barrier removal, wetland replacement, air pollution control, and adaptation to climate change are important to the future health and safety of citizens. Each helps protect priceless natural resources.

WSDOT's diverse programs and projects are supported by 7,200 full-time employees, including engineers, vessel captains, maintenance technicians, environmental specialists, planners, and many others. We take pride in our workforce and strive for excellence and integrity in everything we do.

WSDOT at a Glance:

- 18,389 state highway lane-miles
- 3,600 bridges, including the four longest floating bridges in the United States
- 47 safety rest areas
- 23 ferry vessels active in the largest vehicle-ferry system in the world
- 20 ferry terminals
- 24 million ferry passengers annually
- \$15 billion capital improvement program
- 7,200 full-time employees

WSDOT Programs and Metro Transit

The Washington State Department of Transportation is responsible for several programs and services that are important to King County Metro operations.

High Occupancy Vehicle (HOV) Lanes

High Occupancy Vehicle (HOV) lanes are freeway lanes reserved for the use of carpools, vanpools and buses. WSDOT manages and builds Washington State's HOV lane system which, as of 2006, includes 195 miles of completed HOV lanes of a planned 300 mile HOV lane system. WSDOT also monitors and evaluates HOV lane speed, travel time reliability and person throughput on an ongoing basis¹.

HOV lanes improve the efficiency of the transportation system by carrying more people. HOV lanes provide a benefit to transit providers and bus riders by helping to maintain transit speed and reliability through several congested corridors. HOV lanes also improve the competitiveness of transit service and reduce vehicle miles traveled. Several routes in Metro's transit system use Interstate 5, Interstate 405, Interstate I-90 and State Route 520 HOV lanes to provide riders with a faster, more reliable trip to major destinations in the county including downtown Seattle, Bellevue, Redmond, and the University of Washington.

Transportation Demand Management

Transportation Demand Management (TDM) is an umbrella term for strategies that encourage the use of carpools, vanpools, buses, bicycling and walking as well as discouraging single-occupant vehicle use. WSDOT manages several TDM programs including: Commute Trip Reduction (CTR) Program, Rideshare Tax Credits, Vanpool grants, Regional Mobility grants, Park and Ride lots and construction mitigation².

- **CTR, Rideshare Tax Credits, Vanpool grants:** King County Metro plays an important role in several of these programs by providing employers with transit pass programs to help them meet requirements of the CTR law. Rideshare Tax Credits is a program through which Metro provides transit pass programs and vanpools, enabling employers to provide financial incentives for use of public transportation, vanpool or non-motorized transportation. The Vanpool grant program provides transit agencies throughout the state with the opportunity to expand vanpool fleets. Through this program, King County Metro has expanded its fleet of vanpools.
- **Regional Mobility grants** fund local government projects such as park and ride lots, peak hour transit service and projects that improve connectivity. Through the use of one of these grants, Metro expanded the Brickyard Park and Ride in east King County, improving access for users and providing additional stalls at this busy facility. In fall 2009, King County Metro also received a regional mobility grant to improve Route 245 service between Kirkland, Overlake and Eastgate/Factoria, investing peak-period frequencies improvements in this corridor.

¹ 2007 WSDOT Key Facts: www.wsdot.wa.gov/HOV

² 2007 WSDOT Key Facts: www.wsdot.gov/TDM/TRPP

- **Park and Ride lot program** is managed by WSDOT. Park and ride lots are built, owned and operated by multiple agencies including Sound Transit, Metro and local jurisdictions. WSDOT's role in the process is to help develop partnerships to expand capacity of these lots and to locate the lots where they provide the most benefit for the transportation system. Park and rides are available throughout Metro's service area. As of the end of 2009 King County Metro had 130 operating Park and Rides within King County Metro Transit service area.
- **The Construction Mitigation program** encourages travelers to carpool, vanpool or take the bus to minimize construction-related congestion and maintain traffic flow. Metro is often a partner in construction mitigation programs, providing additional service in the affected corridor to encourage transit use. Over the past three years, King County Metro has collaborated with WSDOT to mitigate congestion impacts due to construction in the I-405 corridor. By agreement between the agencies, WSDOT funded additional transit service, which was designed and implemented by Metro. Two new routes were added - one between Kenmore and Overlake, and one between Totem Lake and Downtown Bellevue - and additional service was added to another existing route to provide more capacity and more attractive service as an alternative to driving through the construction area.

Electronic Tolling

WSDOT operates Good To Go!, a high-tech toll collection system that allows customers to pay tolls electronically. WSDOT is planning to implement this system on State Route 520 in spring 2011. Tolling the SR520 corridor is expected to have travel-time benefits for both transit and general purpose traffic and result in less congestion in the corridor. Increased transit service will provide a viable alternative to driving, giving all residents, including low-income groups, more opportunities to use fast and frequent transit service for cross-lake travel.

About the Puget Sound Regional Council

Adapted from Puget Sound Regional Council website: www.psrc.org

The Puget Sound Regional Council (PSRC) is the designated Metropolitan Planning Organization (MPO) for King, Kitsap, Pierce, and Snohomish Counties, collectively known as the central Puget Sound Region. As the MPO the PSRC must conduct a metropolitan planning process according to federal guidelines in order for federal transportation funds to be distributed to the region.

Major Functions:

The major functions of the MPO are as follows

1. Develop a long-range transportation plan that;
  - Identifies transportation facilities, including major roadways, transit and multi-modal and intermodal facilities
  - Include a financial plan
  - Assess capital investments and other measures necessary to ensure the preservation of the system and make the most efficient use of the existing transportation facilities
  - Indicate proposed transportation enhancement activities.
2. Develop and maintain a transportation improvement program and allocate certain federal funds including Congestion Mitigation and Air Quality (CMAQ), STP and Federal Transit Administration (FTA) funds. Programs in the transportation improvement program must include all regionally significant projects, regardless of funding source. These projects must be consistent with the long-range plan.
3. Develop a congestion management process for the Puget Sound region.
4. Comply with all National Environmental Protection Agency (NEPA), and Clean Air Act regulations in the planning process and consult other environmental and resource agencies as appropriate.
5. Develop a unified planning work program for the region.

PSRC Mission and Plans:

The PSRC has defined its mission as “playing a key regional role in keeping central Puget Sound thriving as we grow. PSRC is committed to creating a great future for the region through planning for regional transportation, land use and economic development, under authority embodied in state and federal laws.”

In coordination with other local government, business and citizens the PSRC has develop the region’s strategy for addressing anticipated growth of population and employment through the Vision 2040 plan. Vision 2040 describes how and where the region can grow while also supporting the well-being of people and communities, economic prosperity and a healthy environment.

As a companion plan to Vision 2040 the PSRC is developing a new long-range transportation plan, “Transportation 2040” which will outline the investments and strategies needed to keep the region moving as we grow.

Along with the development and transportation plans of Vision and Transportation 2040, the PSRC, along with public and private groups is also helping advance a regional economic strategy that will enhance the region’s economic vitality through the “Prosperity Partnership.

PSRC Governance:

The PSRC is governed by a General Assembly and an Executive Board. Each member of PSRC is a voting member of the General Assembly, which meets at least annually to vote on major decisions, establish the budget, and elect new officers. The Executive Board is chaired by the PSRC President, meets monthly, and serves as the governing board. Both the General Assembly and Executive Board use weighted votes based on population to make decisions.



The Transportation Policy Board and Growth Management Policy Board include representatives of PSRC's member jurisdictions, tribes, regional business, labor, civic, and environmental groups, as well as voting members representing each caucus of the state Legislature. These boards make recommendations on key transportation and growth management issues to the Executive Board.

PSRC also supports the work of the region's Economic Development District, governed by a board composed of public and private members that meets quarterly to coordinate regional economic development planning.

More information on PSRC can be found on their website at:
<http://psrc.org/about>

Section 4: Metro Policy and Budget Framework

This section discusses the policy and budgetary restrictions that influence transit planning at Metro. This section is intended to inform task force members on the mission and planning framework that guide King County Metro transit and provide historical context on how Metro allocates transit service throughout the county; both prominent factors in how Metro currently grows and reduces the transit system. A briefing on Metro's financial situation from 2008 to the present is also included to build an understanding of the fiscal constraints of the agency and the future it faces.

Information you'll find in this section:

- King County Metro's Guiding Policy Framework
- Summary of 2007-2016 Strategic Plan Strategies
- Authorizing Environment
- History of New Service Allocation Policy at King County Metro
- Metro Financial Situation 2008-Present
- Metro Financial Planning and Funding Sources

Links to Additional Resource Materials:

Metro Transit Planning Documents:

- Strategic Plan for Public Transportation 2007-2016
- Comprehensive Plan for Public Transportation

<http://www.kingcounty.gov/transportation/kcdot/PlanningAndPolicy/TransitPlanning.aspx>

King County Metro's Guiding Policy Framework

King County Metro Transit is guided by its mission and planning framework identified through its adopted Comprehensive Plan for Public Transportation and its 2007-2016 Strategic Plan. Metro's goals, objectives, policies and strategies fit within the larger framework of King County and the Department of Transportation.

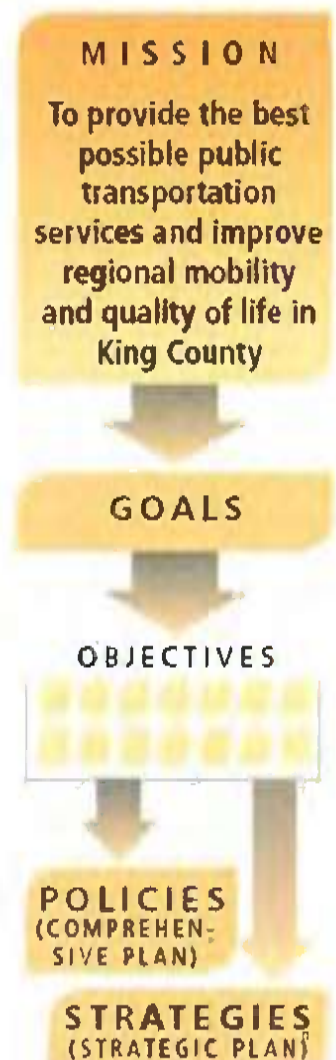
Mission Statement: Provide the best possible public transit services and improve regional mobility and quality of life in King County.

The Comprehensive Plan for Public Transportation

The Comprehensive Plan originally developed in 1993 and updated in 2007 provides the policy foundation for transit planning within King County. It identifies goals, objectives and policies to enhance mobility, support regional and local growth management efforts, and build partnerships at all levels of governments. It also provides policy guidance for the strategic planning and budget processes.

Six broad goals identified in the plan:

- 1.1 Ensure the availability to move around the region -- provide reliable, convenient and safe public transportation services throughout the region for King County.
- 1.2 Support growth management goals, including preserving communities and open space, supporting communities' ability to develop in ways that preserve and enhance their livability and limiting intrusion into rural areas.
- 1.3 Improve the region's economic vitality -- increase access to jobs, education and other community resources.
- 1.4 Preserve environmental quality -- conserve land and energy resources, and reduce air pollution.
- 1.5 Be a responsible regional partner -- build partnerships with state and local jurisdictions, members of affected communities, employers, neighboring transit agencies and the regional transit authority to maximize the effectiveness and efficiency of transit services.
- 1.6 Work with other jurisdictions to ensure that land use and transportation planning and implementation are coordinated.



With these goals in mind, the plan identifies 12 objectives in the five categories of Market Share; Mobility; Cost and Efficiency; Social, Economic and Environmental Benefits; and Financial Feasibility. Stemming from the goals and objectives are the multiple policies identified in the Comprehensive Plan.

Moving Toward the Long-Range Vision: The 2007-2016 Strategic Plan

The Comprehensive Plan sets the long-term policy foundation for transit. Steps towards achieving the goals envisioned in the long range plan are identified in the Strategic Plan which sets forth near-term objectives and strategies for transit, paratransit, rideshare services, transportation demand management and supporting facilities in King County. The Strategic Plan serves as an implementation guide and establishes the basis on which annual operating and capital decisions are made.

The 2007-2016 Strategic Plan was adopted in 2007 and updated in 2009 to reflect changes in response to the current budget situation.

The plan contains thirty-one strategies that provide the direction for service and system development from 2007 to 2016. The strategies are listed in a following document. These strategies fall into five categories:

- Monitoring and Management
- Service
- Capital
- Implementation
- Financial

The existing Strategic Plan was preceded by two Six-Year Plans for Transit Service Development. These prior plans each focused on major objectives drawn from the policy areas of the long range vision. The initial Six-Year Plan covered the period of 1996-2001 and emphasized mobility, market share, and cost and efficiency. An updated plan was developed for 2002 – 2007 and revised in 2004 which added emphasis on growth management.

Relationship to Other Plans

The goals, objectives and policies in the Comprehensive Plan and the objectives and strategies in the Strategic Plan are consistent with the King County Comprehensive Plan, the King County Countywide Planning Policies, Vision 2040 and the Metropolitan Transportation Plan “Destination 2030”, adopted by the PSRC. Metro’s plans are consistent with state and federal law, and recognize other planning efforts completed or underway in the region. These include local jurisdiction comprehensive plans, Sound Transit’s regional transit system plan and state and local plans for major transportation facility investments. More information about these plans is provided in the paper on Authorizing Environment.

2007-2017 Strategic Plan Strategies

The Strategic Plan for Public Transportation 2007-2016 identifies thirty four strategies that provide the direction for service and system development. The Strategic Plan was adopted in 2007 and some of the strategies were modified in 2009 to respond to 2010 Metro Transit Budget planning. These strategies fall into the following five categories, listed below. These strategies are listed in the remainder of this document.

- Monitoring and Management
- Service
- Capital
- Implementation
- Financial

Monitoring and Management Strategies

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

Strategy M-1: Measuring Plan Progress

Establish a series of targets for measuring success in meeting the objectives of the Strategic Plan in each of four long-range policy areas. Evaluate progress using these targets periodically and at the time of Strategic Plan updates.

Strategy M-2: Customer Satisfaction

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

Strategy M-3: Service Performance Evaluation

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

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

Service Strategies

The plan continues the service direction of the previous Six Year Transit Development Plan, 2002-2007, and identifies strategies that were strengthened through passage of the *Transit Now*

measure. The plan continues to emphasize efficiency and improved service design; increases service levels on a core network of routes connecting major activity centers, implements bus rapid transit, enhances service in developing areas, and provides dedicated resources to a service partnership program. New or improved services in each subarea will be provided consistent with local priorities that will serve the highest ridership demand; and improve connections to employment areas. King County Metro will continue efforts to integrate bus, vanpool and rideshare services with new Sound Transit services, and to offer innovative and complementary services and programs to increase HOV use and establish commute partnerships with public and private partners. The paratransit program will continue efforts to provide and develop the most cost-effective transportation options for people who are transportation disadvantaged due to age, disability or income, and vanpool and ridesharing programs will be expanded.

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 in the Strategic Plan . Reinvest savings from these efforts within the planning subarea in which they are generated.

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.

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 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.

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.

Strategy S-5: Bus Rapid Transit

Design, develop and implement RapidRide, a Bus Rapid Transit system. 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.

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.

Strategy S-7: Community Mobility

Improve community mobility options through increase in service levels on existing routes or through the creation of new service 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.

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.

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.

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.

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 and Integration

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.

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.

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.

Strategy S-14: Activity Center Circulation

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.

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.

Capital Strategies

The plan's capital strategies provide for the necessary maintenance, expansion and improvement of transit facilities and equipment to support the objectives of the plan. The strategies provide for capital infrastructure and operating environment improvements integrated with the delivery of service, including the ongoing maintenance of transit assets and the expansion of maintenance

base capacity. Investments in facilities and systems will take advantage of opportunities to improve efficiency by using cost-effective technology as projects for electronic fare collection, radio system replacement and integrating on-bus systems are completed. The plan also calls for investments in an environmentally friendly fleet and capital facilities.

The plan directs capital resources to expanding passenger facilities through more shelter installations and construction of passenger waiting and boarding areas along the bus rapid transit corridors. Investments are identified to improve transit speed and reliability while making route and passenger facility improvements on corridors with higher service levels and ridership.

Strategy C-1: Maintenance, Replacement and Upgrade of Transit Capital Assets

Maintain, replace, and upgrade current facilities, equipment and systems based on ongoing condition assessments, industry standards and King County policies and procedures.

Strategy C-2: Passenger Facilities

Improve transit passenger facility access, shelter, lighting, bus stop locations and other amenities to enhance the waiting environment. In addition to general improvements throughout the system, focus a portion of resources on RapidRide and Core Service Connection corridors identified in Exhibit 5-2 of the Strategic Plan, through cooperation and coordination with local jurisdictions.

Strategy C-3: Transit Speed, Safety and Reliability

Partner with state and local governments to improve transit operating efficiency, and to create speed, safety, and reliability improvements on important transit corridors. In cooperation with local jurisdictions, focus on the target corridors identified in the strategic plan.

Strategy C-4: Park-and-Ride Facilities

Expand park and ride capacity in congested corridors with full or overcrowded park and ride facilities. Support development of a series of small owned or leased park and ride lots along low density suburban routes in order to create artificially higher densities to enhance the ridership base. Use the Transit-oriented Development (TOD) program to further expand park and ride opportunities through joint use of new parking capacity and financing partnerships. Where these lots have unused capacity, encourage their use by vanpools and park-and-pools.

Strategy C-5: Replacement and Expansion of the Transit Fleet

Replace and expand the transit bus fleet so that the size, fleet mix and fleet age are consistent with service projections and operating characteristics of the regular bus system. Replace and expand Vanpool fleet to maintain the appropriate mix of vehicle sizes to encourage and support vanpool program participants. Replace and expand Access paratransit vehicles to support efficient operations. Achieve more efficient and energy-friendly operations with features including efficient propulsion systems and non-traditional fuels.

Strategy C-6: Operating Base Expansion

Expand transit operating base capacity at Central, Atlantic and Ryerson bases as described in the adopted financial plan to support transit fleet growth projected to occur

through the year 2030. Continue to examine fleet requirements in response to evolving service needs and commitments, including potential freeway construction mitigation service.

Strategy C-7: Terminals and Layover

Work with local jurisdictions to secure long-term agreements for use of on-street layover spaces. Coordinate with other transportation agencies and private developers to incorporate layover space and turnaround facilities into transit stations, transit centers, transportation projects and new development proposals where needed to support or improve current transit service. Consider off-street facilities for layover when on-street layover capacity is not available, and when dedicated layover space would result in significant operating savings, improved routing and/or operator safety.

Strategy C-8: Transit-Oriented Development

Encourage and support transit-oriented development at or near transit facilities to increase transit ridership by increasing activity and density in centers, and by increasing affordable housing and an appropriate mix of other land uses. Reduce transit facility development costs through joint development and/or public-private partnerships.

For the purpose of establishing benchmarks by which to later measure the impacts of a project, estimate the anticipated benefits of each proposed TOD including:

- expected ridership increase attributable to the project
- existing and potential residential and office density
  - within the project, and
  - within reasonable walking distance of the transit facility
- amount of affordable housing
- amount of retail that supports nearby resident and transit user needs
- design elements that facilitate transit operations
- design elements that promote walking and bicycling
- partner participation
  - city
  - developer
  - other transit agencies
- project contribution to reduced greenhouse gas emissions

Assess the extent to which each existing TOD, and future projects two and five years after completion, provide the anticipated benefits and other project specific benefits related to transit operating or facilities enhancements, local jurisdictional goals and other transportation goals identified in this plan.

Implementation Strategies

The implementation strategies identified in this chapter define priorities and a phasing plan to make some Transit Now program improvements by 2016. *Transit Now*.

Strategy IM-1: Service Program

Transit Now

A King County Metro priority is to implement the *Transit Now* program passed by voters in 2006 and shown in Exhibit 6-1 of the Strategic Plan, which includes service and capital support for these initiatives:

- **RapidRide BRT.** Use a target of 100,000 annual service hours between 2007 and 2016 to implement RapidRide BRT service in five corridors, consistent with service strategy S-5. The RapidRide corridors are:
  - Shoreline/Downtown Seattle via Aurora Avenue North
  - West Seattle/Downtown Seattle via West Seattle Bridge
  - Ballard/Seattle Center/south downtown stadium area via 15th Ave Northwest and West Mercer Street with service or frequent connections to Ballard High School and the Ballard business district.
  - Federal Way/Tukwila via Pacific Highway South
  - Bellevue/Redmond via Crossroads and Overlake
- **High Ridership Routes.** Improve service frequency and/or span of service on high ridership corridors on the core connections network, consistent with service strategy S-3 and shown in Exhibit 6-1 in the Strategic Plan.
- **Service Partnerships.** Enter into partnerships with public and/or private entities to serve established or emerging ridership markets, consistent with service strategies S-9 and F-3. A sustained fund supporting up to 90,000 annual service hours will be provided for this purpose, to be implemented between 2007 and 2013, matched by an additional 30,000 to 45,000 annual service hours funded by partner direct financial contributions, and by partner investments that will result in quantifiable transit speed and reliability improvements.
- **New Service for Developing Areas.** Add new service or improve existing services in rapidly developing areas in East and South King County within the Urban Growth Area, consistent with service strategy S-6.
- **Expanded paratransit service.** Expand the service area for paratransit service to cover gaps within the fixed-route coverage areas as shown in Exhibit 4-3 in the Strategic Plan and provide service to disabled users not served by Access through the Community Access Transportation Program. This expansion will be re-evaluated in response to the 2009 King County Transit Performance Audit.
- **Expanded ridesharing and the vanpool program.** Expand outreach efforts and provide incentives to increase program participation and facilitate ridesharing opportunities; promote ridesharing to smaller employers in King County, and in areas not served or underserved by the fixed-route transit system.

Other Projects

- **RapidRide Bus Rapid Transit.** Continue the development of RapidRide by implementing a sixth RapidRide line operating a direct east/west routing
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between Burien and Renton via the Tukwila International Blvd Link Station, Southcenter Mall, the Tukwila Sounder Station, and the South Renton Park & Ride.

- **Federal Urban Partnership Award.** Build upon existing SR 520 all-day, two-way and peak commuter routes beginning in late 2010 to accommodate the expected increase in transit demand caused by variable tolling planned for early to mid-2011. The Urban Partnership service will increase the current transit investment by about 25 percent during peak commute times.

Strategy IM-2: Service implementation phasing

Provide a predictable schedule of service expansions in all subareas, as shown in Exhibit 6-2.

Exhibit 6-2: Service implementation phasing

Categories	2007	2008	2009	2010	2012	2013	2014	2015	2016	Total
Developing Areas		13	8							21
RapidRide				34	42	19	5			100
High Ridership/Core	30	24	8							62
Burien/Renton RapidRide							18			62
SR 520 Urban Partnership				7	20					62
Total 40-40-20 Adds	30	37	16	41	62	19	23			228
Service Partnerships	5	22	12	35	6	5	5			90
TOTAL	35	59	28	76	68	24	28			318*

* Implementation of the remaining 317,000 hours of Transit Now service will be determined as resources become available



Investment completed as planned

Strategy IM-3: Service resource allocation

The implementation of transit service hours as stated in strategy IM-1 and IM-2 above shall use the following framework for transit service allocation. Service hours used for service partnerships, schedule maintenance, contracted services or partnership agreements are exempted from subarea allocation requirements.

With the implementation of each 200,000 annual hours of service investments that are subject to the subarea allocation requirement and at the end of the 2007-2016 Transit Now program investments, each King County Metro planning subarea would receive a

share of actual service hours implemented: East 40%, South 40% and Seattle/North King County 20%.

Measurement of the resulting share of hours will be based on the baseline bus route allocations that assign one-way routes that originate in a subarea or two-way routes that operate wholly within a subarea to that subarea. Further, all-day, two-way routes that operate between two subareas will be attributed in hours at 50 percent to each subarea.

Any system-wide reduction in service investment shall be distributed among the subareas in proportion to each subarea's share of the total service investment.

Further, any reduction of the number of total bus service hours implemented between January 1, 2010 and December 31, 2013 in the Metro system below the 2009 year-end service levels shall be considered a "service suspension." The future work program for the King County Regional Transit Committee shall focus on restoration of transit service suspensions/cuts, if any.

Service hours invested in RapidRide, Transit Now partnerships, the SR-520 Urban Partnership, and contracted services such as construction mitigation service are not considered part of the suspensions or restorations.

Any reductions in total bus service hours made after December 31, 2013 or reductions made after the total hours of service in the Metro system return to 2009 year-end service levels shall be considered service cuts.

Strategy IM-4: Subarea and community-based planning

Conduct a community planning process in which transit riders, local jurisdictions, unincorporated area councils, employers, and educational institutions participate in the design and implementation of significant changes to existing service. Use service and capital strategies consistent with the service priorities described in Strategy IM-1. Involve the community, local jurisdictions and subarea groups in the development of recommendations for updates of the Strategic Plan at least every two years or more frequently if changing conditions or priorities dictate. Utilize overall roles and responsibilities as shown in Exhibit 6-3 and the service change process shown in Exhibit 6-4 of the Strategic Plan.

Plan updates shall address significant operating changes and capital improvements anticipated in the next ten years as well as any revision to adopted strategies necessitated by significantly changed circumstances affecting the transit program.

Financial Strategies

The financial strategies of the plan include pursuit of available state and federal grant sources and continues the long-standing policy of pursuing financial partnerships and economic development with local jurisdictions and other public and private entities.

Strategy F-1: Operating revenue

Pursue a combination of farebox and other operations revenue to maintain a target bus operating revenue-to-operating expense ratio of at least 25 percent.

Strategy F-2: Grants

Pursue grants to fund projects that have been identified as necessary to support system service priorities or maintain the system as outlined in this plan.

Strategy F-3: Financial partnerships

Pursue opportunities for partnerships and economic development with communities, employers, other transit agencies, federal and state governments and vendors to expand resources to support transit services and supporting capital facilities. Explore the use of advertising to support shelter program expansion and enhancements.

Strategy F-4: Financial management

Ensure the maximum benefit is derived from available transit revenues by:

- Focusing capital expenditures on projects that directly support service investments
- refining capital improvement program expenditure assumptions to improve annual accomplishment rates
- revising lifespan assumptions to reflect actual experience when planning for the replacement of the transit fleet and other equipment and facilities
- Increasing the amount of service in the operating program by reducing annual underexpenditure levels
- replenishing the Transit Fare Stabilization and Operating Enhancement Reserve to enable the operating program to respond to unforeseen revenue or expenditure circumstances.

Authorizing Environment

The King County Metro Transit Division of the King County Department of Transportation is directed to perform the “metropolitan public transportation function” as authorized in the Revised Code of Washington 35.58, in alignment with other applicable codes and the financial policies adopted by the Metropolitan King County Council. As such, Metro is required to plan and operate transit services that are consistent with state, regional and county planning policies. The list below illustrates the breadth of the laws and policies that influence King County Metro’s policies and planning.

- Washington state law
- Federal law and policy
- State and federal grant fund requirements
- State of Washington’s Growth Management Act
- Puget Sound Regional Council’s *Transportation 2040* (metropolitan transportation plan)
- American Public Transit Association (APTA) standards and guidelines
- King County Code
- King County Executive policies and procedures
- King County countywide planning policies
- King County Comprehensive Plan
- Comprehensive Plan for Public Transportation (KC Metro)
- Strategic Plan for Public Transportation (KC Metro)
- Transportation Concurrency Management Program
- King County green building ordinance
- King County Climate Plan
- King County Energy Plan
- Sound Move
- Sound Transit Phase II

Many of the elements listed above can be organized into six major streams of influence illustrated on the Chart 1.

Growth Management Act

One of the most influential elements listed above is the Growth Management Act (GMA) which directs planning organizations to focus development into urbanized areas and limit development of rural and resource lands. Under the GMA, counties of a certain size and the cities within them are required to adopt comprehensive plans. The GMA also requires affected counties to adopt county-wide planning policies to guide comprehensive plan development and provide guidance for defining urban growth areas. The comprehensive plan is the starting point for any planning process and the centerpiece of local planning. State agencies are required to comply with comprehensive plans and development regulations of jurisdictions planning under GMA.

In the Puget Sound region, the Growth Management Act has led to development of the Puget Sound Regional Council’s (PSRC) Vision 2040 and the Multicounty Planning Policies on a regional level, and the establishment of the Growth Management Planning Council (GMPC) and the development of the Countywide Planning Policies at the county level.

The PSRC is the Metropolitan Planning Organization (MPO) for the central Puget Sound Region, and also serves as the Regional Transportation Planning Organization (RTPO). In urbanized areas, the RTPO is the same as the MPO designated for federal planning purposes (RCW 47.80.020), serving as a pass-through agency for disbursement of federal highway and other transportation funds. As the region's RTPO, the PSRC develops long range transportation and development plans which encourages consistency in transportation and development plans across multiple jurisdictions and establishes federal funding priorities for the region. In accordance with the GMA, the current long range transportation plan, Transportation 2040, reflects an urban-centric development pattern.

Growth Center Approach

In regional and countywide plans, the urban center focus of the Growth Management Act is translated into the designation of regional growth centers. Both the PSRC and the Countywide Planning Policies designate regional and urban centers as areas for special attention. The transportation implication of this 'centers' approach is that transportation investments will be prioritized to facilitate movement within and between these centers. The PSRC adopts Regional Growth and Manufacturing/Industrial Centers from countywide planning policies. The list of Urban Centers and Manufacturing/Industrial Centers as designated by the Growth Management Planning Council (GMPC) are shown in Table 1.

Table 1: Regional Growth Centers in King County

GMPC Confirmed Urban Centers
Downtown Auburn
Bellevue CBD
Downtown Burien
Federal Way CBD
Kent CBD
Redmond Overlake,
Redmond CBD
Renton CBD
SeaTac CBD
Seattle CBD
First Hill/Capitol Hill
Northgate
South Lake Union
University District
Seattle Center
Totem Lake
Tukwila CBD
GMPC Manufacturing/Industrial Centers
Ballard/Interbay
Duwamish
Kent
North Tukwila

Air Quality, Climate Change and Energy

Washington State is also influenced by the Clean Air Act of 1990 and the Clean Air Washington Act of 1991. The Clean Air Act contains federal regulation that directs Washington to outline State Implementation Plans (SIPs) to assist jurisdictions to attain air quality goals. Clean Air

Washington was Washington State's response to the federal requirement to enhance air quality in the state. This statewide policy has a direct impact on transportation plans and policies because it focuses on protecting the state's air quality by reducing air pollution.

Parallel to the Clean Air Act's focus on air quality is the state's Climate Change Challenge Executive Order. This Executive order directly targets green house gas emissions, mandating a reduction in greenhouse gas emissions to 1990 levels by 2020. Transportation accounts for a significant portion of the states green house gas emissions and is influenced by this executive order. At the county level, efforts to limit climate change and reduce greenhouse gas emissions are represented in the King County Climate Plan. This plan provides local guidance on how the County can contribute to State and National efforts to reduce emissions.

Related to the County's climate plan is the 2007 King County Energy Plan. While the plan looks specifically for ways that the county can reduce reliance on non-renewable energy sources, a shift away from fossil fuels such as petroleum would also have positive greenhouse gas and emission impacts. This plan can influence transportation planning and policy by setting a direction to use alternative propulsion technologies or fuels for buses and vehicles, such as hybrid electric or hydrogen.

Countywide Planning Policies

At a county level, the Countywide Planning Policies coordinate the economic, developmental and transportation planning efforts by requiring consistency in local plans. In October of 1992 the Countywide Planning Policies initiated "Phase II" which required the policies to at a minimum address:

- a. Implementation of RCW 36.70A.110 (Urban Growth Areas);
- b. Promotion of contiguous and orderly development and provision of urban services;
- c. Siting of public capital facilities;
- d. Transportation facilities and strategies;
- e. Affordable housing;
- f. Joint County and city planning within Urban Growth Areas;
- g. Countywide economic development and employment; and
- h. Analysis of fiscal impact.

The Countywide Planning Policies require jurisdictions to consider the broader implications of their growth patterns and establishes population and employment growth targets for each of the jurisdictions in the county, organized into four different subareas, East King County, Rural Cities, Sea-Shore and South King County. The jurisdictions and their associated subareas are shown in the Table 2.

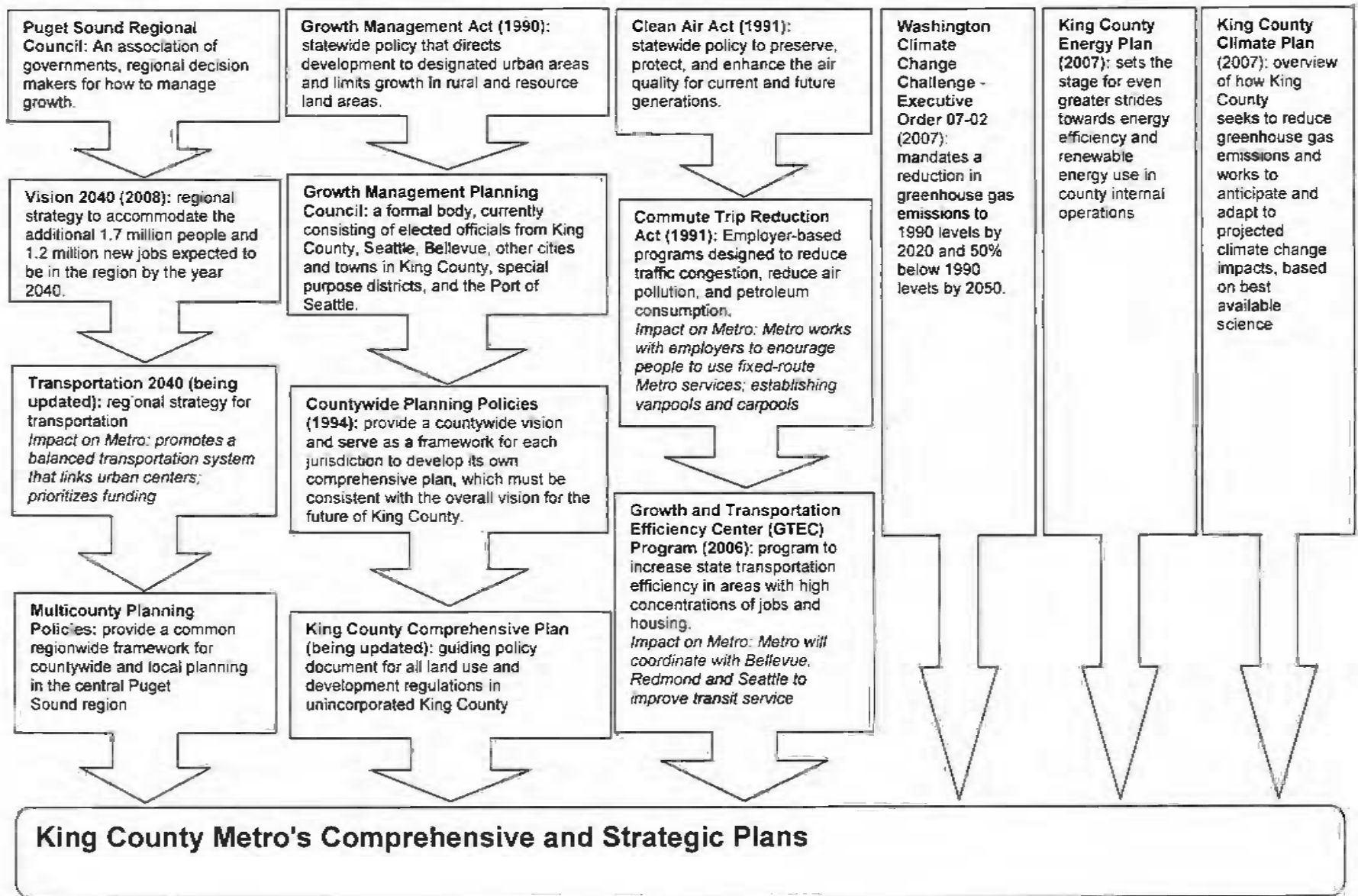
King County Comprehensive Plan (KCCP)

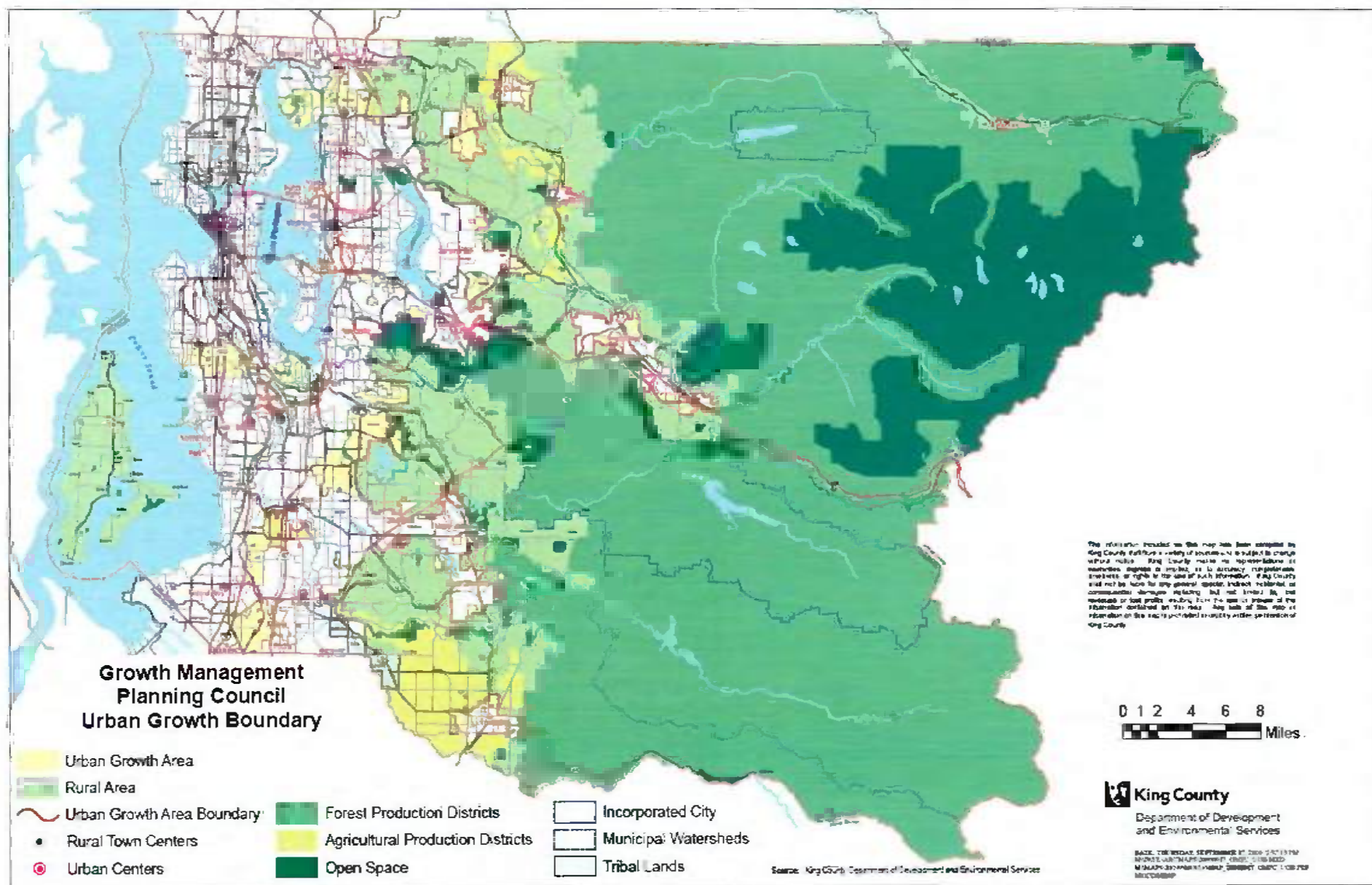
King County, like all local jurisdictions is required to develop a comprehensive plan to guide transportation planning by defining land uses and the transportation system needed to support those land uses. The KCCP is the guiding policy document for all land use and development regulations in unincorporated King County, and for regional services throughout the County including transit, sewers, parks, trails and open space.

Table 2: Local Jurisdictions within King County

Local Jurisdictions Within King County	
Algona	Maple Valley
Auburn	Medina
Beaux Arts Village	Mercer Island
Bellevue	Milton
Black Diamond	Newcastle
Bothell	Normandy Park
Burien	North Bend
Carnation	Pacific
Clyde Hill	Redmond
Covington	Renton
Des Moines	Sammamish
Duvall	SeaTac
Enumclaw	Seattle
Federal Way	Shoreline
Hunts Point	Skykomish
Issaquah	Snoqualmie
Kenmore	Tukwila
Kent	Woodinville
Kirkland	Yarrow Point
Lake Forest Park	

Authorizing Environment Chart 1





History of New Service Allocation Policy at King County Metro

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Existing Service Allocation Policy

King County Metro currently allocates new transit service investment by subarea as directed by Strategy IM-3 from the 2009 amendment of the 2007-2016 Strategic Plan for Public Transportation. The map of the subareas is included as Figure 1.

Strategy IM-3: Service Resource Allocation

The implementation of transit service hours as stated in strategy IM-1 and IM-2 above shall use the following framework for transit service allocation. Service hours used for service partnerships, schedule maintenance, contracted services or partnership agreements are exempted from subarea allocation requirements.

With the implementation of each 200,000 annual hours of service investments that are subject to the subarea allocation requirement and at the end of the 2007-2010 Transit Now program investments, each King County Metro planning subarea would receive a share of actual service hours implemented: East 40%, South 40% and Seattle/North King County 20%.

Measurement of the resulting share of hours will be based on the baseline bus route allocations that assign one-way routes that originate in a subarea or two-way routes that operate wholly within a subarea to that subarea. Further, all-day, two-way routes that operate between two subareas will be attributed in hours at 50% to each subarea. Any system-wide reduction in service investment shall be distributed among the subareas in proportion to each subarea's share of the total service investment.

Any system-wide reduction in service investment shall be distributed among the subareas in proportion to each subarea's share of the total service investment.

Further, any reduction of the number of total bus service hours implemented between January 1st, 2010 and December 31st, 2013 in the Metro system below the 2009 year-end service levels shall be considered a "service suspension." The future work program for the King County Regional Transit Committee shall focus on restoration of transit service suspensions/cuts, if any.

Service hours invested in RapidRide, Transit Now partnerships, the SR520 Urban Partnership, and contracted services such as construction mitigation service are not considered part of the suspensions or restorations.

Any reductions in total bus service hours made after December 31st, 2013 or reductions made after the total hours of service in the Metro system return to 2009 year-end service levels shall be considered service cuts.

Prior Service Allocation Guidance

Transit service allocation policy based on subareas was first established by the council of the former Municipality of Metropolitan Seattle (Metro) in 1993 through the adoption of the Comprehensive Plan for Public Transportation. The 1993 plan, also known as the Long Range Policy Framework, established goals, objectives and policies and identified the subarea boundaries. Prior to 1993, Metro transit investments were decided according to broad system plans and policymaker consensus as available resources allowed. However, growing transit

demand outside the City of Seattle prompted a shift in service investment, and the 1993 plan responded by calling for new service investment to be distributed among the subareas on the basis of population.

The 1993 comprehensive plan policy reads:

“Policy 3.4.1 Operating Subsidy Allocation¹

Allocate new service subsidy resources to each subarea within King County in proportion to the projected population of that subarea, as represented by adopted Puget Sound Regional Council (PSRC) population forecasts for the year 2000: West subarea – 34 percent; East subarea – 30 percent; South subarea – 36 percent (See Figure 1). The percent distribution will be updated to reflect changes in the PSRC population forecasts adopted by the PSRC General Assembly.”

“New service subsidy resources” include the cost of new transit operating investments less direct passenger fares and partnership revenues. In effect, it represents the operating cost of service directly supported through local public transit tax sources.

This policy was carried forward unchanged when King County and Metro Transit merged in 1992 via Ordinance 11032 whereby the King County Council incorporated Metro functions into the county government.

1996-2001 Six-Year Transit Development Plan

In 1995, King County Metro developed the 1996-2001 Six-Year Transit Development Plan which was adopted by King County Ordinance 12060, amending the Comprehensive Plan for Public Transportation. Through the Six-Year Plan, the population percentage share among the three subareas was amended to reflect new forecasts adopted by the Puget Sound Regional Council (PSRC), and provided that future updates of the population percentages would be established via the six-year plan update process. The updated percentages were 28% for the East, 36% for the South and 36% for the West.

In addition to updating the population split among subareas, the 1996-2001 Six-Year Plan clarified service allocation policy by establishing target dates at which new service subsidy investments would be consistent with adopted population targets. As a result, each service change process itself was not required to meet subarea percentage targets, allowing rational phasing of multiple service changes over time.

Route Assignment and Service Investment Accounting

For accounting purposes, King County Metro assigned entire routes within the transit network and their associated subsidy to one of the three county subareas. These assignments were made based on the predominant residential draw area for each route as measured during the morning peak period. The assignment of entire routes was done in order to remain consistent with the

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¹ Metro Council Resolution NO. 6641, October 21, 1993, adopting a Comprehensive Plan for Public Transportation, Exhibit A, page 6

initial investment decisions made during implementation and to utilize data that was readily available.

The implementation of new or modified services was tracked at the subarea level, with the continued assignment of entire routes to specific subareas. Subarea stakeholder input through public process influenced what changes were implemented. The net change in service subsidy over time was then calculated through comparison snapshots of the transit network at different points. More information about factors influencing changes in operating subsidy can be found in the adjacent box.

Metro's Financial Policies and Subarea Allocation

Service subsidy allocation policy by subarea was further clarified in 1998 when the King County Council Regional Transit Committee (RTC) and the county council adopted the Transit Program Financial Policies for 1999 via Motion 10527. The adopted financial policies specified certain resources to be excluded from subarea allocation, restricted the investment of fare revenues generated and service subsidy currently invested in one subarea from being moved to another, and extended the service allocation policy to include service reductions as well as service growth. Financial policies adopted for 1999 and 2000 remained consistent in this area, as stated in Motion 10738 establishing 2000 transit financial program policies:

Fluctuations in Operating Subsidy Requirements

Transit operating subsidy calculations are based on an array of factors influencing total service cost and fare revenue estimates. At the route level, changes in total service resources used to deliver service could change for a variety of reasons. Additional trips inserted to increase frequency, extension of route length in geographic or time of day coverage, and other route restructures may increase resources needed to operate that route. These actions may also save resources if other routes can be shortened, restructured or eliminated along with these changes. Additionally, actions to manage the system, such as “through-routing” two routes (one bus continues in service to deliver two distinct routes) may save or cost resources unrelated to routing, frequency or span changes in a route. Over time these and other actions to manage the system may affect the resources required to operate individual routes, even where no changes are apparent from a customer perspective.

Variability in operating characteristics and fleet types may have a more pronounced affect on cost at the route level than the subarea or system level. For example, changing a route from transit van operation to a larger diesel coach can significantly alter a route's costs without the addition of new trips, although riders presumably will notice the additional seats available.

“B. Operating Subsidy Allocation²

All new service subsidy resources (except for funds excluded by other policies, such as schedule maintenance hours) shall be allocated to each planning subarea within King County in proportion to the projected population of that subarea, as represented by adopted Puget Sound Regional Council (PSRC) population forecasts for the year 2000: west subarea – 36 percent; east subarea 28 percent; south subarea 36 percent. The percent distribution will be updated to reflect change in the PSRC population forecasts adopted by the PSRC General Assembly. Service subsidy currently invested within a subarea and fare revenues generated there shall not be shifted to another subarea. Any system-wide reduction in the level of subsidy shall be reduced proportionally among the subareas consistent with the population-based allocation formula for new service subsidy.”

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² King County Council Motion No. 10738, July 26, 1999, adopting 2000 Transit Program Financial Policies, page 2

A New Allocation Formula: The 2002-2007 Six-Year Transit Development Plan

As Metro began the process to update the 1996-2001 Six-Year Plan, there was growing interest on the part of the Regional Transit Committee and local jurisdictions to explore alternatives to the existing population-based allocation policy. This interest was in part prompted by the threat of significant service cuts associated with the passage of I-695 and the repeal of the motor vehicle excise tax (MVET). Because the legislature provided one year of “bridge” funding to transit and also raised the transit taxing authority by 0.3%, the service cuts ended up not being as severe as originally feared, but the associated discussions led to a revised policy adopted in the 2002-2007 Six-Year Plan. The revised strategy, which was carried forward in the original 2007-2016 Strategic Plan, changed the subarea service investment allocation to a simple ratio rather than a formula based on population, called for tracking annual service hours implemented rather than service subsidy and assigned service hours of cross-subarea routes equally to each subarea, rather than assigning an entire route to a given subarea.

Strategy IM-3: Service Resource Allocation

The implementation of transit service hours as stated in strategy IM-1 and IM-2 above shall use the following framework for transit service allocation. Service hours used for service partnerships, schedule maintenance, contracted services or partnership agreements are exempted from subarea allocation requirements.

With the implementation of each 200,000 annual hours of service investments that are subject to the subarea allocation requirement and at the end of the 2007-2010 Transit Now program investments, each King County Metro planning subarea would receive a share of actual service hours implemented: East 40%, South 40% and Seattle/North King County 20%.

Measurement of the resulting share of hours will be based on the baseline bus route allocations that assign one-way routes that originate in a subarea or two-way routes that operate wholly within a subarea to that subarea. Further, all-day, two-way routes that operate between two subareas will be attributed in hours at 50% to each subarea. Any system-wide reduction in service investment shall be distributed among the subareas in proportion to each subarea's share of the total service investment.

This policy was in place until the current financial situation developed, prompting an amendment to the 2007-2016 Strategic Plan in 2009, which led to the slightly modified policy listed at the beginning.

References

- 1. New Transit Operating Subsidy Investments: Implementation of King County Policy 1995-1999; King County Metro Staff Report, 2000*
- 2. Subarea Transit Service Allocation; Regional Transit Committee staff report; Arthur Thornbury; March 2008*

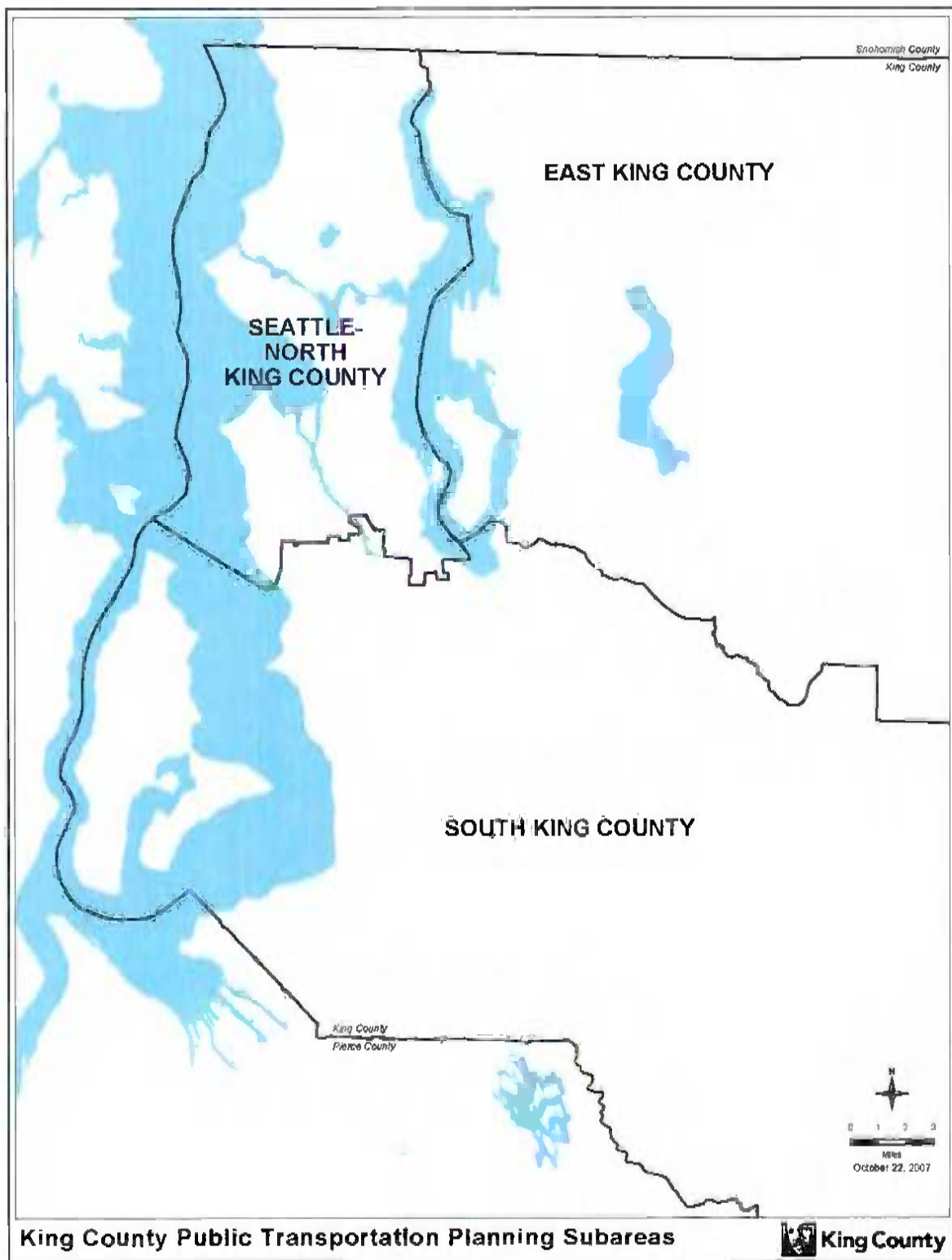


Figure 1: Subarea Map

Metro Financial Situation: 2008 – Present

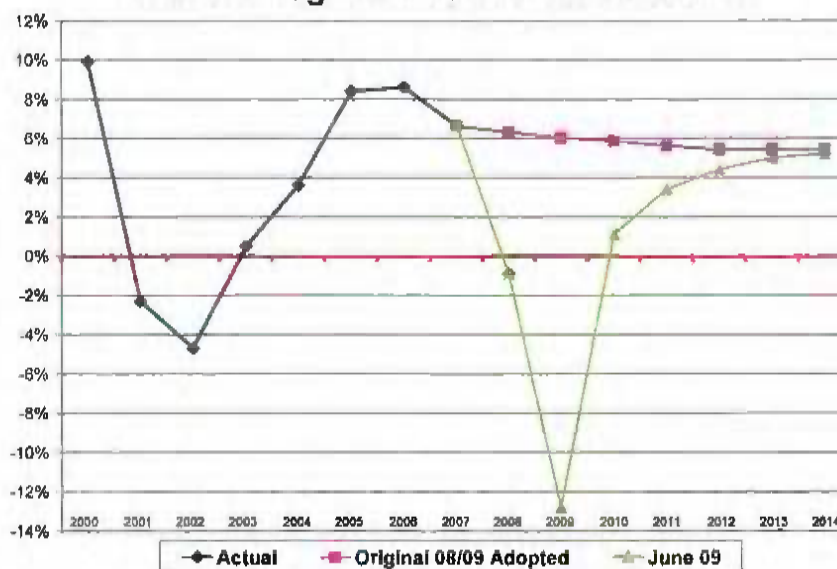
Introduction

The past two years have been times of extreme challenge for King County Metro. A deep recession, severely affecting transit agencies across the nation, led to a reduced budget that included job losses, fare increases, digging deeply into reserves, and cuts to Metro programs. Moreover, the steep decline in sales tax receipts beginning in the second half of 2008 has created a well-documented structural imbalance in Metro's finances. Since sales tax revenue makes up 70% of Metro's operating budget, Metro is facing a difficult reality. As shown in the chart on the right and below, the revenue that Metro will collect from sales tax receipts between 2008 and 2013 is projected to be \$700 million less than originally predicted.

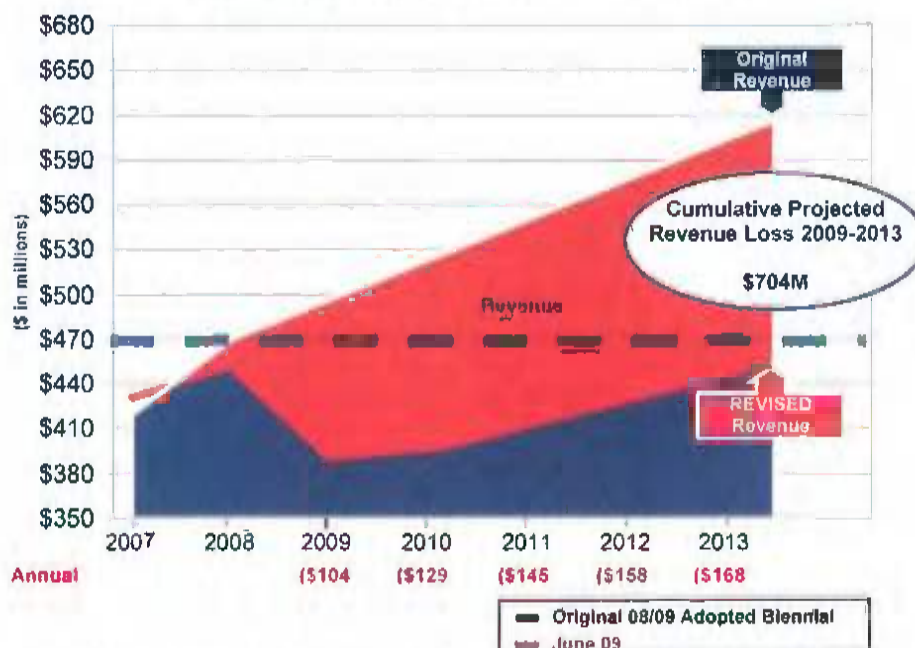
Ridership

At the point where the severe funding issues were first brought to light, Metro was experiencing unprecedented growth in ridership, shown in the chart below. In 2007 and 2008, Metro grew faster than any large transit agency in the nation, over 7% each year. In the summer of 2008, Metro had almost achieved a ten year goal of 20% more riders that was set in 2006. This ridership increase was accompanied by only a 2% increase in service. The main reason for this ridership growth was rapidly increasing gas prices that were causing people to

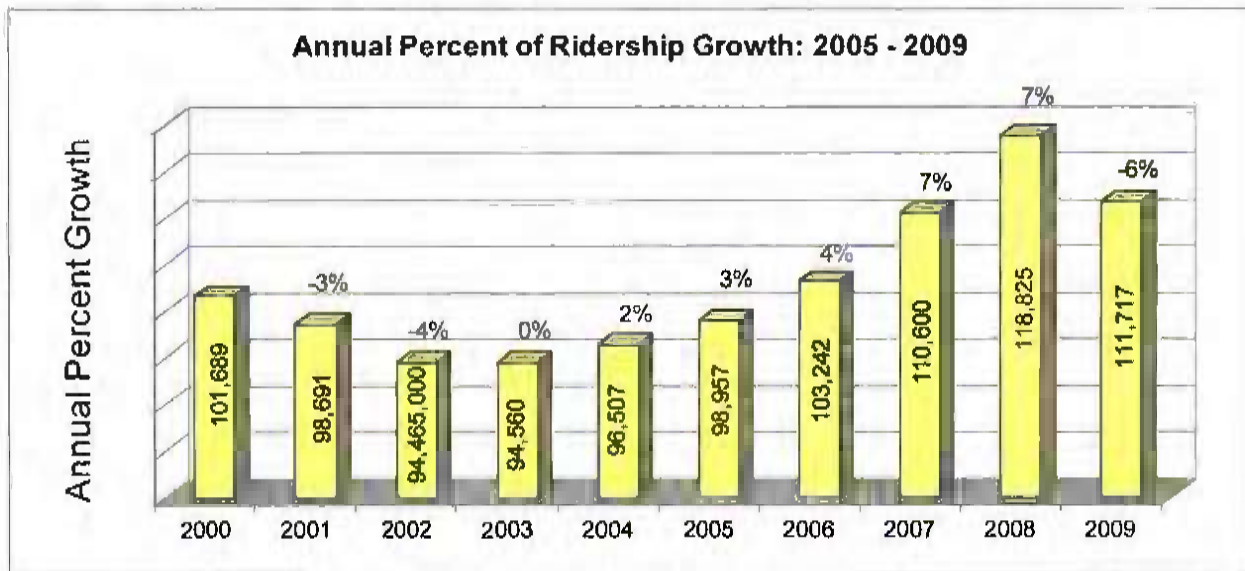
Transit Program — Sales Tax Revenue



King County Metro - Sales Tax Shortfall



rethink their mobility choices. Although gas prices peaked at \$4.37, some people who switched to public transportation during this period, continued to use Metro after gas prices decreased. After its peak in the summer of 2008, ridership declined as the recession took its toll on employment and travel behavior.

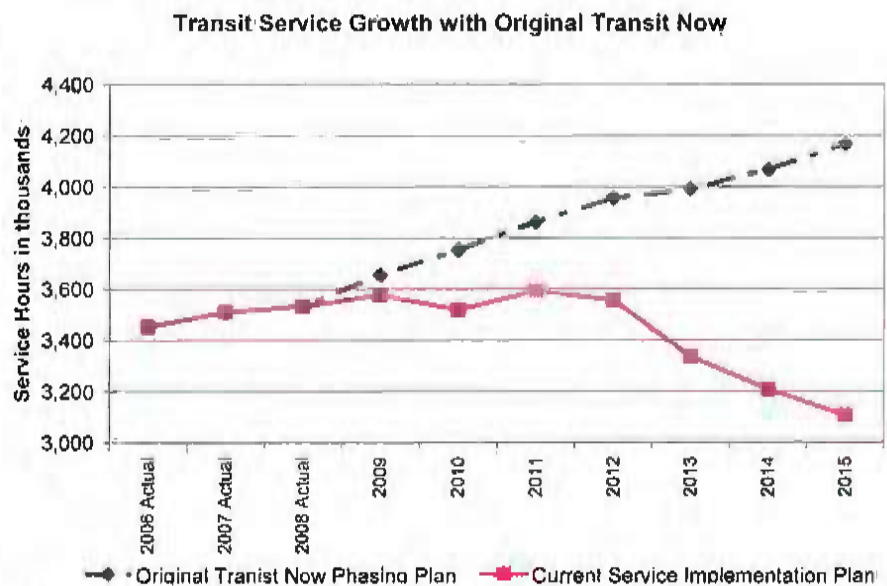


Although ridership has decreased, transit demand in King County remains strong and will continue to grow as the regional economy rebounds and more people move into the area. At a time when transit has become a more popular way to travel, King County Metro should be poised to grow to meet this demand. However, the reality is that it is likely that Metro will have a difficult time sustaining existing services if the revenue outlook does not improve substantially.

Planned Growth

In 2006, a ballot measure was authorized by King County voters to fund the "expansion of service, operations, maintenance and capital needs of King County Metro public transportation." Transit Now consisted of a five-point plan to enhance and improve service and relied on the .1% sales tax increase to fund these improvements. Transit service growth was planned to be implemented according to the chart on the right. This plan included the following:

- **RapidRide BRT:** Metro Transit's new, streamlined bus service that will provide frequent, all-day service in six popular transit corridors throughout King County



DRAFT

Metro Service Hours by Subarea under Executive's Proposed 9 Point Plan

How have new Metro service hours been implemented since the "40/40/20" allocation policy was adopted?

Subarea	2002-2006 "40/40/20" Hours	2007 - 2009 "40/40/20" Hours	2002-2009 "40/40/20" Hours Totals	% Share All Hours	Committed Transit Now Partnership Hrs
West	18,400	12,900	31,300	20%	43,140
South	29,000	32,700	61,700	40%	15,100
East	23,300	37,700	61,000	40%	31,760
	70,700	83,300	154,000	100%	90,000

What would the projected Metro service hours allocation be if Transit Now RapidRide is Implemented?

Subarea	2010-2013 Transit Now RapidRide Hours A-E Lines	Totals	% Share All Hours
West	43,000	74,300	29%
South	34,000	95,700	38%
East	23,000	84,000	33%
	100,000	254,000	100%

What would the projected Metro service hours be if a 6th RapidRide and UPA Services are added?

Subarea	2011-2013 Proposed 6th RapidRide F Line & SR520 UPA Hrs	Totals	% Share All Hours
West	6,000	80,300	27%
South	18,000	113,700	38%
East	21,000	105,000	35%
	45,000	299,000	100%

Hours by Subarea 2007-2013 for RTC 102109

1

Regional Transit Committee 10/21/09

In November, 2010, the King County Council passed a balanced budget that took into account many of the nine points described in his plan. The chart below shows the changes that were made from the nine-point plan to the adopted budget.

Subject	Nine Point Plan	2010 Adopted Budget
Defer most bus service expansion	Only RapidRide and partnership service added from Transit Now	Same as proposed, with Transit Now phasing plan revised to show deferred services being added after 2017
Cut non-direct service related programs	Program reductions in areas such as fleet replacement, zones and shelters, and other areas	Executive's proposal with minor changes
Non-service related cuts	Reduce more than \$6 million in operating costs in part with reduction of 60 positions	Reduce more than \$8.5 million in operating costs with position reductions totaling 73
Raise new revenue through a property tax swap to fund RapidRide service	5.5 cents and addition of sixth RapidRide line and SR 520 service	6.5 cents and addition of sixth RapidRide line and SR 520 service
Tap into operating reserves to help stabilize service levels	Operating reserves reduced from 30 days to 2 weeks	As proposed
Increase fares by 25 cents in 2011	Increase all categories by 25 cents	As proposed, but Youth and Senior/Disable fares not increased
Use fleet replacement reserves	Use \$100 million between 2010 and 2013 to support service	Slight modification from executive proposal
Implement operating efficiencies from the forthcoming transit performance audit recommendations	Unspecified amount in service suspensions	Specifically identified 125,000 hours for efficiency savings
Reduce all service proportionately during the next two years	Reduce 310,000 annual hours	75,000 of "low impact" reductions; remaining hours to be reduced in 2012/2013 biennium

Thus far, with the passage of this budget, Metro has been able to retain the same number of service hours to provide transit throughout King County. Since resources are so scarce, some of the service hours will be reallocated from their current trips and routes to better serve the overall transit needs of the County. In this way, the 2010 Metro Transit Budget allows transit to continue some planned growth over the next two years in areas where Metro has made a commitment to the public to implement improved transit service.

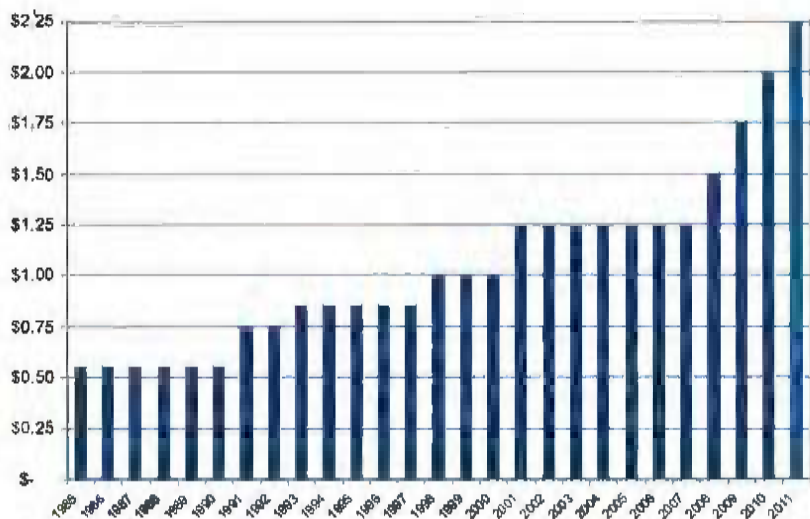
Actions to Balance the Budget

With direction the 2009 Transit Audit and the 2010 Metro Transit Budget, Metro has taken the following steps to balance the budget.

- **Base Fare Increase:** In January, 2010, the base fare increased by \$.25 to \$2.00, shown in the chart on the right. Another fare increase is proposed for 2011.

- **Capital Program Reductions:** Metro reduced its capital program by \$160 million.

- **Spend Down Reserves:** The typical one month reserve that Metro typically keeps has been reduced to a two week reserve temporarily. This will allow Metro to spend an additional \$40 million more than originally budgeted on preserving current Metro service.

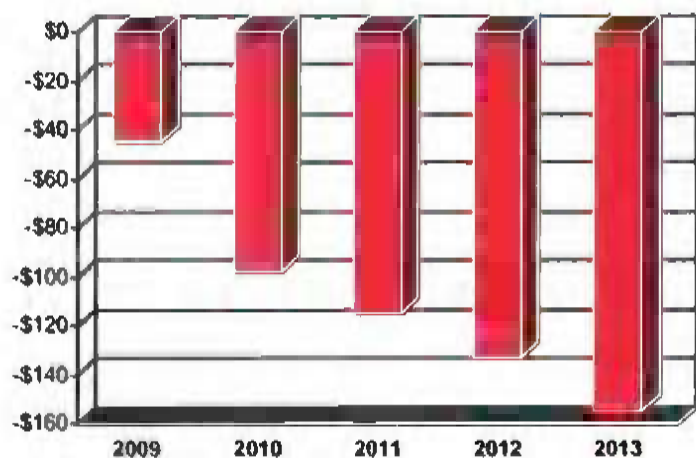


- **Reduce Fleet Replacement Fund:** \$100 million will be used from the Fleet Replacement Fund to preserve Metro service.
- **Implement Audit Findings:** Metro will implement the findings from the 2009 Transit Audit, which should achieve additional savings.
- **Defer Transit Now Investments:** Transit Now programs, apart from RapidRide and Service Partnerships, will be deferred.
- **Increase Transit Funding:** The 2009 Legislature authorized a King County Property Tax to be used for Transit.

Deficit continues to Grow

Financial Future

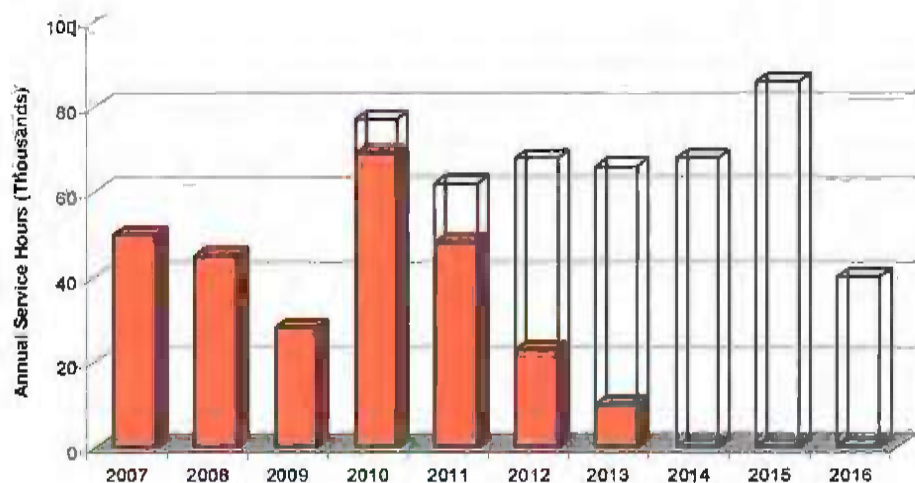
Although Metro has found a way to preserve most current service and to add additional investments that are targeted to the areas of the County where transit service makes the most sense, the budget outlook will not improve without an additional funding source. According to financial projections, there will be a cumulative budget gap of \$546,000,000 from 2009 to 2013 unless this structural deficiency is addressed.



- **High Ridership Corridors:** Metro planned to add hours of service to heavily-used routes, allowing buses to come more often or keep running longer into the day or evening.
- **Rapidly Developing Areas:** Metro planned to add new routes and expand existing routes to serve areas that had limited hours of service or no service at all
- **Partnerships:** Metro planned to increase service on routes by partnering with cities and businesses.
- **Additional improvements:** Metro planned to expand Access service to areas of rural King County that had no service in the past, and planned to implement new online vanpool training programs.

The severity of the budget shortfall has deferred the majority of those improvements so that current service could be preserved to the extent possible, shown in the chart on the right. However, RapidRide bus rapid transit will continue as scheduled. Four of the five Transit Now proposed RapidRide bus rapid transit line will start service between 2010 and 2012, increasing the overall number of service hours operated by Metro. A final proposed Transit Now RapidRide line and a sixth RapidRide line, adopted after Transit Now was finalized, will be implemented in 2013.

Transit Now Deferred Investments



2010 Budget

In the Fall of 2009, Interim King County Executive Kurt Triplett proposed a plan for how to manage Metro's funding deficit for 2010 and 2011. His plan included nine strategies. The Table on the next page should show how Metro Service hours would have been implemented by subarea under this plan. These charts are not representative of the Budget and plan that were eventually adopted. These are discussed later in this document.

Metro Financial Planning and Funding Sources

A central goal of King County Metro's financial planning activities is stability of the transit system and the financial integrity of the Public Transportation Fund along with specific programmatic plans to project future revenues, expenditures and resulting fund balances¹.

King County Metro Financial Planning Process

Planning is done on an ongoing basis, as well as part of the county's annual budget process. Comprehensive financial planning, combined with ongoing forecasting, allows the system to respond effectively to change in the economic environment, without detrimental impacts to existing services. Anticipation of changes in financial conditions and forecasting beyond the current year enable the transit system to project sustainable levels of transit service and to accelerate or delay new service implementations based on these changing conditions.

Relationship of the Strategic Plan to the Financial Plan

The King County Strategic Plan for Public Transportation is consistent with King County Metro's financial plan. Financial strategies included in the strategic plan support the ongoing stability of the transit system and ensure financial integrity of the Public Transportation fund. The financial strategies of the strategic plan include: pursuit of available state and federal grant sources and continues the long-standing policy of pursuing financial partnerships and economic development with local jurisdictions and other public and private entities.²

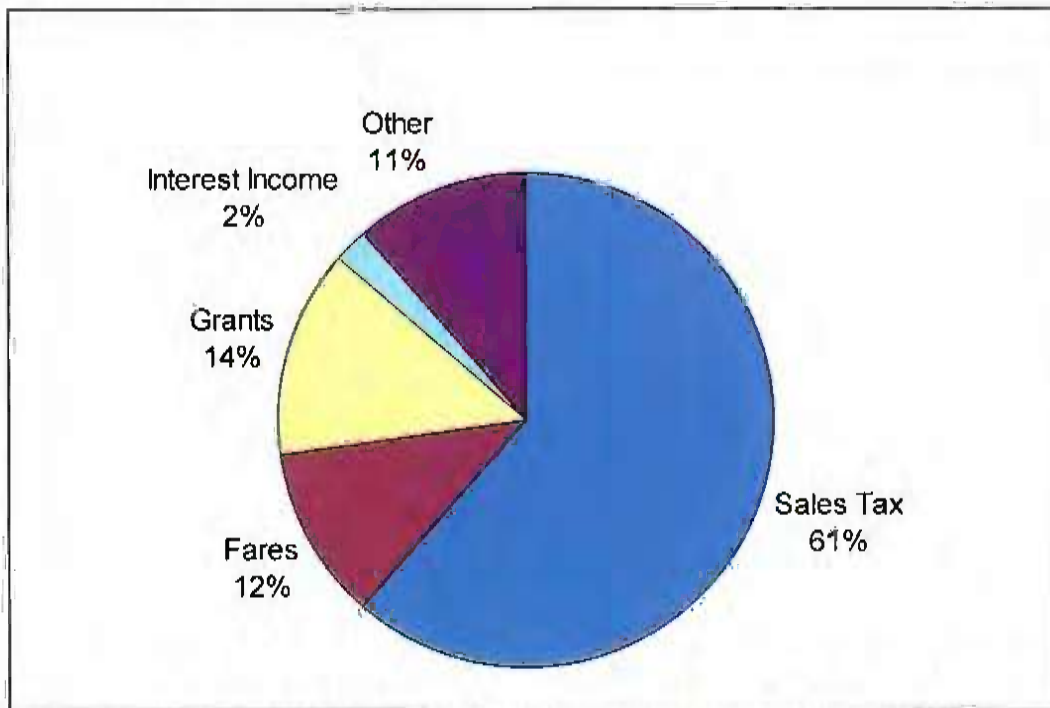
Metro Funding Sources: Past and Present

On September 19, 1972, King County voters approved a 0.3 percent sales tax to fund a county-wide bus system operated by Metro, and Metro began transit revenue service the next year³. Since Metro's inception, sales tax has been the primary source of funding. In 1976, Metro began collecting motor vehicle excise tax to fund transit service. In 1980, Metro received voter approval to increase sales tax by an additional 0.3 percent to fund transit service⁴.

The passage of Initiative 695 in 1999 significantly impacted Metro's funding. The action to cut the Motor Vehicle Excise Tax (MVET) eliminated \$106 million in annual revenue for Metro Transit, or about one-third of its total revenue⁵.

In spring 2000, the Washington State Legislature provided King County with about \$36 million in a one-time "bridge" funding to allow Metro to continue current levels of operation through March 2001. The Legislature also authorized transit districts throughout the state to ask voters to raise local transit sales tax levies to a maximum of 0.9 percent. In 2000, Metro was able to pass a 0.2 percent increase in the local sales tax following this legislation to restore service cuts made after the passage of Initiative 695⁶. In 2006, with voter approval of the Transit Now initiative, the local sales tax increased 0.1 percent, achieving the maximum level of 0.9 percent for public transportation providers. Metro continues to be funded mostly through sales tax revenue.

Current Funding Sources



Adapted from February 25, 2009 Regional Transit Committee Presentation and Staff Report

King County Metro Transit receives approximately 61 percent of its annual revenue from the 0.9 percent Local Option Sales and Use Tax which has been in effect since November 2006, when voters approved an increase to fund King County's Transit Now program. Prior to that, the rate of 0.8 percent had been in effect since 2001. The rate had been raised from 0.6 percent in 2001 by the voters to partially replace transit revenues lost when the Motor Vehicle Excise Tax was repealed by voter approval of Initiative 695 in 1999. Sales tax revenues support both the transit capital and operating programs⁷.

¹ Adapted from King County Metro Strategic Plan for Public Transportation

² 2010-2011 King County Department of Transportation Business Plan

³ Metro milestones <http://metro.kingcounty.gov/am/history/history-1970.html>

⁴ Metro milestones <http://metro.kingcounty.gov/am/history/history-1980.html>

⁵ King County Metro 2003 in Review. <http://metro.kingcounty.gov/am/reports/2003/122003-performance.html>

⁶ Metro milestones <http://metro.kingcounty.gov/am/history/history-2000.html>

⁷ King County Council Staff Report. February 25, 2009 B2009-0064.

Section 5: Metro Service Planning and System Development

This section discusses how Metro plans and implements transit service in King County. This section includes materials on how Metro transit's system has evolved and what factors are considered in planning and implementing transit service. Metro's current methods for planning, distributing and putting service on the street are outlined. Restructures and system integration are also discussed to provide perspective on Metro's role in the regional transportation system and its coordination with other transit agencies. A brief piece on Metro's performance and monitoring practices is also included to provide a summary of Metro reports and practice in this area.

Information you'll find in this section:

- The Evolution of Metro's System: Service Initiatives and System Development
- Transit System Coordination
- Sound Transit and Metro Transit Coordination
- Service Planning: Principles of Route and Network Design
- Service Change Process
- Metro Transit Route and Schedule Change Process
- Monitoring Performance and Defining Success
- Purpose Driven Public Transport: creating a clear conversation about public transport goals

Links to Additional Resource Materials:

Metro Reports:

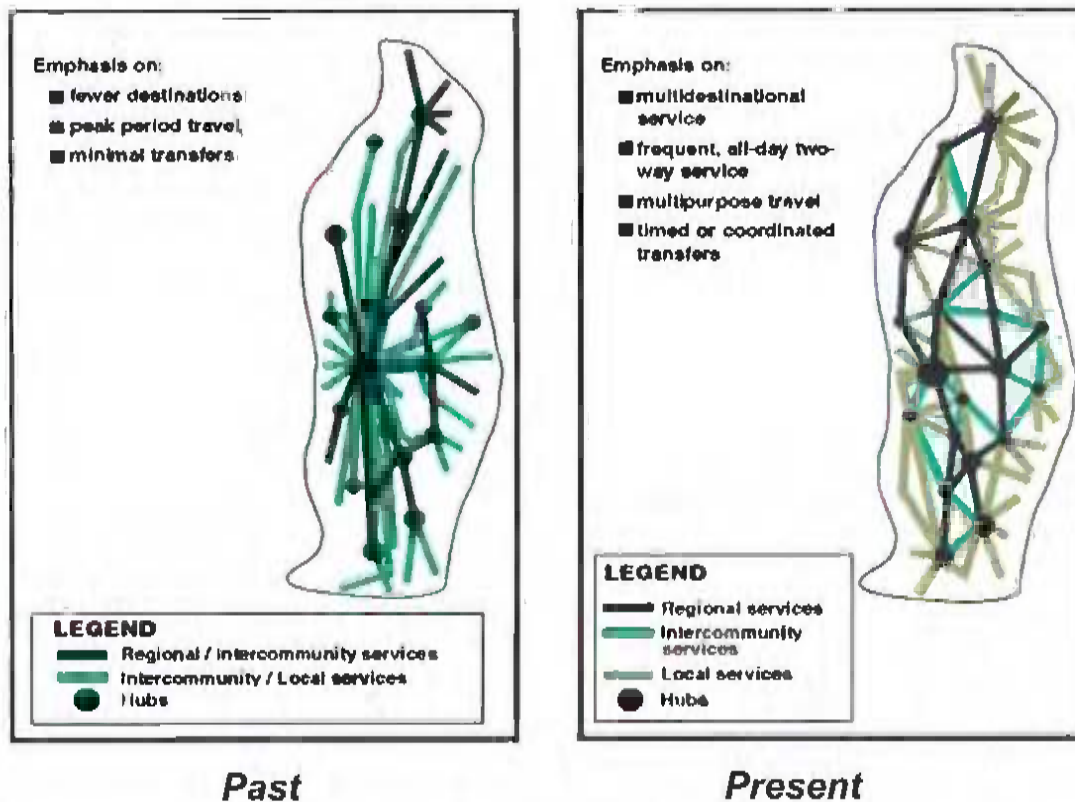
- Annual Management Report
  - Route Performance Report
  - Annual Rider/Non-Rider Survey
- <http://metro.kingcounty.gov/am/reports/reports.html>

The Evolution of Metro's System: Service Initiatives and System Development

King County Metro Transit provides an array of services to meet the many different travel needs of passengers and support the varying land uses throughout the county. Metro has an extensive fixed route network that is comprised of core, peak and local routes. This network is supplemented by vanpools and ridesharing programs for trips that are less convenient by bus and Access paratransit service for citizens who are ADA eligible. The system is expected to serve a wide variety of travel markets and a diverse set of users. Striking a balance for multiple users with differing travel needs is one of the largest challenges that Metro faces, given limited resources. The planning framework helps guide what that balance should be.

Metro's System Design

Metro's existing network of services comprises a multi-centered system focused on connections to and between centers, with higher frequency services in key corridors. This multi-centered approach was first established through adoption of the 1993 Comprehensive Plan for Public Transportation and the subsequent 1996 Six-Year Plan, and has been expanded over the years.



The shift in orientation was prompted by changing demographics in King County and rapid growth in areas outside the City of Seattle. During the 1990's, demand for Metro service grew,

as people wanted to access a broader range of destinations. This demand was accommodated with more efficient use of fleet and service hours.

Notable gains in ridership followed the first stages of Metro's shift to a multi-centered approach. Overall transit use increased, as did the number of households with residents using transit. At the same time, single-occupant vehicle travel declined. Between 1994 and 2000, the proportion of households using transit increased to 31 percent from 28 percent. Service hours also increased steadily from 1995 to 1999 to a system size of just over 3.3 million annual service hours, also a reflection of Metro's healthy financial position.

During the same period, much of the region's growth occurred outside of Seattle, in south and east King County. Between 1994 and 2005, roughly 50 percent of the growth in population occurred in South King County, with 30 percent in East King County. 20 percent of the overall growth occurred in Seattle and West King County.

Expanding the Core Network

Metro's 2002-2007 Six-Year Development Plan continued to emphasize improvements to core corridors to make services that connect activity centers more frequent and convenient. At the same time, there was a focus on increasing service to park-and-rides and improving connections to regional services. Metro's Transit Speed and Reliability Program achieved speed, safety and reliability improvements in a number of important transit corridors. Methods used to achieve program objectives include improved signal coordination, consolidation of stops, queue bypass, customer comfort and safety improvements at and around bus stops, and improved transit access/egress from key locations. Such improvements were completed on both a corridor and spot basis, in coordination with jurisdictions and entities in various locales through Metro's service area.

Restructuring for Efficiency

Metro capitalized on the corridor emphasis to also improve service efficiency and make service more attractive through consolidation of routes. By consolidating routes that originally operated on multiple corridors to a single corridor, it is often possible to create a single route that is more frequent, productive and reliable. These higher frequency routes tend to be more attractive to riders, and Metro has found that such consolidations and restructures often result in increased ridership. A detailed example of a restructure process is described below.

Delridge-Ambaum: Example of a Successful Service Restructure

The Delridge-Ambaum restructure was accomplished without the investment of additional service hours. Service on the corridor was improved by reallocating and consolidating services.

Goals: The goals of the service restructure were to:

- Improve all day transit connections,
- Provide higher levels of transit service without additional resources, and
- Improve passenger experience.

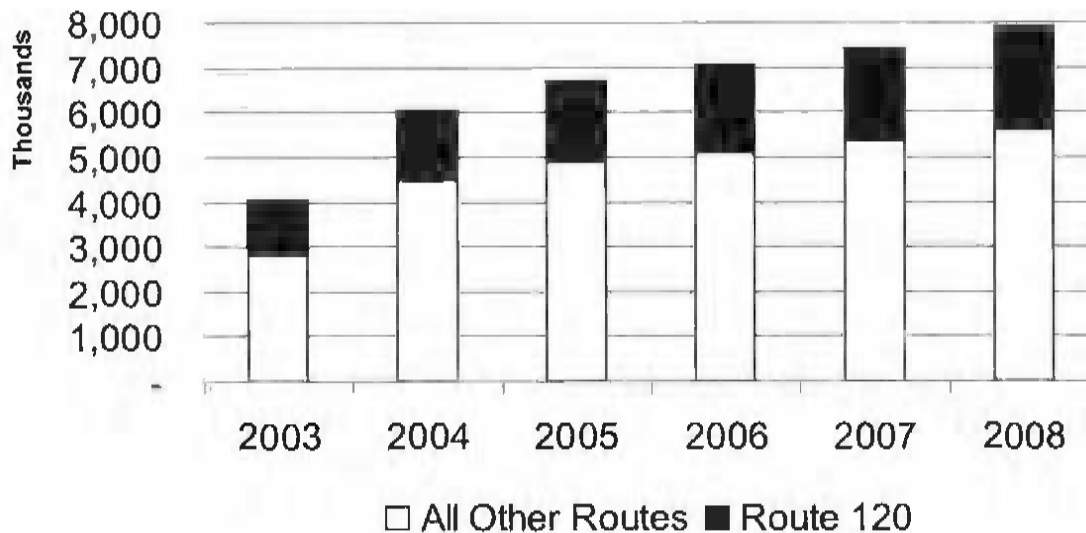
Details of the Service Restructure:

- The primary service, the Route 120, replaced multiple routes that operated less frequently and were less direct – it became an all day, two-way service featuring 15 minute headway throughout most of the day, seven days a week
- Some commuter express service was maintained, but other service was changed to reduce duplication, resulting in some new transfers for riders
- Bus stops were removed to help speed the service. Many of the remaining stops were upgraded with shelters, benches, enhanced lighting, wayfinding and fresh curb paint to mark the bus zones.
- Transit Priority measures were implemented
- New air-conditioned, low-floor articulated buses were assigned to Route 120
- New Route 125 provided replacement service to South Seattle Community College with expanded peak 15-minute service in both directions, more 30-minute service evenings and weekends, and later hours of operation. Trips on Route 125 also were through-routed with Route 11 to provide a no-transfer “college-to-college” connection between South Seattle Community College and Seattle Central Community College on Capitol Hill.
- Less productive midday express trips on SR-509 express services were reduced by 50%, and the three SR-509 routes were renumbered for better distinction between freeway and local arterial services.
- Local service between White Center, Highland Park, and downtown Seattle was consolidated into a single new route, Route 23, and 30-minute frequency was maintained.
- Local all-day transit service between Burien and Park Lake (adjacent to White Center) was consolidated from two routes to a single new route, Route 131.

Completed: 2004



Results: This restructure resulted in a 45% increase in ridership along the corridor compared to 22% system-wide during the same time period, shown in the chart below.



Summary of Ridership Results from Restructures

Metro has implemented similar restructures in other areas. Seven of the major consolidation initiatives since 2003 are listed in the chart below, along with the ridership changes.

Year	Area/Route	Annual Ridership		Net Change in Boardings	% Change in Boardings	Added Service Hours	Boardings per Added Service Hour
		Before	Spring 2008				
2003	North King County	2,912,160	4,064,950	1,152,790	40%	4,300	268.1
2003	Rt 358	2,292,340	3,203,730	911,390	40%	8,000	113.9
2004	Federal Way	2,311,640	3,598,320	1,286,680	56%	12,600	102.1
2005	Ambaum-Delridge	4,371,220	5,723,300	1,352,080	31%	12,800	105.6
2005	Rt 7/49 Split	5,829,710	6,092,086	262,376	5%	10,400	25.2
2006	Rt 150/180	2,328,900	3,618,140	1,289,240	55%	20,600	62.6
2008	Central Eastside	1,507,710	1,776,520	268,810	18%	16,600	16.2
		21,553,680	28,077,046	6,523,366	30%	85,300	76.5

A New Type of Network Improvement: RapidRide

Metro will be implementing further network improvements with the launch of its new RapidRide bus rapid transit service in 2010. RapidRide is streamlined bus service that will provide frequent, all-day service along key corridors. Everything about RapidRide—the buses, the stops, the way it operates—is being designed to keep people moving quickly throughout the day in these heavily used transit corridors. Buses will arrive frequently—at least every 10 minutes during the busiest travel hours. Stations will have distinctive shelters, seating areas, and customer information. Electronic signs at the stations will provide real-time information about when the next bus will arrive. In short, RapidRide will be a more convenient and comfortable way to travel.

The first phase of RapidRide implementation targets six corridors across King County. Four of the six RapidRide bus rapid transit lines will start service between 2010 and 2012, increasing the overall number of service hours operated by Metro. As the agency moves towards the future, Metro will continue to improve and change service to better meet the mobility and travel needs of King County residents.

Other Innovative Programs

Metro engages in an array of activities to improve people's access to public transportation and other alternative choices to the SOV. As of 2009, over 2,000 employers in King County chose to purchase transit passes and other products from Metro. The employees that receive these benefits from their employers are a significant share of Metro's customer base. Likewise, revenues from employers represent over half of Metro's fare revenue. Metro engages in other activities in partnership with local jurisdictions, the Washington State Department of Transportation, and private partners to accomplish mutual goals. These supplemental activities help create success for Metro in terms of ridership, revenue, and improved efficiency of the transportation system in King County. Metro's innovative programs include:

- Commute Trip Reduction Program
- Employer Pass Programs (FlexPass and ORCA Business Account Products)
- Metro's Bike Program
- Jobs Access / Reverse Commute Program
- Residential Programs (In Motion, Partners In Transit)

Partnerships

One source of Metro's success in gaining ridership over the years is its approach to partnerships. Metro simply would not be able to provide as much service, meet as many customer needs, or provide travel options to as many county residents and commuters without the help of partners. The partnerships include a broad array of activities and partners:

- Providing regular transit service (Transit Now Service Partnerships)
- Helping improve the efficiency of the state highway system (WSDOT Commute Trip Reduction and construction mitigation activities)

- Building transit and vanpool use in major employment centers with services provided by third parties and cities (Redmond's R-TRIP program, Commute Seattle, Bellevue's Choose Your Way)
- Helping social service agencies, workforce training groups, and low income / immigrant communities improve access to alternative transportation (Jobs Access / Reverse Commute, human services ticket program)
- Building third party capability to meet travel needs that Metro cannot but supplement people's ability to meet mobility needs without owning a car (Flexcar, now Zipcar).

Carsharing: A Success Story

Carsharing is a good example of why Metro engages in innovative activities. Carsharing is a service where members can reserve and use personal vehicles that are parked at key places within a community. Use of the vehicles is charged by the hour, as opposed to renting a vehicle for a day. Metro sought to bring carsharing to King County as a supplement to the transit system. The value proposition to the user was a way to meet mobility needs not served by the transit network that was less expensive and resource-heavy than car ownership. The value proposition to employer customers was a less expensive way to provide mobility for employees during the workday and not incur employee parking costs or maintenance of a fleet. The value proposition to Metro was an increase in ridership by customers who would rely on the transit system more if they gave up their personal vehicle.

After issuing an RFP for a carsharing service, Metro helped found Flexcar. Several federal grants and private investment funded the startup and early operation of Flexcar. Flexcar has since merged with Zipcar and is the largest provider of carsharing services in North America. Metro and Zipcar still coordinate regularly, still conduct joint promotions, and share access to customers. But Zipcar is on its own and receives no operating subsidies from Metro. And, Zipcar's operation in King County is even making a profit.

Transit System Coordination

Agencies in the Region

There are eight transit agencies in the Puget Sound Region – King County Metro Transit, Sound Transit (ST), Community Transit, Everett Transit, Pierce Transit, Seattle Center Monorail, Kitsap Transit, and the Washington State Ferries (WSF). In addition, Metro collaborates with the Washington State Department of Transportation (WSDOT), the Puget Sound Regional Council (PSRC), and various local and regional jurisdictions. Metro coordinates and forms partnerships with these different agencies and jurisdictions in the region to deliver service, construct capital projects and enhance system continuity. Of the seven other transit agencies in region, coordinate most closely with Sound Transit, Community Transit and Pierce Transit

Levels of Coordination

There are various levels of coordination that take place in the region when planning transportation. These levels include:

- **Governing boards**, such as the King County Council and Regional Transit Committee, and the Sound Transit Board.
- **Management coordination** such as the Transit Operators' Committee, and the Transit Integration Group.
- **Project Teams** such as the Alaskan Way Viaduct Replacement Project construction mitigation team, the SR 520 Replacement Project team, the Eastside Corridor Tolling Study team, and the Metro-Link Light Rail Integration team.
- **Staff Coordination**, ranging from formal to informal coordination.

Areas of Coordination

Agencies coordinate in the following areas:

- **Planning:** Agencies plan projects together, both short and longer range. They coordinate on day to day service, major service changes, and regional corridor projects and plans.
- **Service and Operations:** Agencies coordinate service and operations throughout their systems. Some examples include the Downtown Seattle Transit Tunnel, intermodal and interagency connections, regional ridematch and vanpools, facility use, and customer service.
- **Fare Integration:** In order for the fare system to work best, agencies need to coordinate on its implementation and use. Puget Sound regional agencies coordinate through a Regional Fare Agreement, the ORCA smart card, and Regional Employer Agreements.
- **Joint Facility Construction:** Where appropriate, agencies collaborate on construction of facilities including transit centers, park-and-rides, and transit priority facilities.
- **Major Projects:** Transit agencies collaborate on major projects that are needed to keep the region moving.

Sound Transit and Metro Transit Coordination

Sound Transit (ST) and King County Metro collaborate and coordinate their services that run in King County. Metro operates eight routes for Sound Transit, which account for 54 percent of ST express bus service in the region. Metro and Sound Transit also work together to integrate bus service, light rail and commuter rail service.

Regional Express Buses

The ST Express bus system operates fast, frequent, two-way service connecting the major urban centers of Pierce, Snohomish and King Counties. There are a total of 19 express bus routes, providing connections to local transit routes, and other ST express buses, commuter rail, light rail, Amtrak, ferries and the Sea-Tac International Airport¹. In 2008, Sound Transit Express bus service carried 12.5 million passengers in the three-county area.



ST Express routes that Metro operates include connections between communities such as Kirkland, Bellevue, Woodinville, Issaquah, and Redmond to the University District, downtown Seattle, and Sea-Tac Airport. Metro coordinates service investments with Sound Transit, including the most recent Transit Connections project, which restructured bus service in Southeast Seattle and Southwest King County to better serve Link Light rail stations when Central Link began service. Metro and Sound Transit have coordinated service investments for the State Route 520 Urban Partnership Agreement, where both agencies are contributing to improve services in this key corridor.

Commuter Rail

Sounder commuter rail provides two-way, peak-hour train service using existing railroad tracks between Everett, Seattle, and Tacoma. Sounder commuter rail offers a fast, dependable and easy-to-use commute option, linking major destinations in Snohomish, Pierce and King counties.



Two commuter rail lines are currently in operation, Everett to Seattle (North Line) and Tacoma to Seattle (South Line). There are currently nine daily trips including two reverse commute trips between Tacoma and Seattle and four trips between Everett and Seattle. The Sounder averages over 9,000 daily trips on the South Line and 1,200 daily boardings on the North Line.

Metro works with Sound Transit to provide bus service to and from several of the Sounder Stations to allow riders to connect to commuter rail service there. Routes that serve the Kent, Auburn, and Tukwila Stations are designed to meet morning and evening Sounder commuter trips and provide riders with a reliable transfer between these two modes. In the year 2013,

¹ Sound Transit 2009 Adopted Budget
Transit System Coordination

Metro will implement a sixth RapidRide line, Line F, which will connect Burien to Renton and will connect to Commuter Rail, Link Light Rail, and RapidRide Line A.

Link Light Rail

Light rail adds a new form of high-capacity transit to the region. Future light rail service is designed to connect Northgate, Roosevelt, the University District, Capitol Hill, First Hill, downtown Seattle, the Rainier Valley area and SeaTac. These are the state's highest employment areas with the highest transit ridership in the region.



In July 2009, Sound Transit opened the initial segment of Central Link between Tukwila and downtown Seattle with trains operating every seven minutes during the peak commute periods. The remaining segment between Tukwila and Sea-Tac International Airport opened in December 2009, providing a 35-minute ride between downtown Seattle and the airport. Link Light Rail operates in the Downtown Seattle Transit Tunnel along with several Metro bus routes. Operations and

maintenance of the Central Link system is performed by Metro.

During 2008-2009, Metro worked in coordination with Sound Transit to develop a link integration plan, which restructured Metro's bus system in Southeast Seattle and Southwest King County to better serve light rail stations, and allow customers to connect easily between bus and light rail. In January 2010, Link light rail averaged 15,985 weekday riders, an increase of 8.3% from December 2009.

Two additional Link light rail segments that will be built to make a total of three segments of what is currently planned and funded. The second segment, which will run between downtown Seattle and the University District via a tunnel under First Hill, Capitol Hill and the Ship Canal, is known as University Link and is anticipated to open in 2016. The third segment of the light-rail line, funded by the Sound Transit 2 plan, will operate between the University District and Northgate, with an anticipated completion date of 2020. Metro will continue to work with Sound Transit to integrate bus service and light rail as these additional segments are completed.

Service Planning: Principles of Route and Network Design

Planning a transit system is a difficult and complicated endeavor, as can be seen from the regional transit map on the right. There are many factors that influence effective route and network design, all of which involve trade-offs. Transit can be designed as a lifeline for people who need it, as insurance for people who might need it, and as a way to reduce the number of vehicles on the road for those who chose it over driving. Each of these purposes has an effect on the quality of life of a community, on air quality, and on congestion. Because resources are limited, designing a network to meet any one purpose, means that other transit needs could be negatively affected.

In short, transit cannot meet the mobility needs of all people in all situations. It also cannot achieve all the potential benefits that transit can potentially offer simultaneously, since some of these benefits are mutually exclusive. Therefore, transit planners and decision makers need to prioritize and decide what the purpose of transit will be for the area it serves. Metro planners consider a number of factors and adhere to several planning principles when designing the transit network that seek to balance the different purposes of the transit network, making it as efficient as possible for the most number of riders.



External Factors to Consider when Planning a Transit Network

External factors impact Metro Transit service and affect King County Metro's strategic planning process, including demographics, traffic, transit financing, and proposals and plans to change the region's transportation system. Some of these factors are described in more detail below.

- **Economics and Demographics:** These factors affect the transit network for many reasons. As a population grows, as the Puget Sound Region is projected to do, there are more residents who have various mobility needs, many of whom will use transit. In addition, employment can affect transit needs people adjust their travel patterns as the job

market expands and contracts. Other factors, such as changing demographics, can also impact an area's need for transit. For example, an aging population may rely more on transit for their travel needs than a younger population. In short, the number of people in an area and their unique characteristics impact how transit is designed and provided.

- **Federal Requirements:** King County Metro is required to comply with two federal requirements - Title VI of the Civil Rights Act and the Americans with Disabilities Act (ADA) - that are integrated in all service proposal assessments.

The objectives of Title VI are to ensure that the level, quality and distribution of transit services, as well as participation in transit planning, are provided to ensure equal access and mobility without regard to race, color or national origin. In anticipation of significant transit system modifications, King County Metro Transit will identify resulting service levels and quality of service for minority and non-minority communities, and make such information available to policy makers.

The Americans with Disability Act (ADA) requires that complementary paratransit service be comparable to non-commuter, fixed route service for the general public in several ways, including service area, days and hours, response time and fares. The minimum complementary paratransit service area, as defined by federal regulations, is based on Metro's non-commuter fixed route service. When non-commuter fixed route service changes occur, the paratransit service area is adjusted to reflect these changes as needed.

- **Congestion:** As population and employment grow, traffic congestion generally increases. As congestion grows in a region, as it has in the Puget Sound Region, operating conditions for transit deteriorate. The amount that people drive, measured as vehicle miles traveled (VMTs) has increased significantly in this area. The amount of congestion on the region's roadways has a direct impact on the effectiveness of transit.
- **Changes to the Region's Transportation System:** The Puget Sound Region's transportation is constantly changing and adapting to the mobility needs of its residents. There are many plans and proposals for improvements and expansions to the transportation system in this area. Regional transit agencies must coordinate amongst themselves, other transportation agencies and jurisdictions, and other interested parties. King County Metro actively participates in regional transportation planning and the development of transportation system changes to ensure coordinated efforts that include transit-supportive elements. King County Metro also participates in regional planning efforts to make certain that transit service implications of regional transportation projects are integrated into King County Metro's strategic plan.
- **Major Transportation Corridor Projects:** Several major construction projects are underway on multiple corridors concurrently in the Puget Sound Area. Maintaining mobility throughout the construction period may be one of the region's more significant transportation challenges. Implications of these construction projects for King County Metro are multi-layered. Foremost, Metro will be faced with the challenge of keeping buses moving through construction-related congestion that will affect the whole region. Secondly, King County Metro service could potentially be an important part of efforts to

mitigate construction-related congestion. Some of the major transportation projects and proposals that may affect mobility include:

- **Alaskan Way Viaduct (AWV) Replacement.** The Alaskan Way Viaduct Central Waterfront section will be replaced by a tunnel. Construction will impact roads and transit service through Downtown Seattle. This will influence overall accessibility into downtown Seattle, transit operating speed and costs into and through downtown, and the amount of transit service needed in the affected corridors during and after project construction. Since a majority of Metro Transit service passes through downtown Seattle, small increases in travel speed or reliability have a large impact on both ridership and the cost of operation.
- **SR-520 Bridge Replacement and HOV Project.** State and local governments continue to work with neighborhoods and local organizations to refine designs for a bridge replacement and decisions about freeway options through the Montlake area. Although construction is not scheduled to begin until 2013, King County Metro will work actively with local groups and the state to maintain transit-friendly features of the project and address potential impacts to transit.
- **Urban Partnership.** Related to the SR 520 project, and in partnership with the Puget Sound Regional Council and the Washington State Department of Transportation, King County is one of the metropolitan areas selected for federal funding and technical assistance for planning innovative approaches to congestion reduction. The proposal would implement tolls on SR-520 subject to legislative authorization, and fund transit improvements in the corridor. Experience gained from the urban partnership program could affect plans to implement tolls on other freeways, providing increases in ridership demand and, potentially, in revenues for transit.

Internal Factors to Consider when Planning a Transit Network

Planning a transit network requires a delicate balance between many things. In addition to the external challenges of planning and implementing a transit network, internal challenges also complicate transit planning. Once a decision has been made about how to best balance the many trade-offs and competing goals, normally an iterative process, plans are formulated for how to work towards system goals. Effective network design is an important factor in meeting varying trip needs and balancing some of these goals.

Each decision will affect transit riders and the transit agency in a different way. Often times, an improvement in one aspect of the network can negatively impact another. Therefore, route design is inherently a juggling act of trade-offs and choices. The factors that can be affected by network design are:

- **Travel Time:** Travel time for riders is the cumulative time needed to get from the origin to the destination. This time includes:
  - **Access Time:** The time it takes to access the bus from the origin point.
  - **Wait Time:** The time it takes for the bus to arrive at the bus stop.

- **Travel Time:** The time spent on the bus.
- **Ridership and Fare Revenue:** The more riders who are attracted to taking the bus, the greater the fare revenue will be. If routes are designed to be lifeline services for people, they are typically not going to generate a substantial amount of revenue.
- **Efficiency:** The number of rides per hour that a bus provides is an indicator of how efficient the service is.
- **Community Integration:** A goal in network design is to integrate a bus route into the community it serves. This could refer to how easy the route is to operate and how much bus service impacts pedestrians, residents, businesses and automobiles.

This document describes effective planning principals that are used by Metro planners to the extent possible to create an effective and efficient transit system. For each principle listed below, a diagram is included that indicates how each principle generally affects the four factors listed above. Travel time is broken into its three components. In each of these graphics, an arrow pointing up means that the factor increases and an arrow pointing downward means that the factor decreases. This could produce a negative or positive effect depending on the factor. These graphics show the general trend, yet there could be specific instances where the impact is different than what is shown in the graphic.

Planning Principles

Planning principles are generally focused on improving the customer experience and enhancing transit operations. 12 planning principles are described in more detail below:

- **Principle 1 – Routes should be direct**

The shortest distance between two points is a straight line. Routes that operate directly along a corridor without deviating off the corridor are faster and more attractive to customers once they are on the bus. The tradeoff of a direct route is that the route will serve a smaller geographic area, meaning some customers may have to walk further to get to access a bus stop.

Route should only deviate off of a direct pathway where the number of riders boarding/alighting on the deviation is significantly more than the time lost for through riders. In addition, it makes sense for a route to deviate off a direct pathway if it would be difficult or unsafe for customers to walk between the main pathway and the destination.

Small loops and Circulators are popular in theory because they can come closer to providing direct access for people. However, routes that travel in circles tend to attract low numbers of riders. Small loops at the end of routes are acceptable as a means to increase service coverage and turn the bus around.

The graphic below shows the typical impacts of making routes more direct. Access time to the route tends to increase, which is a negative impact. However, wait and travel times tend to decrease and ridership and efficiency tend to increase, all positive impacts.



- **Principle 2 – Generalized service is more desirable than specialized service**

Generalized service attempts to serve many customer groups. Through diversification of customer groups, generalized services can withstand major changes in travel patterns by a single group fairly easily. However, by serving several customer groups, generalized services tend to require more frequent service and longer service hours than do specialized services. The higher service level of generalized services can create a “virtuous cycle” of ridership gain followed by further service level improvements. The higher service levels are also more efficient as riders can use the bus to travel in both directions at all times of day. Additionally, buses on frequent service routes are often used more efficiently than those on infrequent service routes.

Differing from generalized service, specialized service that is designed for a specific group of customers provides a high level of service only to that group of customers. By doing this, specialized services tend to ignore all other groups of customers. The success of a specialized service is linked directly to the single customer group and is significantly impacted by any changes in group travel patterns. Specialized service often heavily favors travel in a single direction with buses travelling empty or nearly empty in the other direction.

Despite these negative characteristics, specialized services can be used effectively. Good examples of specialized services operated by King County Metro are the routes designed to carry customers to the University of Washington. Trips are scheduled specifically to serve major class start/end times and major shift times for workers. In addition, ridership varies significantly over the course of the year which allows Metro to reduce service on many of the routes during the summer and term breaks.

The graphic below illustrates the impacts of generalized services. Access time and travel time on the route tend to increase, which is a negative impact. However, wait times tend to decrease and ridership and efficiency tend to increase, all positive impacts.



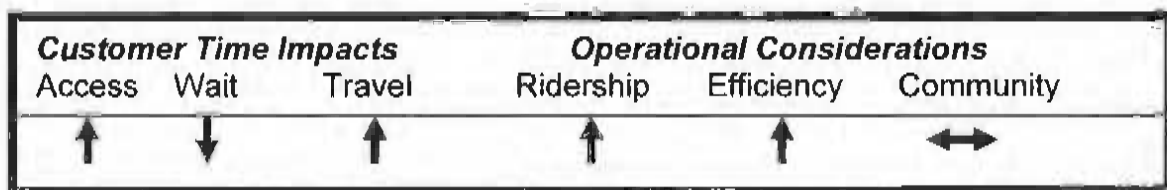
- **Principle 3 – Routes should serve multiple destinations**

Routes designed to serve multiple destinations tend to have higher ridership and more seat turnover than routes that only serve a single destination. In order for a route to have a single destination, the market for that destination must be sizeable, exceeding the sum of the markets of multiple destinations.

Serving multiple markets with a single route can be tricky as the markets served should be chosen in a way that complement one another and provide insurance for one another if either market is failing. Choosing markets that are too closely related can result in a “perfect storm” of either severe overcrowding or under utilization.

Examples of multi-destination, complementary market King County Metro routes are Routes 64 and 303 which serve both Downtown Seattle and First Hill. Customers on First Hill tend to arrive and leave work earlier than those in Downtown Seattle. Therefore early trips on these routes have a higher percentage of First Hill riders while later trips have more Downtown Seattle riders. By combining these markets, Metro is able to offer a wider diversity of trip times to both markets than could be afforded by a single-destination route.

The graphic below illustrates the impacts of routes that serve multiple destinations. Access time and travel time on the route tend to increase, which is a negative impact. However, wait times tend to decrease and ridership and efficiency tend to increase, all positive impacts.



▼ Principle 4 – Bus stops should be spaced as far apart as possible without compromising ridership

Customers access bus service by waiting at a bus stop. Closely spaced bus stops along a route mean that customers have a short walk time to the stop but it comes at the expense of slowing the buses down as they need to stop more frequently. In addition to the actual time it takes to serve a stop, service speed can be further slowed as buses are stopped at traffic signals which are timed to optimize general traffic progression. There is a tipping point for how effective the service is. This point is the place where the increased ridership attracted by an additional stop is outweighed by a loss of riders due to slower trips. Finding the right balance between good access and good service speed is tricky and must be evaluated on a route-by-route basis.

The graphic below illustrates the impacts of increased stop spacing. Wait time and travel time on the route tend to increase and efficiency tends to decrease, which are negative impacts. However, access times tend to decrease, a positive impact.



• **Principle 5 – Bus routes should be the appropriate length to minimize operational issues**

In general, the longer a route is the more likely it is to encounter delay along the course of the journey. The increased likelihood of delay of longer routes means that additional time must be scheduled at a terminal in order to ensure the on-time departure of the following trip. On the other hand, longer routes also provide the opportunity for more trips to be made without a transfer, thereby increasing ridership and efficiency of the service.

However a route that is too short is not going to attract many riders as the waiting plus travel time is not competitive when compared to the time it would take to walk. Bus routes should, therefore, be no shorter than a couple miles.

Two different routes are sometimes “through-routed” and these buses will continue from one route to another route seamlessly. Through-routing two previously independent routes can be beneficial to both customers and operations. The customers who previously transferred between routes may no longer need to, saving time. Operators can also benefit as it may be possible to reduce the overall amount of unproductive “recovery” time between routes.

The graphic below illustrates the impacts of designing shorter routes. Wait times tend to decrease and ridership and efficiency tend to increase, which are positive impacts.



• **Principle 6 – Avoid heavy traffic congestion to the extent feasible**

Wherever possible, routes should be designed to avoid known locations of traffic congestion while continuing to meet the needs of the customers. Freeway interchanges and roads leading to them can be severely congested with automobile traffic. In addition, there is rarely a reason for bus riders to get on or off at freeway interchanges. Therefore, bus routes should be routed to cross freeways at locations where interchanges do not exist.

A good example of avoiding traffic congestion is the diversion of Metro Routes 5, 75, 345 and 346 to avoid crossing I-5 on North Northgate Way. There is a major traffic interchange at this intersection. Therefore, these routes cross I-5 on North 92nd Street. In addition to avoiding the traffic congestion, the routes are able to directly serve North Seattle Community College, providing another customer group access to these routes.

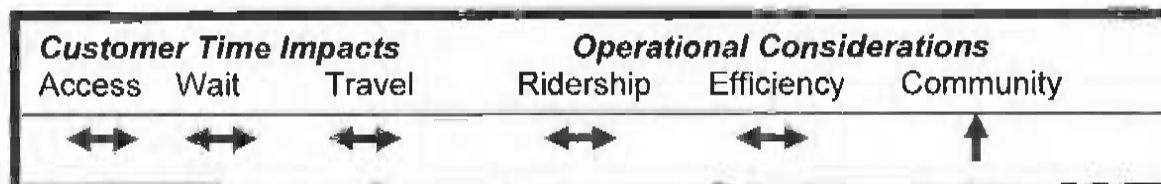
The graphic below illustrates the impacts of avoiding heavy traffic congestion. Travel times tend to decrease and ridership and efficiency tend to increase, positive impacts.



• Principle 7 – Operate on appropriate streets

Buses are large and heavy vehicles and are unable to safely operate on all streets. For the most part, buses should **only** be routed on arterial streets as they are designed to handle bigger vehicles. In addition, they are also more likely to have **sidewalks** for customers to access bus stops. Operating buses on minor streets is more likely to generate negative feedback from residents who may perceive buses to be a nuisance because of increased noise.

The graphic below illustrates the impacts of operating on arterial streets. Community integration increases, a positive impact.



• Principle 8 – Choose appropriate locations for route terminals

The location where a bus route ends and the buses wait before starting the next trip must be considered carefully. From a **ridership** perspective, route terminals that are also a **destination** help to ensure that there is demand for travel in two directions, thereby improving ridership and **efficiency**. The physical location of a route terminal can be perceived negatively by adjacent residences and businesses so route terminals should be placed where impacts are minimized. Off-street Transit Centers are ideal locations for terminals.

The graphic below illustrates the impacts of having appropriate locations for terminals. Ridership, efficiency, and community integration tend to increase, all positive impacts.

<i>Customer Time Impacts</i>			<i>Operational Considerations</i>		
Access	Wait	Travel	Ridership	Efficiency	Community
↔	↔	↔	↑	↑	↑

• **Principle 9 – When appropriate, give routes more than one function**

Routes that are designed to serve a single function, such as feeding commuters into a rail station, can be tailored specifically to meet the needs of that function. However, due to the lack of variety of a single-function route, ridership and productivity will be lower than a route that has multiple functions. A route that serves multiple purposes will attract more riders than one that serves a single function. Routes that attract more riders will also justify higher service levels, again increasing the attractiveness for riders.

The graphic below illustrates the impacts of giving routes multiple functions. Ridership and efficiency tend to increase, positive impacts.

<i>Customer Time Impacts</i>			<i>Operational Considerations</i>		
Access	Wait	Travel	Ridership	Efficiency	Community
↔	↔	↔	↑	↑	↔

• **Principle 10 – Plan for multiple routes to serve the same corridor, increasing the relative frequency**

Different portions of routes can have significantly different demand levels. If a portion of a route has sufficiently more demand than other portions, other routes can converge on the corridor with complementary schedules to provide a higher frequency. This situation is most often observed when routes are approaching high density centers or connecting two urban centers.

The graphic below illustrates the impacts of having multiple routes serve the same corridor. Access time tends to increase, which is a negative impact. However, wait times tend to decrease and ridership and efficiency tend to increase, all positive impacts.

<i>Customer Time Impacts</i>			<i>Operational Considerations</i>		
Access	Wait	Travel	Ridership	Efficiency	Community
↑	↓	↔	↑	↑	↔

• Principle 11 – Space routes appropriately

Studies indicate that riders are willing to walk $\frac{1}{4}$ to $\frac{1}{2}$ mile to access a transit route. This suggests that routes should be no closer than $\frac{1}{2}$ mile apart otherwise routes will be **duplicative** and compete for the same pool of riders. A network of routes that is spaced every $\frac{1}{2}$ mile can provide a higher frequency than could be afforded by a network of routes that are spaced every $\frac{1}{4}$ mile. However, urban and physical geography and the customers' ability to access service will all also impact the spacing of routes.

The graphic below illustrates the impacts of spacing routes $\frac{1}{2}$ mile apart. Access time tends to increase, which is a negative impact. However, wait times tend to decrease and ridership and efficiency tend to increase, all positive impacts.



• Principle 12 – Work in conjunction with other services and providers

Bus routes should provide connections to the regional network of transit services in order to expand the travel range and possibilities of customers, as their functions are **complementary**. Regional rail and express buses provide a much higher service speed than local service. At the same time, local service provides distribution and collection of passengers within the communities. Good integration of these services will improve the ridership and efficiency of both regional and local transit services.

The graphic below illustrates the impacts of integration with regional transit routes. Travel times tend to decrease and ridership and efficiency tend to increase, all positive impacts.



Service Change Process

(Adapted from the 2007-2016 Strategic Plan)

King County Metro is committed through policy and King County code to conduct a community planning process as part of the design and implementation of significant changes to existing service or development of new service. Subarea and community-based planning plays an important role in identifying new service initiatives, updating transit plans and modifying service. Subarea and community based planning processes involve the following steps:

- Define subarea and community priorities within the parameters of the policy framework
- Work with individual communities to define specific improvements to be implemented consistent with strategies in the Strategic Plan

To do this, Metro works with the subarea transportation boards, including the Eastside Transportation Partnership (ETP), South County Area Transportation Board (SCATbd), and Seattle/Shoreline (Seashore) and other stakeholders to identify service priorities not specifically identified in existing plans. Where appropriate, Metro develops community sounding boards to identify specific improvements and modifications to be implemented.

Service Changes

Formal King County Council approval of detailed service proposals finalizes the service change process, which takes place three times a year. This formal approval provides opportunities for the public to help design and implement changes. Current service is changed and new services developed through this process. Although the exact schedule of events may vary during each service change process, depending on the complexity of the changes being discussed and the decision timeline associated with them, processes should be designed to:

- Include input from riders, nonriders, citizen advisory committees, elected officials, community leaders, city and county staff, school districts, social service agencies, and Metro staff and operators.
- Make use of information on public and community needs and preferences, research on other transit systems, and data on the performance of the current system.

Working partnerships are created between King County Metro and communities affected by service changes. This approach assumes the following:

- Public involvement occurs early in the planning process
- The public is advised about opportunities for involvement throughout the planning process

- An extensive public information effort uses a variety of media and communication media to keep discussion open
- Clarity is needed as to who contributes to decisions and who is responsible for the final decision
- Flexibility is necessary

The goal of this approach to community involvement is to ensure that Metro Transit is responsive and accountable to the community during implementation of the Six-Year Plan. Depending on the complexity of a given service change proposal, the community involvement process may take up to eighteen months, including Council adoption of the final service recommendations.

Additional Factors. Beyond consistency with plan objectives and strategies, during any given service change process a number of factors will influence the selection of a specific set of service changes. These considerations include federal requirements, cost, capital requirements, relationship to other proposals, and subarea priorities.

Federal Requirements. King County Metro is required to comply with two federal requirements - Title VI of the Civil Rights Act and the Americans with Disabilities Act (ADA) - that are integrated in all service proposal assessments.

The objectives of Title VI are to ensure that 1) the level, quality and distribution of transit service provides equal access and mobility without regard to race, color or national origin, and 2) opportunities to participate in transit planning are provided. In anticipation of significant transit system modifications, King County Metro Transit identifies resulting service levels and quality of service for minority and non-minority communities and makes such information available to policy makers.

The Americans with Disability Act (ADA) requires that complementary paratransit service be comparable to non-commuter, fixed route service for the general public in several ways, including service area, days and hours, response time and fares. The minimum complementary paratransit service area, as defined by federal regulations, is based on Metro's non-commuter fixed route service. When non-commuter fixed route service changes occur, the paratransit service area is adjusted to reflect these changes, as needed.

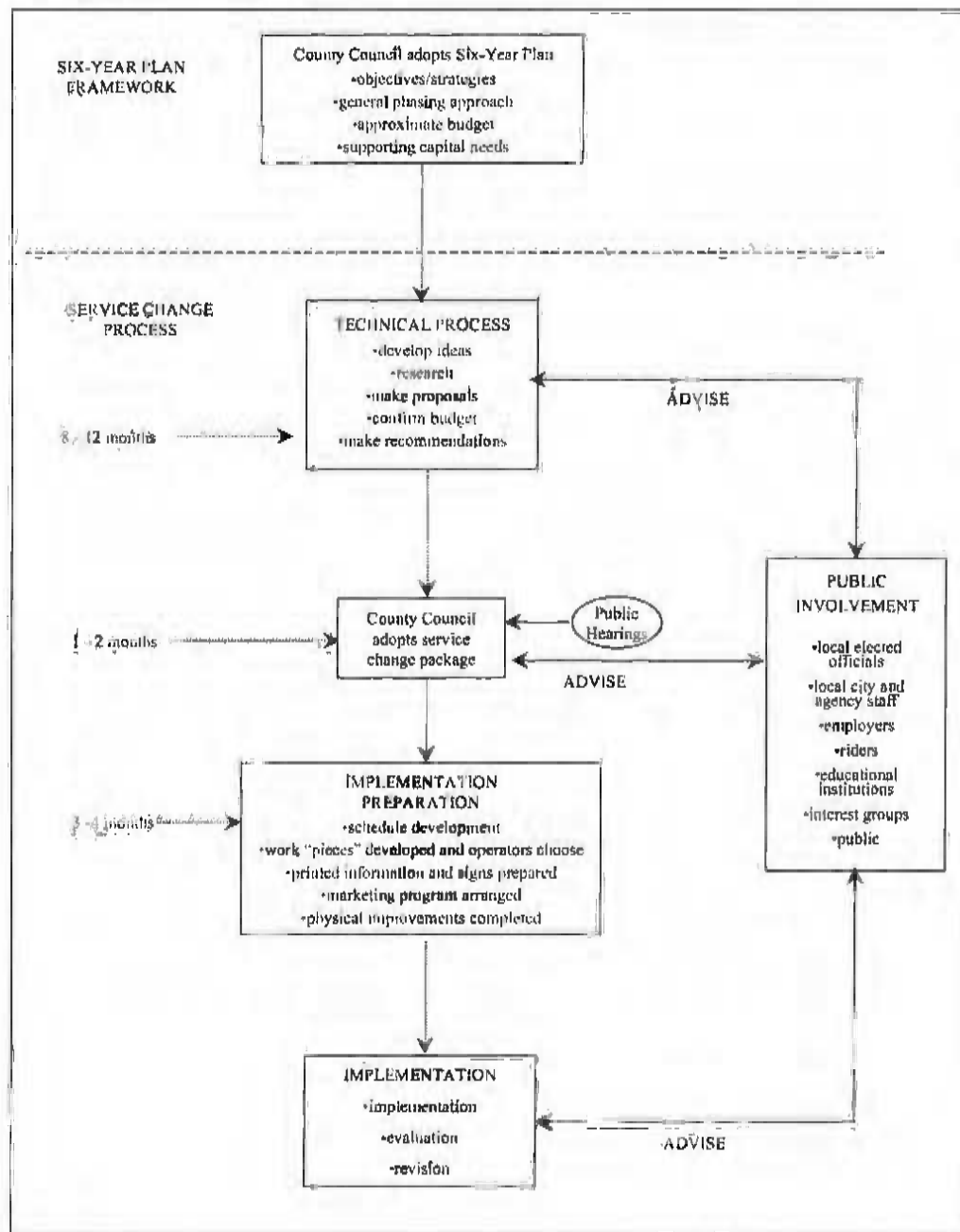
Cost. Some service changes may be delayed because of funding constraints. The magnitude and timing of service implementation may vary depending on the availability of additional revenue.

Capital Requirements—Integrating Service with Capital. The establishment of service priorities influences the timing for implementation of critical supporting capital program elements (fleet procurement, transit hubs, speed and reliability improvements, and other related improvements).

Relationship to Other Proposals. Different service proposals may complement each other by mutually enhancing their effect on overall mobility or system efficiency. Circumstances such as these could require that certain changes occur simultaneously.

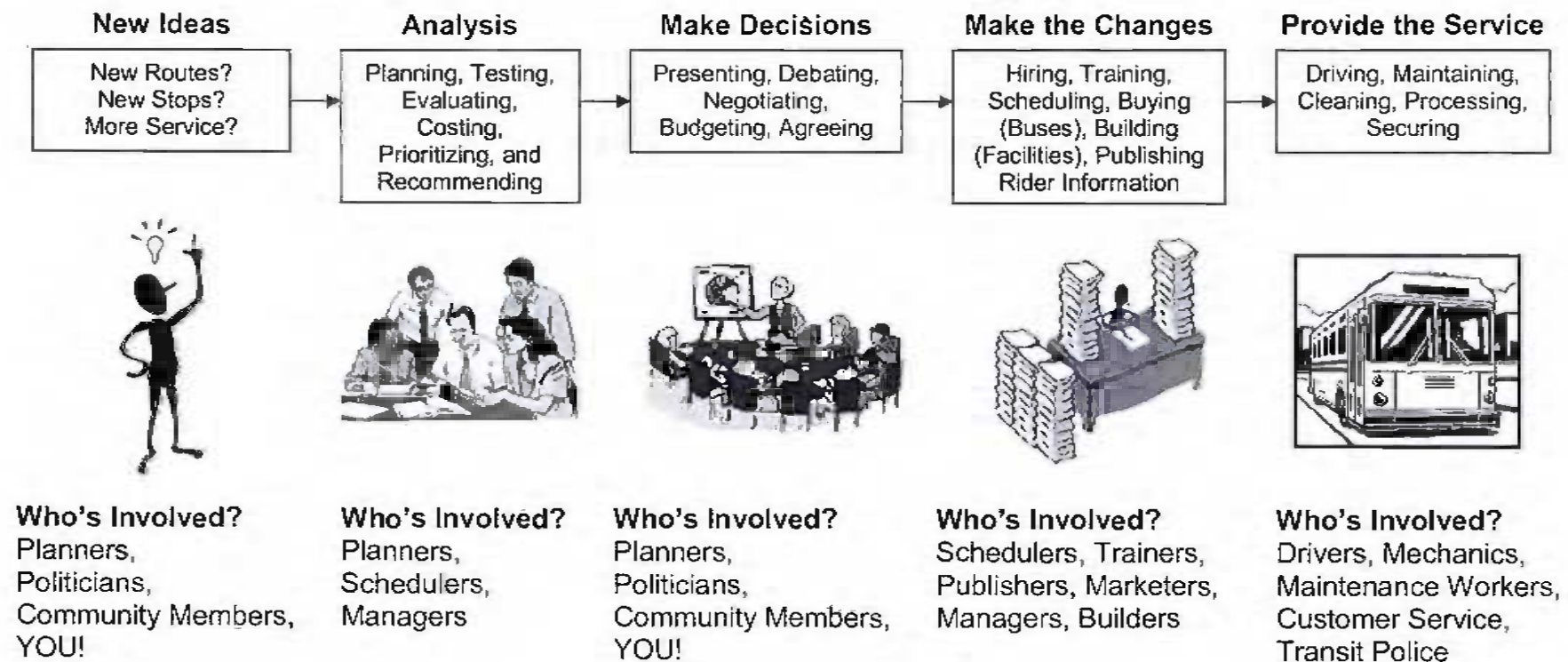
As individual services are agreed upon, Metro periodically updates subarea groups on progress towards implementation. In addition, the groups are used as a “clearinghouse” to address issues regarding the direction of service changes, any issues resulting from the community work and effects on the overall network for the subarea in question.

Figure 6-1 illustrates the service change process.



Service Change Process

Metro Transit Route and Schedule Change Process



Monitoring Performance and Defining Success

Why Measure Performance?

Monitoring transit performance helps assess current circumstances, past trends, existing concerns and **unmet needs**¹. It provides an assessment of progress towards goals and objectives, trends, achievements, short-comings or challenges and establishes a method to communicate results to stakeholders.

Results from performance measurement inform internal and external stakeholders including the public, elected officials, funding and regulatory agencies and division, department and executive management. They provide information to inform budget and operational decisions, and keep Metro accountable to stakeholders and citizens of King County for transit funding that is collected through taxes.

Common Measures

There are a variety of different measures used by transit agencies nationally and internationally. The most commonly measured attributes include service performance and productivity and reliability. These measures can be grouped into broader categories, although some measures fit into more than one category. The Transit Cooperative Research Program *Guidebook for Developing a Transit-Performance Monitoring System* identified primary categories of measures:

- **Performance:** Transit performance from a business perspective, including utilization, efficiency and effectiveness. These measures can help identify how well resources are used and the ability to meet demand with given resources. Common measures include ridership, productivity, cost per passenger, fare box recovery ratio and cost per revenue hour.
- **Service delivery:** Passengers' day-to-day experiences using transit, including factors such as reliability, customer service and passenger loading. Specific indicators include on-time performance, rider satisfaction, overloads, missed trips and complaint rates.
- **Availability/Access:** The ease with which potential passengers can use transit services for various kinds of trips, from a geographic and temporal perspective. Specific measures include span of service and access to transit.
- **Community measures:** Transit's role in meeting broad community objectives, such as mobility, community enhancements and environmental benefits. Examples include the reduction in vehicle miles traveled or reduction in greenhouse gases.
- **Safety and security:** The likelihood of being involved in an accident (safety), or becoming a victim of a crime (security) while using transit. Measures include passenger and operator assaults, accident rates and perception of safety while riding or waiting for a bus.

¹ Transit Cooperative Research Program, Research Results Digest. Summary of TCRP Report 88: A Guidebook for Developing a Transit-Performance Measurement System. January 2003.

- **Maintenance:** The effectiveness of the agency's maintenance program, in terms of vehicle reliability. An example measure is miles between trouble calls.

Performance Monitoring at Metro

Reporting

Various groups receive reports on Metro's performance including Metro operating divisions, Metro management, the King County Council, the Regional Transit Committee, the Washington State Department of Transportation (WSDOT) and the Federal Transit Administration (FTA), as well as the public and other interested parties. An outline of Metro Performance Reports and reports to external agencies can be found below.

Metro Performance and Customer Research Reports:

- **General Manager's Report:** reports annual operating and financial statistics for the year including ridership, on-time performance, safety and security measures, and operating expenses. Also includes information on the Transit Capital Program.
- **Route Performance Report:** reports annual performance of Metro's fixed-route bus services including riders per revenue hour, fare recovery ratio and passengers per revenue for each of the routes Metro's system. This report is designed to help inform Metro planners on possible modifications to existing routes in the system.
- **Rider Surveys:** Metro conducts both rider/non-rider surveys as well as surveys focused on regular and infrequent riders. These reports are designed to track customer awareness, transit use, and commuting and customer satisfaction. Surveys are typically done on an annual basis.

All reports can be accessed online; <http://metro.kingcounty.gov/am/reports/reports.html>

Reports to External Agencies

- **Summary of Public Transportation:** Metro submits operating information, objectives and achievements each year to WSDOT. This report provides data to legislative transportation committees and local and regional government as well as other transit agencies throughout the state.
Online at: <http://www.wsdot.wa.gov/Publications/Manuals/PTSummary.htm>
- **Equity in Transit Report:** report for the Federal Transit Administration, examining Metro's compliance with the Civil Rights Act.
The Equity in Transit Report is available by request from Metro Staff.
- **National Transit Data (NTD) Report:** requirement of the Federal Transit Administration that agency report certain statistical information each year. This includes service area characteristics, fleet information, operating income and expenses, and measures of service efficiency and effectiveness as well as cost effectiveness such as operating expense per revenue mile and passenger trips per revenue hour.
A summary of 2007 agency data can be found at: http://www.ntdprogram.gov/ntdprogram/pubs/profiles/2008/agency_profiles/0001.pdf

Measures

Metro regularly reports on more than 30 measures assessing agency performance including utilization, cost efficiency, service effectiveness and reliability. A list of regularly-monitored measures is identified in Table 1. These measures focus on three key areas: financial performance, service availability and service delivery.

Table 1: Regularly Monitored Performance Measures and Associated Reports					
Measures	Measure Category	General Managers Annual Report	Route Performance Report	Rider/Non-Rider Survey	NTD Report
Financial					
Ridership (fixed-route, vanpools, Access)	Utilization Outcome	X			X
% of households that have rider	Utilization Outcome			X	
Boardings per capita	Utilization Outcome			X	X
Average daily unlinked trips (weekday, sat, sun)	Utilization Outcome				X
Fare Revenue/Operating Expense Ratio	Cost effectiveness	X	X		
Operating expense per passenger mile	Cost effectiveness				X
Operating expense per boarding	Cost effectiveness				X
Boardings per revenue hour	Effectiveness		X		X
Passenger miles per revenue hour	Effectiveness		X		
Boardings (unlinked passenger trips) per revenue mile	Effectiveness				X
Bus operating cost per service hour	Cost efficiency	X			
Cost per platform hour	Cost efficiency				
Operating expense per revenue mile	Cost efficiency				X
Operating expense per revenue hour	Cost efficiency				X
Total passenger miles	Utilization Outcome				X
Passenger miles per platform hour	Service effectiveness		X		
Boardings per platform hour	Service effectiveness	X			
Availability					
Total annual platform hours	Availability	X			X
Total annual revenue hours	Availability				X
Total annual revenue miles	Availability				X
Percent of King County/households within ¼ of transit or ½ mi of park-and-ride	Availability				
Service Delivery					
On-Time performance	Reliability	X			
Complaints per million boardings	Customer service	X			
Customer assistance office	Customer service	X			
Response to customer contacts	Customer service	X			
Miles between Trouble calls	Maintenance	X			
Accidents per million miles	Safety	X			
Assaults on operators	Security	X			
% of riders satisfied with on-time performance	Customer service			X	
Customer satisfaction overall	Customer service			X	

Monitoring Performance and Defining Success

Relationship to Service Guidelines and Service Evaluation

Performance measures are one element of effective service planning. Two other important elements that work in conjunction with performance measurement is service guidelines and service evaluations, which are described below.

- ◆ **Service Guidelines** outline criteria for evaluating and adjusting performance of transit service as well as identify methods and procedures for the design of transit service.
- ◆ **Service Evaluation** allows a transit agency to objectively assess how well the mix of transit services provided is meeting the mobility needs within a transit agency's service area.

When fully integrated, service design guidelines, performance measurement, and service evaluation, build upon one another and essentially form the foundation for which a transit network can be created and maintained. The diagram below illustrates that service design guidelines, performance measurement and service evaluation must be an integrated approach.²



Purpose of Guidelines and Standards

Many public transit agencies implement guidelines and standards to guide transit service development, design and provision. Service design guidelines identify methods, procedures, and criteria for designing, evaluating, and adjusting the performance of fixed-route and demand-responsive public transit services. They act as tools for maximizing the overall usefulness of the public transportation system for customers, ensuring the consistency of the route structure, and providing consistent criteria for establishment of service levels.

² Florida Department of Transportation Research Center, *Best Practices in Transit Service Planning*, 4. *Monitoring Performance and Defining Success*

Guidelines differ from standards in that guidelines tend to be more flexible in nature. A standard on the other hand is a more firm measure used as a basis for judgment or comparison³.

Guiding Factors for Metro Service and Facility Development

King County Metro guidance for service and facility development comes from many sources including Metro's Ten Year- Strategic Plan and Comprehensive Plan for Public Transportation, historical agency guidelines, published industry best practices and application of professional knowledge and judgment. For the purposes of this discussion, service and facility guidelines and standards are considered for those elements of Metro's system which are not already specifically guided by federal, state or local laws or regulations, which themselves may direct or define Metro services.

Metro has at different points in time identified service guidelines to provide direction for tracking performance, evaluating service changes and identifying services not meeting the desired levels of performance as well as identifying design guidelines for facility development. Given the evolution of Metro's transit system and the ongoing evolution of best practices across the transit industry, some previously-identified guidelines are no longer relevant. Consequently, there is no one document that Metro points to as the basis for service and facility development decisions but rather decision-making rests upon a variety of sources. These sources include planner knowledge and experience, adaptations of previously identified guidelines, national research by industry experts such as the Transportation Research Board, and review of service and facility guidelines used by other agencies. The Ten-Year Strategic Plan and the Comprehensive Plan for Public Transportation include policies and strategies that guide service and facility development in both specific and general ways.

Examples of Service and Facility Guidelines

There are certain guidelines that Metro uses regularly and which affect various aspects of Metro's service design, delivery and system management investments. Some guidelines suggest best practices for service design, methods of evaluating service quality or to identify thresholds at which service or facility investments should be made. For example:

- *Service Quality – Overloads:* A route is defined as overloaded when it is at or above 1.2 capacity or where passengers are standing 20 minutes or longer
- *Service Quality – Schedule adherence:* A route is defined as on-time if it is up to 5 minutes late or 1 minute early.
- *Service Design – Deviation:* Routings should only deviate from a more direct pathway than where the number of riders boarding/alighting on deviation is offsets the number of minutes lost for through riders.
- *Facility Investment – Threshold for installation of a shelter:* 50 or more riders per day in Seattle, 25 or more outside of Seattle.

³ National Committee on Urban Transportation. Recommended Standards, Warrants, and Objective for Transit Service and Facilities: A Procedural Manual. 1958.

Monitoring Performance and Defining Success



Purpose-driven public transport: creating a clear conversation about public transport goals

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ABSTRACT

Public transport faces an increasingly intense conflict between patronage goals and coverage goals. Broadly speaking, patronage goals seek to maximize patronage of all types, while coverage goals lead to the provision of service despite low patronage – to achieve social inclusion objectives for example. The conflict between these goals follows inevitably from the underlying structure of the public transport product, including both its costs and geometry.

The tradeoff between patronage and coverage is the type of value-judgment that elected officials are paid to make. The paper presents a means of quantifying the tradeoff, to facilitate public discussion and decisions on how to balance these priorities. These strategies are designed to ensure that the decision about how to balance social versus patronage goals is made consciously rather than inadvertently, with a clear understanding of the consequences of the choice.

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0. Introduction

Public transport exists for a range of purposes, including environmental, economic, and social ones (Veeneman, 2002). However, different purposes may imply quite different kinds of service. Public transport providers and funding agencies may try to present themselves as serving all the diverse purposes of public transport, but in fact they must make hard choices between competing goals. This paper presents a language for discussing these hard choices with constituents and elected officials, one that has proven valuable in consultation and decision making.

Most of the purposes of public transport cluster around two opposing poles:

- **Purposes served by patronage.** Most environmental benefits of public transport are related to how many people use the service. Fiscally conservative goals, such as minimizing subsidy, are affected by fare revenue, which also varies with patronage.
- **Purposes served by coverage.** Social benefits of public transport, such as accessibility for persons who cannot drive, tend to be based on the severity of need among certain population groups, rather than the level of patronage to be gained by meeting this need. Demands for “equity” of public transport service among areas with different patronage potential also can yield low-patronage services that are retained for these non-patronage reasons (Hay, 1993, 1995).

This paper contends that it is possible to create a language in which to discuss those hard choices with the public, so that elected leaders can make informed and quantified decisions about those choices that reflect their constituents’ values. The key idea is to use the consultation process to educate constituents and decision-makers about the patronage-coverage tradeoff, and then elicit a direction in the form of a percentage of service resources to be devoted to each of these purposes. The role of the public transport funding agency and operator, in this scheme, is to document that the service they are providing reflects the balance of values chosen by the public through their elected leaders.

A scheme of this kind was developed by the author in the course of consulting projects for several public transport agencies in North America.¹ The agencies in question ranged from larger urban operators (population over 2 million) to agencies covering free-standing small cities (population 50,000–100,000). The Regional Transportation Plan for the urban area of Reno, Nevada (Regional Transportation Authority of Washoe County Nevada, 2005), based on work for them by the author, uses the scheme most ambitiously, establishing and monitoring long-term goals for each category.²

¹ The author acknowledges the contributions of these US clients to this line of thinking, notably Salem Keizer Transit, Salem, Oregon; Whatcom Transportation Authority, Bellingham, Washington (2004); Regional Transportation Commission of Washoe County Nevada, Reno, Nevada (2005); the City of Fort Collins, Colorado (2002); Valley Regional Transit, Boise, Idaho; and VIA Metropolitan Transit, San Antonio, Texas.

² The Reno policy states: “Approximately 80% of CitiFare service will be allocated to maximize productivity and 20% for coverage to provide service in less dense areas.” (2005, pp. 2–7) “Productivity” in this statement corresponds to “Patronage” in this paper.

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The distinction between patronage-oriented and coverage-oriented services echoes distinctions made by Litman (2006, p. 58) and Nielsen et al. (2005), among others. The State Government of Victoria in Australia (Betts, 2007) makes a policy distinction between “mass transit” and “social transit” that roughly parallels the distinction between patronage and coverage. This paper attempts to quantify the tradeoff as precisely as possible, as a tool for public discussion and consensus-building.

The structure of this paper is as follows:

- The first two sections discuss the two categories of goals proposed – patronage goals versus coverage goals – and explain the different kinds of service design that tend to follow from each.
- Section 3 describes the range of situations in which this distinction is useful.
- Section 4, “Service Design Policies and “Equity”” shows how the language of the productivity/coverage distinction leads to policies that elected officials can understand as reflecting their values, and that public transport managers and planners can implement and measure.
- Section 5, “Consultation Process”, presents an approach to consultation using the proposed tools.
- Finally, one key technical challenge in such policymaking is to define the starting point – i.e. what is the split between patronage and coverage goals in the existing service pattern. Section 6 “Analysing Existing Services by Purpose”, discusses techniques developed to this end. The section is aimed at planners and managers seeking to use this tool, but a reader interested in larger questions of policy may skip this section without missing important material.

1. Patronage goals

A patronage goal is one that is achieved to the extent that people use public transport. These goals include:

- *Goals related to financial return or efficiency.* The agency or operator that receives the fare revenue are motivated to maximize patronage.
- *Goals related to vehicle trip reduction.* Most environmental purposes of public transport – including emissions reductions – are met by full public transport vehicles and not by empty ones.

The typical measure of a patronage goal is patronage per unit of cost, e.g. passengers/km or passengers/h. Where fare revenue is relatively constant per passenger, fare revenue per passenger (high) or subsidy per passenger (low) can also express achievements toward a patronage goal.

Patronage goals are not all exactly aligned with one another. For example, some emissions-related goals are related to vehicle km travelled, and are therefore met mostly in relation to passenger-kilometres. Others, especially those relating to “cold start” emissions, tend to vary with passengers more than passenger-distance, at least over the typical distance range of urban public transport operations. Meeting environmental goals may also require that public transport patronage consist of people who would otherwise have generated car trips, rather than those who otherwise would have walked, cycled, or not made the trip.

In the urban public transport context, however, these variations are small in comparison to the difference between patronage goals and their opposite, the coverage goals. The key point of patronage goals is that they all tend to lead to similar kinds of service, namely:

- *Frequent all-day service in dense and walkable areas.* For example, in a large urban area based on a core city that is at least a century old, the portion of the city built before World War II typically has higher overall densities and also a more well-connected street grid that is friendly to pedestrians, while being less friendly to the private car. Some newer centres and communities may also have these features. These areas tend to support voluntary public transport dependence, which in turn leads to high all-day patronage.
- *Frequent all-day connections between major activity centres,* where the intense activity at these centres produces high demand even though the demand at points in between may be relatively light.
- *Frequent peak-period service in commute markets,* where a high level of demand can be served over a short period. This tends to be a dominant mode of service in lower density areas.

In most urban public transport operations, the most productive services, in terms of patronage per unit of cost, are generally of these types.

It should be noted, however, that the patronage/coverage distinction is used to categorize services by the standards of a particular study area. Thus the distinction can be used by outer-suburban and rural operations where there is no dense inner city fabric, because these areas still have services that reflect a patronage goal as applied to that service area. The key to identifying patronage-oriented services is to ask: “Would this service still run when and where it does if patronage were our only purpose?” In low-density areas some markets will be relatively high-patronage by the standards of that study area, and would therefore pass this test.

2. Coverage goals

Coverage goals are met by the availability of service, regardless of its patronage. These values tend to include:

- *Social needs of disadvantaged populations.* When a public transport operator proposes to cut a service due to low patronage, the response is often an intense objection from small numbers of people who depend heavily on the service. A facility serving senior citizens or disabled persons, for example, will advocate for their service not based on how many people use it, but rather on the severity of the problems these people would face if the service were taken away. Whenever service is provided or retained due to such appeals, we are in the presence of a coverage goal.
- *Concepts of geographic equity.* The perception that service should be “equitable” leads to a dispersion of service to include areas with low patronage potential. In outer-suburban Sydney, for example, typical “good” performance for a bus route can be as little as 0.5 passengers/km, while in the inner city a “good” performance is 2.0 passengers/km or more. A purely patronage-based approach would focus service on the best markets and abandon unproductive markets. Services retained despite this consideration reflect the impact of the coverage goal.⁵

The typical measure of a coverage goal takes the form “___% of residents and jobs must be within ___ metres of service”.

Again, there are some subtleties among coverage goals, but they are exceptions that prove the rule, showing that all coverage goals are broadly more similar than different:

⁵ Alternatively, equity can be as a possible position midway between patronage and coverage goals, as discussed later in the paper.

- Severity of need and geographic equity sometimes diverge in the case of very small numbers of people with severe needs in an otherwise rural setting, but the vagueness of the concept of equity is often extended to embrace these cases.
- Low-patronage service may be provided with the intent of "leading development", where there is credible reason to believe that high patronage will be achieved at development build-out. These cases are easily dealt with by identifying the service as patronage-based but defining the patronage target in relation to development completion.

Service designed for a coverage goal is by definition low-patronage service, by the standards of a given agency or service area. As a result, these services tend to be:

- Devoted to low-density and rural areas where patronage potential is always relatively low.
- Infrequent, because services are spread over the largest possible area.
- Circuitous, often including one-way loops, because covering an area is more important than speed or directness of operations.

Demand-responsive services are usually coverage services, because compared to successful fixed route services in the same area, they tend to have lower productivity. By their nature, demand-responsive services must devote more effort to serving each passenger than fixed routes do, so they tend to reach their capacity limits at much lower levels of patronage. When a demand-response service replaces a successful patronage service at low-demand times, some special considerations apply as discussed in Section 5.

3. Uses of the patronage–coverage distinction

The question about how to divide resources between patronage and coverage services is, by design, a judgment about competing values. It obviously has no technical answer, but rather goes to the heart of each citizen's beliefs about why public transport should exist at all. Framing service design questions in these terms can quickly lead to remarkably clear conversations among constituents about what really matters to them.

This conversation can lead, in turn, to an informed decision by appropriate elected officials. The resulting policy typically takes this form:

Devote ____% of resources to services justified by patronage, and the remaining ____% to maximizing coverage.

Service design professionals can design a network that implements this direction precisely, including documentation showing which services are intended for patronage and which are intended for coverage.

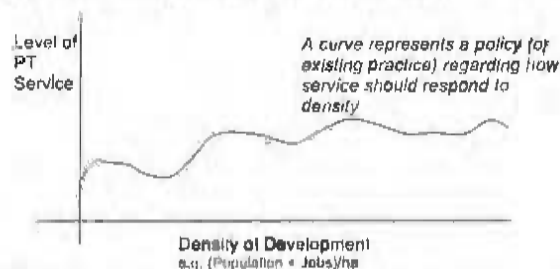
Such a policy provides a clear answer to inevitable objections that arise during consultation, by showing that the service provided is a fair implementation of a consistent policy. For example, if a resident of a low-density area complains about their low level of service, the reply is that:

- The density and/or development pattern where they live is not conducive to a high-patronage service, so any service they receive is going to be coverage service.
- The proposed service plan represents a fair distribution of the ____% of service dedicated to coverage over the areas to be covered.
- If you want more service than is provided, your options are to (a) advocate for a shift of the overall policy in favor of coverage or (b) advocate for a local funding source in your council or market area to supplement your service above the policy level.

Elected officials often value this kind of policy because it spares them from accusations of favoring one area over another. It also empowers the elected official by separating service design into its two components: decisions about values – which elected officials should make – and the technical and creative aspects of designing service to implement those values – which are the province of public transport professionals. The result can be an increased level of trust between these two essential parties in the service design process.

4. Service Allocation Policies and "Equity"

To understand the effect of the productivity and coverage goals on service design, consider a service allocation graph where the x-axis represents density, and the y-axis represents the service provided. Different service allocation policies can be represented by different curves. If a hypothetical community had equal amounts of each density, then the area under the curve would be proportional to the overall quantity of service provided.

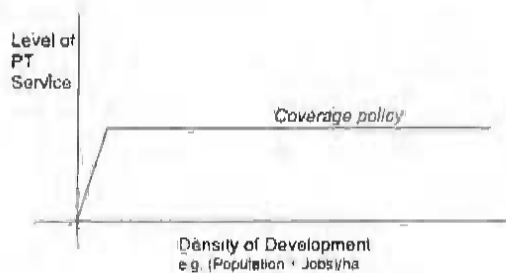


Density here should be understood as a shorthand term for "aspects of a built environment that directly affect public transport patronage." As Cervero (1998, pp. 72–74) and others note, density is indeed the overwhelmingly dominant indicator, but other aspects of design, such as the continuity of the pedestrian network, are also relevant. Density indicates the size of the market located within a fixed air distance (such as the common 400 m standard) of a transit stop, but the pedestrian network determines how much of that market is within a fixed walking distance (Ewing, 1996, p. 13). Densities (and hence air distances) are commonly used as shorthand because density information (by small travel zones) is usually available. A more subtle and accurate measure would consider walking distance rather than air distance, but this calculation requires levels of detail about the pedestrian network, and exact locations of destinations within travel zones, that are not available from most jurisdictions.⁴

By the same principle, density must be understood as combining both population and activity density. The measure (Population + Jobs)/ha is a reasonable approximation that is easy to calculate, though subtler and more complex measures are possible.

A coverage approach is responsive to need rather than density. Even coverage-oriented service falls away at the very lowest densities, but apart from this coverage service is about making a little service available everywhere, regardless of density. For example, a typical small-city coverage system consists of one-way loop routes all running at the same frequency, converging on a centre for the purposes of connections but otherwise offering the same level of service everywhere. A coverage policy, then, would be a horizontal line, falling away only where the level of activity is so close to zero that the community expresses no need for public transport even as a social service or lifeline;

⁴ For fast-growing or fast-changing areas, of course, it is often a challenge for jurisdictions to keep population and employment data current. Public transport planners are often accused of "planning for the past" even when they are using the most current data available.



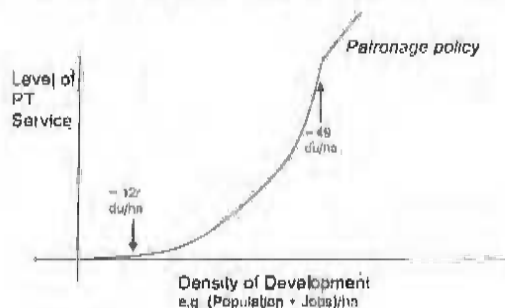
A deployment based on patronage is more complex, because the relationship between density and patronage has several different phases. Spillar and Rutherford (1998), for example, looked at cities in the Western US and found these relationships:

- In rural development up to about 12 dwelling units per hectare⁵ (du/ha), demand is at a very low level, rising slowly in direct proportion to density. (Demand at this level is actually highly dependent on the presence of demographic categories with high public transport needs, such as senior citizens, the disabled, and youth below driving age.)
- From 12 du/ha to about 49 du/ha⁶ demand rises faster than density, in an upward and roughly parabolic curve. This is the range in which most urban development in Australia and North America occurs, outside of the densest urban cores.
- Above 49 du/ha demand is again linear with density, but at a much higher rate than in rural areas. At these high urban densities, people live so close to so many of their daily needs that walk trips begin to take a large mode share at the expense of public transport.

Given these relationships, a service pattern devoted to maximizing patronage would follow these phases with service. The goal of the patronage policy is to deploy all service where it will carry the most passengers overall. Thus:

- At densities below 12 du/ha, patronage potential is low except for the occasional school trip. Thus, a strict patronage policy would provide no service apart from those school trips.
- At densities of 12–49 du/ha, patronage potential rises faster than density, so a patronage policy would follow this rising curve. (Spillar and Rutherford note that the rate of public transport use per household rises in an upward curve. The service allocation strategy, then, would be an even steeper curve, reflecting this rate of use times the number of households.)
- Above 49 du/ha, the curve becomes a steep straight line, as patronage continues to grow with population density, but not faster.

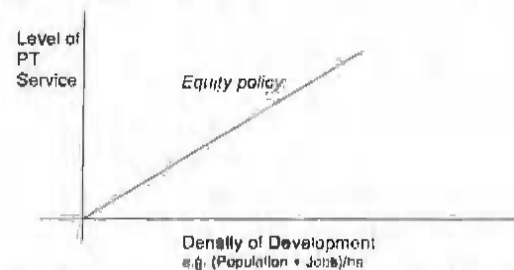
So a patronage policy would look something like this:



⁵ 5 du/acre in Spillar and Rutherford.

⁶ 20 du/acre in Spillar and Rutherford.

Graphing the policies in this way suggests a possible "compromise" between the two policies, namely one in which the service is directly proportional to the density throughout the range. This could be called an "equity policy", although it is not always what advocates of "equity" intend:



In regions or states where there is a wide range of development types, the equity policy has obvious appeal. Something like an equity policy is usually at work if an agency tolerates a much lower patronage/km in a low-density area than in a high-density area. In very dense cities, however, the equity policy provides far less service than the patronage policy does. A common outcome may be overcrowding in dense inner city portions of a network, while in outer-suburban areas public transport may run largely empty outside of school peak periods.

In practice, every consistent system of service allocation will be some compromise between a patronage policy and a coverage policy. The equity policy is one possible compromise, so long as policymakers are comfortable with having empty public transport vehicles in outer suburbs and overcrowded ones in the inner city. A simpler form of compromise, however, is simply to allocate resources between patronage and coverage goals, and allow the resources on each side of the divide to be used unequivocally for that end.

5. Consultation Process

Once an existing system is understood in terms of how it divides resources between patronage and coverage – and other purposes if relevant – elected officials are presented with a clear question that only they can answer: How should this balance between competing goods be shifted, if at all? This section briefly describes how this question can be applied both to short range service design decisions and long-term planning of policy networks. The discussions are obviously different in each case, but the underlying question is the same.

5.1. Short range service changes

When doing a short range service design where the strain between productivity and coverage goals is an issue, the best approach is often to draft two or more service designs that illustrate different points on a spectrum. For example, in a strategic plan project for the Whatcom Transportation Authority in Bellingham, Washington, USA (WTA, 2004) two service designs were prepared, one emphasising patronage and the other emphasising coverage. Both designs were taken to the public in consultation. Only then was a final recommendation developed striking a balance between the two. This approach had several benefits.

First, a common complaint about public consultations – that the plan has already been decided on and consultation is just a show – was refuted by the presentation of two options. All public transport management staff participating in the consultation were instructed to show no preference between the options in their comments to the public.

Second, participants readily understood the philosophical choice underlying the difference between the two options. For participants who were not comfortable discussing patronage and coverage as abstractions, the contrast between the proposed networks made the tradeoff clear.

Finally, all participants could express an opinion that could be translated into a quantifiable 'vote'. For example, if one scenario was, say 60% patronage and 40% coverage,⁷ while the other was the opposite, then participants could easily vote for one of these, or to say that they would be comfortable halfway between them (a 50–50 split), or that they feel the split should be like one scenario but even more extreme (a 70–30 split or more). These votes could be readily called to quantify the position of any consultation group, thus providing clear guidance to the elected official(s) making the final decision.

In short, the analysis and discussion of a service plan in terms of a patronage–coverage tradeoff yielded a clear discussion in which all participants could have a valid opinion regardless of their level of technical expertise or ability to think abstractly. Nobody needed to master technical details of a proposal in order to discuss it. Instead, participants understood that they were being asked a real and consequential question, and that their response would have a measurable effect on the outcome. This clear conversation, and the clear and implementable policy resulting from it, is the ultimate purpose of the analysis.

5.2. Long-range network planning

In long-range network planning, the patronage/coverage distinction is easier to talk about theoretically, and can be linked to other policy issues that are in play. For example, in the development of the Regional Transportation Plan for Washoe County, Nevada (the Reno area) a key concern has been the high non-auto mode share target – planned to rise from under 3% currently to 6% in 2030 (Regional Transportation Authority of Washoe County Nevada, 2005, pp. 2–7). The network at the time was split roughly 60% patronage, 40% coverage. When policymakers understood that patronage services were contributing substantially toward the mode share goal, but that coverage services were not, they authorised a gradual shift from the current 60–40 split to a target of 80–20 in favor of patronage. This target means that most new resources are assigned to patronage services, and the policy is cited as a reason why the agency cannot always meet the service expectations of new low-density, car-oriented outer suburbs. Service planning proposals are all assessed to see how they contribute toward reaching this goal.

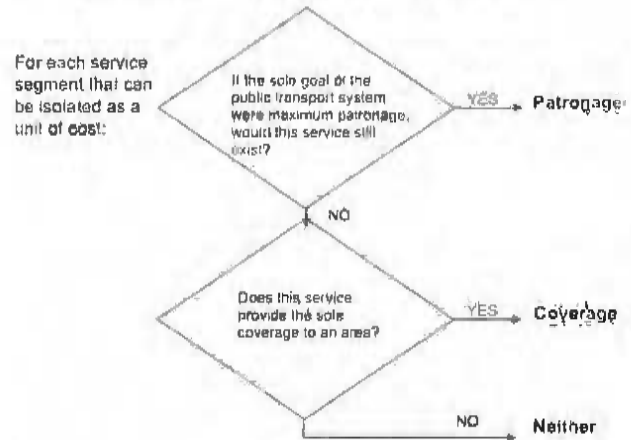
It is important to stress that the "success" here is not the specific decision they reached, one with which the reader may disagree. Instead, it was that they reached a decision expressed in terms that their staff knew how to implement and measure. The elected officials also understood that they could revisit their decision, and that doing so would affect the patronage outcomes. For example, if they decided to shift resources from patronage service to coverage service, they should expect total system patronage to fall.

6. Analysing existing services by purpose

A consultation process on the patronage–coverage tradeoff typically begins with an analysis of existing public transport services in these terms. This analysis categorizes services according to the purposes they seem to be serving. The analysis typically looks both

at the current performance of each route or service, as well as features of its design and the degree to which its existence supports other services. This section develops a basic methodology for this analysis. A reader more interested in the main concepts of the paper may wish to skip over this section.

The decision process for this analysis is as follows:



The sequence of steps has an impact on the outcome. If a service is justified by both patronage and coverage, it is assigned to patronage. This could have been thought of the other way: We could have first identified a system wide network of coverage, and then assigned to patronage only the frequency increments above that level. Both methodologies are valid, but get different answers, so the point is to be consistent in which methodology is used. The reason to assign to patronage first is a practical one: Many routes fall entirely into, or out of, the patronage category, so analysing the service this way means that fewer routes need to be divided between categories, and that routes can be divided by segment rather than by increments of frequency. The result is a simpler calculation and one that is easier to represent on maps.

The analysis is done primarily in terms of geographical segments, rather than temporal segments such as span of service or increments of frequency. Temporal segments are much more interdependent than geographical segments are, and therefore harder to divide by purpose. Every customer's round trip requires service at two times of day, or more, and every trip is sensitive to wait time and hence frequency. Therefore, cutting any temporal piece of service – e.g. by cutting off evening service earlier, starting morning service later, or reducing frequencies between the peaks – will have effects on patronage on other times of day. For this reason, it is usually misleading to say that a certain part of a service span, or a certain increment of frequency, is attributable to patronage while the rest is not. By contrast, a geographical increment is much easier to analyse in isolation, because it represents a discrete market.⁸

It would be easy to say, then, that the purposes of patronage or coverage are features of an entire route. However, it is quite common for an inner segment of a route to be justified by patronage, while outer tails or branches are clearly not. For this reason, some segmentation of routes may be essential for the analysis.

6.1. Assigning segments to patronage

The first question in the flowchart above may need some further explanation, because it is conditional and therefore requires considerable judgment. How do we know that a certain segment

⁷ Given obvious roughness in the way services are allocated to categories, participants are encouraged to think about the patronage–coverage split in 10% increments.

⁸ This issue is discussed further in subsection 6.3 below.

would be part of a maximum-patronage system, if that system were created and optimized?

The assignment is made based on the convergence of two factors:

- **Existing patronage.** Segments assigned to patronage generally have an existing productivity (patronage per unit of service) that exceeds the system average. This assessment must be based on the average load through the segment, not the boardings in the segment, since a non-stop segment where the bus is full is clearly patronage-justified.
- **Physical evidence of patronage potential.** For segments where the existing load is not decisive either way, we consider whether the segment's physical features lend themselves to further patronage growth, based on industry experience. Thus, positive indications for patronage would be if a route is:
  - Straight and direct (as opposed to circuitous and looping).
  - Operating on arterial streets that permit reasonable speed.
  - Serving continuous high-density development (i.e. a high population/employment level within 400 m).
  - Serving an area whose street network provides good pedestrian access from 400 m to either side.
  - Serving major patronage sources at the end of the corridor or segment, indicating demand to the end of the line.
  - A necessary part of a coherent connective network linking other high-patronage segments.

The "physical evidence" criteria tend to correlate with high patronage throughout the developed world. We include them because existing patronage on a particular local segment may be affected by other factors that are extraneous to this analysis. Where that is the case, it is important to consider whether the segment has the potential to be a high-patronage segment, and these factors are the definition of that potential.

6.2. Assigning segments to coverage, or to some other purpose

If a segment is clearly not justified by patronage, then we ask whether it has a unique function in providing the sole service to some neighbourhood or community. A good way to quantify this is: "If this service did not exist, would a significant number of residents and/or jobs no longer be within 400 m of service?"

The answer is usually yes, but the test is important because if the answer is no, the segment may have some other justification, usually but not always a weaker one. Examples may include:

- **Overlap.** A segment may exist overlapping other segments. This often occurs where service from several unique coverage areas converges on one path into a CBD or interchange. If these segments combine to form a high-frequency spine that supports high patronage, then the routes should be segmented to isolate this section. Small segments of this overlap may be acceptable in coverage services, since there is no more efficient route structure. Where a long overlap exists that does not combine to form a patronage service, it is sometimes appropriate to identify the service as "Overlap", and assign this category its own percentage. For example, when this analysis was done at Salem-Kelzer Transit in Salem, Oregon, the quantification of an Overlap category helped the policy board understand the costs of offering a service pattern that required nobody to change to reach the CBD, as opposed to structures that would require more interchange but reduce duplication, thus allowing for better frequencies from the existing operating budget.
- **Political discretion.** Sometimes a service exists to satisfy a political demand, though it does not rise to the standards of either

patronage or coverage. This is not necessarily a problem. Some applications of this scheme create a separate but usually small "Discretionary" category for these cases.

Where these categories exist, it is helpful to isolate them because they suggest other solutions.

6.3. Patronage and coverage services in integrated networks

Public transport planning is rightly concerned with creating integrated networks, where different kinds of service work together to meet a range of mobility needs. Often, a coverage service is described as 'complementary' to a patronage service. For example, demand-responsive services are often designed to complement a fixed route network. Commonly, they may serve areas that are physically unsuited to fixed route service, but bring people from those areas to a fixed route. They have broad application to evening and especially late-night service needs, where they can replace fixed route services that are unproductive at these hours, and provide a "guaranteed ride home." Considerable innovation is occurring in this area.

However, one service may complement another but still not be grounded in the same underlying purpose. Where a low-patronage service is integrated with a high-patronage one, the key question is whether the former is making the decisive difference to the performance of the latter.

The key question for our analysis is: "If our only purpose were maximum patronage per unit of service, would this service still exist?" For example, if it can be shown that certain demand responsive services are essential to the high performance of a fixed route, then and only then a case could be made for treating those demand-responsive services as patronage services. In many cases, however, a successful fixed route continues to perform well with or without these complements, because of the intrinsic strength of the markets it serves directly.

To understand the purposes of integrated or "complementary" services, it is important to distinguish between several things that these terms can mean. When Service A and Service B are described as complementary or integrated, it usually means one of the following:

- **Service B connects with Service A, but serves a different area.** In this case, Service A and Service B can still have different purposes.
- **Service B serves the same area as Service A, but runs at different times of day and/or days of week.** Many successful high-patronage services run late into the evening. These late evening trips are often low patronage, but their existence helps support patronage earlier in the day, as passengers are more comfortable using a service that gives them the option of returning home later than planned. For this reason, when considering an all-day fixed route, we do not assign different purposes to different trips based on their patronage, because part of what makes the service attractive is its entire span of service and the resulting simplicity. It follows that if Service A runs throughout the daytime but Service B replaces it in the evening to serve the same area, the two could be thought of as having the same purpose, based on their combined performance as a unit. This is an area where further research is needed, to determine the extent to which these evening services are essential to the success of the daytime route.
- **Service B serves the same area as service A, but provides specialised service for passengers who cannot use Service A for reasons of disability.** "Paratransit" services for the disabled do not fit cleanly into the patronage-coverage distinction. Where the cost of these services is assigned to fixed route operators by law, e.g. under the United States Americans with Disabilities Act, these services

become part of the cost of running a productive fixed route system, so there is no point in assigning them a separate purpose. Specialised service provided in excess of the legal requirement, or where there is no legal requirement, are best treated as a separate purpose outside of the proposed scheme, though they are similar to coverage services in that they do not aim for high patronage but rather to meet identified needs.

7. Conclusion and suggestions for further research

Public transport must serve the competing demands of patronage and coverage, because the two values push service design in opposite directions. If this distinction is made explicit, and discussed as such, the result can be a clearer conversation and, in the end, a more confident decision by the elected policymaker(s). These concepts have been used successfully to facilitate both short-term service design decisions and long-range network planning, and can be used as a way to judge short-term decisions against the long-range vision.

The core analytical question proposed is, for each public transport route or service: "Would this service still exist if maximizing patronage were our only purpose?" The paper provides a detailed methodology for answering this question, but there is certainly room for further research and thought. These include:

- How can we more precisely quantify the effects of integration between different services? What are the cases in which two or more "complementary" services should be judged only as a unit?
- Can the concept be extended fruitfully to a discussion of services for the disabled?
- How often should datasets describing existing population and employment by traffic zone be updated, and are there ways to make this updating process continuous so that current data is always available?
- Many practical refinements to the patronage/coverage tool would emerge from a large-scale application of the analysis, e.g. by using it for all of the local planning within a state, prov-

ince, or nation. This paper is currently founded largely on the author's successful experience in using the tool in a range of planning projects, but these results do not lend themselves to easy summation because each agency used the tool in a different way for a different local need. A more systematic application would certainly help to refine the methodology and perhaps broaden the range of decisions in which it is useful.

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Section 6: King County Demographics

This section includes information on the demographics of King County and includes maps related to population density, employment, low-income and minority populations. Included in this section is information related to land use, economic growth and social and environmental justices that affect the transit system in King County. This section also provides information on areas of growth, population and growing communities that could impact how the transit system develops in the future.

Information you'll find in this section:

- King County Demographics
- Maps
  - i. 2008 Population Density
  - ii. 2006 Covered Employment
  - iii. Access to Bus Stops
  - iv. Number of people 65 and older by census tract
  - v. Median Income by census tract
  - vi. Low-income census tracts
  - vii. Race characteristics of census tracts
  - viii. Minority Census Tracts
- Metro Riders
- King County Cities

Links to Additional Resource Materials:

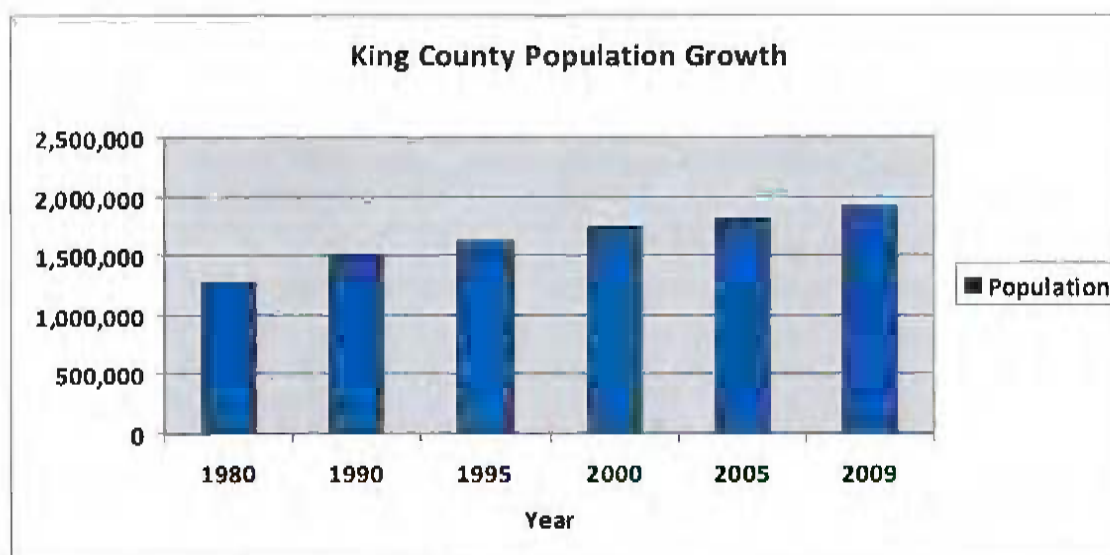
- King County Growth Report:
<http://www.kingcounty.gov/exec/strategy/PerformMgmt/KCGrowthReport.aspx>
- King County Benchmark Reports:
<http://www.kingcounty.gov/exec/strategy/PerformMgmt/BenchmarkProgram.aspx>
- King County Metro Rider/Non Rider Survey:
<http://metro.kingcounty.gov/am/reports/reports.html>

King County Demographics

(Adapted from King County 2010 Executive Proposed budget book)

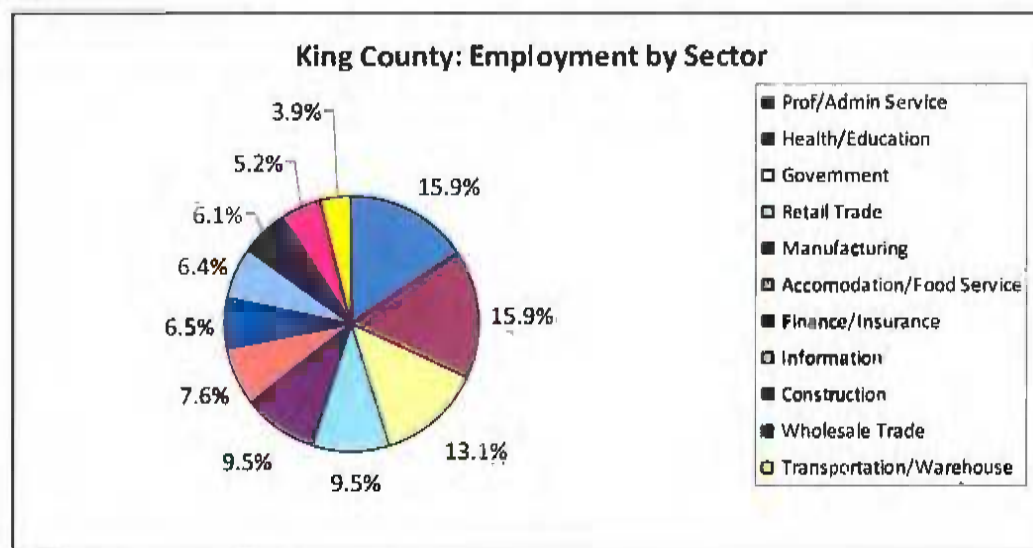
Population Growth

King County has seen substantial growth for the past 30 years. Between 1980 and 1990, the population grew 18.7% and grew another 15.2% between 1990 and 2000. This graph provides a snapshot of King County's growth since 1990.



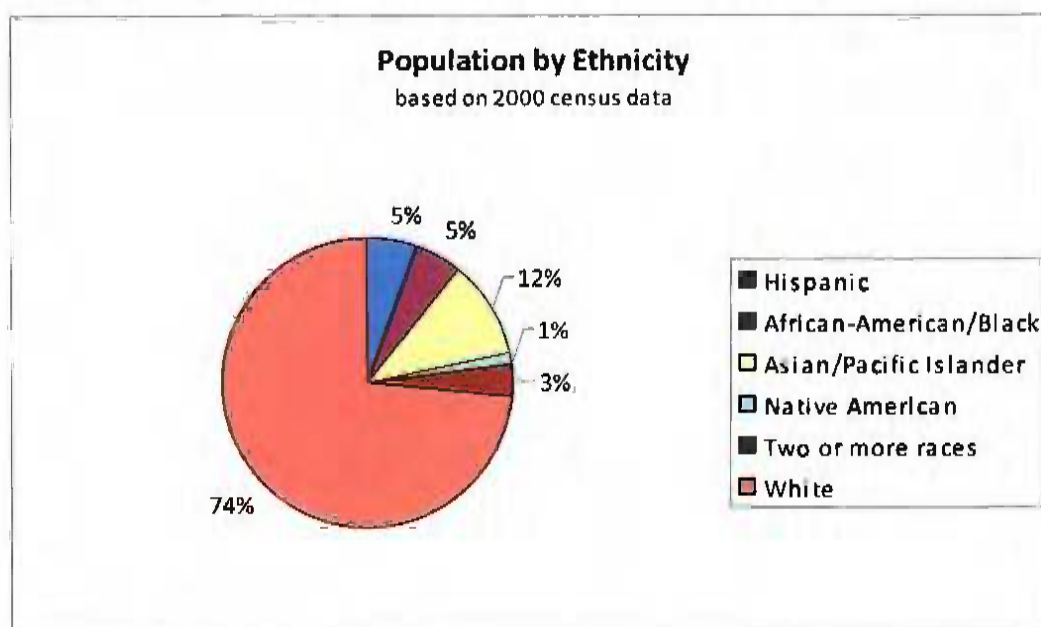
Employment

King County is the largest metropolitan county in the State of Washington not only in terms of population, but in the number of cities and employment. Among the top employment sectors in King County are Professional and Administrative Services, Health and Education, and Government. These sectors reflect the presence of large employers in these sectors including the Boeing Company, University of Washington, King County government, City of Seattle, Swedish Healthcare, Microsoft, Starbucks and Group Health.



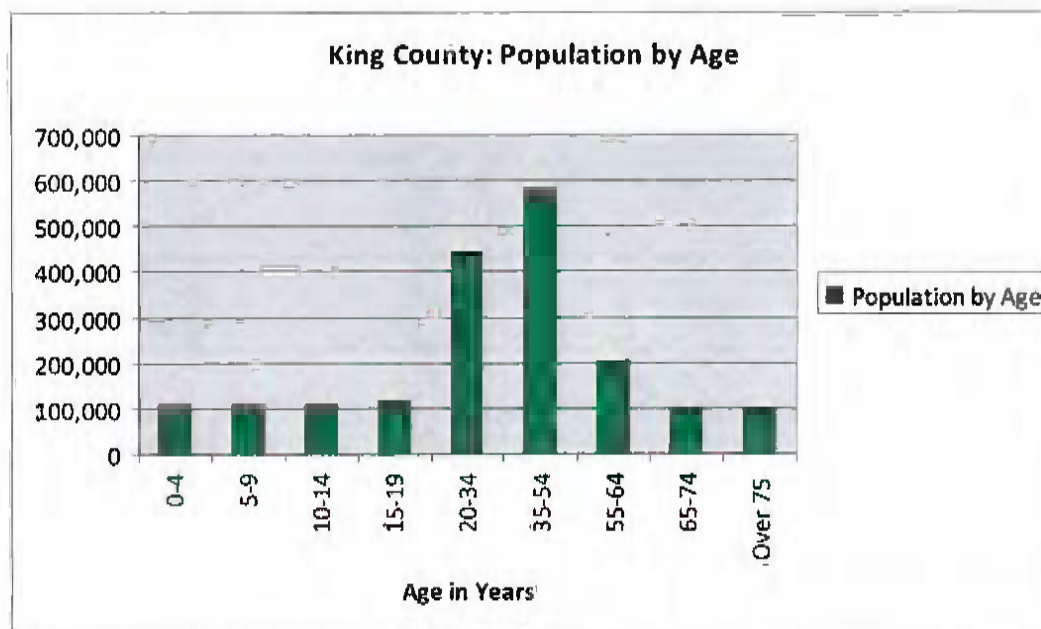
Population by Ethnicity

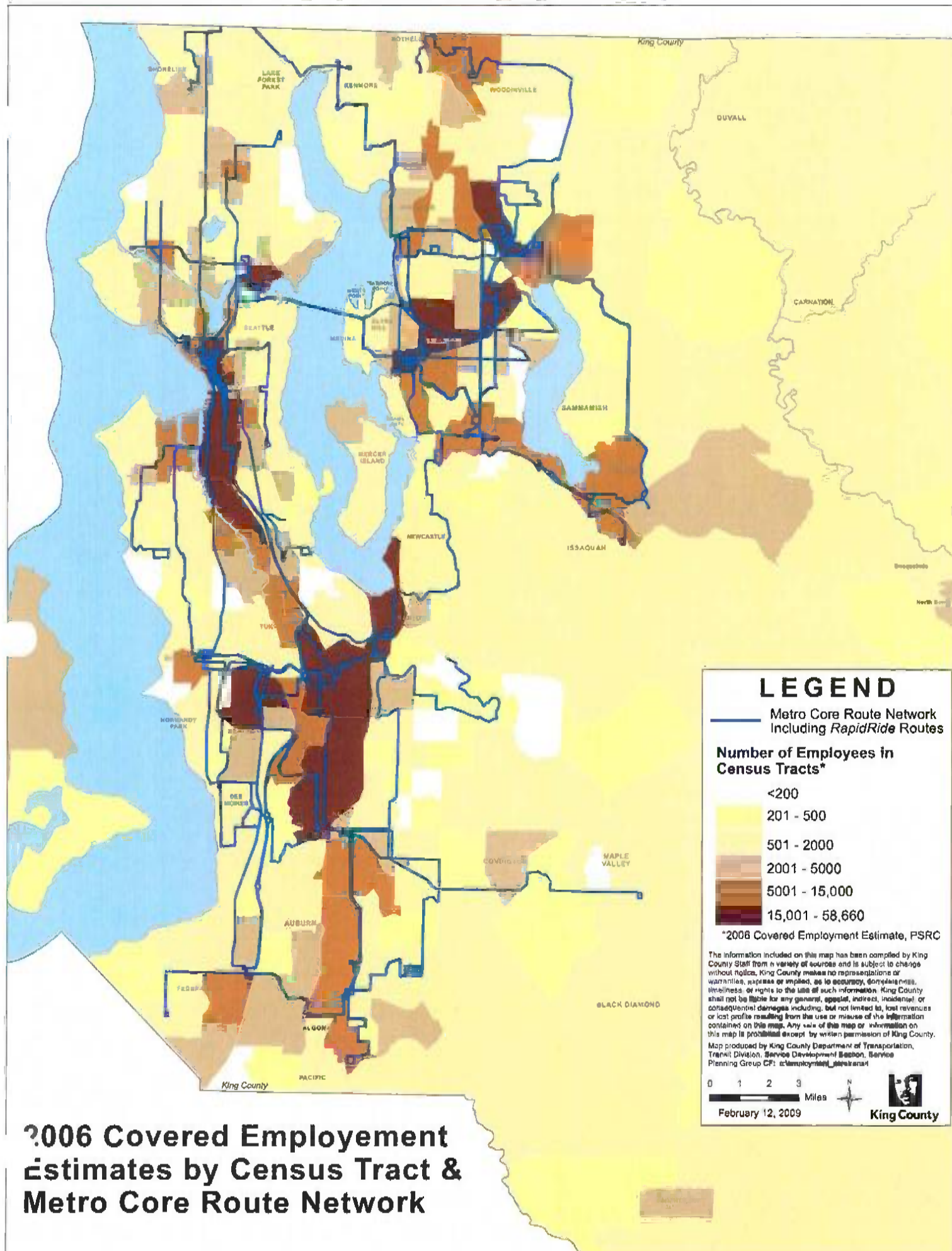
King County is predominantly Caucasian area; Asian-Pacific Islander (11.2%), Black or African American (5.3%) and Hispanic or Latino (5.5%) are the next largest ethnic groups by population.

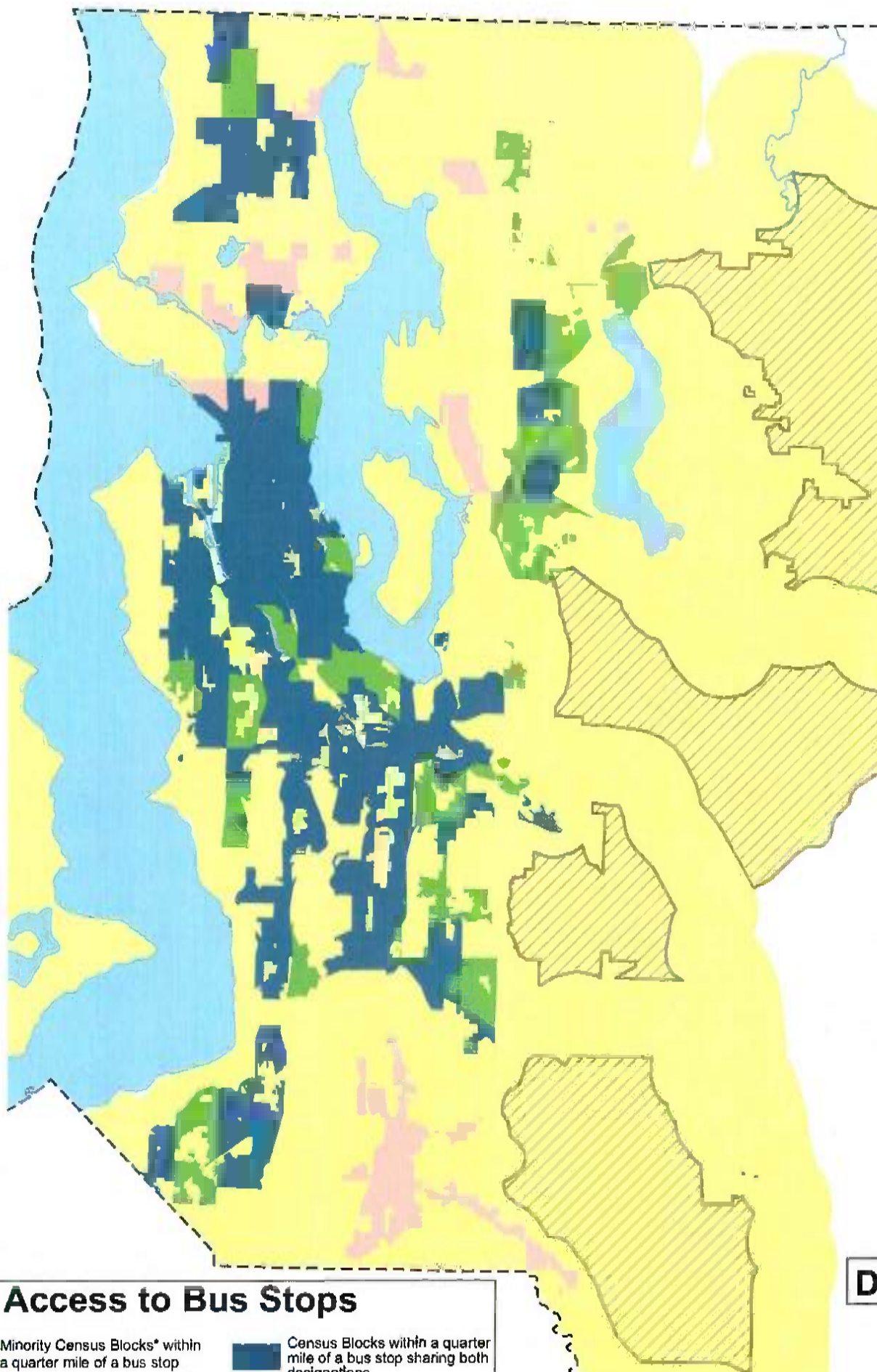


Population by Age

King County population by age, shows most King County residents are between the ages of 20-34 and 35-54, accounting for over half (55%) of the population. Residents under the age of 20 and resident over 55 each account for just over 20% of the population







DRAFT

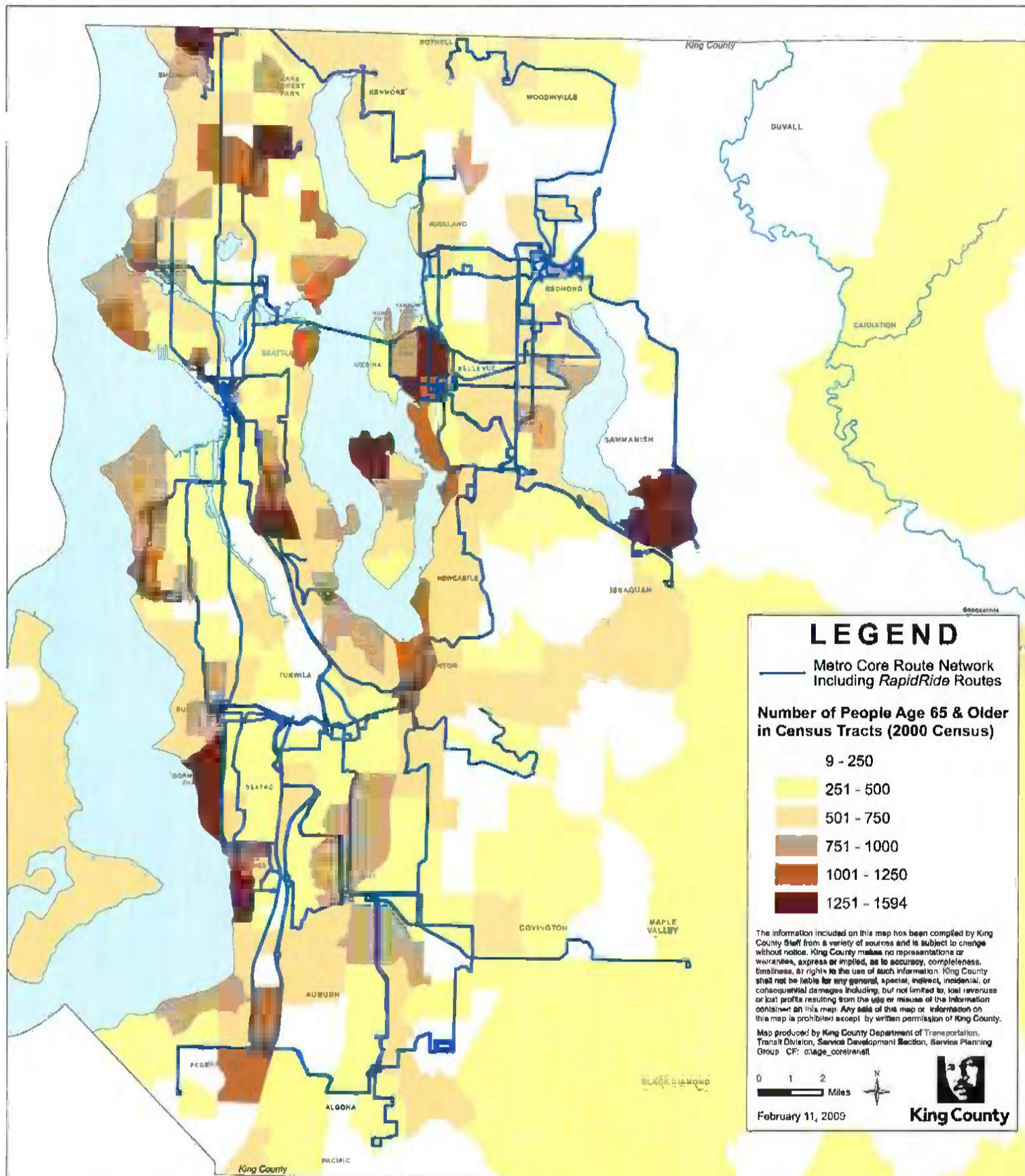


agolncomminority.pdf
March 11, 2009

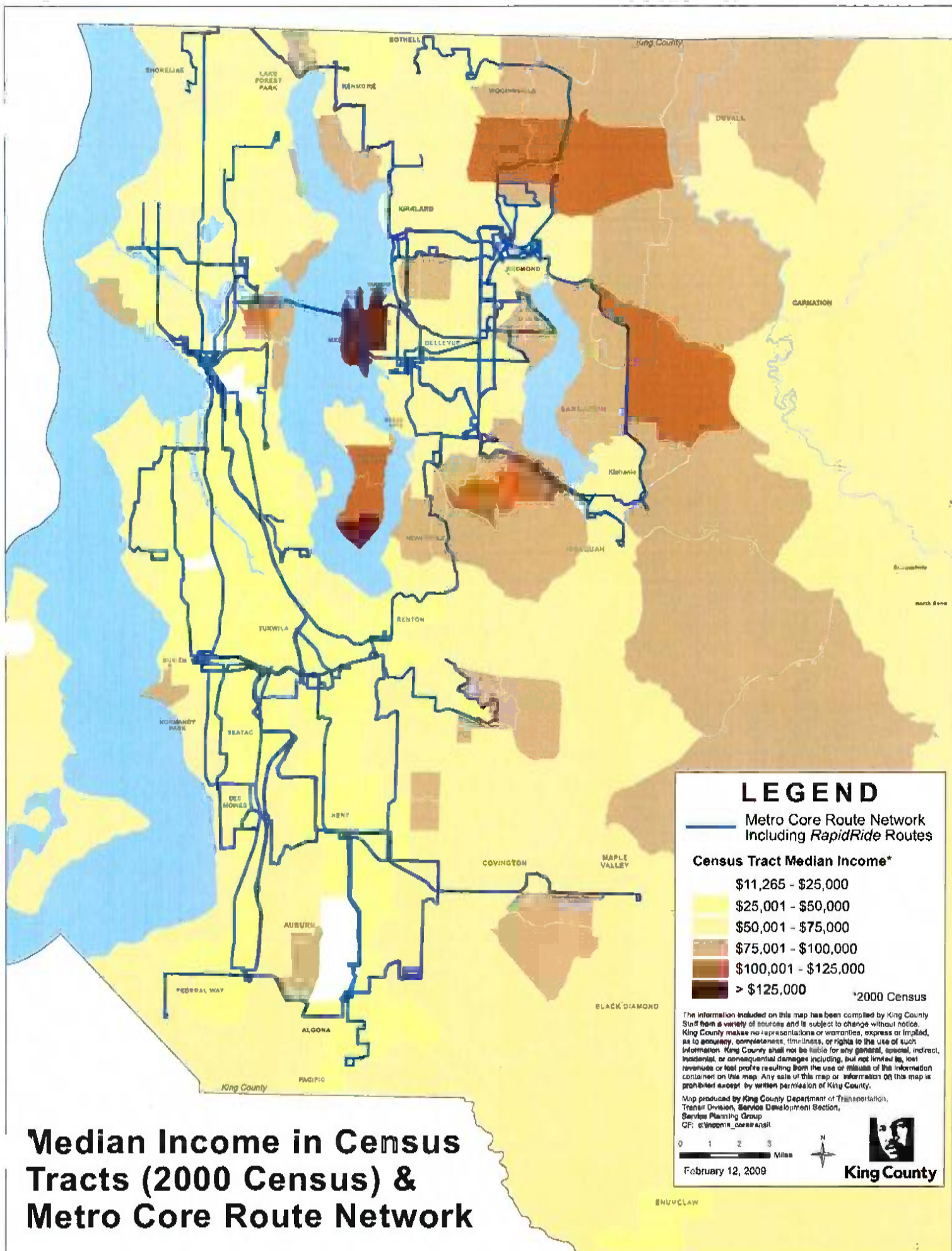
Access to Bus Stops

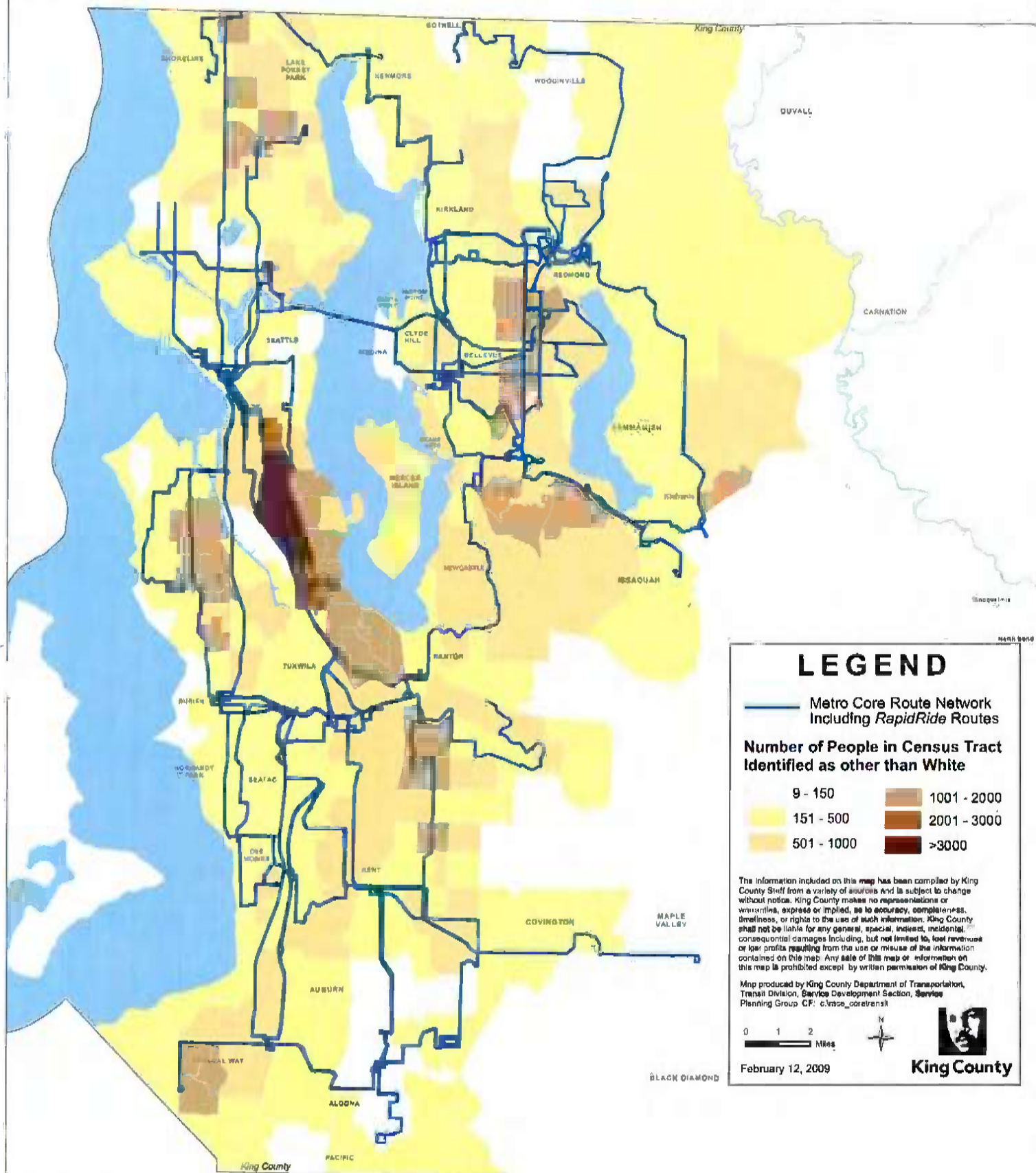
-  Minority Census Blocks* within a quarter mile of a bus stop
-  Low-Income Census Blocks** within a quarter mile of a bus stop
-  Census Blocks within a quarter mile of a bus stop sharing both designations
-  King County Access Program Service Area
-  King County Access Program Service Area (2008)

*Blocks within Minority Designated Census Tracts
**Blocks within Low-Income Designated Census Tracts

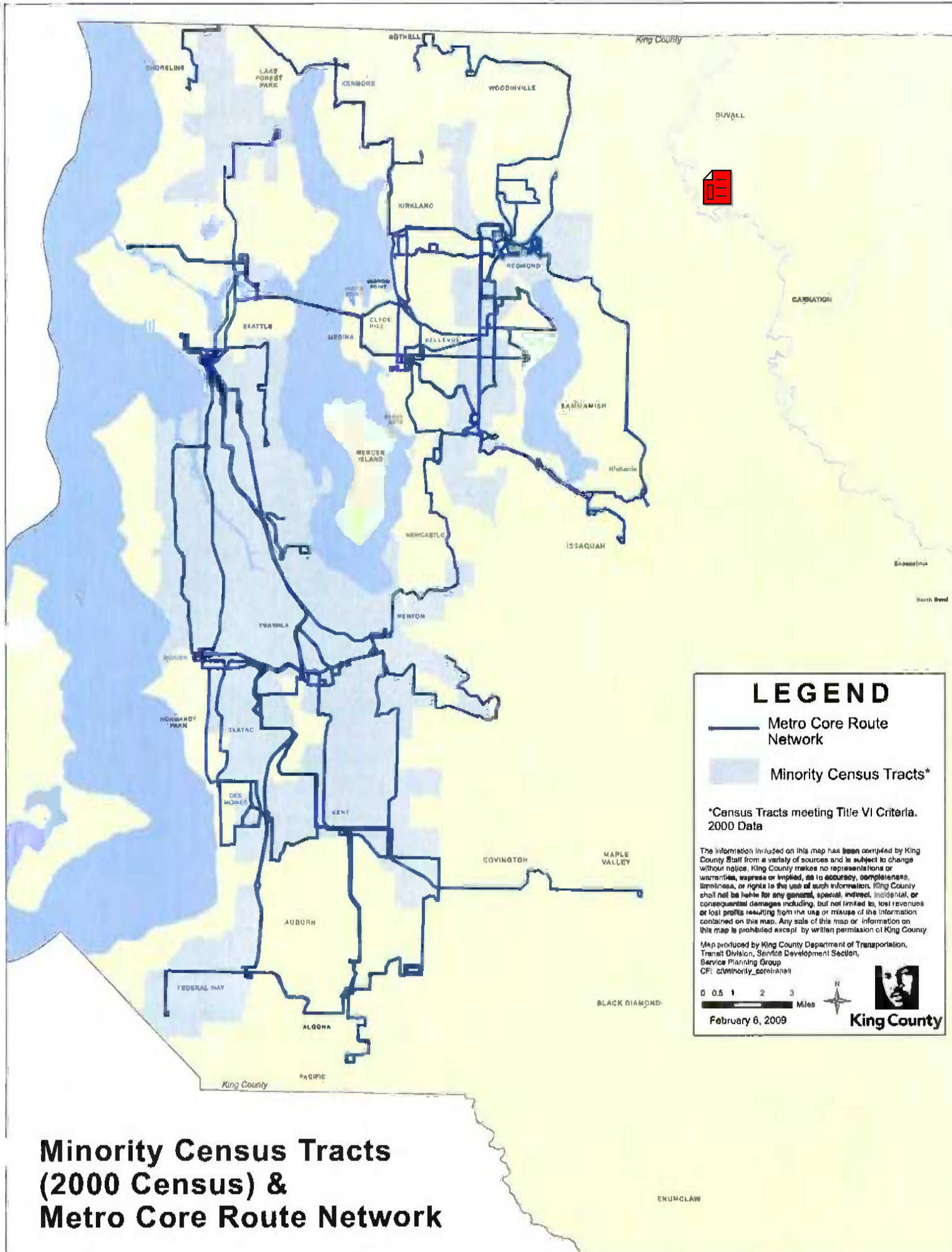


**Number of People 65 and Older
in Census Tracts (2000 Census)
& Metro Core Route Network**





Race Characteristics of Census Tracts (2000 Census) & Metro Core Route Network



LEGEND

-  Metro Core Route Network
-  Minority Census Tracts*

*Census Tracts meeting Title VI Criteria.
2000 Data

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Map produced by King County Department of Transportation,
Transit Division, Service Development Section,
Service Planning Group
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0 0.5 1 2 3 Miles



February 6, 2009

King County

Minority Census Tracts (2000 Census) & Metro Core Route Network

Metro Riders

(From the 2008 Rider Survey, Gilmore Research Group)

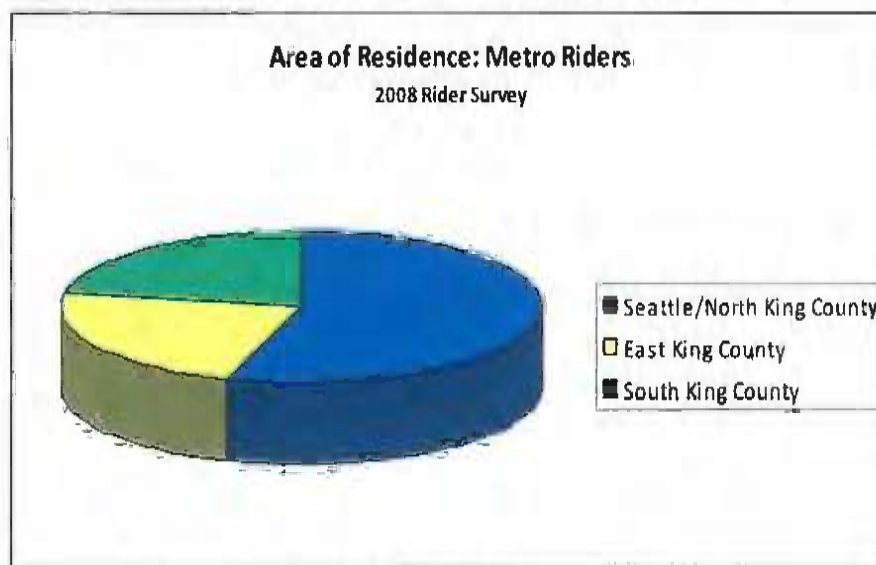
Who are Metro Riders?

For more than 25 years, Metro Transit has conducted a telephone survey of transit riders and non-riders on an almost annual basis for more than 25 years. In the two most recent surveys, 2007 and 2008, Metro decided to focus on the behavior of regular and infrequent riders. For the 2008 Rider Survey, the Gilmore Research Group conducted 400 telephone interviews with randomly selected residents age 16 or older. The survey profiled both groups of riders including demographics, rider travel habits and rider satisfaction.

Rider Characteristics

Two-thirds of the respondents surveyed were identified as regular riders (those who take five or more transit trips per month and the remainder as infrequent riders (1-4 trips per month). The demographic characteristics of these riders are based on area of residents, gender, age, ethnicity, income, employment status and average number of transit trips per month. Some of the findings from the study show:

- Households in North King County/ Seattle are almost twice as likely to have a Regular Rider in residence as those in South or East King County.
- Metro riders are just as likely to be female (52%) as they are male (48%).
- The average age of a Metro rider is 47.
- Most riders (67%) are employed full or part time, 9% are students, 18% are retired and 6% are unemployed or homemakers.
- Although the median income for all riders is \$69,468; 23% of Metro riders earn more than \$100,000 annually.



The characteristics of regular riders to those outlined above, but characteristics of infrequent riders vary slightly. Infrequent riders are more likely to be female (55%) than male (45%), are an average age of 52 and tend to be Caucasian. Fewer infrequent riders are employed full-time (41%) and fewer own their own homes. Regular riders take an average of 24.5 trips per month compared to infrequent riders, with 2.2 transit trips per month.

Transit Use

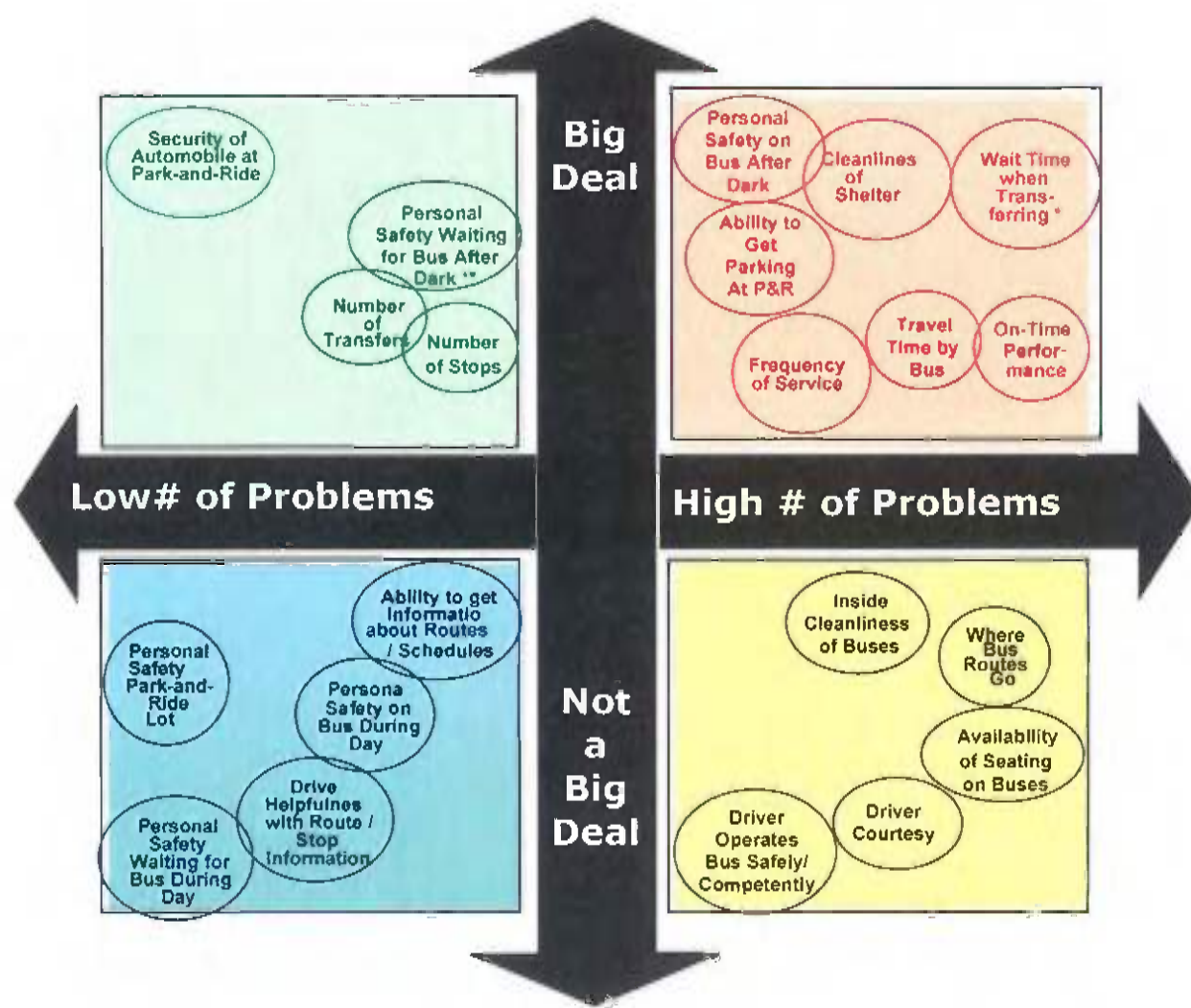
Half of all riders use Metro primarily to get to work (50%), while 7% use Metro mainly for school trips. Entertainment is the second most common purpose for using Metro (23%). The number of riders using Metro primarily for work has increased by 5% between 2007 and 2008. Most riders walk to the bus stop (72%), make their trips within a single zone (58%) and some transfer (49%). A majority of riders (75%) take the bus during peak hours.

Metro Riders

What is important to Our Riders?

(From the 2008 Rider Survey, Gilmore Research Group)

The chart below illustrates which issues are most important to Metro rider satisfaction, in terms of rider response to the problem and the frequency of the issue occurring. Background on rider satisfaction and an explanation of the chart can be found the page following.



Rider Satisfaction

Rider satisfaction ratings for Metro have not changed significantly in the past five years. A majority of riders (94%) are satisfied with Metro Transit, with 54% of riders being very satisfied with the agency. Certain factors can help predict what rider satisfaction will be.

Rider satisfaction is largely driven by time, whether a bus is on-time, where the routes go and travel time by bus¹. Regular riders rank on-time performance and travel time by bus as among the elements that affect their satisfaction the most. New riders and infrequent riders tend to focus on where bus routes go as a factor in their satisfaction with the agency.

Explanation of chart

The chart on the previous page is intended to explain the relationship between different elements that impact customer satisfaction and the occurrence of rider issues with those elements.

Vertically, the chart represents how much different elements impact customer satisfaction. Certain elements are a “big deal” if a customer has a bad experience, such as when buses don’t operate on-time, when service is infrequent, when travel time by bus is long and when people don’t feel safe on the bus after dark. Other elements such as personal safety during the day, and inside cleanliness of a bus are have less impact to rider satisfaction when expectations are not met.

The horizontal portion of the chart represents how often a bad experience happens. There are few incidents of riders feeling unsafe waiting or riding a bus during the day; however, there are more issues with on-time performance, travel time and where buses go are more frequent issues that arise for customers. Monitoring customer satisfaction, combined with other measures of our performance can help identify those areas where we may have the most to gain in terms of rider satisfaction (upper red box) compared to areas where we have more flexibility (lower blue box).

King County Cities

King County includes 39 cities within a 2,134 square mile area. These 39 cities encompass 400 square miles while unincorporated areas account for 1,734 square miles. Below are population estimates for King County jurisdictions from the Washington State Office of Financial Management. King County has seen a 9.9% increase in growth since 2000, with 12.8% growth in King County cities.

2009 Population Estimates King County and its Cities

Jurisdiction	1980 Census	1990 Census	2000 <i>Corrected</i>	2008 Estimate	2009 Estimate	Change 2000-2009	% Change 2000-2009
Algona	1,467	1,694	2,460	2,740	2,760	300	12.2%
Auburn (K.C. portion)	26,417	33,102	42,901	60,400	60,820	17,919	41.8%
Beaux Arts	328	303	307	310	315	8	2.6%
Bellevue	73,903	86,874	109,827	119,200	120,600	10,773	9.8%
Black Diamond	1,170	1,422	3,970	4,155	4,180	210	5.3%
Bothell (K.C. portion)	7,943	11,986	16,119	17,130	17,260	1,141	7.1%
Burien	-	-	31,881	31,540	31,890	9	0.0%
Carnation	951	1,243	1,893	1,905	1,910	17	0.9%
Clyde Hill	3,229	2,972	2,890	2,805	2,815	(75)	-2.6%
Covington	NA	-	13,783	17,360	17,530	3,747	27.2%
Des Moines	7,378	17,283	29,267	29,180	29,270	3	0.0%
Duvall	729	2,770	4,616	5,925	5,980	1,364	29.5%
Enumclaw	5,427	7,227	11,116	11,470	11,460	344	3.1%
Federal Way	-	67,304	83,259	88,040	88,580	5,321	6.4%
Hunts Point	483	513	443	475	465	22	5.0%
Issaquah	5,536	7,786	11,212	26,320	26,890	15,678	139.8%
Kenmore	-	-	18,678	20,220	20,450	1,772	9.5%
Kent	22,961	37,960	79,524	86,980	88,380	8,856	11.1%
Kirkland	18,785	40,052	45,054	48,410	49,010	3,956	8.8%
Lake Forest Park	2,485	4,031	12,871	12,810	12,820	(51)	-0.4%
Maple Valley	-	-	14,209	20,480	20,840	6,631	46.7%
Medina	3,220	2,981	3,011	2,955	2,970	(41)	-1.4%
Mercer Island	21,522	20,816	22,036	22,650	22,720	684	3.1%
Milton (K.C. portion)	218	697	814	825	830	16	2.0%
Newcastle	-	-	7,737	9,720	9,925	2,188	28.3%
Normandy Park	4,268	6,709	6,392	6,425	6,485	93	1.5%
North Bend	1,701	2,578	4,746	4,710	4,760	14	0.3%
Pacific (K.C. portion)	2,261	4,622	5,373	6,120	6,200	827	15.4%
Redmond	23,318	35,800	45,256	51,320	51,890	6,634	14.7%
Renton	31,031	41,688	50,052	78,780	83,650	33,598	67.1%
Sammamish	-	-	34,104	40,550	40,670	6,566	19.3%
SeaTac	-	22,694	25,496	25,720	25,730	234	0.9%
Seattle	493,846	516,259	563,376	592,800	602,000	38,624	6.9%
Shoreline	-	-	53,296	53,440	54,320	1,024	1.9%
Skykomish	209	273	214	210	210	(4)	-1.9%
Snoqualmie	1,370	1,646	1,631	9,360	9,730	8,099	496.6%
Tukwila	3,578	11,874	17,181	18,080	18,170	989	5.8%
Woodinville	-	-	9,809	10,560	10,670	861	8.8%
Yarrow Point	1,077	962	1,008	970	965	(43)	-4.3%
Cities Total:	766,811	994,021	1,387,812	1,543,050	1,566,120	178,308	12.8%
Uninc. King County:	503,087	513,298	349,234	341,150	343,180	(6,054)	-1.7%
King County	1,269,898	1,507,319	1,737,046	1,884,200	1,909,300	172,254	9.9%

Note: "-" means that the city incorporated after 1990. *Italics* represent corrections by the US Census Bureau or Washington State.

Source: Washington State Office of Financial Management, 2000 through 2009.

Section 7: External Factors that influence Metro's planning

This section provides background on factors that shape the role of public transportation. Some examples of external factors that influence Metro's planning include climate change, transportation system pricing and transit and construction mitigation. An overview of these issues will provide the task force with a perspective on additional factors that can influence King County's transit system. Also provided is a summary of state and county plans that influence Metro transit planning.

Information you'll find in this section:

- A Discussion of Emerging Issues
- Overview: State and County Plans that Influence Transit

Links to Additional Resource Materials:

- King County Healthscape: <http://www.kingcounty.gov/transportation/HealthScape.aspx>
- King County Equity and Social Justice Initiative:
<http://www.kingcounty.gov/exec/equity.aspx>
- Washington State Climate Change Report:
  - State Climate Change Information:
<http://www.ecy.wa.gov/climatechange/index.htm>
  - Leading the Way: Implementing Practical Solutions to the Climate Change Challenge: http://www.ecy.wa.gov/climatechange/2008CATdocs/ltw_app_v2.pdf
- King County Energy Plan: <http://your.kingcounty.gov/dnrp/measures/documents/pdf/KC-Energy-Plan-2008.pdf>
- 2007 King County Climate Plan:
<http://your.kingcounty.gov/exec/news/2007/pdf/climateplan.pdf>

A Discussion of Emerging Issues

The following paper was taken from a Metro staff report presented to the Regional Transit Committee (RTC) in February 2008. This piece was initially developed as part of the work program to update King County Metro's 2007-2016 Strategic Plan and the Comprehensive Plan for Public Transportation. The updates to Metro's plan were put on hold as a result of the budget crisis.

Report Contents

1. Climate Change and Healthy Communities
2. Transportation System Pricing
3. Transit and Construction Mitigation:
Surviving and Thriving During Highway Construction

Bibliography

1. Climate Change and Healthy Communities

The consensus among scientists that human beings are causing potentially devastating changes to the global climate presents one of the most critical challenges facing humanity today. Climate scientists at the University of Washington predict average temperatures in the northwest will increase approximately one degree Fahrenheit per decade in the 21st century. Such increases are expected to bring about significant changes to our region such as reduced snow pack and water supply, higher sea level and increased flooding and droughts. The impacts of warming across the planet will be significant, affecting people around the world, changing not just the weather, but also economies and the availability of critical resources. Action now could limit the impact and King County has committed to being an innovative leader in mitigating and adapting to climate change.

Transportation plays a key role in climate change, accounting for one-third of greenhouse gas emissions in the U.S. and more than half the emissions in Washington State. All trends point to a continued rise in transportation emissions, as population and employment increase and land use patterns continue to favor automobile travel to access jobs and other needs of daily life. To reduce emissions will require significant changes in how we live and travel, addressing not just emissions per mile, but also the number of vehicle miles traveled (VMT). To reduce VMT while improving the quality of life, we will need to be able to meet our needs with fewer, shorter auto trips. Transportation alternatives will be needed and our patterns of land development and urban form will need to be more compact. Managing overall transportation demand through market pricing will be another critical element to achieve this goal, which will be discussed further in section II of this paper.

Transit and walking will need to become the modes of choice for more of our travel needs. That means both that land uses need to become less oriented to automobiles, and transit services need to be improved and expanded to become the best alternative for a greater share of trips. The connections between walking and transit must be strengthened because transit extends the range of pedestrian travel while walking increases transit use. This also explains the link between climate change and healthy communities. Rising obesity and related health effects are directly related to our automobile dependence and inactive lifestyle. Combating climate change and reducing obesity both call for the same prescription - a more active, pedestrian-oriented lifestyle where more of our travel needs are met locally, on foot, on bicycles and by transit.

To meet the challenge of reducing the impacts of climate change and improving public health, transit will need to be improved and expanded. More investment will be needed, but with constrained resources, every dollar will need to be used most effectively. Transit will also need to examine the carbon emissions resulting from our own operations, and take steps to reduce them. The ambitious goals for climate change adopted by the county will require us to take risks and to question the constraints that limit expectations for transit today. This section will discuss transit's role and objectives in meeting climate change and public health challenges, actions that could be taken, and policy and strategy changes that may be needed to succeed.

The Climate Change Challenge

Scientists have confirmed that the earth is warming and that greenhouse gas emissions primarily due to human activity are the cause. Greenhouse gases, such as carbon dioxide, are largely a product of burning fossil fuels – in cars, power plants and other human activities such as industry. Greenhouse gases also occur naturally in the environment but their accumulation in the atmosphere can be traced to the beginning of the Industrial Revolution. Since roughly 1750, CO₂ levels have risen by approximately 30 percent. This build-up of greenhouse gases is trapping increased levels of the sun's heat near the earth's surface, thereby causing the earth's temperature to rise. If unabated, the increase in greenhouse gases could warm the climate by as much as 10 degrees by 2100 bringing about potentially significant consequences such as the melting of polar ice, the rising of sea level, increased storm intensity and reduced water supply¹.

Effects of climate change are already evident but many scientists believe that taking action now can limit the impacts. To avoid the worst effects, scientists call for reducing emissions by 60-80 percent by 2050 in order to stabilize greenhouse gas concentrations in the atmosphere.

The Public Health Challenge

Global warming is closely tied to transportation and our dependence upon automobiles but a growing body of research is also making the connection between transportation, public health and air quality. Physical inactivity, another result of our increasing dependence on the automobile and our dispersed development patterns has been closely associated with dramatic increases in obesity and associated diseases. In King County, 54 percent of the population was overweight or obese in 2004, with obesity levels more than doubling from 1987 to 2004. A 2005 study sponsored by King County showed that walkable communities – those that are compact with mixed uses and well-connected streets – are associated with higher overall rates of physical activity, lower obesity rates and lower per capita CO₂ emissions². The findings suggest that improving public health can be accomplished largely by reducing the amount people drive, by providing travel alternatives such as transit and by making activities such as walking and biking a more integral form of transportation – strategies that also help reduce greenhouse gas emissions.

King County's Aggressive Climate Change and Public Health Goals

King County is taking actions to address both climate change and public health. In terms of climate change, King County along with other governments in the region such as the City of Seattle and the State of Washington have committed to attaining the Kyoto target of reducing emissions. Achieving the Kyoto Protocol target for King County translates to a commitment to reduce greenhouse gas emissions by 7 per cent below 1990 levels by 2012. This will require

¹ PEW Center on Global Climate Change, "Climate Change 101", 2006.

² Lawrence Frank & Co., "LUTAQH: A Study of Land Use, Transportation, Air Quality, and Health in King County, WA", December 2005.

some major changes considering that the current trend line points to a continued rise in emissions as population, employment, and driving continue to increase.

As an important step in accomplishing this target and the longer term goal of reducing emissions by 80 percent below current levels by 2050, King County developed the **2007 Climate Plan**.³ The plan provides an overview of how King County seeks to reduce greenhouse gas emissions in all sectors and identifies steps to anticipate and adapt to projected climate change impacts. It addresses not only how King County can change its own operations and practices but how it can use its influence as a regional leader to encourage reduced emissions on all levels of government. From a transportation perspective, the plan calls for cleaner cars and fewer cars as well as a continued commitment to encourage alternative modes of transportation, to promote and provide improved public transportation services and to promote commute trip reduction, and increased ridesharing and carpooling. The plan also calls for continued commitment to a clean fleet.

The **2007 Energy Plan**, a precursor to the Climate Plan, sets an initial roadmap for King County's future use, generation and conservation of energy. It calls for transit to emphasize energy efficiencies and clean, renewable fuel sources⁴.

King County has also committed to incorporating public health and air quality considerations into transportation and land use actions and is developing tools that local governments can use to plan communities and transportation that will promote public health and reduce greenhouse-gas emissions. The county has also adopted a resolution to promote active transportation.

Taking Action

Taking action toward these goals, King County is working to reduce fossil fuel consumption and to adapt to the inevitable changes climate change will bring:

- At the local and regional level, King County is enacting major energy and resource conservation programs and requiring **consideration of the impact of development proposals on greenhouse gas emissions** under the State Environmental Policy Act⁵.
- The County is also building a green fleet of **hybrid vehicles** and has been recognized nationally for its use of hybrid, electric and clean diesel transit vehicles.
- In collaboration with the Climate Impacts group at the University of Washington, King County has produced a **guidebook for regional governments** on how to adapt to climate change impacts.
- At the national level, King County has joined several large counterparts across the country in partnering with the Sierra Club to form the **Cool Counties Climate Stabilization Initiative**. King County Metro was the first transit agency to join the Chicago Climate Exchange

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³ King County 2007 Climate Plan

⁴ King County 2007 Energy Plan

⁵ Climate Impacts Group and King County, Preparing for Climate Change: A Guidebook for Local, Regional and State Governments

(CCX), a voluntary market in which members commit to reduce greenhouse gas emissions and work actively with other government members to advocate for a United States federal cap on greenhouse gas emissions.

Metro's Contribution

As the region's largest transit provider, Metro provides a range of mobility options to help people drive less.

- **Metro transit carried roughly than 115 million riders in 2007⁶ and will expand its service by 20 percent by 2016 through the voter- approved Transit Now program.**
- **Metro has the nation's largest public van program, with more than 2 million riders in 2007.**
- **Metro also offers ridematch services, marketing programs such as community-based In-Motion, service for people with disabilities and connections for cyclists with bike racks on buses and bike lockers at transit stops; Metro is also a supporting partner in the ZipCar Program (formerly FlexCar).**

Reducing greenhouse gas emissions in the transportation sector

As identified above, King County Metro already offers many services and incorporates business practices that help mitigate climate change but will need to do more of it and do so more effectively to achieve King County's emissions targets, particularly in relation to transportation.

The transportation sector's CO₂ emissions are a function of vehicle fuel efficiency, fuel carbon content and vehicles miles traveled, factors often referred to as a "three-legged stool" (Figure 1). Working to reduce transportation-related greenhouse gases requires addressing all three legs.

Figure 1. Transportation CO₂ Emissions: The Three Legged Stool



⁶ Fixed-route Metro-only transit, vanpools and ACCESS

Transit's Role and Objectives for Climate Change and Health

Within the framework of the three-legged stool, the roles Metro and the public transit industry can play in reducing greenhouse gas emissions and making communities healthier are focused in three areas:

1. **Reducing the emissions from our own operations.** While Metro has worked hard to reduce emissions from its vehicles and facilities, it can do more still. Continued commitment to clean fuels and technologies can be complemented by an on-going focus on service efficiency and effectiveness.
2. **Providing alternatives to driving through improved and expanded public transportation.** Buses, vanpools, paratransit, streetcars and ridesharing all provide a means to access jobs and other daily needs without using a car.
3. **Helping make communities more compact, healthy and active.** In both urban and suburban parts of the county, people desire to be able to walk safely and to meet more of their daily needs on foot, bicycle or on transit.

The first area directly addresses the clean fuels and clean vehicle legs of the stool. The second and third areas address the third leg, reducing VMT.

1) Reducing the emissions from our own operations

Clean fuels and vehicles combined with efficient service are key to reducing operations-related emissions. Metro takes its commitment to clean air seriously. Metro's buses are required to meet the emission standards in effect when the bus is built. Heavy-duty diesel engines used in transit buses must meet more stringent EPA standards than diesel engines used in trucks. The EPA raises the emission standards every few years. Buses delivered since 1995 generally have no visible exhaust.

In terms of clean transportation technologies, King County has been recognized nationally for its use of clean vehicle technologies:

- **Clean diesel:** As an additional commitment to clean air, Metro retrofitted particulate traps to the 273 1999-2000 New Flyer articulated diesel buses and the 95 1999-2000 Gillig 30 ft diesel buses. These particulate traps or exhaust filters, along with the ultra low sulfur diesel fuel Metro is now using, will further reduce diesel particulates. The 100 New Flyer 40 ft low floor diesel buses also have particulate traps.
- **Hybrid buses:** Metro has purchased a fleet of hybrid articulated buses to replace the Breda tunnel buses. The hybrid technology, by converting energy normally wasted in braking into electricity and using it to help accelerate the bus, further reduces emissions. The hybrid buses and the 30 New Flyer low floor articulated buses also have particulate traps.

- **Electric trolleybuses:** An additional component of Metro's commitment to the environment is its fleet of zero-emission electric trolley buses. These 146 buses provide clean and quiet public transportation on some of Metro's heaviest routes.

Metro investments also help build new markets for clean technologies. To meet greenhouse gas reduction goals, Metro will need to continue demonstrating and implementing cleaner vehicle technologies for its entire fleet and meet low-emission standards for its facilities.

Metro is also on the cutting edge of fuel technologies. Using a blend of 20 percent biodiesel in all appropriate vehicles, King County is the largest single user of biodiesel in Washington State which makes its fleet cleaner and helps to stimulate in-state biodiesel production.

Reducing VMT through alternatives to driving and compact, transit-supportive communities

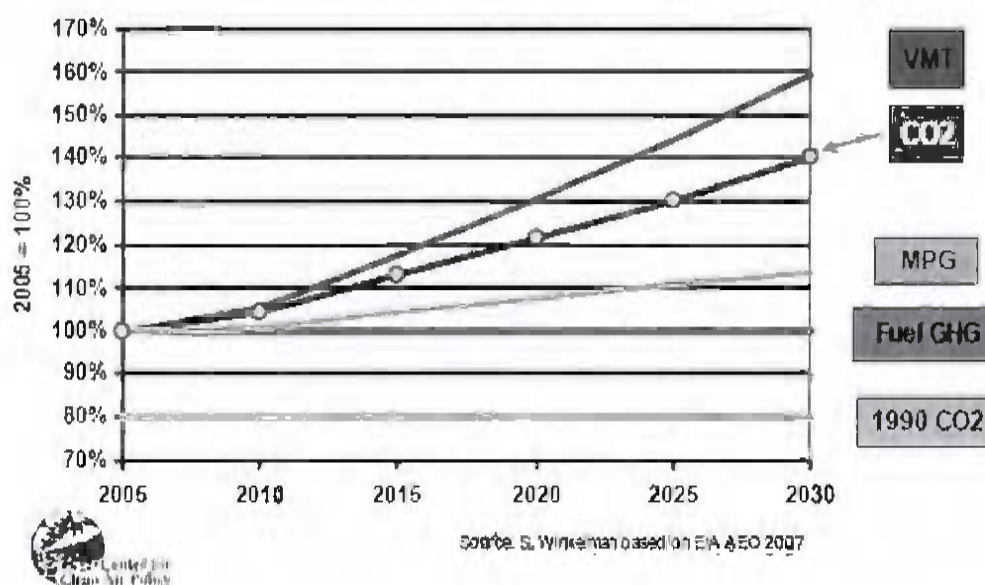
While much of the focus to date has been on advances in clean fuels and vehicles, there is growing recognition that the third leg of the stool - reducing VMT - is a critical part of a solution. To make a substantial difference in emission levels will require reducing the region's dependency on driving and eliminating trips altogether. For one, a complete turnover of the nation's fleet to fuel-efficient vehicles could take 20 to 30 years. But the real problem lies in the fact that people are driving more and more. Even stringent clean-air standards would not be sufficient to offset growth in VMT.

The amount that people drive, measured as vehicle miles traveled (VMT) has been steadily increasing over the past 25 years. The rise in VMT is due in large part to sprawling development patterns that require driving longer distances as well as limited transportation alternatives. Between 1980 and 1992, national urban VMT grew by 60 percent overall, with highway VMT growing by 88 percent.⁷ In King County, the vehicle miles traveled during the same time frame grew faster than the national average, increasing by 78.5 percent. This increase far outpaced the County's population growth of 28.9 percent and employment growth of 39.4 percent. Since then VMT in King County has continued to grow, but is more aligned with population growth.

Growth in VMT is expected to continue. The U.S. Department of Energy's Energy Information Administration (EIA) projects a 59 percent increase in national VMT from 2005 to 2030, outpacing projected population growth of 23 percent, as depicted in Figure 2. Over this time period, vehicle emission rates are projected to improve by 13 percent as more fuel efficient vehicles penetrate the nation's fleet. Under this scenario, CO₂ emissions would increase by about 40 percent, or 74 percent above 1990 levels⁸. Consequently, allowing VMT to grow on its projected path will not enable attainment of emission targets for climate stabilization. It is critical to reduce VMTs. Providing transportation alternatives through improved and expanded transportation along with compact, transit-friendly development can help address the problem.

⁷ EIA Residential Transportation Energy Consumption Survey 1994;

⁸ <http://www.ccap.org/domestic/Domestic%20Dialogue%20July%2007%20Presentations/CCAP%20Transp%20package%20discussion%20memo%207%2026%2007.pdf>

Figure 2. Projected Growth in CO₂ Emissions from Cars and Light Trucks

2) Providing transportation alternatives through public transportation

As a transportation alternative to automobile use, transit helps reduce emissions by decreasing the amount people drive, providing more fuel-efficient mobility and lessening congestion. People who have competitive transit options drive less. Numerous studies have examined the relationship of eliminated auto trips to transit trips, and the results suggest that on average, approximately 4 auto trips are not taken for every trip on transit.⁹ Households that use transit drive an average of 29 miles per day compared to 45 miles per day for households that do not use transit regularly. Transit use has also been shown to reduce petroleum use by 1.4 billion gallons annually, which translates to 4 million gallons per day.¹⁰

Fewer auto trips means fewer emissions. According to an American Public Transportation Association (APTA) report, transit reduced CO₂ emissions in the United States by an estimated 6.9 million metric tonnes in 2005.¹¹ On an individual basis, a solo commuter who switches to existing public transportation services can reduce his CO₂ emissions by 20 pounds per day, or more than 4,800 pounds per year.

A number of studies suggest that transit's influence on the built environment leads to significant reductions in driving, and consequently fuel use and greenhouse gas emissions. These reductions are attributed to transit's support of higher density land uses and a more efficient built environment, which allow for fewer miles of travel, shorter commute times, reduced road maintenance and reduced need for parking.

⁹ "Transit and VMT Reduction" Travelmatters.org

¹⁰ Bailey, L., "Public Transportation and Petroleum savings in the US: Reducing Dependence on Oil" ICF International

¹¹ Davis, T and Monica Hale, "Public Transportation's Contribution to US Greenhouse Gases", SAIC Study, September 2007

A More Robust Role for Transit

The rising awareness of the threat of global warming and the health implications of an auto-centric lifestyle add urgency to transit's existing mission. The indicators suggest a more robust role for public transportation. Transit can effectively reduce vehicle miles traveled when it is a competitive travel option – the key is making it a competitive travel option for more people on more occasions. Buses, vanpools, paratransit, streetcars and ridesharing all provide a means to access jobs and other daily needs without using a car. To provide more options for more people, Metro's Transit Now program will expand service by 20 percent by 2016.

An expanding role will require new resources

Transit is already attracting more people across the United States, as demonstrated by increasing ridership. Between 1995 and 2006, transit ridership in the US grew by 30 percent, outpacing both growth of highway use at 24 percent and population at 12 percent.¹² This has certainly proven to be the case in King County with Metro's ridership rising steadily over the past few years, showing a 15 percent increase between 2005 and 2007. In contrast, Metro transit revenues grow only with increases in sales tax revenues, with much of the increase consumed by increases in the cost to operate service. Metro service is essentially on a fixed income, while demand and expectations for transit continue to grow. To some extent, Metro can work to optimize its service efficiency by promoting increased use of transit when and where it has trips, such as off-peak times but this has only a limited affect. If ridership increases continue on their current course without additional service investment, system crowding will reach a critical point in only a few years. Further discussion of expanding the system is located in Section 5.

Attention at the state and national level

A recently released state report commissioned by Governor Gregoire, *Leading the Way on Climate Change: The Challenge of Our Time*¹³, identifies transit as an integral part of the efforts to reduce greenhouse gas emissions. The plan includes strategies to promote transit, ridesharing and commuter choice programs and to develop associated funding mechanisms.

On a national level, transit is getting attention in both the U.S. and Canada, attention that may help bring higher levels of investment. In light of the role transit can play, the American Public Transit Association (APTA) is calling for Congress to incorporate public transportation into a national climate strategy that includes providing additional funding for more public transportation investment and tax credits and other incentives to promote commute trip reduction and mixed use development to reduce dependency on driving.

Canada is also calling on transit to play a significant role in its national campaign to address climate change by strongly marketing transit and the Canadian Urban Transit Association (CUTA). The Canadian transit industry is also exploring ways to promote the reduction of greenhouse gases through operational strategies and advanced fuel and vehicle technologies.

¹² APTA presentation: "Public Transportation's Role in a Greenhouse Gas Reduction Strategy"

¹³ Washington Climate Advisory Team, "Leading the Way on Climate Change", January 2008.

3) Helping make communities more compact, healthy and active

Transit's success as a travel alternative is largely dependent upon land use and development patterns. The dispersed land use which has given rise to increased vehicle miles traveled is also closely linked to the diminishing effectiveness of transit, reduced walking and exercise in daily life, and growth in greenhouse gas emissions.

In contrast, compact development – which features a mix of land uses, strong population and employment centers, interconnection of streets and structures at a human scale – reduces the need for auto ownership, reduces driving, supports effective transit service and increases ridership.¹⁴ On a per capita basis, residents of the most compact areas of the region generate 28 percent fewer miles of travel than their suburban counterparts.¹⁵

Residential density, along with a greater mix of land use and closer intersection spacing, has also been associated with lower greenhouse gas production on a per capita basis – greenhouse gases decline steadily as density increases. Consequently, focusing growth in compact urban communities reduces greenhouse gas emissions and increases transit effectiveness while using land more efficiently.

Transit not only benefits from higher density development but can also promote it. Numerous studies have suggested that availability of transit enables more efficient development. Concentrations of transit service can bring larger numbers of pedestrians to a center or business district, so pedestrian-oriented retail uses and building designs are more likely to be attracted. Availability of transit service can also improve the market for higher-density housing development.

More compact communities also foster a healthier lifestyle. Research conducted in support of King County's Healthscape program has shown that in communities that support walking and biking, people are more active and benefit from cleaner air.

Local jurisdiction actions and policies can make transit more competitive

Transit can help reduce greenhouse gas emissions and make our communities healthier but its effectiveness depends largely on the conditions in which it operates. Making transit a feasible and desirable mobility option is easier to do in conjunction with policy and planning measures that promote transit. Transit-supportive land use as mentioned enables transit to be more effective. There are other valuable measures to support transit such as providing workplace incentives for employees, designing transit stations that are accessible by foot and bike, as well as by car and reducing the amount of parking available at major destinations.¹⁶

¹⁴ Ewing, R et al. "Growing Cooler: The Evidence on Urban Development and Climate Change"

¹⁵ Lawrence Frank & Co; LUTAQH Brochure at http://www.metrokc.gov/healthscape/publications/LUTAQH_brochure.pdf

¹⁶ "Transit and VMT Reduction", Travelmatters.org

Metro and other transit agencies are dependent to some extent on other agencies and jurisdictions to create transit-supportive environments. In terms of land use, efforts have been underway in the state and the region to address sprawl and inefficient development of land. In 1990, the State passed the Growth Management Act to focus growth in urban areas. Regional policy set by the Countywide Planning policies encourages growth in centers. King County incorporates smart growth strategies that integrate land use, transportation, public health, environmental management and economic development into all its business.

On a local level, Metro relies on jurisdictions to help create land use patterns, policies and operating conditions that make transit a more competitive option. Existing Metro strategies emphasize the mutual need of transit agencies and jurisdictions to create an environment where transit can succeed, and proposes that new service should be prioritized to reward these policies and actions. This strategy has proven challenging to implement. Metro has followed suit by focusing service delivery in the urban area and placing priority in service supporting centers.

2. Transportation System Pricing

Transportation system pricing is a strategy to improve the efficiency of the transportation system, and help reduce greenhouse gas emissions by charging vehicles for using the system. Pricing can be a powerful mechanism for balancing and managing supply and demand. Free use of highways today results in overuse of limited roadway space and overconsumption of auto use, experienced as congestion. Pricing can help manage congestion and raise revenue that in turn can be re-invested in transportation improvements. It can also encourage the shift to other modes such as ridesharing and transit, both by increasing the relative cost savings of those modes and by generating revenue which can potentially be invested in them.¹⁷

Road pricing would be accomplished through tolls, which can be varied by time of day and traffic conditions for different users in order to manage demand on a dynamic basis. Some of the approaches to tolling that have been applied elsewhere include¹⁸:

- **High occupancy toll (HOT) lanes** where single-occupant vehicles can pay to use HOV lanes when there is available capacity
- **Corridor tolling** such as traditional tolls on individual facilities
- **Cordon tolling** where all drivers are charged a toll when entering a designated area, such as a downtown district
- **System-wide congestion pricing** where fees are charged on all freeways and arterials based on actual system use

¹⁷ Evans, John E et al. "Road Value Pricing: Traveler Response to Transportation System Changes" *Transit Cooperative Research Program Report 95, Chapter 14*. Transportation Research Board, 2003.

¹⁸ An overall pricing strategy can also include parking fees and taxes but that is not addressed in this paper.

Pricing Examples From Around the World

System pricing is being successfully implemented in different forms around the world, with the primary objectives to manage congestion, raise revenue and preserve air quality. In many cases, an increase in use of transit and other public transportation services has also accompanied transportation pricing. The following examples demonstrate several of the approaches cited above, where increased transit use was also noted.

- **London:** In London, a £5 (\$8 US) cordon toll has been imposed for driving private vehicles in an eight square mile central area during weekdays as a way to reduce traffic congestion and raise revenues for transport improvements. An automated system checks vehicles entering the charging zone against a database of motorists who have paid the fee. Vehicle traffic speeds have increased and bus transit service has improved, while accidents and air pollution have declined in the city center. Public acceptance has grown and there is now support to expand the program to other parts of London.¹⁹
- **New York/New Jersey:** In the Tri-State area, the Port Authority of New York & New Jersey changed from fixed to variable priced tolls in 2001. The Port Authority analysis found that 7 percent fewer drivers used the agency's bridges and tunnels during the morning peak hour period and that 4% fewer were traveling the crossings during the afternoon peak hours. The shift of traffic out of the peak hours was accompanied by an increase in off-peak travel, as well as by increased car-pooling and transit use.
- **Stockholm, Sweden:** The city of Stockholm, Sweden, established a charge in 2006 for vehicles entering the inner city area on weekdays between 6:30 a.m. and 6:30 p.m. The charges range from the equivalent of US \$1.27 to \$2.54 per trip, with a maximum daily charge of \$8.00. The program reduced traffic volumes by about 25 percent, removing 100,000 vehicles from the roads during peak business hours and increasing public transit ridership by 40,000 users per day. About 350,000 vehicles per day pay the fee, generating roughly \$500,000 to \$2.7 million in daily revenue, not counting revenue from the \$77 fee charged to those who forget to pay the tax. Retail sales in central Stockholm shops increased compared with the same month in 2005, including significant increases in grocery sales in central neighborhoods, which probably reflects increased purchases by area residents who are more likely to shop locally rather than drive to shop.
- **San Diego's I-15 "FasTrak" Express Lanes:** The I-15 project is making better use of the existing capacity while maintaining free-flow traffic conditions on the HOV lanes through pricing and the use of dynamic pricing. It also generates \$1.2 million in annual revenues, about one-half of which is used to support transit service in the corridor.²⁰

¹⁹ Victoria Transport Policy Institute TDM Encyclopedia, "Road Pricing" at <http://www.vtpi.org/tdm/tdm35.htm>

²⁰ Evans, John E et al. "Road Value Pricing: Traveler Response to Transportation System Changes" *Transit Cooperative Research Program Report 95, Chapter 14*. Transportation Research Board, 2003, p. 21

Similarities between tolling approaches

In all of these systems, when faced with a fee, drivers may choose not to travel, or select an alternative time, route or mode of travel if they are unwilling to pay. Drivers who pay are able to drive, when they choose to with reduced congestion. If even a small portion of drivers either choose not to drive or switch modes, it can make a difference – it's been demonstrated that a relatively small shift in the proportion of peak-period trips can lead to substantial reductions in overall congestion.²¹

Short-term trip-making adjustments made by travelers in response to pricing include changes in route choice, time of travel, mode choice, trip frequency and selection of activity and destination. Route choice adjustments predominate when free highway alternatives are available. Long-term effects are less certain; road value pricing may influence not only further decisions about trip-making, but potentially also automobile ownership and location choice for residences, employers, and activities.

Tolling in Washington State

Washington State has applied tolling primarily for large bridge projects, with tolls used to finance construction and borrowing costs. More widespread use of roadway pricing as a congestion management tool has gained wide recognition among local, regional and state leaders in Washington State. King County has been an advocate of tolling as a tool to optimize the efficiency and effective capacity of the transportation system and to help limit greenhouse gas emissions.

Northwest Examples

- **SR 16 Narrows Bridge:** This past year tolls were established on the Tacoma Narrows bridge to finance construction of a second span and addition of HOV lanes. Electronic tolling has been used, and is widely considered successful.
- **SR 167 HOT(High Occupancy Toll) Lanes:** A pilot HOT lanes project is scheduled for implementation in April 2008 on SR 167. The project will convert 9 miles of High Occupancy Vehicle (HOV) lane to HOT lanes between Renton and Auburn. The HOT lanes will provide

Urban Partnership Program Status

On August 13, 2007, the USDOT selected the SR 520 Bridge Replacement and HOV Project as a priority project to receive grant funding and additional federal support under the Urban Partnership Program to implement advanced transit, technology, telecommuting, and tolling projects designed to reduce traffic congestion.

Under the Urban Partnership Agreement, the Urban Partner – comprising WSDOT, PSRC, and King County – agrees that all projects outlined in the agreement will be in operation by September 30, 2009. In exchange for these commitments, USDOT intends to allocate \$128 million in Federal grant funding according to the terms of a grant agreement to be negotiated by the Department and the Urban Partner.

²¹ Ibid

express trips for transit, vanpools and carpools while allowing solo drivers the option to pay a toll to use the lanes. Toll rates for single-occupant vehicles will vary depending on roadway usage in order to manage traffic and maintain a speed of 45 mph or better. This project will be the first application of HOT lanes in the region and is expected to optimize the balance between traffic flow and HOV speed and reliability. The project should also provide experience in safe and efficient HOT lane design and operation which can be applied to other corridors if system pricing is applied.

- **Urban Partnership Program for SR-520:** Corridor pricing could also be implemented on the SR-520 bridge under the Urban Partnership program, a new federal program that partners the U.S. Department of Transportation (USDOT) with metropolitan areas that commit to the pursuit of aggressive strategies to reduce traffic congestion. Under the Urban Partnership program, the region will apply congestion pricing in the form of tolls, and undertake aggressive transit service improvements, demand management programs, and technological applications in an effort to improve the efficiency of the transportation system.

Jointly with WSDOT and the Puget Sound Regional Council, King County has submitted a proposal to the United States Department of Transportation to establish congestion pricing on the SR 520 floating bridge as early as 2009. King County Metro Transit and WSDOT anticipate that transit demand will grow significantly in the corridor, as much as 35 percent, if tolls are established. This increased demand will require additional transit trips across the bridge during the peak and off-peak hours. Service improvements identified in *Transit Now* and by Sound Transit will accommodate off-peak demand. New trips not identified in *Transit Now* will be required during the peak. Additionally, enhancements to passenger waiting areas were included in the proposal, including shelter upgrades at the paired bus zones on either end of the bridge, and real time information at bus stops along SR 520.

Increased transit service to accommodate growth is key to the urban partnership proposal. Congestion pricing increases the price of auto travel, inducing some motorists to seek out alternative modes of transportation. Transit has been identified as a key strategy in reducing congestion under this tolling strategy. Without the proposed new service and passenger amenities, the opportunity to convert motorists into transit riders is compromised and the effectiveness of congestion pricing will be reduced.

Legislative status

Washington State legislators have taken up tolling policy in the 2008 session. Specific legislation is required to authorize tolling on any bridge or highway in Washington State. Two recent statutes address tolling, adopted in 2005 and 2002 respectively:

- **RCW 47.031 Approval of Tolls:** No toll may be imposed on new or existing highways or bridges without specific legislative authorization or upon a majority vote of the people within boundaries of the unit of government empowered to impose tolls. This section applies to chapter 47.56 RCW and to any tolls authorized under chapter 47.29 RCW, the transportation innovative partnership act of 2005.

- **RCW 47.56.075 Toll roads, facilities – Legislative authorization or regional or local sponsorship required:** The department shall approve for construction only such toll roads as the legislature specifically authorizes or such toll facilities as are specifically sponsored by a regional transportation investment district, city, town, or county.

Tolling to Achieve Multiple Objectives

Some of the most difficult challenges to implementing tolls are related to system equity and consistency issues that must be addressed for tolling to be acceptable by policymakers and voters. A decade ago the legislature unanimously passed legislation to foster public-private initiatives that would allow private entities to design, construct and operate transportation facilities and collect tolls for compensation. Of six projects selected by the state, only the SR 16 Narrows Bridge project survived. All of the others were defeated primarily because concerns about consistency and equity were not addressed – it was not readily apparent why travelers in one area would need to pay for using roads that are provided for free in other places.

Consistency is an important principle in transportation system design, as can be seen in the consistent use of signs, pavement markings and traffic controls throughout the country that allow travelers to use the road system safely wherever they go. Consistency has also been important in public acceptance of HOV lane policies. The need for consistency presents a challenge to the flexible use of tolling, both for managing demand and financing construction costs. Different roadway improvement projects will have dramatically different costs, and tolls set based on project costs will vary greatly between corridors. From the driver's point of view however, a trip that traverses more than one highway corridor is still a single trip. Balancing system objectives with needs for individual roadways is a key challenge to designing a successful toll program.

Some key principles in implementing a successful pricing program to achieve transportation demand objectives include²²:

- Choosing pricing methods that are cost effective to implement, convenient to users, and accurately reflect the costs imposed by each trip.
- Using time-variable tolls, with higher rates during peak periods and lower rates during off-peak periods, to reduce congestion.
- Applying pricing on existing roads, not just new facilities.
- Encouraging development of travel alternatives, including flextime, ridesharing, transit improvements and bicycle facilities.
- Integrating pricing with other TDM strategies that increase traveler choice and provide additional incentives to use alternative modes in the same area.
- Insuring that road pricing decisions are transparent, built on public participation and trust.

²² Victoria Transport Policy Institute TDM Encyclopedia; "Road Pricing" at <http://www.vtpi.org/tdm/tdm35.htm>

- Addressing equity concerns by insuring that all groups receive benefits, either through rebates or improved travel choices.
- Making prices as predictable as possible.

Transit Implications

The Urban Partnership program has begun to illustrate the opportunities and challenges tolling will pose for transit. Depending on many factors, including the toll rate, tolling on SR 520 is projected to increase transit ridership considerably. To accommodate the growth in demand, the Urban Partnership program calls for additional transit service in the SR 520 corridor, expanding key park-and-ride lots and integrating with Metro RapidRide Service.

However, the grants associated with the Urban Partnership are anticipated to fund fleet expansion and capital improvements only, such as park-and-ride lot expansions, improvement of key bus stops, and installation of real-time information signs. Additional funding needed for service increases will need to come from toll revenues or other new sources. Metro estimates that new Sound Transit and Metro service will cost approximately \$4 million annually. There is no funding available within the existing revenue streams of either agency for this increase.

Legislation will be needed to clarify how tolls will be used, and whether they can be applied to accommodate increases in transit demand that will result from the tolling program. Tolling is expected to result in an additional 1.2 million transit trips over SR 520 each year. Some of the increased transit demand can be accommodated by existing and already planned service expansions and route consolidations but additional capacity will be needed.

Strategies to accommodate increased transit demand on SR 520 due to tolling include improving all-day and peak-period frequency of core routes, implementing new and expanded reverse peak service to better serve dense residential areas on the west side of the lake, and adding midday service. An exact service plan will be developed through a public process, but the preliminary service concept proposes to add approximately 60 additional one-way peak-period trips on Metro and Sound Transit service on four core routes (Route 255, 271, 540, and 545). Additionally, Metro expects to provide nearly 30 additional one-way peak-period trips on existing and new peak-period only routes made possible through the proposed fleet expansion.

Other elements of the Urban Partnership program would fund and implement active traffic management and tolling infrastructure on both SR 520 and I-90 to ensure that the proposed congestion pricing can be implemented within the shortest timeline following the legislative approval. The active traffic management components that will be implemented to support pricing on SR 520 (as well as I-90) include speed harmonization, lane control, queue warning, and junction control. These techniques will be implemented using a series of variable message signs over each lane that can display numerical speed limits and lane control directions (such as green arrows and red Xs). These may be accompanied by additional lane channelization at the freeway junctions to ensure traffic move smoothly from and to the SR 520 corridor.

Tolls on I-90

To increase the effectiveness of system pricing on SR-520 and generate more revenue, tolling I-90 is also being considered. As a segment of the interstate highway system, implementation of tolls on I-90 would require federal approval as well as approval from the Washington State legislature and the State Transportation Commission. It is possible also that central Puget Sound voters would be asked to weigh in. The Washington State Legislature could provide the tolling authority as early as March 2008. As noted in the Washington State Treasurer's report, tolling I-90 may be needed to raise adequate revenue to fund the SR 520 bridge replacement and to operate the overall translake corridor efficiently. In that report, the Treasurer recommended tolling both facilities no later than July 2011.

By tolling both I-90 and SR 520, WSDOT would increase the feasibility of financing SR 520 improvements, while avoiding the negative impact that SR 520 tolls would otherwise have on I-90 traffic due to diversion. Tolling both bridges would also increase the opportunity and challenge to transit by increasing the diversion of cross-lake trips to transit, and increasing the level of transit service needed to accommodate them.

3. Transit and Construction Mitigation: Surviving and Thriving During Highway Construction

While the Regional Transportation Investment District (RTID) ballot measure failed in 2007, the campaign underscored the magnitude of work that may be needed to replace and upgrade aging freeways, including replacing the Alaskan Way viaduct and the SR 520 floating bridge, expanding I-405 and preserving I-5 through Seattle. Freeway construction projects themselves could present one of the most challenging mobility issues over the next two decades. Under the right circumstances, transit could play a role in mitigating major construction impacts, while drawing new riders that would continue to use transit when construction is complete.

This section describes strategies to mitigate construction traffic impacts with transit service and vanpools within the Central Puget Sound region, as well as conditions needed for transit mitigation to be effective. It discusses the costs, constraints, program sizing considerations, and suggests some generalized strategies that could be applied to mitigate major proposed regional corridor construction project impacts.

Conditions Needed for a Successful Transit Mitigation Program

The success of any transit mitigation effort will depend on meeting these five conditions:

1. **Transit will provide faster and more reliable travel times than driving.** This means that HOV lanes must remain available and be managed to meet the state's HOV speed and reliability standards, or an alternative route must be available that will provide a fast and reliable pathway for transit vehicles

2. **Rider incentives will be provided for using transit.** These include subsidized passes to make transit less expensive, parking management and tolling that makes driving more costly
3. **Transit fleet and operating base capacity will be sufficient** and the rate of planned service growth needs to be achievable
4. **Funding is provided for service and fleet expansion.** This needs to include service hours and vehicles that are needed to compensate for increased costs to operate existing transit services if construction results in longer trip times
5. **Comprehensive strategic and tactical marketing of transit alternatives is provided.** People should be aware of the full range of travel alternatives available to them, including vanpools, carpool formation support and traditional transit.

If these conditions are met, there will be a significant increase in transit demand during the construction period. In many cases this will mean that additional services and fleet will be required to accommodate that additional demand. If construction is not managed to provide a fast and reliable path for transit, existing transit service will be more costly and ridership will suffer. Added mitigation service would be less effective, and the cost of funding mitigation services would increase.

How much mitigation service is appropriate?

There are many different ways to determine the appropriate size of a transit mitigation program. Ideally a transit mitigation program should be sized to meet anticipated demand, assuming an aggressive effort to make transit an attractive alternative to private autos. As noted previously, this can be accomplished by combining priority treatments that give transit an edge in traffic with incentives that give it an edge in price. Individual services should be sized to stay within cost-effectiveness guidelines, and the total program should not exceed transit capacity limits.

The best approach would size service based on an estimate of the likely increase in transit demand, based on the following factors:

- **Severity and frequency of construction-related congestion.** This is different from lost capacity, since the congestion impact of lost capacity is far greater as demand approaches or exceeds capacity. If closures will be frequent or unpredictable, the perceived impact to freeway users will be greater than slow but predictable delays.
- **Strength of the underlying transit market.** The success of a mitigation program will be proportionate to the underlying fit and attractiveness of transit in the corridor.
- **Change in the relative travel time between transit and driving.** Incremental transit ridership will be driven by the combined effect of increased traffic conditions and the travel time transit will be able to achieve in HOV lanes or due to other transit priority measures.

- **Likely effectiveness of freeway tolls, and of other marketing and incentive programs.** Data exists from other transit mitigation programs that can provide a basis to estimate the effectiveness of these programs.
- **Capacity constraints.** There is a limit to the amount of transit that can be added to the existing system within a set time period that the total mitigation program cannot exceed.

A great deal needs to be known about the detailed construction program in a corridor to make this assessment, and if multiple corridors will be under construction at the same time, the information and interagency coordination needed increases. Judgment will be required to determine a reasonable level of transit mitigation to minimize negative economic impacts and maintain mitigation service that is well-used and cost-effective.

Transit needs a fast and reliable path during construction to be an effective mitigation strategy.

A foundation for effective transit mitigation service is the availability of a right-of-way for transit to operate in that is faster and more reliable than conditions faced by general traffic. Transit must provide a tangible travel time and/or reliability benefit over driving, or else drivers will have no reason to use it. For bus service, this means that HOV lanes must be open through the construction period, and they must be managed more effectively than they are today to avoid overuse and congestion. If HOV lanes can't be provided, maintained, and managed, then transit needs to have an alternative route that isn't also clogged with traffic.

If transit is to play an effective role in mitigation, coordination with the roadway agency must begin at an early stage of project development, if not earlier. The ability to maintain transit reliability needs to be a project objective from the outset, since changes to accommodate transit become more difficult as design is further along.

Changes to operating practices may also be needed. Often HOV lanes are the first lanes to be closed when lane reductions are needed or when incidents occur, probably because they have the lowest vehicle volumes. This is especially true during off-peak periods. For transit to play a meaningful mitigation role, these practices will need to be changed so that the HOV lane is not always the first lane closed or blocked.

While the best approach to keep transit moving may vary by corridor, some of the generic methods may include these:

- **Contract requirements and incentives.** Since the construction contractor makes decisions about traffic management through construction sites, WSDOT may have the greatest impact on transit priority through carefully-written contract language that sets expectations for maintaining use of HOV lanes or penalties for closure periods.
- **High occupancy toll (HOT) lanes or 2-person HOV permits.** HOV lane volumes are exceeding capacity in several corridors today, and will not provide the speed and reliability advantages they were designed for during construction without other measures to control

their volume. Consideration should be given to changing the peak period HOV definition to 3 persons or more, and allowing a limited number of 2-person carpools to buy a permit to use the lanes during peak periods during the construction period. In the longer run, a HOT lane system may be needed allowing other vehicles to use HOV lanes for a price that is set dynamically, based on congestion.

- **Use of shoulders.** If HOV lanes must be closed, or do not exist, consideration should be given to allowing buses to use freeway shoulders or other construction reroutes that are not available to general traffic. Shoulders may need to be upgraded to provide a 12' lane and full-depth pavement, but this will also be useful for other traffic shifts needed during construction. Shoulder use by buses can also help when buses must make freeway-to-freeway movements at congested interchanges where direct ramps are not available.
- **Incident management procedures.** To manage incidents and clear up incident-related congestion, HOV lanes are often opened to other traffic, or accidents are cleared to the HOV lane to allow other traffic to get by. The unfortunate side effect is that transit is also affected by the incident, and the HOV lane fails when it is needed most. Especially during major construction, it is worth reconsidering incident management practices to find ways to keep HOV lanes operating as a first priority.

Public awareness and rider incentives are needed to make sure people will take maximum advantage of mitigation service.

Another foundation for a successful transit construction mitigation program is a program to market transit service and to provide incentives to maximize transit use. If several construction projects will be underway at once, these measures will be more effective if they are applied consistently rather than as separate programs designed and implemented for each corridor.

Early-onset regional marketing will be essential to the program's success. Region-wide joint marketing will help establish a media environment where specific construction mitigation efforts can be marketed by directly targeting people most impacted by a project, given a general public awareness that alternatives are available throughout the region. Aggressive marketing, combined with service design that is easy to understand, will cause ridership to grow more rapidly, and maximize use of the service provided.

Ridership incentives are also important to promoting use of mitigation services, as well as baseline transit services that already exist in each of the impacted corridors. Based on decades of experience providing commute trip reduction programs and ridesharing services, some demand management measures have emerged that have the greatest impact. These include:

- **Pass distribution and subsidy programs.** Examples include the UPass program offered by the University of Washington and others, and FlexPass programs provided through employers throughout the region. Passes can be used on multiple transit systems, as well as for vanpools. These programs consistently result in significant increases in transit use.

- **Marketing and awareness programs.** Added transit service must be advertised in order to be well-used. A robust public information program will be needed to advise travelers of travel conditions, reroutes and travel alternatives, and this program should include information about transit options and incentive programs. Specific programs should be developed to encourage alternative work hours and telecommuting.
- **Individualized travel assistance.** Programs that provide hands-on personal assistance to identify travel options can be very effective in influencing travel behavior.
- **Ridesharing programs.** Expansion of the ridematch database and other efforts to promote carpool and vanpool formation can provide HOV alternatives for commuters for whom transit service is not as effective.
- **Commute trip reduction outreach.** Increased marketing and outreach to employers affected by the commute trip reduction law would increase employer and employee participation and decrease single-occupant commuting.

Transit Mitigation Service Strategies

Transit service should be designed to meet common-sense principles. Some of the principles that should guide mitigation service design include:

- **Enhancing existing services will be more effective and will have longer lasting benefits.** It takes time to build ridership on any transit route, and to build awareness of the service among potential customers. It is also faster to implement an increase in existing service than initiate a new service, since customer information and driver training materials are already available, facilities are in place, and there are existing customers who can spread the word to others most effectively. Customers gained on these services during the mitigation period are more likely to continue riding transit once the construction period is over than customers of an interim service that is cancelled once freeway construction is ended.
- **Mitigation provides an opportunity to increase the use of existing capacity.** The region has spent considerable sums to develop HOV lanes and high capacity transit, including commuter rail and the light rail system that will open in 2009. If projects can be phased so that construction begins after high-capacity service is in place, transit will be in a better position to play a significant mitigation role. To be successful, feeder bus routes and park-and-ride access must be in place and sufficient to allow potential riders to access the system. Where capacity also exists on the local and express bus system, it can be used more effectively if targeted marketing and incentive programs are implemented.
- **Simple is best.** If interim services are needed, they should be as simple to understand as possible. For example, a frequent service to a centrally-located park and ride lot will be easier to describe in a flyer or 10-second radio segment than a more complicated and customized service.

The cost to provide transit is related primarily to the running time of a transit route, and its productivity is affected by underlying demand, whether the service carries passengers in both directions and whether seats are used more than once during a trip due to passenger turnover along the route. Longer trips with service in one direction only will require more hours and coaches to serve the same number of riders than shorter services that operate in both directions, since for longer trips much of the bus travel time is often spent repositioning rather than carrying passengers. Express services that collect riders along local streets are more expensive to operate than those that originate at a park-and-ride lot due to their longer travel time.

Vanpools are effective for more dispersed origins and destinations

Vanpooling provides one of the most cost-effective and flexible strategies for mitigating the impacts of construction projects. As a rule, vanpool vehicles can be purchased faster than buses and they can be moved from one project to another as demand levels change. Several strategies may increase the demand for vanpooling along construction corridors.

- **Priority:** Vanpools should enjoy the same priority measures that allow speedy travel through construction zones as buses.
- **Fleet Availability:** Anticipating that the demand for vanpools will increase once these major construction projects get underway, additional vanpool vans should be available to meet these demands.
- **Marketing:** People traveling through construction zones should be aware of the full range of travel alternatives available to them, including vanpools.

If the region's providers continue to recover a substantial portion of operating costs from fares, the additional public funding required to expand the region's vanpool programs would be limited to the public operating subsidy and capital costs associated with expanding the program.

Recent Experience Mitigating I-405 and I-5 Construction Impacts

Over the past two years King County Metro has collaborated with WSDOT to mitigate the congestion impacts due to construction in the I-405 corridor. By agreement between the agencies, WSDOT funded additional transit service, which was designed and implemented by Metro. One new route was added between Kenmore and Overlake, and additional service was added to another existing route to provide more capacity and more attractive service as an alternative to driving through the construction area.

To support these services and other public transportation options in the corridor, several marketing and incentive programs were also funded, including among others:

- Vanpool relocation program for up to 18 vanpools
- Bellevue Employer Outreach Program to 1225 employers
- South King County Employer Outreach Program
- 2 Residential Outreach neighborhood incentive programs

- Employee Outreach Program to approximately 2000 service employees
- Vanshare Promotion to form six new vanpool groups
- Bicycle Promotion and installation of 8 bike lockers
- Carpool Promotion campaign

This agreement set a new precedent for use of WSDOT funds for transit service, predicated on its success mitigating the effects of WSDOT's construction activities.

These efforts illustrate both the potential and limitations to using transit as a mitigation measure for roadway construction. The program has drawn new riders to transit, but now that the construction period is coming to an end, either new sustainable revenues need to be identified to make these mitigation services permanent or riders will need to find another travel option. The program was also implemented for a project that had relatively minor traffic impacts, and did not provide a fast alternative path for transit.

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Overview: State and county plans that influence transit

There are several state and county plans that influence transit planning. Below are summaries of plans that affect Metro's planning and operations.

King County Healthscape

Program Website: <http://www.kingcounty.gov/transportation/HealthScape.aspx>

HealthScape is King County's effort to promote public health by improving how communities are built. The results of a past study in King County clearly showed that changes in land use patterns and approaches to transportation investment can help the county achieve its goals related to smart growth, land use, transit efficiency, and improved air quality and public health. Communities with compact neighborhoods, well-connected street networks, mixed use, and orientation to transit deliver benefits to their residents in the form of less automobile dependency, more opportunities to be physically active and healthier, and better air quality at the regional scale. The current focus of the Healthscape program is to develop and implement tools for Development Impact Assessment and assessing benefits of non-motorized transportation investments. Many of the elements studied by Healthscapes that support healthy outcomes also make transit service more efficient and effective, including mixed land uses, well-connected streets, and infrastructure to support walking and bicycling. The Transit Division identified community health as an emerging issue in its Strategic Plan for Public Transportation and is planning to include supporting healthy communities in its Comprehensive Plan and Strategic Plan updates in 2010.

King County Equity and Social Justice Initiative

Initiative website: <http://www.kingcounty.gov/exec/equity.aspx>

The King County Equity and Social Justice Initiative began in 2008 with the goal of eliminating long-standing and persistent inequities and social injustices. To reach the goal of the initiative, all communities must be equipped with the means to provide individuals with access to livable wage, affordable housing, quality education, quality health care, and safe and vibrant neighborhoods. King County is applying the principles of the equity and social justice through steps like intentionally including consideration of equity in policy and decision-making, improving internal education and communication about equity issues, facilitating community partnerships, and improving delivery of county services to take specific actions to support equity and social justice. The Transit Division's Strategic Plan for Public Transportation include strategies to provide federally-required ADA paratransit service through the Access program, provide taxi scrip to low-income residents of King County, provide bus travel training, and implement the Community Access Program (CAP) for seniors and those with disabilities.

Washington State Climate Change Report

State Climate Change Information: <http://www.ecy.wa.gov/climatechange/index.htm>
 Leading the Way: Implementing Practical Solutions to the Climate Change Challenge:
http://www.ecy.wa.gov/climatechange/2008CATdocs/ltw_app_v2.pdf

The State of Washington recognizes the opportunities and challenges presented by climate change. *Leading the Way* report lists "most promising" strategies to address climate change for numerous areas including transportation. For transportation, expanding transit and ridesharing, and transportation system pricing (e.g. tolling) are listed as recommended strategies. Specific recommended actions include implementing transit priority measures and increasing HOV capacity, prioritizing transit

investment in energy grant programs and using toll revenues for transit. The Transit Division has goals and strategies that tie in closely with the state recommendations. The Transit Division Comprehensive Plan includes a goal related to environmental quality and the Strategic Plan for Public Transportation has strategies aimed at making transit more competitive with the automobile, improve transit access, and reduce SOV travel.

King County Energy Plan

Plan: <http://your.kingcounty.gov/dnrp/measures/documents/pdf/KC-Energy-Plan-2008.pdf>

The purpose of the King County Energy Plan is to guide King County's planning for future use, generation and conservation of energy and the achievement of the following mandates, as set forth in the 2006 Renewable Energy Order:

- 50 percent of King County's non-transit energy use come from renewable sources by 2012,
- 35 percent of King County's transit energy use come from efficiencies and renewable sources by 2015, and
- 50 percent of King County's transit energy use comes from efficiencies and renewable sources by 2020.

The Energy Plan refers to several actions to be undertaken by Metro Transit in pursuit of these goals, including expanded hybrid electric bus use, hybrid electric support vehicles, synthetic oils, synthetic lubricants, biodiesel when cost effective, ethanol and extended oil drain intervals with conventional oils. In addition, the plan set energy reduction goals for each King County division. The overall energy reduction goal established for Transit Division rolling stock is approximately 327 BTU per ride per year or a total division reduction of 36,161 MMBTU per year for the 5 years through 2012.

2007 King County Climate Plan

Plan: <http://your.kingcounty.gov/exec/news/2007/pdf/climateplan.pdf>

The 2007 King County Climate Plan provides an overview of how King County seeks to reduce greenhouse gas emissions. It works to anticipate and adapt to projected climate change impacts, based on best available science, and builds on over 15 years of efforts across King County departments to stop the causes of climate change and to prepare for regional climate change impacts. The plan set in motion a process to incorporate climate change mitigation and adaptation as critical factors in the cost-benefit evaluations of all decisions made by King County. It is a companion plan to the 2007 King County Energy Plan, summarized above.

The transportation sector is identified at the region's largest source of greenhouse gas emissions and the second largest category of greenhouse gas emissions generated by King County government operations. Accordingly, the plan identifies several goals and actions targeted at reducing emissions from transportation sources. Of note is the goal for King County to *expand and encourage use of alternative modes of transportation such as public transit, carpooling, car-sharing, bicycle and pedestrian trails, sidewalks and non-motorized travel*. The plan indicates that King County will provide and promote the use of increased and improved public transit service as an action to pursue this goal.

Transit Funding Crisis Across the Nation

King County Metro is facing an unprecedented funding crisis. To balance the 2010/2011 transit budget required a combination of fare increases, staff layoffs, capital program cuts, spending reserves, levying a new property tax, implementing operating efficiencies and deferring planned service investment.

Metro is not the only transit agency facing such challenges however. All across the nation, transit agencies are faced with similar situations requiring tough choices. San Francisco, Chicago, New York and Washington D.C. are just some of the examples of metropolitan regions experiencing huge transit budget deficits, leading to service cuts, worker layoffs and fare increases.

The following articles include an overview of what is happening across the country and provide more detailed discussion of a sampling of certain agencies, including some of Metro's neighbors at Community Transit in Snohomish County and Tri-Met in Portland, Oregon.

Stranded at the Station

Report documents the devastation of transit cuts and fare increases on America's communities

Americans across the country, in towns large and small, are being hurt by fare increases and draconian cuts in public transportation service, an epidemic that did not have to happen, according to a new report from Transportation for America and the **Transportation Equity Network**.

Stranded at the Station: The Impact of the Financial Crisis In Public Transportation is the first systematic analysis of the conundrum faced by communities and their transit systems: Historic ridership and levels of demand for service, coupled with the worst funding crisis in decades.

The nationwide demand for public transportation is at historic levels and growing, but funding for the day-to-day operations of these transit services is built on an unstable foundation. This report shows that without federal support, many will likely be unable to meet the demand now and in the future.

Many transit agencies across the country have cut service, raised fares or laid off workers to deal with shrinking budgets, severely affecting the people who depend on regular, reliable service in order to access jobs, social services and education everyday. Nearly **90 percent** of transit systems have had to raise fares or cut service in the past year and among the 25 largest transit operators, 10 agencies are raising fares more than **13 percent**.

Americans without access to an alternative form of transportation, the majority of whom are older, African-American or Hispanic and senior populations, are being left stranded without access to lifeline services.

As our **United States of Transit Cutbacks** map from earlier this year and the new maps from this report show, these cuts reach across America from coast to coast.

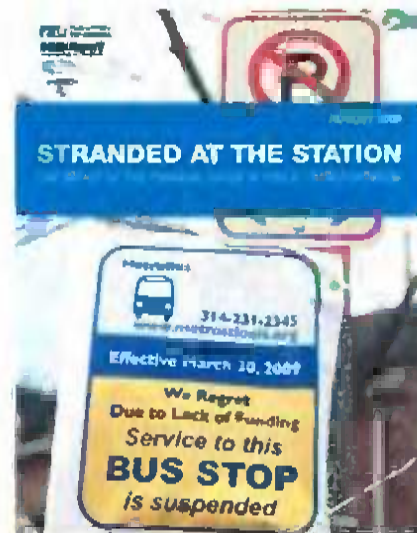


FIGURE 5 2009 ~~FARE~~ INCREASES, SERVICE REDUCTIONS & STAFF REDUCTIONS
(EXPECTED & PROPOSED)

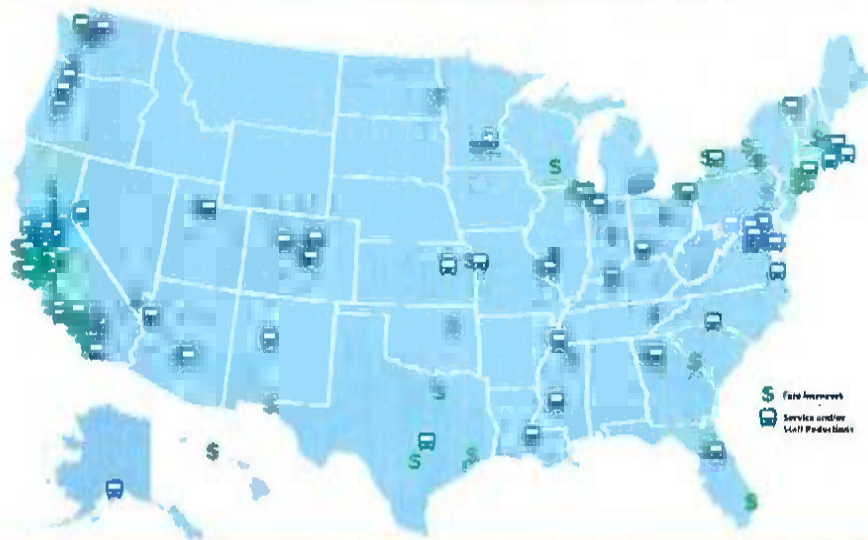
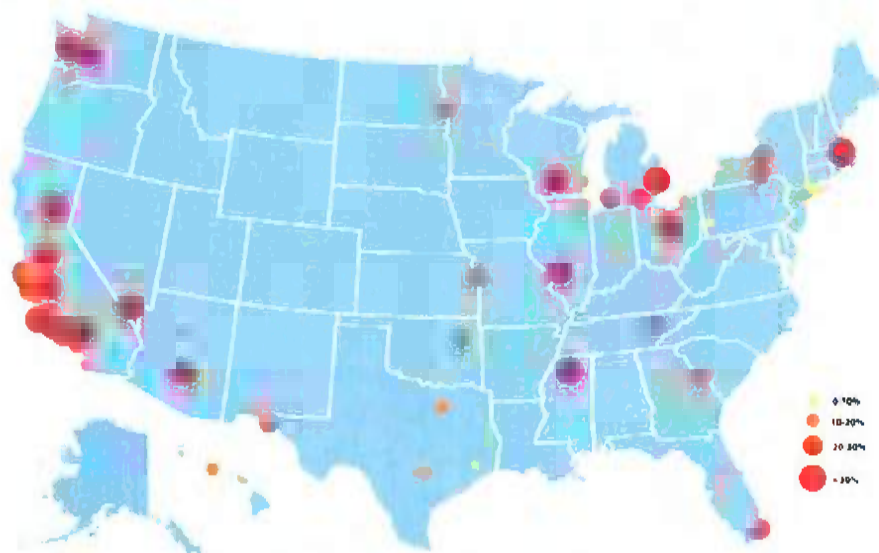


FIGURE 6 2009 INCREASES IN ADULT CASH FARE
(EXPECTED & PROPOSED)



What can we do about it?

TOP 10 PROJECTED DEFICITS AS A PERCENTAGE OF OPERATING BUDGET

1.	MARTA (Atlanta)	18%
2.	Muni (San Francisco)	17%
3.	MTA (New York)	14%
4.	CTA (Chicago)	12%
5.	DART (Dallas)	12%
6.	WMATA (Washington, DC)	12%
7.	MBTA (Boston)	11%
8.	BART (San Francisco)	8%
9.	Metro Transit (Minneapolis/St. Paul)	8%
10.	TriMet (Portland, OR)	7%

Existing federal policy is out of date and out of touch with the reality of public transportation's growing importance to Americans and their communities. Only **18 cents** of every transportation dollar supports transit and to make that situation worse, communities are required to supply a much larger matching amount compared to federally-supported highways.

A local community has to provide a dollar for each federal dollar received in transit funding, versus providing just \$0.25 for each federal dollar received for highways.

Large transit systems do not have the flexibility to spend their federal formula funds on keeping buses and trains running and preserving reliable, high-quality service. Instead, they are restricted to spending their funds on capital needs — on construction and new equipment that they might not afford to operate. So they might be able to buy a new bus, but can't afford to pay a new driver to operate it.

The upcoming transportation authorization is a once-in-a-generation opportunity to create the safe, clean and smart transportation system necessary to ensure all Americans have the options they need to succeed in today's economy and to move our country forward.

Chairman James Oberstar and his House Transportation and Infrastructure Committee are to be commended for drafting a six-year bill that would increase the investment in public transit and restore some flexibility in how federal funds are used.

PERCENTAGE INCREASES IN BASE FARES

1. Muni (San Francisco)	33%
2. MBTA (Boston)	33%
3. BART (San Francisco)	17%
4. DART (Dallas)	17%
5. King County Metro (Seattle)	17%
6. RTD (Denver)	14%
7. MARTA (Atlanta)	14%
8. MTA New York City Transit (New York)	13%
9. CTA (Chicago)	13%
10. TheBus (Honolulu)	13%
11. MTA Long Island Rail Road (New York)	10%
12. MTA Metro North	10%
13. Metro (Houston)	4%

The full transportation bill could be further improved by incorporating [HR 2746](#), sponsored by representatives Russ Carnahan (D-MO) and Doris Matsui (D-CA). HR 2746 would cut the red tape preventing large transit agencies from using federal formula transportation funds they receive to maintain service and affordable fares.

This bill allows federal transit funds to be spent on operating assistance if a state or local government also increases its level of support for the transit system, leveraging federal funds to increase overall public transportation funding levels. The bill also allows transit systems to use federal funds for operating expenses to achieve energy savings or greenhouse gas reductions through expanded service.

The current crisis is not just a short-term problem. Unless it becomes a catalyst for change, given the scale of this recession, next year's transit agency budgets are unlikely to be much better. Even in a healthier economy, transit riders will remain caught up in a fluid, unpredictable, and ultimately unhealthy situation.

We can and must do better.

TriMet faces \$27 million in cuts for FY11 budget

February 10, 2010

Portion of shortfall will be offset by service cuts; 3-month public process begins with rider input and open houses

Due to the continued economic recession and declining payroll tax revenues, TriMet must cut its FY11 budget by \$27 million, which includes a 5 percent administrative cut, a salary and hiring freeze, reductions to bus and MAX service, and a five-cent fare increase.

Last year, TriMet faced a \$31 million budget shortfall and cut 9 percent to all areas except service, and implemented a salary and hiring freeze, layoffs and executive furloughs before looking to fill the balance of the shortfall by cutting bus and MAX service. In the past 18 months, TriMet staff has been reduced by more than 120 employees.

TriMet faces a \$27 million budget shortfall for FY11, and is using \$7.2 million in federal stimulus funds to reduce the budget gap to \$20 million. With the economy still in deep recession, TriMet expects payroll tax receipts to be down \$15 million and passenger revenue down \$8 million, with other assorted expenses adding up to a \$27 million shortfall. TriMet gets 55 percent of its operating revenue from payroll taxes.

TriMet needs to cut approximately \$8.7 million in transit service. Today, TriMet begins a three-month comment and refinement phase where the public can help shape the final service cut plan. Service changes take effect September 2010.

Criteria for service cuts

- Low ridership bus lines
- Low ridership trips on bus lines and MAX
- Alternative service available nearby
- Least impact to riders and available capacity on the vehicle

Ridership changes

The ongoing recession, double digit unemployment and previous cuts to service have impacted transit ridership. Bus ridership has been declining since March 2009, and in the past six months, bus ridership has declined 10 percent, nearly 16 percent during rush hour and nearly 5 percent systemwide. MAX also saw a drop in ridership since March, but it has been boosted since the Green Line opened in September. As TriMet looked to propose cuts, it focused on how ridership has changed so that service can better match ridership demand.

4 bus lines proposed to be discontinued

- Four bus lines are proposed to be eliminated due to low ridership and/or have alternative service nearby. Low ridership lines have less than 15 rides an hour: 27-Market/Main, 65-Marquam Hill/Barbur Blvd, 154-Willamette and 157-Happy Valley.
- Three lines are proposed to have some or all weekend service eliminated due to low ridership: 32-Oatfield (Saturday service), 45-Garden Home (Sunday service) and 80-Kane/Troutdale (both Saturday and Sunday service).

Proposed bus frequency changes

TriMet is proposing that the frequency of several lines be reduced to match ridership demand with vehicle capacity.

- Weekday schedule reductions on 24 bus lines:
  - Reduce the frequency by 2-3 minutes during non-rush hour and by 2-10 minutes in the evenings on 13 lines (Lines 4, 6, 8, 9, 12, 14, 15, 17, 20, 33, 57, 70, 71); four of those lines will have 2-3 minute changes during rush hour (33, 57, 70, 71).
  - On 11 lines, reduce the frequency 2-10 minutes throughout various times during the service day (16, 24, 32, 43, 44, 52, 58, 62, 68, 73, 77).
- Weekend schedule reductions: reduce the frequency of 13 bus lines up to 6 minutes (4, 6, 8, 9, 12, 14, 15, 20, 33, 54/56, 57, 71, 75); frequency change from every 30 to every 60 minutes on Line 58 on Sundays.
- Eliminate select trips: eliminate select weekday trips on six lines where capacity is available (1, 51, 85, 92, 94, 99).
- Reduce span of service on weekdays and/or weekends: eliminate the first and/or last trip with low ridership on 15 lines (8, 9, 24, 28, 32, 45, 48, 51, 55, 70, 73, 85, 87, 88, 155); on four of those lines, more than the first/last trip will be eliminated (48, 70, 73, 155).
- Eliminate low-ridership portion of route: eliminate a portion of four routes with low ridership (33, 43, 53, 67).

More details

MAX service

The start and end times of MAX service and rush hour service remain the same. TriMet is proposing to reduce frequency by 2 minutes on all lines midday, evenings and weekends, from every 15 minutes to every 17 minutes in off peak

hours. In the early mornings and late evening, schedules would be adjusted by up to four minutes.

Fare increase

TriMet is also proposing to increase fares five cents to help keep pace with inflation. TriMet typically increases fares nearly every year. The last fare increase was September 2008.

Public comment period

Public comments for this phase are accepted beginning today through Friday, April 23. In addition to the service cuts, the public can comment on the proposed fare increase. All information is posted on trimet.org. Comment via:

Email: [Feedback form](#)

Comment line: 503-962-5806

Fax: 503-962-6469

Mail: TriMet-MK2, 4012 SE 17th Ave., Portland, OR 97202

TTY: 503-238-5811 (7:30 a.m. to 5:30 p.m. weekdays)

Open Houses

TriMet will be holding open houses to answer questions and gather input from the public:

Tuesday, February 23, 2010, 4:30-6:30 p.m.

Portland Building
Conference Room C
1120 SW 5th Avenue
Portland, OR 97204

[Plan a trip to this meeting](#)

Wednesday, February 24, 2010, 4:30-6:30 p.m.

Pioneer Community Center
615 5th Street
Oregon City, OR 97045

[Plan a trip to this meeting](#)

Wednesday, March 3, 2010, 4:30-6:30 p.m.

Beaverton Community Center
12350 SW 5th Street, Suite 100
Beaverton, OR 97005

[Plan a trip to this meeting](#)

Thursday, March 4, 2010, 4:30-6:30 p.m.

Gresham City Hall
Oregon Trail Room
1333 NW Eastman Parkway
Gresham, OR 97030

[Plan a trip to this meeting](#)

June service changes

TriMet will adjust summer schedules as it regularly does to match service with ridership demand. On 10 lines, schedules will be adjusted by 2-3 minutes during rush hour (Lines 6, 8, 9, 12, 14, 15, 33, 70, 73, 96); a few select trips with low ridership will be eliminated (10, 19); on Line 35 expand headways from every 30 to every 45 minutes on Sundays. Line 72 will have schedules realigned to match ridership, since many former riders now ride the Green Line. Line 72 will maintain at least 15-minute or better service the same hours as today. June changes begin June 6, 2010. The June changes result in approximately \$2.5 million in savings.

The New York Times

ROOM DEBATE

A Running Commentary on the News

DECEMBER 16, 2009, 7:32 PM

Why Is the M.T.A. Always in Trouble?

By THE EDITORS

Mario Tama/Getty Images

Updated, Dec. 17, 12:05 p.m. | Paul Larrousse of the National Transit Institute joins the discussion. He points out that the M.T.A. is hardly alone in its troubles: 90 percent of transit systems have raised fares and/or cut service in the past year.

The Metropolitan Transportation Authority, which is struggling to fill a sudden budget gap of \$400 million, voted to approve a slate of cuts, including phasing out free student fares, reducing or ending service on dozens of bus lines and eliminating two subway lines, the W and the Z.

The current financial crisis came up quickly as expected revenues plummeted. For riders, the M.T.A. seems to be in perpetual trouble, with threats of fare increases and service cuts even in good times. A 7.5 percent fare increase is already scheduled for 2011. Strong union contracts and an aging infrastructure make cost control challenging. What savings and efficiencies might be achieved immediately, and what cuts need to be done in the out years?

Related

- Broad Service Cuts Stir Many Complaints
- No W or Z? Mapmakers, Grab Your Pens

- Joshua B. Freeman, history professor and author
- Nicole Gelinas, Manhattan Institute
- Neysa Pranger, Regional Plan Association
- Paul Larrousse, National Transit Institute

Underfunded Since the 1940s

Joshua B. Freeman is professor of history at Queens College and the Graduate Center of the City University of New York. He is the author of "Working-Class New York: Life and Labor since World War II" and "In Transit: The Transport Workers Union in New York City, 1933-1966."

No modern mass transit system can effectively operate without substantial subsidies. Ever since New York City took over the bus and subway system in the 1940s it has been chronically underfunded, with the situation getting worse in recent decades.

The only possible solution to the perpetual transit crisis is

The M.T.A.'s chronic inability to

increased government funding. The federal, state and local governments must work together to shift subsidies away from road travel and other high energy transportation systems to more efficient ones, like trains, buses and subways, while making sure that businesses and real estate owners who benefit from mass transit pay their fair share.

come up with believable, accurate financial forecasts suggests a need for a house cleaning.

Service cuts make no sense. They will undo much of the progress the M.T.A. has made in recent years in attracting riders and penalize those who did not cause the current mess. While the agency has a point in arguing that the city should contribute toward the cost of carrying school children, its threat to cut off their free fares is yet another political stunt of the sort that has undermined public backing for the agency.

Close

No doubt the M.T.A. could cut some of its very large administrative costs. I would start by firing the people who decided to challenge in court the award that resulted from arbitration with the Transport Workers Union (to which the M.T.A. had enthusiastically agreed), a political charade, bound to fail, that postponed a realistic reckoning with the agency budget and needlessly alienated the work force. (The chronic inability of the M.T.A. to come up with believable, accurate financial forecasts suggests a broader house cleaning may be in order.)

Transit workers have dirty, difficult, dangerous jobs, for which they get reasonably good pay and benefits. If we are going to start cutting overly generous compensation, let's begin by putting higher city and state taxes on those in the financial industry who tanked the economy, leading to the M.T.A.'s problems. We can work down from there. It will take quite some time to get to transit workers.

Get Smart With Labor

Nicole Gelinas, a contributing editor to the Manhattan Institute City Journal, is author of "After the Fall: Saving Capitalism from Wall Street — and Washington."

Seven months ago, the state-run Metropolitan Transportation Authority won a \$2.1 billion bailout. Today, it is preparing to make the same "draconian" service cuts that it threatened last year.

The problem is that New York's labor costs are unsustainable and consume money for physical investments. The deficit is a leadership deficit.

If the authority's costs had kept up with inflation during the last half-decade, the M.T.A. would not face big deficits today. Instead, labor costs have increased more than 40 percent,

Powerful unions cannot continue to enjoy outdated compensation and rule packages at the expense of

driven by pension and health care benefits. Next year, pensions and health care will cost the authority nearly \$2.2 billion, more than one-fifth of its cash operating expenses.

riders and New York's economic future.

Debt costs are up, too, and the reason for so much debt is that labor costs require so much cash.

These problems are not temporary — caused by the recession — but indefinite, caused by poor political decisions. The authority's unionized workers in New York City can retire as early as 55 with generous health benefits. Long Island Rail Road benefits are legendary.

Close

This is not compensation for low wages. Average pay for the authority's city union members is more than \$64,000. Subway and bus workers recently won an 11.5 percent raise over three years, costing the M.T.A. \$193 million in 2010, more than service cuts will save. Similar generosity at state government is why Albany had to take away \$143 million of the authority's money for its own deficit. Work rules, too, add costs.

Immediately, the authority cannot do much about these costs, which are contractual. M.T.A. chief Jay Walder is cutting the non-union budget, including, possibly, 10 percent pay cuts, and there's plenty more to do administratively. "It's apparent to me that we don't operate in a way that ensures that every taxpayer dollar that we receive is being used as effectively as possible," Walder said Wednesday. But administrative cuts are not enough to avoid public pain.

Longer term, it comes down to political leadership from Gov. David Paterson, Mayor Michael Bloomberg and lawmakers. Skilled workers should be paid fairly, and current workers have a right to the pensions that Albany has promised them. But powerful unions cannot continue to enjoy outdated compensation and rule packages at the expense of riders and New York's economic future.

Increase State Support

Neysa Pranger, director of public affairs at the Regional Plan Association, has been involved in several statewide efforts to finance transportation needs.

The region's transit system is in hot water again. An under-performing payroll tax, greater than expected operating expenses and cuts in state aid have turned the M.T.A. into the perennial Grinch, with cuts to service and student transit passes.

Where do we go from here? The M.T.A. will meet again in early 2010 after a round of public hearings to approve or modify Wednesday's actions. Here are some ideas.

Katie Orlinsky for the New York Times As part of M.T.A.'s service cuts, the W line will be eliminated.

First, the city and state should pitch in to cover student transit passes. While the city's

contribution has remained stable since an agreement between the M.T.A., city and state split the burden equally amongst the three entities in 1995, the state's portion has slipped and the M.T.A. has had to make a larger and larger percentage of the cost.

Second, the M.T.A. must find its own internal savings. Jay Walder, the authority's chairman, on Wednesday proposed a 10 percent salary reduction to all the non-union employees and a commitment to "take the place apart" to find savings in the coming year.

Close

He should expedite this process. But much like other proposals on the table, these actions will not be enough to close the gap on their own.

Third, the state and city must not give up on finding a long term source of revenue to finance transit expansion and operating needs. At the climate change talks in Copenhagen, Mayor Bloomberg floated the notion reviving variable tolling on the city's bridges. While this idea has encountered many obstacles in the recent past, tolling is being embraced around the globe as a sensible user fee system.

Lastly, the House of Representatives on Wednesday marked up bills for a second round of stimulus funding aimed at saving and creating jobs. Part of this provision will allow transit agencies to use a small portion of these funds on operations. While cities must ultimately be responsible for supporting transit operations, a one-shot provision to keep buses and subways running in a struggling economy should be considered.

Transit Troubles Everywhere

Paul Larrousse is the director of the National Transit Institute in the Edward J. Bloustein School of Planning and Public Policy at Rutgers University. He has been a general manager of transit systems in Wisconsin, Michigan and Pennsylvania.

The financial situation facing the New York M.T.A. is not unique in the transit industry given the recession and the revenue shortfalls in the public sector. There is no quick or simple fix to this problem. The American Public Transportation Association reported that 90 percent of transit systems have raised fares and/or cut service in the past year. Budget shortfalls are reported by the transit industry on a daily basis.

Cutting service and raising fares are always the least desirable options, but for many systems weathering the downturn there are no other options.

The aging of the transit workforce raises tough pension and health care issues.

Adding new technologies, improved vehicles or system upgrades may help improve efficiencies. But these efforts will not, in and of themselves, close the huge budget gaps. Further, these solutions also require financial investments and may take a long time to put in place.

Many people say that the solution lies in re-negotiating transit labor contracts. The unions are aware of the industry's problems and have not been unresponsive to the current economic situation. But the transit workforce is rapidly aging, and that presents issues in funding current and future benefits like pensions and health care. Also, since most transit workers are public employees, the laws governing public sector employment can constrain the ability to change labor agreements.

The Seattle Times

Thursday, March 4, 2010 - Page updated at 12:46 AM

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Snohomish County may lose Sunday bus service

By Mike Lindblom
Seattle Times transportation reporter

Bob Fletcher took the bus Sunday to escort his foster daughter to a meetup at Aurora Village, then back north on Highway 99 to Home Depot in South Everett, followed by Lowe's in Lynnwood, finding supplies to build a rath canopy for his wheelchair.

He'll spend his Sundays closer to home after mid-June, if Community Transit board members Thursday approve a drastic proposal to eliminate service on Sundays and holidays.

By cutting Sundays, managers are striving to preserve the bulk of the busier weekday service, although some cuts are planned there, too.

After putting up a brave face through a gas-price spike followed by recession, Snohomish County's public-transit agency is succumbing to a 15 percent drop in sales-tax revenue since 2007.

Its response points to a profound shift in the mission of public transit, instead of serving mainly as a social-safety net for those who cannot drive, Community Transit has focused on surmounting gridlock for commuters.

In fact, cheaper local fares are rising 25 cents while the higher-priced commuter fares are not. The agency is still buying new "Double Tail" bi-level buses for long commute routes into King County and keeping its promise of a bus every 10 minutes on the new Swift bus-rapid transit system on Highway 99 (except Sundays).

"It's not just about maintaining commuter service. It's about maintaining our core local service as well, so that when the economy improves, we still have a good core to build from," said spokesman Tom Pearce. "It's terrible for the people who are losing their Sunday service, it's the absolute last resort."

Community Transit provides bus and vanpool service throughout most of Snohomish County, and to downtown Seattle, the University of Washington and the Eastside.

Some numbers:

The average Sunday sees about 8,400 boardings, compared with 35,000 per weekday. Despite fewer bus runs, Sundays require similar overhead, including supervisors and mechanics. So the agency would need to cut 1.7 hours of bus travel per weekday to preserve 1 hour of Sunday service.

The 'community'

Fletcher, 64, rides the bus 20 to 30 times a week. A former small-scale land developer with a love of backhoes, he lost most of his eyesight to diabetes, and his mobility to degenerative-bone diseases. He rides the bus partly to keep his sanity, rather than molder inside his home near the Ash Way Park-and-Ride just north of Lynnwood.



ERIKA SCHULTZ / THE SEATTLE TIMES
Bob Fletcher, here at the Aurora Village Transit Center in Shoreline, opposes a Community Transit proposal to cut Sunday bus service. He believes Community Transit did a poor job of engaging the community and presented no alternatives.

Wednesday morning, he rode crosstown to Sharl's in Mill Creek for coffee with a friend; other days he'll hit Costco to eat the food samples.

Fletcher agrees that transit CEO Joyce Eleanor is doing a logical thing, from a purely fiscal point of view.

But he also meets elderly women who take a bus to church, and teens who need buses to go to work at Alderwood mall. He's a huge fan of Swift, but on Sunday there will be a gap between Everett and the King County line for anyone travelling Highway 99.

"I will be less affected than a lot of people. I'm more concerned with people who have got to have it," he says.

Says his son Michael, a limousine driver: "They're taking the 'community' out of Community Transit."

Kathleen Custer, president of Amalgamated Transit Union Local 1576, said the agency hasn't taken a serious look at alternatives. The union Thursday will call for trimming management and deferring certain capital projects, including the double-decker buses and a high-tech vehicle-tracking system.

Sharing the pain

Transit officials say commuters will share the pain.

For example, people leaving the downtown Edmonds ferry terminal would switch buses at the Edmonds Park-and-Ride near Highway 99, instead of taking a one-seat ride into Seattle.

Twelve routes would be eliminated, others would be less frequent, and some bus routes would end at park-and-ride lots instead of reaching outlying neighborhoods. Some workers at Boeing have seethed over proposals to reduce routes to the Everett plant from small towns.

Sunday service has been suspended here before, for two years following Tim Eyman's Initiative 695 in 1999, when voters supported a statewide cut in car-tab taxes.

Snohomish County isn't the only place sacrificing Sunday buses.

According to an American Public Transportation Association (APTA) survey last year, 54 percent of transit agencies that made service cuts either reduced or eliminated weekend runs. (Meanwhile, 54 percent also reduced peak-time travel.)

Kitsap Transit suspended Sunday service in February 2009.

King County Metro, on the other hand, has not proposed service cuts, though it warns they might be looming.

Nationally, transit agencies have seen a surge in what they call "choice" riders in the past five years, as former drivers seek refuge from gas prices and traffic. That means about 60 percent of riders are travelling to or from work, said APTA spokeswoman Virginia Miller.

That's a big motivation for transit politicians to cater to commuters, though Miller emphasizes that "all types of people ride public transit."

Locally, the plight of Community Transit and other agencies is being invoked by transit boosters in Olympia, where Rep. Marko Lias, D-Mukilteo, has co-sponsored an amendment to let transit boards enact a \$20 car-tab fee.

More than 500 people have attended public meetings, and 800 comments have been filed, about the proposed Community Transit cuts.

Just about every Sunday bus rider is a weekday rider too, Pearce emphasizes.

Those include Bob Fletcher, a gadfly to transit officials. He's having tests at UW Medical Center on Thursday. He'll make the 3 p.m. board meeting in South Everett ~~at~~ if the buses bring him back in time.

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GOVERNMENT/POLITICS

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Pierce Transit plans cuts

Buses: Without new revenue by 2012, agency might sharply reduce service

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Pierce Transit might eliminate local bus service in much of the county in 2012 unless it can find new money to balance its budget.

Service would be eliminated in most of East Pierce County, Northeast Tacoma, Gig Harbor and Steilacoom under one scenario described by Pierce Transit officials in a meeting with The News Tribune's editorial board Wednesday.

One solution: a three-tenths of 1 percent sales tax increase that would have to be approved by voters. New state or federal revenue also could help save bus service.

Pierce Transit chief executive Lynne Griffith said the agency faces an unprecedented funding crisis as the recession pummels its chief source of revenue: the sales tax.

Without new funding, "we'll inevitably hit the edge of the cliff and have to make some radical changes," Griffith said.

Currently Pierce Transit provides bus, shuttle and vanpool services across most of Pierce County. Last year the agency saw 15.8 million passenger boardings.

But while use of local transit services was up nearly 15 percent from 2006, the agency has struggled to balance its budget as revenue declined during the recession.

The sales tax accounts for about 70 percent of Pierce Transit's \$119 million operating budget. Fares and grants account for most of the rest.

From the agency's founding in 1980 through 2006, its sales tax revenue grew at an average rate of 6 percent a year. That allowed Pierce Transit to expand its system and pay for rising operating costs.

But the recession and unemployment have taken a toll on consumer spending, and Pierce Transit saw its sales tax revenue plummet more than \$40 million from 2007 through 2009.

The agency has responded by trimming staff, reducing service, raising fares and seeking operating efficiencies. The result: about \$72 million in savings.

But long-term funding problems remain. Sales tax revenue is still declining and isn't projected to return to 2007 levels until 2016.

As a result, Pierce Transit will either have to find new money or dramatically reduce service, Griffith said.

If forced to rely on current revenue sources, the agency would eliminate local service in many areas by 2012.

The areas that could be targeted for service cuts include a huge portion of the county geographically.

But Pierce Transit spokesman Lars Erickson said the affected areas are less densely populated than the county's urban core, where service would still be provided.

Still, even in urban areas buses would run fewer hours and stop less frequently. Weekend service also would be reduced.

The agency would reduce the number of bus routes from 51 currently to 23 routes. It would reduce total annual service hours from 622,000 to 265,000.

Griffith said those plans are "back of the napkin" calculations. The agency would seek public input before finalizing the cuts.

To prevent dramatic service cuts, the Pierce Transit Board may consider asking voters to approve a three-tenths of one percent sales tax increase. That would allow the agency to slightly increase service over existing levels.

Griffith said it's also possible state and federal funding could help offset declining sales tax revenue.

The bottom line: "By mid-2012 we need to have new revenue," she said.

Pierce Transit isn't the only agency experiencing tough times.

Public transit agencies across the country have raised fares and reduced service because of declining revenue, according to the American Public Transportation Association.

More than 80 percent of public transit agencies have seen flat or declining revenue, the association reported.

The Pierce Transit board has not decided whether or when to ask voters to approve a tax increase, County Executive Pat McCarthy, a member of the board, said it will seek public input before making a decision.

Beginning next month Pierce Transit will host a series of public meetings to explain its predicament and seek feedback.

The agency board is expected to decide how to proceed this summer.

McCarthy praised Pierce Transit for reviewing its 30-year-old system in light of tight resources.

"As a public, we want everything," McCarthy said. "We want expedited service. We want service countywide and we want it in every nook and cranny. But there's a cost to that."

Griffith said Pierce Transit will continue seeking efficiencies and will seek to provide the best service it can.

"Dollars will determine how well we can do," she said.

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Section 9: Acronyms and Glossary

This section provides a glossary of transit terms and concepts to provide the task force with background and understanding of the transit system.

Information you'll find in this section:

- Transit Terms and Concepts
  - Service Planning Glossary
  - Transit Operations Terms and Concepts
  - Transit Vehicle Types
  - Anatomy of a Transit Trip
- National Transit Database Glossary

Additional Resource Links:

- National Transit Database glossary:
<http://www.ntdprogram.gov/ntdprogram/Glossary.htm>

TRANSIT TERMS AND CONCEPTS

Service Planning Glossary

Deadhead Time: The scheduled time spent driving to and from the base or between trips on different routes. Many transit providers allow passengers to be carried on deadheading trips.

Frequency: The number of bus trips in the same direction of travel within a specified time period. Frequency is usually expressed as the number of trips per hour. Frequency is also sometimes expressed in minutes, when referring to a single trip within a specified time period.

Headway: The amount of time between consecutive trips in the same direction of travel. Headway is usually expressed in minutes. On routes with uneven headways (i.e. variation in times between buses), this measure is expressed as an "average headway."

Example of Headway and Frequency:

Route A departs at: 5:00, 5:30, 6:00, 6:15, 6:30, 6:40, 6:50 and 7:00

- Between 5:00 and 6:00, the headway of route A is 30 minutes and the frequency of route A is 2 buses/hour or 1 bus every 30 minutes.
- Between 6:00 and 7:00, the average headway of route A is 12 minutes and the frequency of route A is 5 buses/hour. Between 6:00 and 6:30, the frequency of route A could also be expressed as a bus every 15 minutes. Between 6:30 and 7:00, the frequency of route A could also be expressed as a bus every 10 minutes.

Layover or Recovery Time: The scheduled time spent at a route's terminal between consecutive trips by a single bus. Example: A bus is scheduled to arrive at its terminal at 2:00 PM and is scheduled to leave it's terminal at 2:30 PM. The "layover" or "recovery" time for this bus would be 30 minutes. "Layover" or "recovery" time is necessary to allow bus drivers a break and provide a time cushion in event that arrival at the terminal is delayed.

Paratransit (Access) Service: Van operated service which has no fixed route or schedule and which provides trips to customers who have difficulty using Metro's regular service. Passengers must apply to use Access service in advance of making a trip.

Passenger Load: The number of passengers divided by the number of seats on the bus. Passenger load is expressed a ratio and is measured at points along the route. Planning staff is interested in the maximum passenger load and where along the route it occurs. A maximum passenger load above 1.0 indicates that at one or more points during the bus trip, there are more passengers than there are seats.

Platform Hours: The number of hours buses are on the road for a given route. This includes revenue time, layover time and deadhead time. Annual Platform Hours equals the number of platform hours operated during a calendar year for a given route. For example, if a route uses one bus for 10 platform hours of service each day of the year, there are 3,650 ($= 10 * 365$) annual platform hours on the route.

Productivity: The efficiency and effectiveness of a bus service or network. Often expressed in "rides per platform hour" or "rides per revenue hour".

Revenue Hours: The number of hours buses are operating scheduled trips for a given route. This time does not include layover or deadhead time.

Ridership: Another way of measuring the success of a bus service or network. Often expressed in average number of boardings per weekday.

Span of Service: The amount of time each day during which the route operates. Span of Service can be expressed generally in terms of hours per day or more specifically by stating the time of the first and last trips of the day. For example, route A has a span of service of 18 hours between the first trip at 5:00 AM and the last trip at 11:00 PM.

Stop spacing: The distance between bus stops, usually measured in feet.

Transit Operation Terms and Concepts

Inbound/Outbound: Every bus trip is classified as an "inbound" or an "outbound" trip depending upon the direction the bus is heading. A trip is classified as an "inbound" trip if it is headed toward the route's major market orientation. "Outbound" trips are trips heading away from the route's major market orientation. A few examples are:

- Trips on Routes 21, 22, 37, 54, 55, 56, 57, 120, and 125 are "inbound" when heading toward Downtown Seattle and "outbound" when returning to West Seattle from downtown.
- Trips on Route 128 are "outbound" when heading north towards Admiral Junction and "inbound" when heading south towards South Seattle Community College and Southcenter.
- Trips on Routes 51 and 53 are "inbound" when heading toward Alaska Junction and "outbound" when heading to Admiral (51) and Alki (53).

Transit Center: A facility where numerous bus routes converge to provide convenient, safe opportunities to transfer. Bus schedules are often coordinated at transit centers to minimize transfer times between certain routes. Our local example in West Seattle is at California and Alaska, where eight Metro routes (22, 37, 51, 53, 54, 55, 57, and 128) and Sound Transit Express 560 converge at a group of six bus stops, providing connections to and from dozens of major destinations.

Transit Vehicle Types

Articulated bus: A 60-foot long bus, consisting of front and rear sections, connected by a turntable and accordion-like fabric. New Metro articulated buses have seats for 56 passengers.

Diesel bus: A diesel powered bus. Power is generated by the diesel engine carried on board the vehicle.

Electric trolley bus: An electrically powered, zero-emissions bus. Power is transmitted from electric substations through wires suspended above the roadway. The bus collects power using trolley poles.

Hybrid bus: A diesel powered bus. A diesel-electric drivetrain carried on board the vehicle generates power. This bus has approximately 20% higher fuel economy than a standard diesel bus.

Low-floor bus: A bus that has no stairs at the doorways. This provides much easier access to customers, particularly those with mobility difficulties, and can help to reduce the time for customers to get on and off the bus, thereby reducing the time at stops. All new Metro buses have been low-floor buses since 2003.

Small bus: A 30-foot long single body bus. The small buses are slightly narrower than typical buses and have significantly better maneuverability than standard or articulated buses. Metro small buses have seats for 30 passengers.

Standard bus: A 35- to 40-foot long single body bus. New Metro standard buses are 40 feet long with seats for 35 passengers.

Anatomy of a Transit Trip

Origin: The location where a passenger begins a trip.

Destination: The location where a passenger ends their trip.

Boarding: A single passenger getting on a transit vehicle. Also referred to as an "on."

Alighting: A single passenger getting off a transit vehicle. Also referred to as an "off" or a "deboarding".

Ride: A single passenger using a single transit vehicle for a segment of their trip.

Transfer: Occurs when a passenger changes buses in order to complete their trip.

Trip: A single passenger movement from their origin to their destination. A trip may include several rides.

Example of a Transit Trip:

A transit customer (bus rider) boards a Route 56 bus at 61st Ave. SW and Alki and rides to Alaska Junction, where they alight and transfer to a 128 destined for Southcenter (the customer's final destination).

- "Origin" at Alki and "destination" at Southcenter
- One "Trip" (Alki to Southcenter)
- Two "boardings" (Alki and Alaska Junction)
- Two "alightings" (Alaska Junction and Southcenter)
- Two "rides" (Between Alki and Alaska Junction, and between Alaska Junction and Southcenter)
- One "transfer" (at Alaska Junction)

NTD Glossary

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Vehicle Type: Articulated bus

Accident Repairs of Buildings, Grounds and Equipment (128)

Repairing all damage to buildings, grounds and equipment resulting from collisions with stationary or moving objects, floods and accidentally ignited fires, etc. Reporting manual reference: F-30

Accident Repairs of Revenue Vehicles (062)

Repairing all damage to revenue vehicles resulting from incidents (e.g., collisions with stationary or moving objects, floods and accidentally ignited fires, etc.). Reporting manual reference: F-30

Accident Reporting Time (2.03)

The time allowed an operator to complete and file the forms necessary to report an accident. Reporting manual reference: F-50

Accounting System

An accounting system consists of the business papers, records, and reports plus the procedures that are used in recording transactions and reporting their effects. An example of an accounting system is the Uniform System of Accounts (USOA). Reporting manual reference: Declarations

Accrual Accounting

A method of financial accounting where revenues are recorded when earned; the revenue does not have to be received in the same reporting period. Similarly, expenditures are recorded as soon as they result in liabilities for benefits received; the payment of the expenditure does not have to be made in the same reporting period. Reporting manual reference: Introduction, Declarations, F-10, F-20

Act of God

A natural and unavoidable catastrophe that interrupts the expected course of events, such as earthquakes, floods, hurricanes, tornados, other high winds, lightning, snow and ice storms. Reporting manual reference: S&S-40

Active Vehicles

The vehicles available to operate in revenue service, including spares and vehicles temporarily out of service for routine maintenance and minor repairs. Reporting manual reference: Internet Reporting, A-30

Active Vehicles in Fleet

The vehicles in the year-end fleet that are available to operate in revenue service, including spares and vehicles temporarily out of service for routine maintenance and minor repairs. Reporting manual reference: A-30

Actual Passenger Car Hours

The hours that passenger cars travel while in revenue service (actual passenger car revenue hours) plus deadhead hours. Actual passenger car hours time; but excludes hours for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Actual Passenger Car Miles

The miles that passenger cars travel while in revenue service (actual passenger car revenue miles) plus deadhead miles. Actual passenger car miles exclude hours for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Actual Passenger Car Revenue Hours

The hours that passenger cars travel while in revenue service. Passenger car revenue hours include layover / recovery time; but excludes deadhead, operator training, vehicle maintenance tests, and charter services. Reporting manual reference: S-10, MR-20

Actual Passenger Car Revenue Miles

The miles that passenger cars travel while in revenue service. Passenger car revenue miles exclude deadhead, operator training, vehicle maintenance tests, and charter services. Reporting manual reference: S-10, MR-20

Actual Person Count

Full and part time employees of the transit agency, permanent or temporary, who hold approved and filled positions at the end of the fiscal year. Reporting manual reference: R-10

Actual Service

The total service operated during each time period. Actual service excludes: missed trips, and service interruptions (e.g., strikes, emergency shutdowns). Actual service is measured by vehicles in service, in miles and hours. Reporting manual reference: S-10

Actual Train Hours

The hours that trains travel while in revenue service (actual train revenue hours) plus deadhead hours. Actual train hours include layover / recovery time; but excludes hours for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Actual Train Miles

The miles that trains travel while in revenue service (actual train revenue miles) plus deadhead miles. Actual train miles exclude miles for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Actual Train Revenue Hours

The hours that trains travel while in revenue service. Train revenue hours include layover / recovery time; but excludes deadhead, training operators prior to revenue service, vehicle maintenance tests, and charter services. Reporting manual reference: S-10

Actual Train Revenue Miles

The miles that trains travel while in revenue service. Train revenue miles exclude deadhead, training operators prior to revenue service, vehicle

maintenance vehicle tests, and charter services. Reporting manual reference: S-10

Actual Vehicle Hours

The hours that vehicles travel while in revenue service (actual vehicle revenue hours (VRH)) plus deadhead hours. Actual vehicle hours exclude hours for charter service, school bus service, operator training, and vehicle maintenance testing. Reporting manual reference: Internet Reporting, S-10

Actual Vehicle Miles

The miles that vehicles travel while in revenue service (actual vehicle revenue miles (VRM)) plus deadhead miles. Actual vehicle miles exclude miles for charter services, school bus service, operator training, and vehicle maintenance testing. Reporting manual reference: Internet Reporting, S-10

Actual Vehicle Revenue Hours (VRH)

The hours that vehicles travel while in revenue service. Vehicle revenue hours (VRH) include layover / recovery time; but exclude deadhead, operator training, maintenance testing, as well as school bus and charter services. Reporting manual reference: Internet Reporting, S-10, FFA-10, Declarations, MR-20

Actual Vehicle Revenue Miles (VRM)

The miles that vehicles travel while in revenue service. Vehicle revenue miles (VRM) include layover / recovery time; but exclude deadhead, operator training and maintenance testing, as well as school bus and charter services. Reporting manual reference: Internet Reporting, Declarations, S-10, FFA-10, MR-20

ADA

Americans with Disabilities Act of 1990

ADA Accessible Stations

Public transportation passenger facilities, which provide ready access, and do not have physical barriers that prohibit and / or restrict access by individuals with disabilities, including individuals who use wheelchairs. Refer to 49 CFR Part 37, Appendix. Reporting manual reference: A-10

ADA Accessible Vehicles with Lifts

Public transportation revenue vehicles, which do not restrict access, are usable, and provide allocated space and / or priority seating for individuals who use wheelchairs, and which are accessible using lifts. Refer to 49 CFR Part 38. Reporting manual reference: A-30, RU-20

ADA Accessible Vehicles with Ramps / Low Floor

Public transportation revenue vehicles, which do not restrict access, are usable, and provide allocated space and / or priority seating for individuals who use wheelchairs, and which are accessible using ramps. Refer to 49 CFR Part 38. Reporting manual reference: A-30, RU-20

ADA Related Unlinked Passenger Trips (UPT)

The number of passengers who board public transportation vehicles for complementary paratransit services (demand response (DR)) associated or attributed to the Americans with Disabilities Act of 1990 (ADA) compliance requirements. The number of Americans with Disabilities Act of 1990 (ADA) unlinked passenger trips (UPT) should be less than or equal to the total number of unlinked passenger trips. These trips are reported only for demand response (DR) mode. ADA-related service reported to NTD should not include any categorical service (i.e., Services that are not available to the general public such as: Medicaid, Meals-On-Wheels, Head Start, sheltered workshops, independent living centers, etc.). Reporting manual reference: S-10

Administrative Buildings

Facilities and offices which house the executive management and supporting activities for overall transit operations such as accounting, finance, engineering, legal, safety, security, customer services, scheduling and planning (see General Administration (160) function). They include separate buildings for customer information or ticket sales, which are owned by the transit agency and which are not part of passenger stations. Reporting manual reference: F-20

Advertising Revenues

The revenue earned from displaying advertising materials on transit agency vehicles and property. The amounts should be net of any fees paid to advertising agencies, which place the advertisement with the transit agency. Reporting manual reference: F-10

Aerial Tramway (TR) Mode

A transit mode that is an electric system of aerial cables with suspended powerless passenger vehicles. The vehicles are propelled by separate cables attached to the vehicle suspension system and powered by engines or motors at a central location not on-board the vehicle. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10

Aerial Tramway Vehicle Type

Unpowered passenger vehicles suspended from a system of aerial cables and propelled by separate cables attached to the vehicle suspension system. Engines or motors at a central location, not onboard the vehicle, power the cable system. Reporting manual reference: A-30

Aerial Tramway (TR) Line Miles

The distance from terminal to terminal following the path of the tramway towers. Reporting manual reference: A-20

AG

Mode: Automated guideway transit Vehicle Type: Automated guideway vehicles

Aggravated Assault

An unlawful attack by one person upon another wherein the offender uses a weapon or displays it in a threatening manner, or the victim suffers obvious severe or aggravated bodily injury. Reporting manual reference: S&S-40

Alaska Railroad (AR)

In recognition of the special Federal relationship with the Alaska railroad (AR), a segment of the passenger service portion of the Alaska railroad (AR) is considered to be eligible for certain FTA funding under the Fixed Guideway Modernization program. The service encompasses only those lines operating within the Anchorage, Alaska, urbanized area (UZA) where passenger service is provided and only includes car miles for passenger cars; car miles for freight cars are specifically excluded. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Americans with Disabilities Act of 1990 (ADA)

The legislation defining the responsibilities of and requirements for transportation providers to make transportation accessible to individuals with disabilities. Reporting manual reference: Introductions, B-10, F-30, F-40, A-10, A-30, S-10, RU-20

Amortization of Intangibles (513.13)

The amortization of the intangible costs of the transit agency including organization costs, franchises, patents, goodwill and other intangible assets. Reporting manual reference: F-40

Annual Operating and Administrative Expenses

The recurring costs of providing public transportation service. They include: all employees' wages and salaries; fringe benefits; operating supplies such as fuel, and oil; contractors' charges for services; taxes; repair and maintenance services, parts, and supplies; equipment leases and rentals; marketing; lease or rental costs; and insurance. Operating expenses include administrative expenses. Operating costs exclude fixed costs such as depreciation on plant and equipment, costs of providing transportation services not available to the general public, and interest paid on loans on capital equipment. Reporting manual reference: RU-20

Annual Passenger Trips

The number of passengers who board operational revenue vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. Trips should be counted regardless of whether an individual fare is collected for each leg of travel. It includes passenger trips on volunteer vehicles. Reporting manual reference: RU-20

Annual Vehicle Hours

The total amount of time in hours for the reporting period that all vehicles travel from the time they pull out to go into revenue service to the time they pull in from revenue service. This includes the hours of personal vehicles used in service. Reporting manual reference: RU-20

Annual Vehicle Miles

The total number of miles for the reporting period that all vehicles travel from the time they pull out to go into revenue service to the time they pull in from revenue service. This includes the miles of personal vehicles used in service. Reporting manual reference: RU-20

AO

Vehicle Type: Automobiles

APC

Automatic passenger counter

AR

Mode: Alaska Railroad

ARRA

American Recovery and Reinvestment Act, 2009

American Recovery and Reinvestment Act, 2009

Signed into law by the President on February 17, 2009, the ARRA supports government wide efforts to stimulate the economy by the preservation or creation of jobs and the promotion of an economic recovery, as well as the investment in transportation, environmental protection and other infrastructure providing long-term economic benefits. Reporting manual reference: Introduction, F-10.

Arrest

To take a person into custody, by authority of law, for the purpose of charging him / her with a criminal offense. Reporting manual reference: S&S-40, S&S-50

Arson

To unlawfully and intentionally damage, or attempt to damage, any real or personal property by fire or incendiary device. Reporting manual reference: S&S-40

Articulated Buses (AB)

Vehicle Type: Extra long (54 ft. to 60 ft.) buses (MB) with two connected passenger compartments. The rear body section is connected to the main body by a joint mechanism that allows the vehicles to bend when in operation for sharp turns and curves and yet have a continuous interior.

Reporting manual reference: A-30

At Grade, Exclusive Right-of-Way (ROW)

Railway right-of-way (ROW) from which all other traffic, mixed and cross, is excluded. Median strip right-of-way (ROW) is included provided all crossings of the right-of-way (ROW) pass over or under the median. Reporting manual reference: A-20

At Grade, Mixed and Cross Traffic

Railway right-of-way (ROW) over which other traffic moving in the same direction or the cross directions may pass. City street right-of-way (ROW) is included. Reporting manual reference: A-20

At Grade, with Cross Traffic

Railway right-of-way (ROW) over which no other traffic may pass, except to cross at grade level crossings. A median strip right-of-way (ROW) with grade level crossings at intersecting streets is included. Reporting manual reference: A-20

Atypical Day

A day on which the transit agency either does not operate its normal, regular schedule, or provides extra service to meet demands for special events such as conventions, parades, or public celebrations, or operates significantly reduced service because of unusually bad weather (e.g., snow storms, hurricanes, tornadoes, earthquakes) or major public disruptions (e.g., terrorism). Reporting manual reference: S-10

Automated Guideway (AG) Transit

A transit mode that is an electric railway (single or multi-car trains) of guided transit vehicles operating without vehicle operators or other crew onboard the vehicle. Service may be on a fixed schedule or in response to a passenger activated call button. Automated Guideway (AG) transit includes personal rapid transit, group rapid transit, and people mover systems. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Automated Guideway Vehicles (AG)

Vehicle Type: Guided transit passenger vehicles operating under a fully automated system (no crew on transit units). Reporting manual reference: A-30

Automatic Passenger Counter (APC)

An automated means of counting boarding and alighting passengers (e.g., treadle mats or infrared beams placed by the door). Reference: www.its.dot.gov Reporting manual reference: Introduction, S-10

Automatic Vehicle Location (AVL)

Position determination via an automatic technology or combination of technologies, such as gGlobal positioning system (triangulation of satellite signals), Signposts (beacons at known locations transmit signals picked up by vehicle), Ground-based eadio (triangulation of radio tower signals), or Dead-reckoning (vehicle's odometer and compass used to measure new position from previous known position), and typically includes real-time reporting of that location to a dispatcher. Reference: www.its.dot.gov

Automobiles (AO)

Vehicle Type: Passenger cars, up to and including station wagons in size. Reporting manual reference: A-30, S&S-40

Automotive Vehicle Ferriage

Revenues earned from transporting vehicles in ferryboat transit service. Reporting manual reference: F-10

Auxiliary Transportation Revenues

The revenue earned from operations closely associated with transportation operations. Auxiliary transportation revenues include concessions — station and vehicle concessions, advertising revenues, other — including ID card fees (seniors, persons with disabilities, employees), fare evasion and park-and-ride lot fines, and automotive vehicle ferriage. Reporting manual reference: F-10

Average Lifetime Mileage per Active Vehicle

The total miles accumulated on all active vehicles since date of manufacture divided by the number of active vehicles. Reporting manual reference: A-30

Average Monthly Fixed Guideway Directional Route Miles

The monthly average number of fixed guideway directional route miles (FG DRM) over which service was operated. For each segment, sum the directional route miles (DRM) for each month that the mode was operated during the year and divide by 12 months. Reporting manual reference: Introduction, S-10, S-20

Average Saturday

A typical, representative Saturday in the operation of the transit system, weighted to reflect seasonal variations in service. Reporting manual reference: S-10

Average Sunday

A typical, representative Sunday in the operation of the transit system, weighted to reflect seasonal variations in service. Reporting manual reference: S-10

Average Trip Length

The average distance ridden for an unlinked passenger trip (UPT) by time period (weekday, Saturday, Sunday) computed as passenger miles (PM) divided by unlinked passenger trips (UPT). Reporting manual reference: S-10

Average Weekday

A typical, representative weekday in the operation of the transit system, weighted to reflect seasonal variations in service. Reporting manual reference: S-10

Average Weekday Unlinked Passenger Trips

The number of passengers who board public transportation vehicles on an average, typical weekday during a month. Reporting manual reference: MR-20

AVL

Automatic vehicle location

B

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Bomb Threat

Credible written or oral (e.g., telephone) communication to a transit agency threatening the use of an explosive or incendiary device for the purpose of disrupting public transit services or to create a public emergency. Reporting manual reference: S&S-40

Bombing, Chemical, Biological, Nuclear / Radiological Releases, etc.

The unlawful and intentional delivery, placement, discharge, or detonation of a biological, chemical, or radiological / other lethal device in, into, or against a public transport facility, a public transportation system (including vehicles), or an infrastructure facility, or conspiracy, instigation, or attempts to commit such acts. Chemical, biological, or radiological / other releases involve solids, liquids, or gases that have chemical properties that produce lethal or serious effects in human beings, or any weapon involving a disease organism. Or conspiracy, instigation, or attempts to commit such acts a) with the intent to cause death or serious bodily injury, or b) with the intent to cause extensive damage to, or destruction of such a place, facility or system, where such destruction results in or is likely to result in major economic loss. Reporting manual reference: S&S-40

Bond Issuance Costs

The fee for service that the transit agency pays an investment banking firm to handle the bond issue and other related fees that the transit agency may incur related to the bond issue such as accounting, legal, and printing costs. Reporting manual reference: F-10

Bonds

Financing mechanism used to raise funds. Bonds are secured debt offered through a legal entity (usually a state or local government) that guarantees two rights to the purchaser the right to receive a fixed interest payment (e.g., 10%), often semiannually, on the par value of the bond (e.g., \$10,000), and the right to be paid the par value of the bond (e.g., \$10,000) at a definite future date when the bond matures (e.g., 20 years

after issuance). Reporting manual reference: F-10

Bridge, Tunnel and Highway Toll

A tax or fee paid for the liberty or privilege of using a bridge, tunnel or highway. Reporting manual reference: F-10, F-30

Brokerage System

An association of transportation providers managed by broker or agent who makes transportation arrangements for a specific clientele such as the elderly and persons with disabilities. The transportation providers in a brokerage system are typically social service agencies and taxicab operators. The broker may be the transit agency directly or the transit agency may contract with an individual or firm to operate the brokerage system. Reporting manual reference: B-30

BU

Vehicle Type: Buses

Burglary

The unlawful entry into a building or other structure with the intent to commit a felony or a theft. Reporting manual reference: S&S-40, S&S-50

Bus (MB)

A transit mode comprised of rubber-tired passenger vehicles operating on fixed routes and schedules over roadways. Vehicles are powered by diesel, gasoline, battery, or alternative fuel engines contained within the vehicle. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-20

Buses (BU) Vehicle Type

Rubber-tired passenger vehicles powered by diesel, gasoline, battery or alternative fuel engines contained within the vehicle. Vehicles in this category do not include articulated, double-decked, or school buses. Reporting manual reference: A-30, S&S-4

Buyer

The NTD reporter contracting with a seller under a purchased transportation agreement to provide transit services. The contractor may be a public transit agency or a private company. Reporting manual reference: Introductions, B-30, F-10, F-20, F-30, A-10, A-20, Declarations

C

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Cable Car (CC)

A transit mode that is an electric railway with individually controlled transit vehicles attached to a moving cable located below the street surface and powered by engines or motors at a central location, not onboard the vehicle. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Cable Car (CC) Vehicle Type

Streetcar type of passenger vehicles operating by means of an attachment to a moving cable located below the street surface and powered by engines or motors at a central location not onboard the vehicles. Reporting manual reference: A-3

Capital

Projects related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of the capitalization level established by the government unit for financial statement purposes, or \$5,000. Capital expenses do not include operating expenses (OE) that are eligible to use capital funds. Reporting manual reference: FFA-10

Capital Assistance

Financial funding to help cover the costs of equipment necessary to support transit services. Equipment is tangible property having a useful life of more than one year, e.g., vehicles, buildings, passenger stations and fixed guideway (FG) facilities. See capital expenses for requirements. Reporting manual reference: FFA-10

Capital Costs

The expenses incurred within the year related to the purchase of facilities, vehicles and equipment. Reporting manual reference: RU-20

Capital Expenses

The expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of the capitalization level established by the government unit for financial statement purposes, or \$5,000. Capital expenses do not include operating expenses (OE) that are eligible to use capital funds. Reporting manual reference: Introductions, B-10, F-10, F-20

Capital Labor

The employees engaged in the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of The capitalization level established by the government unit for financial statement purposes, or \$5,000. Reporting manual reference: R-10

Capital Maintenance Expenses

Expenses classified as operating expenses under the Uniform System of Accounts (USOA) that are eligible for capital funds under FTA formula programs, e.g., preventive maintenance costs. Reporting manual reference: F-30

Casualty and Liability Costs (506)

The cost elements covering protection of the transit agency from loss through insurance programs, compensation of others for their losses due to acts for which the transit agency is liable, and recognition of the cost of a miscellaneous category of corporate losses. Reporting manual reference: F-30

CC

Mode: Cable car

Vehicle Type: Cable cars

CEO

Chief Executive Officer

Charter Service

A vehicle hired for exclusive use that does not operate over a regular route, on a regular schedule and is not available to the general public.

Reporting manual reference: Introductions, S-10

Charter Service Hours

The total hours operated by revenue vehicles while in charter service. Charter service hours include hours operated while carrying passengers for hire, plus associated deadhead hours. Reporting manual reference: S-10

Charter Service Revenues

The revenue earned from operating vehicles under charter contracts. Reporting manual reference: F-10

Chief Executive Officer (CEO)

The principal executive in charge of and responsible for the transit agency. Reporting manual reference: Introductions, Internet Reporting, B-20, S-10, Declarations, S&S-20, RU-10

Chief Executive Officer (CEO) Certification

Attestation by the chief executive officer (CEO) of a transit agency certifying the accuracy of the data submitted to the NTD. Reporting manual reference: Introduction, Internet Reporting, S-10, Declarations, D-10

Citation

A writ or order commanding a person to appear in court as a notice to a person that he or she is charged with a petty offense. Reporting manual reference: S&S-50

CMAQ

Congestion Mitigation and Air Quality Improvement Program

Collision

A transit vehicle accident in which there is a:

- Collision with object: An incident in which a transit vehicle strikes an obstacle other than a vehicle or person (e.g., building or utility pole).
- Collision with person: An incident in which a transit vehicle strikes an individual. Incidents involving suicides and attempted suicides are now included in this category.
- Collision with vehicle: An incident in which a transit vehicle strikes or is struck by another vehicle.

Reporting manual reference: S&S-40

Communication Systems

Systems for exchanging information including two-way radio systems for communications between dispatchers and vehicle operators, cab signaling and train control equipment in rail systems, automatic vehicle locator systems, automated dispatching systems, vehicle guidance systems, telephones, facsimile machines and public address systems. Reporting manual reference: F-20

Community

Service operated primarily within the boundaries of a community that is not considered a municipality, county independent city or parish. Reporting manual reference: RU-20

Commuter Rail (CR)

A transit mode that is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas. Such rail service, using either locomotive hauled or self-propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station to station fares, railroad employment practices, and usually only one or two stations in the central business district.

It does not include heavy rail (HR) rapid transit, or light rail (LR) / streetcar transit service. Intercity rail service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter service means that for any given trip segment (i.e., distance between any two stations), more than 50 percent of the average daily ridership travels on the train at least three times a week. Only the predominantly commuter service portion of an intercity route is eligible for inclusion when determining commuter rail (CR) route miles. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, S&S-40, RU-10

Commuter Rail Locomotives (RL)

Vehicle Type: Commuter rail (CR) vehicles used to pull or push commuter rail (CR) passenger coaches. Locomotives do not carry passengers themselves. Reporting manual reference: A-30

Commuter Rail Passenger Coaches (RP)

Vehicle Type: Commuter rail (CR) passenger vehicles not independently propelled and requiring one or more locomotives for propulsion. Reporting manual reference: A-30

Commuter Rail Self-Propelled Passenger Cars (RS)

Vehicle Type: Commuter rail (CR) passenger vehicles not requiring a separate locomotive for propulsion. Reporting manual reference: A-30

Complementary Paratransit Services

Transportation service required by the Americans with Disabilities Act (ADA) for individuals with disabilities who are unable to use fixed route transportation systems. This service must be comparable to the level of service provided to individuals without disabilities who use the fixed route system and meet the requirements specified in Sections 37.123-137.133 of *Transportation Services for Individuals with Disabilities (Part 37), Code of Federal Regulations, Title 49, Volume 1*. The complementary services must be origin-to-destination service (demand response (DR)) or on-call demand response (DR) service to an accessible fixed route where such service enables the individual to use the fixed route bus (MB) system for his or her trip. Reporting manual reference: B-10, F-30, F-40, S-10, MR Introduction

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

Federal Highway Administration (FHWA) funds transferred from the Congestion Mitigation and Air Quality Improvement Program (CMAQ) to FTA for transit projects. This program is to help improve air quality and to manage traffic congestion. Transferred funds may be used for capital expansion and improvements that increase ridership, travel demand management strategies, shared ride services, and bicycle and pedestrian facilities. Reporting manual reference: F-10, MR Introduction

Contract Revenues

Reimbursement by any organization, government, agency, or company, as a result of a formal contractual agreement with the transit service operator, for trips provided to a specific passenger or group of passengers. Reporting manual reference: RU-20

Contractor

An individual who is compensated by the transit agency for directly operated (DO) services, the labor expense for the individual is reported in object class 501 labor, or for purchased transportation (PT) service, the labor expense for the individual meets the same criteria as object class 501 labor. Reporting manual reference: S&S Introduction, S&S-40

Contributed Services

The receipt of services (not cash) from another entity where such services benefit transit operations and the transit agency is under no obligation to pay for the services. Reporting manual reference: F-10

Controlled Access Right-of-way (ROW)

Lanes restricted for at least a portion of the day for use by transit vehicles and other high occupancy vehicles (HOV). Use of controlled access lanes may also be permitted for vehicles preparing to turn. The restriction must be sufficiently enforced so that 95 percent of the vehicles using the lanes during the restricted period are authorized to use them. Reporting manual reference: A-20, S-10, FFA-10

Cooperative Agreement

An agreement where one or more public transit agencies or governmental units contribute to, or are assessed for, the value of public transit services provided by another public transit agency. There is usually a written memorandum of understanding or mutual agreement on the calculation and payment for the services. Generally, the service is part of the public transit agency's directly operated (DO) service. Reporting manual reference: Introduction, B-30, S&S Introduction

County

A small administrative district of a country; esp., the largest local administrative subdivision of most States of the U.S. For Rural NTD reporting, the term county is a county, independent city, parish (Louisiana), borough (Alaska) or US Census area (Alaska). Reporting manual reference: RU-20

County/Independent City

Service operated primarily within the boundaries of a single county/independent city or parish. Reporting manual reference: RU-20

Customer

A person who is: Onboard, boarding or alighting from a transit vehicle for the purpose of travel, without participating in its operation.

CR

Commuter rail

CU

Cutaways

Customer Services (162)

Component activities include providing supervision and clerical support for public information and customer relations activities, selling and arranging for the provision of charter services providing route information in passenger stations and at other points along the transit way, providing telephone information service, handling customer complaints and administering a lost and found operation. Reporting manual reference: F-30

Cutaways (CU)

A vehicle in which a bus body is mounted on the chassis of a van or light-duty truck. The original van or light-duty truck chassis may be reinforced or extended. Cutaways typically seat 15 or more passengers, and typically may accommodate some standing passengers. Reporting manual reference: RU-20

Cyber Incident

Involves the targeting of transit facilities, personnel, information, or computer or telecommunications systems associated with transit agencies. Proscribed activities include a) denial or disruption of computer or telecommunications services, especially train control systems, b) unauthorized monitoring of computer or telecommunications system, c) unauthorized disclosure of proprietary or classified information stored within or communicated through computer or telecommunications systems, d) unauthorized modification or destruction of computer programming codes, computer network databases, stored information or computer capabilities; or d) manipulation of computer or telecommunications services resulting from fraud, financial loss, or other criminal violations. Reporting manual reference: S&S-40

D

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Data Processing (170)

Component activities include providing supervision, training and clerical support for data processing activities, entering and verifying input data, operating data processing equipment (e.g., computers and more conventional devices), designing data processing application, programming and testing data processing applications, controlling and distributing output data and maintaining data processing equipment. Reporting manual reference: F-30

Data Universal Numbering System (DUNS or D-U-N-S)

A system developed and regulated by Dun & Bradstreet (D&B) which assigns a unique nine-digit numeric identifier to a single business entity. OMB announced in the June 27, 2003 issue of the Federal Register (68 FR 38402) that a DUNS number would be required for all grant applicants for new or renewal awards on or after October 1, 2003. The DUNS number will supplement other identifiers, e.g., EIN. Can be found in: B-10.

Data Waiver

Relief from reporting a specific data item. Reporting manual reference: Introductions, Internet Reporting

Days not Operated due to Officially Declared Emergencies

The number of days that service did not operate due to emergencies, such as floods, snowstorms, or tornadoes. A person in authority (usually the mayor, county head or governor) must officially declare an emergency. Reporting manual reference: S-10

Days not Operated due to Strikes

The number of days that service did not operate due to transit labor strikes. Reporting manual reference: S-10

Days Schedule Operated

The number of days that service was actually operated according to the schedule of service. For non-scheduled services such as demand response (DR) and vanpool (VP), days schedule operated refers to the days when service normally was operated. Reporting manual reference: S-10

DB

Vehicle Type: Double decker buses

Deadhead (Miles and Hours)

The miles and hours that a vehicle travels when out of revenue service. Deadhead includes leaving or returning to the garage or yard facility, changing routes, or when there is no expectation of carrying revenue passengers. However, deadhead does not include charter service, school bus service operator training, or maintenance training. Reporting manual reference: Internet Reporting, S-10, R-20, MR-20

Declarations

Documents stating the validity of the data being reported to the NTD / FTA: Chief Executive Officer (CEO) Certification, Independent Auditor Statement for Financial Data and Independent Auditor Statement for Federal Funding Allocation Data, and the Safety and Security Chief Executive Officer (CEO) Certification. Reporting manual reference: Introductions, Internet Reporting, Declarations

Dedicated Fleet

Vehicles used exclusively for public transit service of a modal classification. Reporting manual reference: RU-20

Degraded HOV Facility

An HOV is considered degraded if vehicles operating on it are failing to maintain a minimum average operating speed 90% of the time over a consecutive 180-day period during morning and / or evening weekday peak hours (minimum average operating speed is defined as 45 mph in a 50-mh zone, or 10 mph below limit when limit is less than 50 mph). A State may make mileage requirements more restrictive than specified in SAFETEA-LU when managing use by low emission and energy-efficient vehicles. Reporting manual reference: S-20, FFA-10, Declarations

Demand Response (DR)

A transit mode comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand response (DR) operation is characterized by the following a) the vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need, and b) typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed route basis:

- Many origins — many destinations
- Many origins — one destination
- One origin — many destinations, and
- One origin — one destination.

Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Demand Response Service

Shared use transit service operating in response to calls from passengers or their agents to the transit operator, who schedules a vehicle to pick up the passengers to transport them to their destinations. Reporting manual reference: RU-20

Depreciation (513)

The charges that reflect the loss in service value of the transit agency's assets. Depreciated items have a high initial cost and a useful life of more than one accounting period. In order to account for the reduction in value (usefulness) of this type of asset, a portion of the cost is expensed each year of the asset's life. Depreciation and amortization include the depreciation of the physical facilities such as guideways, tracks and roadbeds, elevated structures, passenger stations and parking facilities, revenue vehicles, operating stations, facilities (including buildings, equipment and furnishings), or power generation and distribution, revenue vehicle movement control, data processing, revenue collection and processing, and other general administration. Reporting manual reference: F-40

Derailment

A non-collision incident in which one or more wheels of a transit vehicle unintentionally leaves the rails. Can be found in: S&S-40

Deviated Fixed Route Service

Transit service that operates along a fixed alignment or path at generally fixed times, but may deviate from the route alignment to collect or drop off passengers who have requested the deviation. Reporting manual reference: RU-20

Direct Cost

An object class cost (e.g., labor, services, materials and supplies) that is incurred exclusively for a particular function, mode and type of service (TOS). For example, an operator whose time is spent solely in driving a bus (MB) (vehicle operations - MB/DO) or a mechanic who works only on directly operated (DO) buses (MB) (vehicle maintenance - MB/DO). Reporting manual reference: F-30

Directional Route Miles (DRM)

The mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route miles (DRM) are a measure of the route path over a facility or roadway, not the service carried on the facility; e.g., number of routes, vehicles, or vehicle revenue miles; computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way (ROW).

Directional route miles (DRM) do not include staging or storage areas at the beginning or end of a route. Reporting manual reference: A-20, S-10,

S-20, FFA-10, Declarations

Directly Generated Funds

Any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds, and taxes imposed by the transit agency. Reporting manual reference: F-10

Directly Levied Tax

The tax revenues to transit agencies that are organized as independent political subdivisions with their own taxation authority. Reporting manual reference: F-10

Directly Operated (DO)

Transportation service provided directly by a transit agency, using their employees to supply the necessary labor to operate the revenue vehicles. This includes instances where an agency's employees provide purchased transportation (PT) services to the agency through a contractual agreement. Reporting manual reference: Introductions, B-10, F-10, F-20, A-10, R-10, R-20, R-30, FFA-10, Declarations, MR-10, S&S-10, S&S-40, S&S-50, RU-10

DO

Directly operated

Double Decker Buses (DB)

Vehicle Type: High capacity buses having two levels of seating, one over the other, connected by one or more stairways. Total bus height is usually 13 to 14.5 feet, and typical passenger seating capacity ranges from 40 to 80 people. Reporting manual reference: A-30

DR

Demand response

DRM

Directional route miles

DUNS

Data Universal Numbering System

E

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Elevated on Fill

Rail transit way above surface level on fill. Transition segments above surface level on fill are included. Reporting manual reference: A-20

Elevated on Structure

Rail transit way above surface level on structures. Transition segments above surface level on structures are included. Reporting manual reference: A-20

Elevator

A compartment that usually moves up and down vertically to transfer passengers from one level of a station or parking facility to another. Elevators may move horizontally, such as from a station to an adjacent parking garage, but such movement is normally done by non-elevator means such as a pedestrian bridge or a moving sidewalk. Does not include non-passenger elevators used only for freight or by transit staff. Reporting manual reference: A-10

Emergency Contingency Vehicles

Revenue vehicles placed in an inactive contingency fleet for energy or other local emergencies after the revenue vehicles have reached the end of their normal minimum useful life. The vehicles must be properly stored and maintained, and FTA must approve the Emergency Contingency Plan. Substantial changes to the plan (10% change in fleet) require re-approval by FTA. Reporting manual reference: Introduction, B-10, A-30, S-10

Employee(s)

An individual who is compensated by the transit agency as follows:

- For directly operated (DO) services, the labor expense for the individual is reported in object class (501) labor.
- For purchased transportation (PT) service, the labor expense for the individual meets the same criteria as object class (501) labor.
- Applies to transit employees and contractors.

Reporting manual reference: S&S Introduction, F-30, R-10, R-20

Employee Work Hours

Employee labor hours, not including fringe benefit hours such as sick leave, holidays, and vacations. Work hours include only labor hours for employees of the transit agency, both full time and part time, permanent and temporary. Reporting manual reference: R-10

Escalator

A moving stairway that moves up and down at an angle to transfer passengers from one level of a station or parking facility to another. Does not include non-passenger escalators used only for freight or by transit staff. Reporting manual reference: A-10

Evacuation

A condition requiring all passengers and employees to depart a transit vehicle or property and enter onto the transit right-of-way (ROW) or roadway under emergency circumstances. Reporting manual reference: S&S-40, RU-20

Exclusive Right-of-Way (ROW)

Roadway or other right-of-way (ROW) reserved at all times for transit use and / or other high occupancy vehicles (HOV). The restriction must be sufficiently enforced so that 95 percent of vehicles using the right-of-way (ROW) are authorized to use it. Reporting manual reference: A-20, S-10, FFA-10, Declarations

Expansion (fleet)

The acquisition of revenue vehicles for expansion of transit service. Reporting manual reference: F-20

Expense Transfers (510)

Accounts used for reporting adjustments and reclassifications of expenses previously recorded. Reporting manual reference: F-30

F

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Failure to Report

Submitting a late report, incomplete report or no report. Reporting manual reference: Introductions

FARE

Uniform Financial Accounting and Reporting Elements

Fare Evasion

The unlawful use of transit facilities by riding without paying the applicable fare. Reporting manual reference: S&S-50

Fare Revenue Collection Equipment

Any equipment used in collecting passenger fares including turnstiles, fare boxes (drop), automated fare boxes and related software, money changers and fare dispensing machines (tickets, tokens, passes). Reporting manual reference: F-20

Fare Revenues

All income received directly from passengers, either paid in cash or through pre-paid tickets, passes, etc. It includes donations from those passengers who donate money on the vehicle. It includes the reduced fares paid by passengers in a user-side subsidy arrangement. Reporting manual reference: RU-20

FASB

Financial Accounting Standards Board

Fatality

A transit-caused death confirmed within 30 days of a transit incident, which occurs under the collision, derailment, fire, evacuation, security incident, hazardous material spill, act of God, or safety occurrence not otherwise classified categories. Reporting manual reference: S&S Introduction, S&S-40, RU-20

FB

Mode: Ferryboat

Vehicle Type: Ferryboats

Federal Capital Assistance

Financial assistance from the Federal Transit Administration to assist in paying the capital costs of providing transit service. Reporting manual reference: RU-20

Federal Government Funds

Financial assistance obtained from the Federal government to assist with paying the costs of providing transit services. Reporting manual reference: F-10

Federal Operating Assistance

Financial assistance from the Federal Transit Administration to assist in paying the operating costs of providing transit service. Reporting manual reference: RU-20

Ferryboat (FB)

A transit mode comprised of vessels carrying passengers and / or vehicles over a body of water that are generally steam or diesel powered. Intercity ferryboat (FB) service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter service means that for any given trip segment (i.e., distance between any two piers), more than 50 percent of the average daily ridership travels on the ferryboat on the same day. Only the predominantly commuter service portion of an intercity route is eligible for inclusion when determining ferryboat (FB) route miles. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Vehicle Type: Vessels for carrying passengers and / or vehicles over a body of water. The vessels are generally steam or diesel powered conventional ferry vessels. They may also be hovercraft, hydrofoil and other high speed vessels. Reporting manual reference: A-30, S&S-40

FFYE

Federal fiscal year end

FG

Fixed guideway

FG DRM

Fixed Guideway Directional Route Miles

FHWA

Federal Highway Administration

Finance and Accounting (171)

Component activities include supervising, training and supporting the finance and accounting activities, maintaining general accounting records (general ledger), publishing financial statements, processing payrolls and labor cost distribution, paying vendors for material and service purchases, accounting for investments in fixed assets and receivables, preparing and submitting financial reports to public and regulatory agencies, investing available cash in short-term securities, obtaining funds through debt, equity and subsidy financing transactions, billing charter sales, budgeting, performing internal audit of accounting system performance. Reporting manual reference: F-30

Financial Accounting Standards Board (FASB)

Entity responsible for generally accepted accounting principles affecting all types of entities. Reporting manual reference: Introduction

Fire

Uncontrolled combustion made evident by flame and / or smoke that requires suppression by equipment or personnel. Reporting manual reference: S&S-40, S&S-50

Fixed Guideway (FG)

A public transportation facility using and occupying a separate right-of-way (ROW) or rail for the exclusive use of public transportation and other high occupancy vehicles (HOV) or a fixed catenary system useable by other forms of transportation. Reporting manual reference: Introductions, B-10, F-10, A-20, S-10, S-20, FFA-10, Declarations

Fixed Guideway Directional Route Miles (FG DRM)

The mileage in each direction over which public transportation vehicles travel while in revenue service on fixed guideway (FG). Fixed guideway directional route miles (FG DRM) include directional route miles (DRM) for rail modes (heavy rail (HR), light rail (LR), commuter rail (CR), inclined plane (IP), cable car (CC) and automated guideway (AG)), ferryboats (FB), aerial tramways (TR), bus (MB), trolleybus (TB), other modes on exclusive right-of-way (ROW) and controlled access right-of-way (ROW). Fixed guideway directional route miles (FG DRM) do not include staging or storage areas at the beginning or end of a route. Reporting manual reference: S-20, FFA-10, Declarations

Fixed Route Service

Transit service using rubber tired passenger vehicles operating on fixed routes and schedules, regardless of whether a passenger actively requests a vehicle. Reporting manual reference: RU-20

Fixed Route Services

Services provided on a repetitive, fixed schedule basis along a specific route with vehicles stopping to pickup and deliver passengers to specific locations; each fixed route trip serves the same origins and destinations, such as rail and bus (MB); unlike demand responsive (DR) and vanpool (VP) services. Reporting manual reference: A-10, A-20, S-10

Flexible Funding Programs Federal Highway Administration (FHWA) programs that allow the transfer of funds to the FTA Urbanized Area Formula Program (UAF) to be used for transit projects such as Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), and the National Highway System (NHS). Reporting manual reference: F-10

Forcible Rape

The carnal knowledge of a person, forcibly and/or against that person's will. Reporting manual reference: S&S-40

Freight Tariffs

The revenue earned from carrying all types of freight on runs whose primary purpose is passenger operations. Reporting manual reference: F-10

Fringe Benefits (502)

The payments or accruals to others (insurance companies, governments, etc.) on behalf of an employee and payments and accruals direct to an employee arising from something other than a piece of work. These payments are transit agency costs over and above labor costs, but still arising from the employment relationship. Reporting manual reference: F-30

FTA

Federal Transit Administration

FTA Alternative Transportation in Parks and Public Lands (§5320)

Financial assistance from §5320 of the Federal Transit Act. This is a program to support public transportation projects in parks and public lands. Funds may be used for planning and capital projects in or in the vicinity of any Federally owned or managed park, refuge, or recreational area that is open to the general public. Reporting manual reference: F-10, RU-20

FTA Capital Program (§5309)

Financial assistance from §5309 of the Federal Transit Act. This program provides capital assistance for three primary activities which are new and replacement buses and facilities, modernization of existing fixed guideway (FG) systems, and new fixed guideway (FG) systems. Reporting manual reference: F-10, FFA-10, RU-20

FTA Clean Fuels Program (§5308)

Financial assistance from §5308 of the Federal Transit Act. This program supports the use of alternative fuels in air quality maintenance or nonattainment areas for ozone or carbon monoxide, both for urbanized and other than urbanized areas. Funds may be used for the purchase or lease of clean fuel buses, the construction of clean fuel electrical recharging facilities, improvement to existing facilities to accommodate clean fuel buses, and the re-powering and retrofit or rebuild of pre-1993 engines if before a mid-life rebuild. Reporting manual reference: F-10, RU-20

FTA Grant Program

Financial assistance from FTA programs. These funds include:

- FTA Capital Program (§5309)
- FTA Urbanized Area Formula Program (§5307)
- FTA Clean Fuels Program (§5308)
- FTA Metropolitan Planning (§5303)
- FTA Special Needs of Elderly Individuals and Individuals with Disabilities Formula Program (§5310)
- FTA Other Than Urbanized Area Formula Program (§5311)
- FTA Research, Development, Demonstration and Training Projects (§5312)
- FTA Job Access and Reverse Commute Formula Program (§5316)
- FTA New Freedom Program (§5317)
- FTA Transit in the Park (§5320)
- Interstate Transfer Program

Reporting manual reference: F-10

FTA Growing States and High Density States Formula (§5340)

New Growing States and High Density States Formula Factors: §5340 of the Federal Transit Act that establishes new factors to distribute funds to the urbanized area formula and rural formula programs. One-half of the funds that are made available under the Growing States factors are apportioned by a formula based on state population forecasts for 15 years beyond the most recent census; amounts apportioned for each state are then distributed between urbanized areas and rural areas based on the ratio of urban/rural population within each state. The High Density States factors distribute the other half of the funds to states with population densities in excess of 370 persons per square mile. These funds are apportioned only to urbanized areas within those states. Reporting manual reference: Introductions

FTA Job Access and Reverse Commute Formula Program (JARC) (§5316)

Financial assistance from §5316 of the Federal Transit Act. This program pertains to:

1. Access to jobs projects for the development and maintenance of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment, including:
  - a. Transportation projects to finance planning, capital, and operating costs of providing access to jobs;
  - b. Promoting public transportation by low-income workers, including the use of public transportation by workers with nontraditional work schedules;
  - c. Promoting the use of transit vouchers for welfare recipients and eligible low-income individuals; and
  - d. Promoting the use of employer-provided transportation, including the transit pass benefit program under Section 132 of the Internal Revenue Code of 1986.
2. Reverse commute projects for public transportation designed to transport residents of urbanized areas and other than urbanized areas to suburban employment opportunities, including any projects to:
  - a. Subsidize the costs associated with adding reverse commute bus, train, carpool, van routes, or service from urbanized areas and other than urbanized areas to suburban workplaces;
  - b. Subsidize the purchase or lease by a nonprofit organization or public agency of a van or bus dedicated to shuttling employees from their residences to a suburban workplace; or
  - c. Otherwise facilitate the provision of public transportation services to suburban employment opportunities.

Reporting manual reference: F-10, RU-20

FTA Metropolitan Planning (§5303)

Financial assistance from §5303 of the Federal Transit Act. This program supports the cooperative, continuous and comprehensive planning program for making transportation investment decisions in metropolitan areas. Reporting manual reference: F-10

FTA New Freedom Program (§5317)

Financial assistance from §5317 of the Federal Transit Act. This is a formula program to encourage services and facility improvements to address the transportation needs of persons with disabilities that go beyond those required by the Americans with Disabilities Act. Funds may be used for associated capital and operating costs. Reporting manual reference: F-10, RU-20

FTA Other Than Urbanized Area Formula Program (§5311)

Financial assistance from §5311 of the Federal Transit Act. This program provides formula funding to States and Indian Tribes for the purpose of supporting public transportation in areas with a population of less than 50,000. Funding may be used for capital, operating, State administration, and project administration expenses. Under §5311 SAFETEA-LU also includes provisions for Growing States and High Density States Factors. Reporting manual reference: Introductions

FTA Recipient Identification Number (TEAM ID)

The four-digit number assigned to your transit agency for the FTA electronic grant making system — TEAM (Transportation Electronic Award and Management). Reporting manual reference: B-10, RU-10

FTA Research, Development, Demonstration and Training Projects (§5312)

Financial assistance from §5312 of the Federal Transit Act. This program promotes research, development and demonstration projects to improve or help public transportation meet total urban transportation needs, and also projects that use innovative techniques in managing and providing public transportation; and provides training fellowships in managerial, technical and professional positions in the public transportation field. Reporting manual reference: F-10

FTA Small Transit Intensive Cities (STIC) Formula

SAFETEA-LU establishes a provision in the FTA Urbanized Area Formula program (§5307) to distribute funds to urbanized areas under 200,000 population. Under the formula for STIC, funds are apportioned to urbanized areas (UZA) with a population less than 200,000 that meet or exceed the average level of service for all UZAs with populations between 200,000 and 1,000,000. The UZAs must operate at a level of service equal to or above the industry average level of service for all UZAs with a population of at least 200,000 but not more than 999,999, in one or more of six performance categories:

1. Passenger miles traveled per vehicle revenue mile,
2. Passenger miles traveled per vehicle revenue hour
3. Vehicle revenue miles per capita,
4. Vehicle revenue hours per capita,
5. Passenger miles traveled per capita, and
6. Passengers per capita.

Reporting manual reference: Introductions, F-10, FFA-10

FTA Special Needs of Elderly Individuals and Individuals with Disabilities Formula Program (§5310)

Financial assistance from §5310 of the Federal Transit Act. This program provides capital assistance to state and local governments and private non-profit groups in meeting the transportation needs of elderly individuals and individuals with disabilities. A seven State pilot program for FY 2006-2009 has been established to determine whether expanding eligibility to operating assistance would improve services to elderly individuals and individuals with disabilities. In the pilot, up to 33% of a participating State's apportioned §5310 funds may be used for operating expenses. The State (or State-designated agency) administers the §5310 program.) Reporting manual reference: F-10, F-30, RU-20

FTA Urbanized Area Formula Program (§5307)

Financial assistance from §5307 of the Federal Transit Act. This program makes Federal resources available for capital and operating assistance for transit in urbanized areas (UZAs). The Urbanized Area Formula Program also supports planning, in addition to that funded under the Metropolitan Planning program (§5303). Funding is apportioned directly to each UZA with a population of 200,000 or more, and to the State Governors for UZAs with populations between 50,000 and 200,000. Generally, operating assistance is not an eligible expense for UZAs with populations of 200,000 or more. However, there are several exceptions to this restriction (See SAFETEA-LU). Under §5307 SAFETEA-LU also includes provisions for Small Transit Intensive Cities (STIC) Formula and Growing States and High Density States Factors. Reporting manual reference: Introductions, B-10, F-10, F-30, FFA-10

Fuel and Lubricants (504.01)

The costs of gasoline, diesel fuel, propane, lubricating oil, transmission fluid, grease, etc., for use in vehicles. Reporting manual reference: F-30

Full Time Employees

Employees of the transit agency meeting the local definition of full time hours. Normally, these persons are entitled to receive the full benefits package (e.g., sick leave, vacation and insurance benefits). Reporting manual reference: R-10, S&S-30

Function

The activity performed or cost center of a transit agency. There are four basic functions for reporting. The four basic functions are vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration. The activities included under each basic function are detailed in Section 6.2 of the Uniform System of Accounts (USOA). Reporting manual reference: F-30, R-10

Funds Allocated to Transit out of General Revenues of the Government Entity

Any funds allocated to transit out of the general revenues of the governmental entity (state or local). General revenue funds are usually determined through a state or local government's annual budgeting process. Reporting manual reference: F-10

Funds Dedicated to Transit at their Source

Any funds raised specifically for transit purposes and which are dedicated at their source, rather than through an appropriation of general funds. These funds include dedicated taxes, bridges, tunnels and highway tolls, bonds and loans, and other dedicated funds. Reporting manual reference: F-10

Funds Expended (Applied)

Any expenditures that involve a transfer of money between the transit agency and another party such as a contractor or another government agency.

Reporting manual reference: F-10, F-40, A-20

Funds not Applied

Any expenditures that do not involve a transfer of money between the transit agency and another party and that are typically valued using accounting principles. Examples include depreciation of vehicles and Intangibles. Reporting manual reference: F-40

FYE

Fiscal year end

G

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GAAP

Generally Accepted Accounting Principles

GASB

Governmental Accounting Standards Board

General Administration (160)

All activities associated with the general administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning. Reporting manual reference: Internet Reporting, F-10, F-30, F-40, R-10

General Engineering (173)

Component activities include providing supervision and clerical support for general engineering activities, researching available technology for performing transit activities and preparing specifications for purchasing or constructing capital assets. Reporting manual reference: F-30

General Function (181)

A general category to collect operating expenses (OE) not related to or easily associated with the other prescribed functions in general administration (160). Reporting manual reference: F-30

General Insurance (169)

Component activities include providing supervision and clerical support for insurance activities other than public liability, insuring the transit agency against losses other than public liability (e.g., fidelity, fire, accident), and preparing, submitting and pursuing insurance claims for losses other than public liability. Insurance activities involved with public liability should be included under injuries and damages(165). Reporting manual reference: F-30

General Legal Services (168)

Component activities include providing supervision and clerical support for general legal service activities, performing legal services other than those concerned with public liability claims for injuries and damages. Reporting manual reference: F-30

General Management (176)

Component activities include providing executive assistance and clerical support for general management activities and special projects, establishing policies for the development and operation of the transit agency and providing top level management for the transit agency to implement the development and operation policies. Reporting manual reference: F-30

General Purpose Maintenance Facilities

Facilities used for inspecting, servicing and performing light maintenance work upon revenue vehicles. Light maintenance includes brake adjustments, engine degreasing, tire work, minor body repairs and painting. Reporting manual reference: A-10, RU-20

Governmental Accounting Standards Board (GASB)

Affiliated with the FASB, it specializes in accounting principles within government agencies in the United States. Reporting manual reference: Introduction

Grade Crossing

An intersection of roadways, railroad tracks, or dedicated transit rail tracks that run across mixed traffic situations with motor vehicles, light rail (LR), commuter rail (CR), heavy rail (HR) or pedestrian traffic. Either in mixed traffic or semi-exclusive situations. Reporting manual reference: B-10, A-20, S&S-40

Guideway

A public transportation facility using and occupying a separate right-of-way (ROW) or rail for the exclusive use of public transportation including the buildings and structures dedicated for the operation of transit vehicles such as at grade, elevated and subway structures, tunnels, bridges, track and power systems for rail modes, and paved highway lanes dedicated to bus (MB) mode. Guideway does not include passenger stations and transfer facilities, bus (MB) pull-ins or communication systems (e.g., cab signaling and train control). Reporting manual reference: F-20

H[Back to top](#)**Hazardous Materials Spill**

The spill or release of any amount of hazardous material that creates an imminent danger to life, health, or the environment. Reporting manual reference: S&S-40

Headway

The time interval between vehicles moving in the same direction on a particular route. Reporting manual reference: S-10

Heavy Maintenance Facilities

Facilities used for performing heavy maintenance work on revenue vehicles. Heavy maintenance includes the following: Unit rebuild Engine overhaul Significant body repairs Other major repairs. Reporting manual reference: A-10

Heavy Rail (HR)

A transit mode that is an electric railway with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating singly or in multi-car trains on fixed rails, separate rights-of-way (ROW) from which all other vehicular and foot traffic are excluded, sophisticated signaling, and high platform loading. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Heavy Rail Passenger Cars (HR)

Vehicle Type: Rail cars with motive capability, driven by electric power taken from overhead lines or third rails, configured for passenger traffic and are usually operated on exclusive right-of-way (ROW). Reporting manual reference: S&S-40

High Occupancy / Toll (HO/T) Lanes

A concept that allows single occupancy vehicles (SOVs) to gain access to high occupancy vehicle (HOV) lanes by paying a toll. For formula purposes, FTA recognizes HO/T lanes as fixed guideway if the following conditions are met:

- A State agency with jurisdiction over the HOV facility certifies to the US Secretary of Transportation that they have established a program to monitor, assess, and report on the operation of the facility and the impact of high occupancy / toll vehicles and other low emission and energy efficient vehicles.
- That there is an adequate enforcement program and provision made for limiting or discontinuing the exemptions if the facility becomes seriously degraded.
- The State agency's certification is submitted to the NTD.

If a transit agency has stricter requirements for high occupancy vehicle (HOV) facilities than the prohibition of SOVs, for example 3 or more persons per vehicle, then those requirements apply to the HO/T lane, i.e., one and two-person vehicles would pay tolls. Reporting manual reference: F-10, S-20, FFA-10, Declarations

High Occupancy Vehicle (HOV)

Vehicles that can carry two or more persons. Examples of high occupancy vehicles (HOV) are a bus, vanpool, and carpool. Reporting manual reference: A-20

High Occupancy Vehicle (HOV) Facility

Exclusive or controlled access right-of-way (ROW) that is restricted to high occupancy vehicles (HOV) (buses, passenger vans, and cars carrying one or more passengers) for a portion or all of a day. Reporting manual reference: F-10, A-20, S-20, Declarations

Hijacking

Any person who unlawfully, by force or threat thereof, or by any other form of intimidation, seizes or exercises control of a transit vehicle with the intent to cause any person onboard the vehicle to be detained against his or her will, cause any person onboard the vehicle to be transported against his or her will to any place other than the next scheduled stop, or cause that vehicle to deviate from its schedule. Reporting manual reference: S&S-40

Homicide

The killing of one human being by another, including murder and non-negligent manslaughter: The willful (non-negligent) killing of one human being by another and negligent manslaughter : The killing of another person through gross negligence. Reporting manual reference: S&S-40

HO/T

High Occupancy / Toll

HOV

High Occupancy Vehicle

HR

Mode: Heavy Rail. Vehicle Type: Heavy Rail Passenger Cars

Hybrid Vehicle

A vehicle that combines two or more sources of power that can directly or indirectly provide propulsion power, so as to increase efficiency and thereby reduce emissions. A hybrid vehicle uses a mixture of technologies such as internal combustion engines, electric motors, gasoline, and batteries. Reporting manual reference: A-30, R-10

I[Back to top](#)**IAS**

Independent Auditor Statement

IAS — FD

Independent Auditor Statement for Financial Data

IAS — FFA

Independent Auditor Statement for Federal Funding Allocation Data

IB

Intercity Bus

ID

NTD identification number

In-Kind Services

A type of contributed service reported only if there is no obligation to pay for the service. Reporting manual reference: F-10

Inactive Vehicles

The vehicles in storage, emergency contingency vehicles, vehicles pulled from the active fleet but awaiting sale, vehicles out of service for an extended period of time for major repairs. Reporting manual reference: A-30, S-10

Inclined Plane (IP)

A transit mode that is a railway operating over exclusive right-of-way (ROW) on steep grades (slopes) with powerless vehicles propelled by moving cables attached to the vehicles and powered by engines or motors at a central location not onboard the vehicle. The special tramway type of vehicles have passenger seats that remain horizontal while the undercarriage (truck) is angled parallel to the slope. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Vehicle Type: Special type of passenger vehicles operating up and down slopes on rails via a cable mechanism. Reporting manual reference: A-30, S&S-40

Incomplete Report

An NTD report not containing all the required reporting forms and data, not in conformance with the NTD requirements, or not containing the chief executive officer (CEO) certification and Independent Auditor Statements (IAS), as applicable. Reporting manual reference: Introduction, MR Introduction, S&S Introduction

Independent Auditor

A person appointed and authorized to examine accounts and accounting records, make comparisons with vouchers, invoices and other documents, and state the result. For NTD, the auditor must meet the independence criteria contained in the Government Auditing Standards (Government Accountability Office). Can be found in: Introduction, Declarations, MR Introduction, S&S Introduction

Independent Auditor Statement (IAS)

A letter signed by an independent public accountant or other independent entity (such as a state audit agency). There are two Independent Auditor Statements (IAS) which are the Independent Auditor Statement for Financial Data (IAS - FD), and the Independent Auditor Statement for Federal Funding Allocation Data (IAS - FFA). Reporting manual reference: Introductions, Internet Reporting, Declarations

Independent Auditor Statement for Federal Funding Allocation Data (IAS — FFA)

A letter signed by an independent public accountant or other independent entity (such as a state audit agency) that he has conducted a review of the data used in the FTA Urbanized Formula Program (UAF) and FTA Capital Program for Fixed Guideway Modernization funding allocations. This letter is required for transit agencies with 100 or more vehicles operated in annual maximum service (VOMS) across all modes and types of service (TOS) and serving urbanized areas (UZA) with 200,000 or more population. Reporting manual reference: Introduction, Internet Reporting, Declarations

Independent Auditor Statement for Financial Data (IAS — FD)

A letter signed by an independent public accountant or other independent entity (such as a state audit agency) that he has conducted a review of all NTD financial forms to ensure that a transit agency's accounting system follows the Uniform System of Accounts (USOA), that accrual accounting or a directly translatable method is used, and that all data are in accordance with NTD requirements. Reporting manual reference: Introduction, Internet Reporting, Declarations

Information Systems

Systems for processing data including computers, monitors, printers, scanners, data storage devices and associated software that support transit operations such as general office, accounting, scheduling, planning, vehicle maintenance, non-vehicle maintenance and customer service functions. Reporting manual reference: F-20

Injuries and Damages (165)

Component activities include providing supervision and clerical support for injury and damage activities, insuring the transit agency against liability losses, receiving injury and damage claims filed against the transit agency, investigating accidents to determine liability, negotiating settlements of public liability cases, making payments in settlement of liability cases, defending public liability cases in court, and accumulating accident and liability claim statistics. Reporting manual reference: F-30

Injury

Any physical damage or harm to persons as a result of an incident that requires immediate medical attention away from the scene. Reporting manual reference: S&S Introduction, S&S-40, S&S-50, RU-20

Inspection and Maintenance of Revenue Vehicles (061)

Component activities include inspecting revenue vehicle components on a scheduled preventive maintenance basis (e.g., engine and transmission, fuel system, ignition system, chassis, body — exterior and interior, electrical system, lubrication system, trolleys, pantographs and third rail shoes, trucks, braking system, air conditioning system), changing lubrication fluids, replacing minor repairable units of the above listed revenue vehicle components, making road calls to service revenue vehicle breakdowns, towing and shifting revenue vehicles to maintenance facilities, rebuilding and overhauling repairable components, performing major repairs on revenue vehicles on a scheduled or unscheduled basis (this work is generally done by the following facilities: machine shop; sheet metal shop; welding and blacksmith shop; woodworking shop), and replacing major repairable units of revenue vehicles (including engines, transmissions, traction motors and air conditioners). Reporting manual reference: F-30, R-20

Inspection and Maintenance of Service Vehicles (091)

Component activities include inspecting service vehicle components on a scheduled preventive maintenance basis (e.g., engine and transmission, fuel system, ignition system, chassis, body — exterior and interior, electrical system, lubrication system, trolleys, pantographs and third rail shoes, trucks, braking system, air conditioning system), performing minor repairs to the above listed service vehicle components, changing lubrication fluids, replacing minor repairable units of the above listed service vehicle components, making road calls for service vehicle breakdowns, towing and shifting service vehicles to maintenance facilities, rebuilding and overhauling repairable components, performing major repairs on service vehicles on a scheduled or unscheduled basis (this work is generally done by the following facilities: machine shop; sheet metal shop; welding and blacksmith shop; woodworking shop), and replacing major repairable units of service vehicles (including engines, transmissions, traction motors and air conditioners). Reporting manual reference: F-30, R-20

Instructor Premium for Operator Training (2.01)

The bonus above straight time pay paid to an operator serving as an instructor to new operators. The straight time pay of such operators is charged to platform time (1.04) if the training is being conducted on the vehicle operating in line service, or to other time spent in transportation administration (2.08) for other instruction time. Reporting manual reference: F-50

Intercity Bus (IB)

Regularly scheduled public service using an over-the-road bus that operates with limited stops between two urbanized areas or connecting rural areas to an urbanized area. Intercity bus mode should only be used by private, intercity bus providers. Reporting manual reference: RU Introduction, RU-20

Intercity Bus Service

Regularly scheduled bus (MB) service for the general public, using an over-the-road bus (MB), that operates with limited stops over fixed routes connecting two or more urban areas not in close proximity or connecting one or more rural communities with an urban area not in close proximity, has the capacity for transporting baggage carried by passengers, and makes meaningful connections with scheduled intercity bus (MB) service to more distant points. Reporting manual reference: Introductions, A-10

Interest Expenses (511)

The charges for the use of borrowed capital incurred by the transit agency, including interest on long term, and short-term debt obligations. Interest charges pertaining to construction debt that is capitalized will not be reflected as interest expense. Reporting manual reference: F-40

Interstate Transfer Program

Federal Highway Administration (FHWA) funds transferred from the Interstate Transfer Program to FTA for transit projects. This program is for segments of the Interstate Highway System that were not built. The funding for these segments was redesignated for other highway and transit projects. Can be found in: F-10

Intervening Time (1.06)

The incidental time between any two pieces of a run. Reporting manual reference: F-50

IP

Mode: Inclined Plane Vehicle Type: Inclined Plane Vehicles

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FTA Job Access and Reverse Commute Program

Jitney (JT)

A transit mode comprised of passenger cars or vans operating on fixed routes (sometimes with minor deviations) as demand warrants without fixed schedules or fixed stops. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Joint Expenses or Shared Costs

An object class cost (e.g., labor, services, materials and supplies) that is shared by one or more functions, modes or types of service (TOS). For example, bus (MB) and demand response (DR) revenue vehicles may fuel at the same location (vehicle operations function - MB and DR/DO) so that fuel expenses (object class 504.01) and their taxes (object class 507) are shared. Reporting manual reference: F-30

Joint Powers Agency

Two or more public agencies, when authorized by their governing authority, to enter into agreements to jointly exercise any power common to the contracting parties. The agency or entity provided by the agreement to administer or execute the agreement may be one or more of the parties to the agreement or a commission or board constituted pursuant to the agreement or a person or a firm or corporation, including a nonprofit corporation designated in the agreement. The administering agency is a public entity separate from the parties to the agreement and shall possess the common power specified in the agreement and may exercise it in the manner or according to the method provided in the agreement. As a general proposition, there are no new powers but merely a new procedure for the exercise of existing powers. Reporting manual reference: B-10

JT

Jitney

L[Back to top](#)**Labor (501)**

The pay and allowances due employees in exchange for the labor services they render in behalf of the transit agency. The labor allowances include payments direct to the employee arising from the performance of a piece of work. Reporting manual reference: F-30

Lane Miles

The length of a roadway (in miles) dedicated to high occupancy vehicles (HOV) multiplied by the number of traffic lanes. Only pavement normally used should be included, shoulders should not be included, except if shoulders are legally used in peak hours. Reporting manual reference: A-20

Larceny / Theft

The unlawful taking, carrying, leading, or riding away of property from the possession, or constructive possession, of another person. Attempted larcenies are excluded. Reporting manual reference: S&S-40, S&S-50

Late Report

NTD report not submitted by the due date, the last day of the grace period or the extended due date. Reporting manual reference: Introductions

Layover / Recovery Time

The hours scheduled at the end of the route before the departure time of the next trip. This time is scheduled for two reasons:

1. To provide time for the vehicle operator to take a break (layover)
2. To provide time to get back on schedule before the next trip departs if the trip arrives late at the end of the route (recovery).

Reporting manual reference: S-10, R-20, MR-20

Lease under Lease Purchase Agreement (LP)

Vehicles leased under a closed end agreement whereby the lessee acquires the capital appreciation of the vehicles as lease payments are made. At the end of the lease, the lessee owns the vehicles. Reporting manual reference: A-30, RU-20

Leased or Borrowed from Related Parties (LR)

Vehicles leased or borrowed through a public entity as the result of legal or governmental agreements or restrictions. For example, a state may purchase all vehicles (hold title) and distribute the vehicles to transit agencies; or vehicles may be owned by a county government and leased to a public transit authority that is legally prohibited from owning the vehicles. Reporting manual reference: A-30, RU-20

Leased through a Purchased Transportation Agreement (PT)

Vehicles leased or borrowed through a purchased transportation (PT) agreement. Reporting manual reference: A-30

Leases and Rentals (512)

The payments for the use of capital assets not owned by the transit agency. True leases are those in which the lessor and lessee are not related parties, the total lease payments cover the lessor's cost of the property for the period of the lease plus interest, or the ownership of the property remains with the lessor upon expiration of the lease. For the true lease, this object class includes the lease payments on true lease property. Reporting manual reference: F-40

Level of Service (LOS)

A qualitative measure that characterizes operational conditions within a traffic stream and their perception by motorists and passengers. The descriptions of individual levels of service characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Reporting manual reference: S-20, FFA-10

Life Safety Event

A situation, such as a fire, the presence of smoke, fuel leak, or electrical hazard that constitutes an imminent danger to passengers, employees, contractors, or other persons. Reporting manual reference: S&S-40

Light Rail (LR)

A transit mode that typically is an electric railway with a light volume traffic capacity compared to heavy rail (HR). It is characterized by passenger rail cars operating singly (or in short, usually two car, trains) on fixed rails in shared or exclusive right-of-way (ROW), low or high platform loading, and vehicle power drawn from an overhead electric line via a trolley or a pantograph. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Light Rail Vehicles (LR)

Vehicle Type: Rail cars with motive capability, usually driven by electric power taken from overhead lines, configured for passenger traffic, and usually operating on exclusive rights-of-way (ROW). Reporting manual reference: A-30, S&S-40

Linked Passenger Trip

A trip from origin to destination on the transit system. Even if a person must make several transfers during a journey, the trip is counted as one linked trip on the system. Reporting manual reference: FFA-10

Loans

Financing mechanism used to raise funds. Loans can be either secured or non-secured debt. They typically are offered to transit agencies by commercial entities (e.g., banks) or other government entities (e.g., states, counties, cities). The terms of the loan specify the term of the loan (e.g., 10 years), the interest rate (e.g., 5%), and frequency of payments (e.g., monthly, quarterly, annually). Generally, the payments are constant (or level) for the term of a loan. Each payment consists of interest and principal (repayment of a portion of the loan amount). When the last payment is made, the entire principal will have been repaid. Reporting manual reference: F-10

Local Capital Funds

Financial assistance from local entities to assist in paying capital. They include:

- Tax levies — A specified amount from local tax levies that is dedicated to supporting the capital costs of the public transit system.
- General funds — Transfers from the general fund of local governments to cover the Local Share portion of transit system capital costs.
- Specified contributions — Contributions from the local government towards the Local Share portion of transit system capital costs.
- Reserve funds — Transfers from a capital reserve fund of local governments expressly established to be used to cover the Local Share portion of transit system capital costs.
- Donations — Donations from individuals or organizations to help cover the transit system capital costs.

Reporting manual reference: RU-20

Local Government Funds

Financial assistance from local governments (below the state level) to help cover the costs of providing transit services. Reporting manual reference: F-10

Local Operating Funds

Financial assistance from local entities that support the operation of the transit system. They include, but are not limited to:

- Tax levies — A specified amount from local levies that is dedicated to supporting public transit system operating costs.
- General funds — Transfers from the general fund of local governments to cover the Local Share portion of the transit system budget.
- Specified contributions — Contributions from city, county or other municipal government towards the Local Share portion of the transit system budget.
- Donations — Donations from individuals or organizations to help cover the costs of providing transit service but which are not related to specific passengers or trips.
- Other — Other revenues such as advertising.

Reporting manual reference: RU-20

Locomotive

A self-propelled unit of rail equipment designed primarily for moving (pushing or pulling) passenger cars. It does not include self-propelled passenger cars. Reporting manual reference: S-10

LOS

Level of Service

LP

Lease under Lease Purchase Agreement

LR

Leased or Borrowed from Related Parties

LR

Mode: Light Rail

Vehicle Type: Light Rail Vehicles

M

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Mainline

Primary rail over which rail transit vehicles travel between stations; it excludes yard, and siding track. Reporting manual reference: S&S-40

Mainline Derailment

A non-collision incident in which one or more wheels of a transit vehicle unintentionally leaves the rails. Reporting manual reference: S&S-40

Maintenance Administration — Facilities (Non-Vehicles) (042)

Component activities include providing supervision and clerical support for the administration of transit way and structures maintenance and other buildings, grounds and equipment maintenance, preparing and updating records for transit way and structures maintenance and other buildings, grounds and equipment maintenance records, providing technical training to facilities maintenance personnel, engineering maintenance of transit way and structures, and of other buildings, grounds and equipment. Reporting manual reference: F-30

Maintenance Administration — Vehicles (041)

Component activities include providing supervision and clerical support for the administration of vehicle maintenance, preparing and updating vehicle maintenance records, accumulating and computing vehicle performance data (e.g., mileage, fuel and oil consumption), providing technical training to vehicle maintenance personnel, appearing as a witness, and engineering vehicle maintenance activities. Reporting manual reference: F-30, R-20

Maintenance Buildings

Facilities where maintenance activities are conducted including garages, shops (e.g., body, paint, machine) and operations centers (see Vehicle Maintenance (041) function). Include in maintenance buildings, equipment that enhances the maintenance function for example bus (MB) diagnostic equipment. Do not include information systems such as computers that are used to process maintenance data. Reporting manual reference: F-20

Maintenance of Communication Systems (126)

Inspecting, cleaning, repairing and replacing all components of communication systems (e.g., office telephone, public address units), other than those devoted to the vehicle movement control function which are included in maintenance of vehicle movement control systems (101). Reporting manual reference: F-30

Maintenance of Fare Collection and Counting Systems (111)

Inspecting, cleaning, repairing and replacing all components of fare collection and counting equipment (e.g., fare boxes, vaults, counters, changers and sorters). Reporting manual reference: F-30

Maintenance of Garages and Shop Buildings, Grounds and Equipment (125)

Component activities include inspecting, repairing and replacing components of garage and shop buildings and equipment and providing custodial services for garage and shop buildings and grounds. Reporting manual reference: F-30

Maintenance of General Administration Buildings, Grounds and Equipment (127)

Component activities include inspecting, cleaning, repairing and replacing components of buildings and equipment used for general administration and providing custodial services for buildings and grounds used for general administration. Reporting manual reference: F-30

Maintenance of Operating Station Buildings, Grounds and Equipment (124)

Component activities include inspecting, repairing and replacing components of operating station buildings and equipment and providing custodial services for operating station buildings and grounds. Reporting manual reference: F-30

Maintenance of Passenger Stations (123)

Component activities include inspecting, repairing and replacing components of passenger station buildings and equipment and providing custodial services for passenger station buildings and grounds. Reporting manual reference: F-30

Maintenance of Roadway and Track (121)

Component activities include inspecting, cleaning, repairing, clearing and replacing all components of roadway and track. Reporting manual reference: F-30

Maintenance of Structures, Tunnels, Bridges and Subways (122)

Component activities include inspecting, cleaning, repairing and replacing all components of structures, tunnels, bridges and subways. Reporting manual reference: F-30

Maintenance of Vehicle Movement Control Systems (101)

Component activities include inspecting, cleaning, repairing and replacing all components of vehicle movement control equipment (e.g., radios, roadway phones and monitor units). Reporting manual reference: F-30

Major Mechanical System Failure

A failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns. Reporting manual reference: S-20

Market Research (164)

Component activities include providing supervision and clerical support for research activities and conducting consumer behavior research and transit service demand surveys to help define new routes, revisions to existing routes, etc. Reporting manual reference: F-30

Mass Transportation

Synonymous term with public transportation. Reporting manual reference: B-10

Materials and Supplies (504)

The tangible products obtained from outside suppliers or manufactured internally. Expenses include freight-in, purchase discounts, cash discounts, sales taxes and excise taxes (except on fuel and lubricants) are to be included in the cost of the material or supply.

Charges to these expense accounts will be for the materials and supplies issued from inventory for use and for the materials and supplies purchased for immediate use; i.e., without going through inventory. Reporting manual reference: F-30

MB

Bus

Miles of Track

The number of tracks obtained from one-mile segment of right-of-way (ROW). Miles of track are measured without regard to whether or not rail traffic can flow in only one direction on the track. All track is counted, including yard track and sidings. Reporting manual reference: A-20

Minimum Guarantee — Daily (1.09)

The time that must be added to a run in order to make the run total a minimum number of hours for a day, or in order to make a work piece equal the minimum number of hours for a piece of work. Reporting manual reference: F-50

Minimum Guarantee — Weekly (1.10)

The time that must be added to an operator's time to guarantee him a minimum number of pay hours for a weekly, biweekly or semi-monthly pay period. Reporting manual reference: F-50

Minimum Guarantee for Call out (1.08)

The time beyond that associated with the performance of a work piece that an operator has been called out to perform in order to bring the total amount of time paid up to a guaranteed minimum for the call out. Reporting manual reference: F-50

Minivans (MV)

A light duty vehicle having a typical seating capacity of up to 7 passengers and a driver. A minivan is smaller, lower, and more streamlined than a full-sized van, but it is typically taller and with a higher floor than a passenger car, such as a hatchback or station wagon. Minivans normally cannot accommodate standing passengers. Can be found in: S&S-40.

Miscellaneous Expenses (509)

The expenses that cannot be attributed to any of the other major expense categories (object classes labor (501), fringe benefits (502), services (503), materials and supplies (504), utilities (505), casualty and liability costs (506), taxes (507) and purchased transportation (508)). Reporting manual reference: F-30

Mixed Traffic Rights-of-Way (ROW)

Roadways other than exclusive and controlled access rights-of-way (ROW) used for transit operations that are mixed with pedestrian and vehicle traffic. Does not include guideway that only has grade crossings with vehicle traffic. Reporting manual reference: A-20, S-10, FFA-10, S&S-40

MO

Mode: Monorail Vehicle Type: Monorail Vehicles

Mode

A system for carrying transit passengers described by specific right-of-way (ROW), technology and operational features. Reporting manual reference: Introductions, Internet Reporting, B-10, F-20, F-30, F-40, A-10, A-20, A-30, S-10, S-20, R-10, R-20, R-30, FFA-10, Declarations, MR-10, MR-20, S&S-10, S&S-30, S&S-40, RU-10

Mode (Rural)

Description of mode of service operated with subcategories for bus and demand response modes. Bus mode can be conventional bus fixed route service, bus deviated fixed route service, or intercity bus service. Demand response can be the usual service (no standing reservations) or subscription demand response where there are on-going reservations for scheduling consistent passenger trips. These subscription services are for categorical programs, such as Medicaid, Meals-on-Wheels, sheltered workshops, independent living centers and any social service agency programs. Subrecipients of \$5311 funds may report these programs to the extent that services are provided in coordination with public transit trips; i.e., they are included in a coordinated public transit – human services transportation system. Reporting manual reference: RU-10, RU-20

Model Number

Vehicle model number as used by the manufacturer. Reporting manual reference: A-30

Monetary Consideration

The consideration paid by the public body to the private or public seller of transportation service (private / public carrier). The monetary consideration may include cash reimbursement of a private / public carrier's operating deficit, negotiated rate per unit of service delivered by the private / public carrier, cash reimbursement to the private / public carrier for reduced fare programs specified by the public body (e.g., for students and for the elderly and persons with disabilities), vehicles given, sold, loaned or leased by the public body to the private / public carrier at or below market value, and maintenance facility leased by the public body to the private / public carrier. Reporting manual reference: Introductions, B-30

Monorail (MO)

A transit mode that is an electric railway of guided transit vehicles operating singly or in multi-car trains. The vehicles are suspended from or straddle a guideway formed by a single beam, rail or tube. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Monorail Vehicles (MO)

Vehicle Type: Guided transit passenger vehicles operating on or suspended from a single rail, beam or tube. Reporting manual reference: A-30, S&S-40

Motor Vehicle Theft

The theft of a motor vehicle. A motor vehicle is a self-propelled vehicle that runs on the surface of land and not on rails. Reporting manual reference: S&S-50

Multi-County/Independent City

Service operated primarily within the boundaries of two or more counties/independent cities or parishes. Reporting manual reference: RU-20

Multi-Modal Stations

A passenger station that also serves non-transit services. Reporting manual reference: A-10

Municipality

A town, village, or other district having powers of local self-government. For Rural NTD reporting, the term municipality does not include a city or

county. Reporting manual reference: RU-20

MV

Minivans

N

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National Highway System (NHS)

Federal Highway Administration (FHWA) funds transferred from the National Highway System (NHS) to FTA for transit projects. The National Highway System (NHS) provides for a wide range of transportation activities. Eligible transit projects include fringe and corridor parking facilities, bicycle and pedestrian facilities, vanpool projects, and public transportation facilities in National Highway System (NHS) corridors. Reporting manual reference: F-10

Net Contract Expenditures by the Buyer (after fare revenue)

Actual payments or accruals by the buyer under the purchased transportation (PT) agreement, net of and not including purchased transportation (PT) fares. For contracts in which the seller retains fare revenues, the net contract expenditures by the buyer equals the actual payments or accruals made by the buyer. For contracts in which the purchased transportation (PT) fare revenues are returned to the buyer by the seller, the net contract expenditures by the buyer equals the actual payments or accruals made by the buyer net of or less the purchased transportation (PT) fare revenues. Reporting manual reference: B-30

NF

Non-Federal (funded vehicles)

NFG

Non-Fixed Guideway

NHS

National Highway System

Nine or Fewer Vehicles Waiver

Relief from filing a complete NTD report if the transit agency operates nine or fewer vehicles in annual maximum service across all modes and types of service (TOS), and all service operates on non-fixed guideway (NFG) (mixed traffic right-of-way (ROW)). Reporting manual reference: Introductions, Internet Reporting, B-10, Declarations, MR-10

Non-ADA Accessible Stations

Public transportation passenger facilities, which do not provide ready access by individuals with disabilities, including individuals who use wheelchairs. Refer to 49 CFR Part 37, Appendix. Reporting manual reference: A-10

Non-Dedicated Vehicles

Vehicles not used exclusively for contracted service. Reporting manual reference: A-30

Nonfederal (NF) (funded vehicles)

Vehicles purchased without Federal funding. Reporting manual reference: A-30

Non-Fixed Guideway (NFG)

Mixed traffic right-of-way (ROW). For Federal funding purposes, excludes trolleybus (TB) and ferryboat (FB) modes, which are considered fixed guideway (FG). Reporting manual reference: Introductions, FFA-10

Non-Operating Paid Work Time

The time an operator spends on the job in a capacity other than operating, making preparations for or completing the immediate operation of a revenue vehicle. Non-operating time includes instructor premium for operator training, student training time, accident reporting time, witness time, time spent on union functions, run selection time, other time spent in transportation administration, time spent in revenue vehicle movement control, time spent in ticketing and fare collection, time spent in customer service, and other. Reporting manual reference: F-50

Non-Rail Modes

Transit modes whose vehicles typically operate on roadways — streets, highways or expressways, but may also operate on waterways (ferryboat (FB)) or via aerial cable (aerial tramways (TR)). Vehicles are typically powered by motors onboard the vehicle, with one exception, aerial tramway (TR) vehicles which are electrically powered by a motor not onboard the vehicle in order to pull the vehicle via an overhead cable. NTD recognizes eight non-rail modes

1. Aerial tramway (TR)
2. Bus (MB)
3. Demand response (DR)
4. Ferryboat (FB)
5. Jitney (JT)
6. Publico (PB)
7. Trolleybus (TB), and
8. Vanpool (VP).

Reporting manual reference: Introductions, F-20, A-10, A-20, S-10, R-10, R-30, MR-10, S&S-40

Non-Revenue Facility

A facility or an area that is not used to enable individuals to board or alight transit vehicles, and that is primarily staffed by transit employees. Reporting manual reference: S&S-40, S&S-50

Non-Scheduled Services

Services provided on demand, rather than with predetermined fixed time points, i.e., a schedule. Nonscheduled services are demand response (DR), vanpool (VP), jitney (JT), and publico (PB) services. Reporting manual reference: A-10, S-10

Non-Transit Services

Non-public transportation services, such as intercity bus (MB) and rail operations that do not meet the requirements of the Federal Transit Act for public transportation. See public transportation. Reporting manual reference: A-10

Non-Transportation Funds

The revenue earned from activities not associated with the provision of transit service. Non-transportation funds include investment earnings, other non-transportation sources, including revenues earned from sales of maintenance services on property not owned or used by the transit agency, rentals of revenue vehicles to other operators, rentals of transit agency buildings and property to other organizations, parking fees generated from parking lots not normally used as park-and-ride locations, donations, grants from private foundations, development fees, rental car fees, and other. Reporting manual reference: F-10

Non-UZA

Other than Urbanized Area

Non-Vehicle Maintenance (042)

All activities associated with facility maintenance, including:

- Administration
- Repair of buildings, grounds and equipment as a result of accidents or vandalism
- Operation of electric power facilities
- Maintenance of:
  - Vehicle movement control systems
  - Fare collection and counting equipment
  - Structures, tunnels and subways
  - Roadway and track
  - Passenger stations, operating station buildings, grounds and equipment
  - Communication systems
  - General administration buildings, grounds and equipment, and
  - Electric power facilities.

Reporting manual reference: Internet Reporting, F-20, F-30, R-10

Non-Violent Civil Disturbance

Incidents such as strikes and blockages that result in the disruption of transit service. Reporting manual reference: S&S-50

NTD

National Transit Database

NTD ID

NTD identification number

NTD Identification Number (NTD ID)

A unique FTA-assigned number (NTD ID) that each transit agency must have before filing a report. Reporting manual reference: Introductions, B-10

Number of Active Vehicles in Fleet

The total number of operational revenue vehicles in the fleet available for general public transit service, including spare or back up revenue vehicles. The total should also include any operational revenue vehicles used by contractors in general public transit service. Non-revenue service vehicles and personal vehicles should not be included. Reporting manual reference: RU-20

Number of Americans with Disabilities Act of 1990 (ADA) Accessible Vehicles in Fleet

The number of active vehicles in the fleet, which meet all ADA accessibility requirements. Reporting manual reference: RU-20

Number of Crossings

The number of locations at which other traffic may traverse the right-of-way (ROW) for rail modes operating at grade. Reporting manual reference: A-20

O

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Object

For operating expense reporting, an article or service obtained. Reporting manual reference: F-30

Object Class

An object is an article or service obtained. An object class is a grouping of expenses on the basis of goods or services purchased. The object classes include salaries and wages, fringe benefits, services, materials and supplies, and other expenses. Object classes are detailed in Section 5.2 of the Uniforms System of Accounts (USOA). Reporting manual reference: F-10, F-30, F-40

Occurrences

The number of offenses known by the transit agency to have taken place. Reporting manual reference: S&S-40, S&S-50

OE

Operating Expense

OF

Other Federal Funds (funded vehicles)

Office Management and Services (175)

Component activities include providing supervision and clerical support for office management and services, performing general office activities (e.g., receptionist, switchboard operator), printing and distributing office supplies and forms, processing incoming and outgoing mail, and operating library and central file facilities. Reporting manual reference: F-30

OO

Owned Outright

Open Cut

Rail transit way below surface level in an excavated cut that has not had a covering constructed over it. Transition segments to open cut or subway

tunnel / tube segments are included. Reporting manual reference: A-20

Operating Assistance

Financial funding to help cover the operating costs of providing transit services. Operating costs are classified by function or activity and the goods and services purchased. The basic functions and object classes are detailed in the Operating Expenses form (F-30) and are defined in Section 5.2 and 6.2 of the Uniform System of Accounts (USOA). Reporting manual reference: Introduction, F-10, FFA-10, MR Introduction

Operating Expenses (OE)

The expenses associated with the operation of the transit agency, and classified by function or activity, and the goods and services purchased. The basic functions and object classes are defined in Section 5.2 and 6.2 of the Uniform System of Accounts (USOA). These are consumable items with a useful life of less than one year or an acquisition cost which equals the lesser of the capitalization level established by the government unit for financial statement purposes or \$5,000. Reporting manual reference: Introduction, Internet Reporting, B-10, F-10, F-30, S-20, FFA-10, Declarations

Operating Labor

The employees engaged in the operation of the transit system, categorized by their functions. The three-digit codes preceding the definition for each labor classification are the function codes in the Uniform System of Accounts (USOA). Can be found in: R-10

Operation and Maintenance of Electric Power Facilities (141)

Supervising, monitoring and operating power generation and distribution facilities (i.e., inspecting, cleaning, repairing and replacing all components of electric power generation and distribution facilities and equipment (including third rail and overhead lines)). Reporting manual reference: F-30

Operators

The personnel (other than security agents) scheduled to be aboard vehicles in revenue operations, including vehicle operators, conductors, and ticket collectors. Operators may also include: Attendants who are transit agency employees that are aboard vehicles to assist riders in boarding and alighting, securing wheelchairs, etc., typically the elderly and persons with disabilities. Reporting manual reference: Introduction, F-30, MR Introduction, S&S Introduction

Operators' Salaries and Wages (501.01)

The labor of employees of the transit agency who are classified as revenue vehicle operators or crew. Reporting manual reference: F-30

Original Submission

A report stage indicating the first time the NTD Annual Report was sent to NTD, and the report is undergoing validation. Reporting manual reference: Internet Reporting

Other

Transit service that does not fit into one of the previous categories. Reporting manual reference: RU-20

Other Agency Requests

These are requests submitted via the e-File to NTD from the agency regarding consolidation request, extension request, fiscal year change request, new fixed guideway segment request, and new ID request. Reporting manual reference: Internet Reporting

Other Assault

An unlawful attack or attempt by one person upon another where no weapon was used or which did not result in serious or aggravated injury to the victim. This includes simple assault, minor assault, assault and battery, injury by culpable negligence, intimidation, coercion, hazing, and all attempts to commit these offenses. Reporting manual reference: S&S-40, S&S-50

Other Auxiliary Transportation Revenues

The revenue earned from operations closely associated with transportation operations other than from concessions and advertising revenues. Other auxiliary transportation revenues include ID card fees (seniors, persons with disabilities, employees), fare evasion and park-and-ride lot fines, and automotive vehicle ferriage. Reporting manual reference: F-10

Other Capital Projects

Any item not described as guideway, passenger stations, administrative buildings, maintenance buildings, revenue vehicles, service vehicles, fare revenue collection equipment or systems including furniture and equipment that are not an integral part of buildings and structures, and shelters, signs and passenger amenities (e.g., benches) not in passenger stations. Reporting manual reference: F-20

Other Costs Incurred by the Buyer

Expenses of the buyer (public transit agency or governmental unit) that are directly attributable to the provision of purchased transportation (PT) services. Examples include, the provision of maintenance services or fuel for the vehicles used by the seller, gathering and compiling NTD data, and monitoring of the seller's operations and other similar costs where the buyer uses its resources to support the purchased service. Reporting manual reference: B-30, F-30

Other Dedicated Funds

Any funds dedicated to transit at their source other than income, sales, property, gasoline and other taxes; and, bridges, tunnels and highway tolls. These funds include vehicle licensing and registration fees, lottery and casino proceeds, sale of property and assets, and Other. Reporting manual reference: F-10

Other Directly Generated Funds

Any funds not included in the directly generated sources common to all transit agencies and for independent political entities. Reporting manual reference: F-10

Other Federal Funds (OF) (funded vehicles)

Vehicles purchased through Federal programs other than the FTA Urbanized Area Formula Program (UAF). Reporting manual reference: F-10, A-30

Other Federal Funds (Rural)

Other FTA programs other than:

- FTA Capital Program Funds (\$5309)
- FTA Special Needs of Elderly Individuals and Individuals with Disabilities Formula Program (\$5310)
- FTA Other Than Urbanized Area Formula Program (\$5311)
- FTA Job Access and Reverse Commute Formula Program (\$5316)

- FTA New Freedom Program (§5317)
- FTA Alternative Transportation in Parks and Public Lands (§5320), and
- Other US DOT programs and any other federal programs.

Reporting manual reference: RU-20

Other FTA Funds

Any FTA funds not reported as FTA Capital Program (§5309) and FTA Urbanized Area Formula Program (5307) funds. These funds include:

- FTA Metropolitan Planning (§5303)
- FTA Clean Fuels Program (§5308)
- FTA Special Needs of Elderly Individuals and Individuals with Disabilities Formula Program (§5310)
- FTA Other Than Urbanized Area Formula Program (§5311)
- FTA Research, Development, Demonstration and Training Projects (§5312)
- FTA Job Access and Reverse Commute Formula Program (§5316)
- FTA New Freedom Program (§5317)
- FTA Alternative Transportation in Parks and Public Lands (§5320)
- Interstate Transfer Program

Reporting manual reference: F-10

Other Funds

Any state government or any local government funding sources that are not dedicated to transit at their source or are not included in the budgeting process of general revenue funds. These funds include vehicle licensing and registration fees, communications access fees, surcharges, taxes, lottery and casino proceeds, sale of property and assets, and Other. Reporting manual reference: F-10

Other Materials and Supplies (504.99)

The costs of materials and supplies not specifically identified in object classes fuel and lubricants (504.01) and tires and tubes (504.02) issued from inventory or purchased for immediate consumption. Reporting manual reference: F-30

Other Mechanical System Failures

A failure of some other mechanical element of the revenue vehicle that, because of local agency policy, prevents the revenue vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip even though the vehicle is physically able to continue in revenue service. Reporting manual reference: R-20

Other Motor Vehicle / Personal Passenger Vehicle

Vehicle Type: Encompasses multiple types of non-commercial, non-transit passenger vehicles such as automobiles, minivans, and pickup trucks. Reporting manual reference: S&S-40

Other Premium (1.15)

The bonuses for special operating situations not covered by overtime, spread time and shift premiums. Reporting manual reference: F-50

Other Reconciling Items (516)

Any other costs that cannot be captured in object classes interest expenses (511), leases and rentals (512), depreciation (513), purchase lease agreements (514) and related parties lease agreements (515). Can be found in: F-40

Other Safety Occurrences not Otherwise Classified

May include slip and fall accidents, electric shock incidents, chemical burns, or other safety incidents that may not fit the Other Reportable Incident types. Reporting manual reference: S&S-40, S&S-50

Other Salaries and Wages (501.02)

The labor of employees of the transit agency who are not classified as revenue vehicle operators or crew. Reporting manual reference: F-30

Other Taxes

Revenues generated from a charge imposed by the state or local government, or independent political entity (e.g., transit authority) on persons or property help to pay expenses, including payroll taxes, utility taxes, communication taxes (e.g., telephone taxes and fees), and motor vehicle and tire excise taxes, but excluding income taxes, property taxes, sales taxes, and gasoline taxes. Reporting manual reference: F-10

Other Than Urbanized Area (Non-UZA)

An area (a population of fewer than 50,000) so designated by the U.S. Bureau of the Census. Reporting manual reference: Introduction, B-10, S-20, FFA-10, Declarations, MR Introduction, RU Introduction

Other Transportation Revenues

Revenues generated from nonpublic transportation, including school bus revenues, charter bus revenues, and freight tariffs. Reporting manual reference: F-10

Other US Department of Transportation (USDOT) Grant Programs

Financial assistance from non-FTA programs of the US Department of Transportation (USDOT). These funds include Federal Railroad Administration (including Amtrak) and Other. Reporting manual reference: F-10

Other Worker

An individual who is neither an employee of a transit agency or a purchased transportation (PT) provider and who is providing specific services at a transit agency. Reporting manual reference: R-10, S&S Introduction, S&S-40, S&S-50

Others

An individual who is neither a transit passenger, transit facility occupant, employee / other worker at the transit agency, nor trespasser. Reporting manual reference: R-10, S&S Introduction, S&S-40, S&S-50

Over-the-Road Bus

A bus characterized by an elevated passenger deck located over a baggage compartment. Reporting manual reference: Introduction, A-10, A-30,

RU-10

Owned Outright (OO)

Vehicles owned outright or as part of a safe harbor leasing agreement where only the tax title is sold. Reporting manual reference: A-30, RU-20

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Paratransit

Types of passenger transportation which are more flexible than conventional fixed-route transit but more structured than the use of private automobiles. Paratransit includes demand response (DR) transportation services, shared-ride taxis, car pooling and vanpooling (VP), and jitney (JT) services. Most often refers to wheelchair-accessible, demand response (DR) service. Reporting manual reference: Introduction, B-10, F-30, F-40, S-10

Park-and-Ride Parking Revenue

Revenues earned from parking fees paid by passengers who drive to park-and-ride lots operated by the transit agency to utilize transit service. Reporting manual reference: F-10

Part Time Employees

Employees of the transit agency who work less than the local definition of full time. Normally, these persons are not provided the full benefits package (e.g., sick leave, vacation and insurance benefits) associated with full time employment. Full time employees working part of their time in a function or mode are not part time employees. Reporting manual reference: R-10

Pass-Through Funds

Capital or operating financial assistance passed through to other transit agencies that have no relationship to the directly operated (DO) and / or purchased transportation (PT) services provided by the designated recipient. Reporting manual reference: F-10

Passenger Car

A unit of rolling rail equipment that provides transportation and seating and standing room for the general public. It includes self-propelled cars. Reporting manual reference: S-10

Passenger Car Hours

The hours that passenger cars are scheduled to or actually travel while in revenue service (actual passenger car revenue hours) plus deadhead hours. Actual passenger car hours include layover / recovery time; but excludes hours for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Passenger Car Miles

The miles that passenger cars are scheduled to or actually travel while in revenue service (actual passenger car revenue miles) plus deadhead miles. Reporting manual reference: S-10

Passenger Car Revenue Hours

The hours that passenger cars are scheduled to or actually travel while in revenue service. Passenger car revenue hours include layover / recovery time; but excludes deadhead, operator training, vehicle maintenance tests, and charter services. Reporting manual reference: S-10

Passenger Car Revenue Miles

The miles that passenger cars are scheduled to or actually travel while in revenue service. Passenger car revenue miles exclude deadhead, operator training, vehicle maintenance tests, and charter services. Reporting manual reference: S-10

Passenger Cars in Operation

The maximum number of passenger cars actually operated to provide service on an average weekday, average Saturday and average Sunday. Reporting manual reference: S-10, MR-20

Passenger Fare Assistance

The subsidy given to the transit agency, usually by state and local governments, on behalf of specific classes of passengers, such as students, the elderly, and persons with disabilities. The subsidy may also come from the private sector, such as employers giving assistance to offer employees programs to use public transit services at reduced rates or free. The fare assistance helps to offset the reduced or free services provided to these passengers. It is usually based on the amount of service provided; i.e., the subsidy is calculated based on the number of rides taken, but may be a lump sum payment. Reporting manual reference: F-10

Passenger Fares

The revenue earned from carrying passengers in regularly scheduled and demand response (DR) services. Passenger fares include base fare, zone or distance premiums, express service premiums, extra cost transfers, quantity purchase discounts applicable to the passenger's ride and special transit fares. Reporting manual reference: F-10

Passenger Mile Sampling

Any data sampling technique, by mode and type of service (TOS), used to calculate passenger miles that meets the 95 percent confidence and $\pm$ 10 percent precision levels. Reporting manual reference: Internet Reporting

Passenger Miles Traveled (PMT)

The cumulative sum of the distances ridden by each passenger. Reporting manual reference: Internet Reporting, F-10, S-10, FFA-10, Declarations

Passenger Stations

A passenger boarding / deboarding facility with a platform, which may include stairs, elevators, escalators, passenger controls (e.g., faregates or turnstiles), canopies, wind shelters, lighting, signs, and buildings with a waiting room, ticket office or machines, restrooms, or concessions. Includes all fixed guideway (FG) passenger facilities (except for on-street cable car (CC) and light rail (LR) stops), including busway passenger facilities; underground, at grade, and elevated rail stations; and ferryboat (FB) terminals. Includes transportation / transit / transfer centers, park-and-ride facilities, and transit malls with the above components, including those only utilized by motor buses (MB). Does not include stops (which are typically on-street locations at the curb or in a median, sometimes with a shelter, signs, or lighting) for bus (MB), light rail (LR), and cable car (CC). Reporting manual reference: F-20, F-30, A-10

PB

Publico

Permanent Employees

Employees of the transit agency meeting the local definition of part time or full time hours. Normally, these persons retain job security rights and are entitled to receive the full benefits package (e.g., sick leave, vacation and insurance benefits) if working full time. Part time permanent

employees may be eligible for a limited benefits package and may have job security rights. Reporting manual reference: R-10

Personal Passenger Vehicle / Other Motor Vehicle

Vehicle Type: Encompasses multiple types of non-commercial, non-transit passenger vehicles such as automobiles, minivans, and pickup trucks. Reporting manual reference: S&S-40

Personal Vehicles in Service

Vehicles that are used by the transit provider to transport passengers in revenue service but are owned by private individuals, typically an employee of the agency or a volunteer driver. Reporting manual reference: RU-20

Personnel

The number of persons used routinely to patrol grounds and to respond to incident in or on transit property.

Personnel Administration (167)

Component activities include providing supervision and clerical support for personnel activities, maintaining employment history records, recruiting, interviewing, testing, screening and giving medical examinations to prospective employees, administering fringe benefit, medical, welfare, pension, job evaluation, performance evaluation, promotion and other related programs, conducting orientation programs, providing supervisory and management training, researching labor relations issues, negotiating labor contracts, administering low level grievances, and administering a worker's compensation program. Reporting manual reference: F-30

Planning (177)

Component activities include providing supervision and clerical support for planning activities and conducting long range and regional transit planning and analysis. Reporting manual reference: F-30

Platform

A horizontal surface raised above the level of the adjacent area, such as a boarding and alighting area alongside rail tracks. Reporting manual reference: F-20, A-10

Platform Time

The time during which an operator operates the revenue vehicle a) in line service or in deadheading (including layover periods in the vehicle at a rest point) or b) for charter, contract, and special non-contract service, or is deadheading or laying over as a result of such service. Reporting manual reference: F-30.

PMT

Passenger Miles Traveled

Point Deviation

A method of providing transit service to all origins and destinations within a corridor, defined by a prescribed distance from a street (e.g., $\frac{3}{4}$ mile), making scheduled stops at mandatory time points along the corridor on a predetermined schedule. This type of service (TOS) does not follow a fixed route because the path is determined based on the origins and destinations of the passengers. Passengers can use the service in three ways:

1. By traveling between mandatory time points on the schedule
2. By advising the bus operator if they want to be taken to a destination that is not a scheduled time point when boarding, or
3. If they want to be picked up at a location that is not a scheduled time point, by calling the transit system and requesting a pickup.

Reporting manual reference: B-10, S-10

Preliminary Transit Agency Development (145)

Component activities include researching transit technology, researching service area to determine which transit technology to apply, route configurations, service level requirements, conducting hearings and meetings with various interest groups to identify their perceived needs and to expose planning concepts for discussion, developing construction project management capability, and performing preliminary design and engineering work on major construction projects. This function covers the operating expenses associated with performing these activities prior to the time when a firm commitment to construction is made. Costs of this nature incurred after the commitment to construct is made would be capitalized. Reporting manual reference: F-30

Preventative Maintenance Costs

All the activities, supplies, materials, labor, services, and associated costs required to preserve or extend the functionality and serviceability of the asset in a cost effective manner, up to and including the current state of the art for maintaining such asset. These capital maintenance expenses are eligible to use FTA formula funding programs for Vehicle maintenance functions (041) and Non-vehicle maintenance(042) functions. Reporting manual reference: F-30, RU-20

Primary Security Personnel

The security force that the agency uses routinely or assigns to patrol its grounds and to respond to incidents in or on transit property. Primary and secondary security forces could be interchangeable due to staffing concerns (e.g., major sporting events). Reporting manual reference: S&S-30.

Private For-Profit Provider

A nonpublic entity that provides public transportation services. For-profit entities exist primarily to generate a profit, (i.e., a surplus of revenues over expenditures). Reporting manual reference: Introduction, B-30, F-10, A-10, MR Introduction, S&S Introduction

Private Nonprofit Provider

A nonpublic entity with a tax-free status that provides public transportation services. Nonprofit entities exist to provide a particular service (e.g., public transportation) to the community. Nonprofit refers to a type of business — one that is organized under rules that forbid the distribution of profits to owners. Profit refers to a surplus of revenues over expenditures. Reporting manual reference: Introduction, B-30, F-10, A-10, MR Introduction, S&S Introduction

Promotion (163)

Component activities include providing supervision and clerical support for promotion activities, media relations including preparing and distributing press releases, designing, producing and distributing promotional material (e.g., posters, decals, photographs, leaflets, newspaper mats), designing and implementing, with or without outside agency assistance, programs for advertising and promoting the use of transit service. Reporting manual reference: F-30

Property Damage

The dollar amount required to repair or replace all vehicles (transit and non-transit) and all property / facilities (track, signals, and buildings) damaged during an incident to a state equivalent to that which existed prior to the incident. Reporting manual reference: S&S-40, S&S-50, RU-20

PT

Purchased Transportation

Public Agency or Transit System

A public entity that provides public transportation services. It may be a state or local government, or any department, special purpose district (e.g. transit or transportation district), authority or other instrumentality of one or more state or local governments (e.g., joint powers agency). Reporting manual reference: Introduction, B-30, F-10, A-10, MR Introduction, S&S Introduction

Public Entity

Any of the following three categories (49 CFR 37):

1. Any state or local government
2. Any department, agency, special purpose district, or other instrumentality of one or more state or local governments
3. The National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Reporting manual reference: Introduction, B-30, F-10, A-10, MR Introduction, S&S Introduction

Public Transportation

As defined in the Federal Transit Act, "transportation by a conveyance that provides regular and continuing general or special transportation to the public, but does not include school bus, charter, or intercity bus transportation or intercity passenger rail transportation provided by the entity described in chapter 243 (or a successor to such entity)." Reporting manual reference: Introduction, B-10, A-10, A-20, A-30, MR-10, S&S Introduction, RU Introduction

Notes: (1) Passenger rail transportation refers to Amtrak. (2) This definition does not affect the eligibility of intercity bus service under the \$5311 Other Than Urbanized Area (Rural) Formula Program. (3) The intercity bus and intercity rail (Amtrak) portion of Intermodal terminals is however an eligible capital cost.

Publico (PB)

A transit mode comprised of passenger vans or small buses operating with fixed routes but no fixed schedules. Publicos (PB) are a privately owned and operated public transit service which is market oriented and unsubsidized, but regulated through a public service commission, state or local government. Publicos (PB) are operated under franchise agreements, fares are regulated by route and there are special insurance requirements. Vehicle capacity varies from eight to 24, and the vehicles may be owned or leased by the operator. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Purchase Lease Payments (514)

The payments for which the arrangement is a financing plan for the purchase of the property by the lessee. The ownership of the property passes to the lessee upon expiration of the lease, sometimes with an additional payment far below the expected market value of the property. The property covered by such leases may or may not have been booked as owned assets, either during or after the period of the lease, in the transit agency's internal accounting records. If purchase leases have not been capitalized in the transit agency's internal accounting records, this category includes the lease payments for the purchase lease agreement. If the lease has been capitalized in the internal accounting records of the transit agency, it is to be accounted for in the NTD system as it has been accounted for internally. Reporting manual reference: F-40

Purchased Transportation (PT)

Transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate public transportation services for a public transit agency or governmental unit for a specific monetary consideration, using its own employees to operate revenue vehicles. Purchased transportation (PT) does not include franchising, licensing operations, management services, cooperative agreements, or private conventional bus service. Reporting manual reference: Introduction, B-10, B-30, F-10, F-20, F-30, A-10, A-20, A-30, R-30, FFA-10, Declarations, MR Introduction, MR-10, MR-20, S&S Introduction, S&S-10, S&S-40, S&S-50, RU-10

Purchased Transportation (PT) Fare Revenues

The fare revenues derived from the transit services provided under the purchased transportation (PT) agreement, regardless of whether fares are retained by the seller or returned to the buyer. They are usually collected by the seller. However, they also include fares collected or sold by the buyer for users of the purchased service. For example, if the buyer of the purchased transportation (PT) service sells tickets, tokens or passes for these users, this revenue is part of purchased transportation (PT) fare revenues. Reporting manual reference: B-30, F-10

Purchased Transportation (PT) Service (508)

The payment or accrual (net of fare revenues) to other transit agencies, public or private, for providing transportation service and purchased transportation (PT) fare revenues. This object class is divided into 2 parts which are filing in report (508.01), and filing separate report (508.02). Reporting manual reference: F-30

Purchased Transportation (PT) Service Filing Separate Report (508.02)

The payment or accrual (net of fare revenues) to other transit agencies, public or private, for providing transportation service and purchased transportation (PT) fare revenues involving sellers whose file a complete, separate NTD report. Reporting manual reference: F-30

Purchased Transportation (PT) Service in Report (508.01)

The payment or accrual (net of fare revenues) to other transit agencies, public or private, for providing transportation service and purchased transportation (PT) fare revenues involving sellers whose non-financial data are included in the buyer's report. Reporting manual reference: F-30

Purchasing and Stores (172)

Component activities include providing supervision and clerical support for purchasing and stores activities, preparing specifications for materials and supplies from vendors, issuing and receiving materials and supplies at storage facilities, delivering materials and supplies to and from requisition points, maintaining physical control of materials and supplies including storing, picking and packing, maintaining inventory control records of materials and supplies including determining reorder points and order quantities. Reporting manual reference: F-30

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Qualified Statistician

An individual with a working knowledge and education or background in statistics who determines if techniques for passenger mile data collection

meet FTA's requirements for statistical reliability (95 percent confidence and 10 percent precision). Reporting manual reference: S-10

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Rail Collision with Person

An incident in which a rail transit vehicle strikes an individual. Incidents involving suicides and attempted suicides are excluded from this category. Reporting manual reference: S&S-40

Rail Collision with Transit Vehicle

An incident in which a rail transit vehicle strikes or is struck by another transit vehicle (either a revenue vehicle or a non-revenue vehicle). Reporting manual reference: S&S-40

Rail Modes

Transit modes whose vehicles travel along fixed rails — bars of rolled steel — forming a track. The vehicles are usually electrically propelled typically through motors onboard the vehicles, but motors may also be at a central location not onboard the vehicles to pull the vehicles by cables (cable car (CC), inclined plane (IP)). For commuter rail (CR), vehicles may be self-propelled or may be drawn by a locomotive. NTD recognizes eight rail modes:

1. Alaska railroad (AR)
2. Automated guideway (AG) transit
3. Cable car (CC)
4. Commuter rail (CR)
5. Heavy rail (HR)
6. Inclined plane (IP)
7. Light rail (LR), and
8. Monorail (MO).

Reporting manual reference: Introduction, F-20, A-10, A-20, S-10, S-20, R-30, MR Introduction, MR-10, S&S Introduction, S&S-40

Rail Overhaul (fleet)

The one-time rebuild or replacement of major subsystems on revenue producing rail cars and locomotives — commonly referred to as midlife overhaul. Reporting manual reference: F-20

Real Estate Management (174)

Component activities include providing supervision and clerical support for real estate management activities, researching transit real estate opportunities, negotiating purchases and sales of transit real estate, arranging and managing concessionaire contracts, and negotiating leases. Reporting manual reference: F-30

Reconciling Items

Any items where accounting practices vary for handling these expenses as a result of local ordinances and conditions. Reconciling items include depreciation and amortization, interest payments, and leases and rentals. They are called reconciling items because they are needed to provide an overall total that is consistent with local published reports. Reporting manual reference: F-40

Rehabilitation (fleet)

The rebuilding of revenue vehicles to original specifications of the manufacture. Rebuilding may include some new components but has less emphasis on structural restoration than would be the case in a remanufacturing operation, focusing on mechanical systems and vehicle interiors. Reporting manual reference: F-20

Related Parties Lease Agreement (515)

Leases for which the lease payments required of the lessee differ substantially from those in a true lease arrangement because the lessor and lessee are related organizations. Reporting manual reference: F-40

Remanufacture (fleet)

The structural restoration of revenue vehicles in addition to installation of new or rebuilt major components (e.g., as engines, transmissions, body parts) to extend service life. Reporting manual reference: F-20

Replacement (fleet)

The replacement of revenue vehicles having reached the end of a minimum normal service life. Reporting manual reference: F-20

Report Stage

An indicator of how an agency's NTD Annual Report is progressing from initial data input through closeout. The four stages are Working data, Original submission, Revision, and Closeout. Reporting manual reference: Internet Reporting

Reportable Incident

Existence of one or more of the following:

- A fatality due to an incident - does include suicides, but does not include deaths by natural causes, or deaths not associated with an incident, and / or
- Injuries requiring immediate medical attention away from the scene for one or more persons, and / or
- Property damage equal to or exceeding \$25,000
- An evacuation due to life safety reasons
- A mainline derailment
- Acts of God
- Hazardous material spill
- Security incidents:
  - Terrorism related events:
    - Bomb threat
    - Bombing
    - Chemical / biological / radiological / nuclear release

- Other system security events:
  - Arson
  - Sabotage
  - Hijacking
  - Cyber
- Other personal events:
  - Aggravated assault
  - Rape
  - Suicide
  - Attempted suicide
  - Vandalism
  - Robbery
  - Burglary
  - Motor vehicle theft
  - Larceny / theft
  - Homicide

Reporting manual reference: S&S Introduction, S&S-30, S&S-40

Reporting Waiver

Relief from filing an NTD report. Reporting manual reference: Introduction, Internet Reporting, S&S Introduction

Reservation

A tract of land set apart by the Federal government for a special purpose, especially one for the use of a Native American people. Reporting manual reference: RU-20

Revenue Facility

A location or an area within a location that is used to enable individuals to board or alight transit vehicles and that is controlled by the transit system. Reporting manual reference: S&S Introduction, S&S-40, S&S-50

Revenue Service (Miles, Hours, and Trips)

The time when a vehicle is available to the general public and there is an expectation of carrying passengers. These passengers either directly pay fares, are subsidized by public policy, or provide payment through some contractual arrangement. Vehicles operated in fare free service are considered in revenue service. Revenue service includes layover / recovery time. Revenue service excludes deadhead, vehicle maintenance testing, school bus service, and charter service. Reporting manual reference: F-50, A-10, A-30, S-10, R-20, FFA-10, Declarations

Revenue Time

The hours (miles) that are comprised of running time and layover / recovery time. Reporting manual reference: S-10

Revenue Vehicle

The floating and rolling stock used to provide revenue service for passengers. Reporting manual reference: Introduction, B-10, F-20, F-30, F-50, A-10, S-10, R-10, R-20, R-30, Declarations, MR Introduction, MR-10, S&S Introduction, S&S-40, S&S-50

Revenue Vehicle Movement Control (012)

Component activities include providing supervision and clerical support for revenue vehicle movement control activities, dispatching operators and vehicles from the operating station, monitoring transit operations in communications and control centers, supervising transit operations along transit routes, and controlling the return of operators and vehicles to the operating station. These may be accomplished by conventional means or through the use of advanced technologies including automatic vehicle location, transit operations software and automated demand response (DR) dispatching systems. Vehicle guidance systems and intermodal transportation management centers may also be employed to assist revenue vehicle movement control activities. Reporting manual reference: F-30

Revenue Vehicle Operation (030)

Component activities include moving revenue vehicles along transit routes while boarding and discharging passengers, moving revenue vehicles from operating stations to route termini or between route termini (e.g., deadheading), laying over at route termini for an operator's rest period, moving operators to and from relief points, and providing non-driving assistance in passenger loading. Reporting manual reference: F-30

Revenues Accrued through a Purchased Transportation (PT) Agreement

Revenue accrued by a seller of transportation services through purchased transportation (PT) agreements, not including passenger fares for purchased transportation (PT) services from service provided under the purchased transportation (PT) agreement. Reporting manual reference: F-10

Revision

A report stage indicating that the NTD Annual Report has been submitted to NTD by the agency more than once and the report is undergoing validation. Reporting manual reference: Internet Reporting

RL

Vehicle Type: Commuter Rail Locomotives

Robbery

The taking, or attempting to take, anything of value under confrontational circumstances from the control, custody, or care of another person by force or threat of force or violence and / or by putting the victim in fear of immediate harm. Reporting manual reference: S&S Introduction, S&S-40, S&S-50

Route Deviation

A type of transit service that operates as conventional fixed route bus (MB) service along a fixed alignment or path with scheduled time points at each terminal point and key intermediate locations. Route deviation service is different than conventional fixed route bus (MB) service in that the bus (MB) may deviate from the route alignment to serve destinations within a prescribed distance (e.g., ¼ mile) of the route. Following an off route deviation, the bus must return to the point on the route it left. Passengers may use the service in two ways:

1. If they want to be taken off route as part of a service deviation, they must tell the bus operator when boarding, or
2. If they want to be picked up at an off route location, they must call the transit system and request a pickup, and the dispatcher notifies the bus operator.

Reporting manual reference: B-10, S-10

RP

Vehicle Type: Commuter Rail Passenger Coaches

RS

Vehicle Type: Commuter Rail Self-Propelled Passenger Cars

Running Time

The hours (miles) the vehicle travels on the route in passenger service, typically from the beginning to the end of a route. It includes all travel and time from the point of the first passenger pickup to the last passenger drop-off, as long as the vehicle does not return to the dispatching point.

Reporting manual reference: F-10, S-10

Rural Identification Number (ID)

A unique five-digit alpha-numeric identification number (ID) assigned by FTA that each transit agency must have before filing a report. Reporting manual reference: RU-10

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Sabotage

The deliberate destruction of transit property or the slowing down of public transit operations by employees with the intention of damaging business or the economic condition of the transit agency. Reporting manual reference: S&S-40

Safe Operation

Concept that applies to priority lanes on freeways, expressways and other /high-speed facilities used by bus (MB) mode and other high occupancy vehicles (HOV), i.e., vanpools (VP) and carpools, to ensure safe travel. For these lanes, there must be some indication of separation to ensure safe access between free flowing high occupancy vehicle (HOV) lanes and the congested, unrestricted lanes. Separation can be accomplished at least two ways:

1. Physical barriers such as cones, concrete dividers, medians
2. Pavement markings such as a double solid wide line, a single solid wide line, a single broken wide line, or a diagonally striped area between lanes.

Reporting manual reference: S-20

Safety (166)

Component activities include providing supervision and clerical support for a system safety program, providing safety-first and other campaigns among employees or the public for the purpose of preventing accidents and damages, and compiling and maintaining safety statistics. Reporting manual reference: F-30

Safety and Security Chief Executive Officer (CEO) Certification

A letter signed by the chief executive officer (CEO) of the agency certifying the accuracy of the safety and security data submitted to the NTD for the past calendar year. Reporting manual reference: S&S Introduction, Internet Reporting, S&S-20

Safety and Security Monthly Summary Incident

Occurrences and / or arrests / citations meet the requirements of Reportable Incidents: Occurrences of:

- Robbery (confrontational theft)
- Larceny (non-confrontational theft)
- Burglary
- Motor vehicle theft
- Other safety occurrence not otherwise classified
- Fires

Arrest / citation for:

- Other (non-aggravated) assaults
- Fare evasion
- Trespassing
- Vandalism
- Non-violent civil disturbance

Reporting manual reference: S&S Introduction, S&S-50

Safety Incidents

Any event involving the operation of a transit system if, as a result, one or more of the following occurs:

- An individual dies either at the time of the event or within 30 days of the event
- One or more persons suffer bodily damage as a result of the event requiring immediate medical attention away from the scene
- Property damage in excess of \$25,000.

Reporting manual reference: RU-20

Sampling

A statistical technique for the collection of passenger mile data. The sampling technique may be one of the FTA approved procedures or an alternative methodology that meets FTA's requirements for statistical reliability (95 percent confidence and ± 10 percent precision). Reporting manual reference: S-10, MR-20

SB

Vehicle Type: School Buses

Scheduled Passenger Car Revenue Miles

The passenger car revenue miles computed from the scheduled service. It includes only the scheduled passenger car revenue miles from the whole trip. It excludes deadhead, service interruptions, and special additional services. Reporting manual reference: S-10

Scheduled Revenue Trip

Revenue service that is provided for picking up and discharging passengers on a continuing and regular basis, i.e., "scheduled." A scheduled revenue trip appears on internal transit agency planning documents (e.g., run paddles, trip tickets and public timetables). Reporting manual reference: R-20

Scheduled Service

The total service scheduled to be provided for picking up and discharging passengers. Scheduled service is computed from internal transit agency planning documents (e.g., run paddles, trip tickets and public timetables). Scheduled service excludes service interruptions, and special additional services. Reporting manual reference: S-10

Scheduled Vehicle Revenue Miles

The vehicle revenue miles computed from the scheduled service. It includes only the scheduled vehicle revenue miles from the whole trip. It excludes deadhead, service interruptions, and special additional services. Reporting manual reference: S-10

Scheduling of Transportation Operations (021)

Component activities include providing supervision and clerical support for scheduling activities, collecting data for schedule making, making schedules, cutting runs, and furnishing schedule information (e.g., routes, miles, time and run definitions). Reporting manual reference: F-30

School Bus Hours

The vehicle hours of travel by revenue vehicles while serving as a school bus. School bus hours are only hours where a bus is primarily or solely dedicated to carrying school passengers. Reporting manual reference: S-10, MR-20

School Bus Service

The exclusive use of buses to carry children and school personnel to and from their schools or school-related activities. It includes county school buses, private school buses, and buses chartered from private companies for the express purposes of carrying students to or from school and / or school-related activities. Reporting manual reference: Introduction, S-10, MR Introduction, S&S Introduction

School Bus Service Revenues

The revenue earned operating vehicles under school bus contracts. This is the exclusive use of buses to carry children to and from their schools. Reporting manual reference: F-10

School Buses (SB)

Vehicle Type: Passenger vehicles which are designed or used to carry more than ten passengers in addition to the driver, and used primarily for the purpose of transporting pre-primary, primary or secondary school students either to such schools from home or from such schools to home. Reporting manual reference: B-10, S&S-40

School Tripper

Additional capacity that an agency adds to an existing public transit route to meet the demands of traveling students. The additional service is open to the general public. Reporting manual reference: S-10

Seating Capacity

The number of seats that are actually installed in the vehicle. Reporting manual reference: A-30

Secondary Security

The number of personnel used occasionally to respond to more serious event occurring in or on transit property when the Primary Security Personnel force requires assistance.

Secondary Security Personnel

The security force that is used occasionally to respond to more serious events occurring in or on transit property when the Primary Security Personnel force requires assistance. Reporting manual reference: S&S-30

Security Incidents

Occurrences of robbery, larceny, burglary, motor vehicle theft, fires and or arrests / citations for other (non-aggravated) assaults, fare evasion, trespassing, vandalism, or nonviolent civil disturbances that do not meet the reporting thresholds for a Reportable Incident Report.

Seller

The public agency or private company providing transit services under a purchase transportation (PT) agreement with the NTD reporter buying the transit services. The seller uses its employees to operate the service (vehicle operators). Reporting manual reference: Introduction, B-30, F-10, F-20, F-30, A-10, A-20, A-30, S-10, FFA-10, Declarations, MR Introduction, S&S Introduction

Service Area

A measure of access to transit service in terms of population served and area coverage (square miles). The reporting transit agency determines the service area boundaries and population for most transit services using the definitions contained in the Americans with Disabilities Act of 1990 (ADA). Transit agency reporters are required to submit service area information on the Identification form (B-10). Reporting manual reference: Introduction, B-10, FFA-10, RU-10

Service Area — Bus

A measure of access to transit service in terms of population served and area coverage (square miles). The reporting transit agency determines the service area boundaries and population for most transit services using the definitions contained in the Americans with Disabilities Act of 1990 (ADA): "Bus. (i) The entity shall provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route. The corridor shall include an area with a three-fourths of a mile radius at the ends of each fixed route. (ii) Within the core service area, the entity also shall provide service to small areas not inside any of the corridors but which are surrounded by

corridors. (iii) Outside the core service area, the entity may designate corridors with widths from three-fourths of a mile up to one and one-half miles on each side of a fixed route, based on local circumstances. (iv) . . . the core service area is that area in which corridors with a width of three-fourths of a mile on each side of each fixed route merge together such that, with few and small exceptions, all origins and destinations within the area would be served."

This definition is taken in part from the U. S. Department of Transportation Federal Register, Vol. 56, No. 173, Rules and Regulations, Americans with Disabilities Act of 1990 (ADA). Reporting manual reference: B-10, RU-10

Service Area — Demand Response

As Demand Response does not operate over a fixed route, but rather serves a broad area, the service area cannot be measured by corridors (see Service Area — Bus (MB)). Therefore, the service area for demand response (DR) is the area encompassing the origin to destination points wherever people can be picked up and dropped off. Reporting manual reference: B-10, RU-10

Service Area — Rail

A measure of access to transit service in terms of population served and area coverage (square miles). The reporting transit agency determines the service area boundaries and population for most transit services using the definitions contained in the Americans with Disabilities Act of 1990 (ADA): "Rail. (i) For rail systems, the service area shall consist of a circle with a radius of 3/4 of a mile around each station. (ii) At end stations and other stations in outlying area, the entity may designate circles with radii of up to 1-1/2 miles as part of its service area, based on local circumstances."

This definition is taken in part from the U. S. Department of Transportation Federal Register, Vol. 56, No. 173, Rules and Regulations, Americans with Disabilities Act of 1990 (ADA). Reporting manual reference: B-10, RU-10

Service Consumed

The amount of service actually used by passengers and which is measured by unlinked passenger trips and passenger miles. Reporting manual reference: S-10

Service Supplied

The amount of service scheduled or actually operated. Service supplied is measured in vehicles, miles and / or hours that were operated. Reporting manual reference: S-10

Service Vehicles

The vehicles used to support revenue vehicle operations and that are not used to carry transit passengers. Types of service vehicles include tow trucks, supervisor vans, transit police cars, staff cars, and maintenance vehicles for maintaining passenger facilities and rights-of-way (ROW) (rail stations, bus shelters, track, etc.). Also referred to as non-revenue vehicles. Reporting manual reference: F-20, F-30, A-10, R-20, RU-20

Services (503)

The labor and other work provided by outside organizations for fees and related expenses. In most instances, services from an outside organization are procured as a substitute for in-house employee labor, except in the case of independent audits, which could not be performed by employees in the first place. The substitution is usually made because the skills offered by the outside organization are needed for only a short period of time or are better than internally available skills. The charge for these services is usually based on the labor hours invested in performing the service. Services include management service fees, advertising fees, professional and technical services, temporary help, contract maintenance services, custodial services and security services. Reporting manual reference: F-30

Servicing and Fuel of Service Vehicles (081)

Component activities include providing supervision and clerical support for the servicing of service vehicles, washing and cleaning exterior of service vehicles, washing and cleaning interior of service vehicles, hosting service vehicles throughout service area (within operating station or garage), and refueling and adding oil and water to service vehicles. Reporting manual reference: F-30, R-20

Servicing Revenue Vehicles (051)

Component activities include providing supervision and clerical support for servicing revenue vehicles, washing and cleaning revenue vehicles, hosting revenue vehicles throughout service area (within operating station or garage), and refueling and adding oil and water to revenue vehicles. Reporting manual reference: F-30, R-20

Sightseeing Service

A service whose purpose is to carry passengers on tours and excursions or to visit and see objects and places of interest. Sightseeing may or may not involve a tour guide. Reporting manual reference: Introduction, MR Introduction, S&S Introduction

Single Occupancy Vehicle (SOV)

A vehicle having only one occupant (the driver). Reporting manual reference: F-10, S-20, FFA-10, Declarations

Social Service Agency

A public or private nonprofit organization providing specialized programs and transportation service to a specific clientele such as the elderly and persons with disabilities. Reporting manual reference: B-30

SOV

Single Occupancy Vehicle

Spare Vehicles

The revenue vehicles maintained by the transit agency to meet routine and heavy maintenance requirements, meet unexpected vehicle breakdowns or accidents, and thereby preserve scheduled service operations. Reporting manual reference: Introduction, A-30, S-10

Special Transit Fares

The revenues earned for rides given in regular transit revenue service, but paid for by some organization rather than by the rider, and for rides given along special routes for which revenue may be guaranteed by a beneficiary of the service. Special transit fares include providing rides for letter carriers with payments being made directly from the US Postal Service, providing rides for police with payments being made directly from the police authority, industrial firms, shopping centers, public and private universities, etc., to guarantee a minimum revenue on a line operated especially for the benefit of the payer, contractual arrangements with state or local governments, and contractual arrangements from non-government entities for special transit fares and from providing special service rides for sporting events, sightseeing, etc., where fares are not guaranteed on a contractual basis. Reporting manual reference: F-10

Sponsored Service

Public transportation services that are paid, in whole or in part, directly to the transit provider by a third party. These services may be offered by transit providers as part of a Coordinated Human Services Transportation Plan. Common sponsors include the Veterans Administration, Medicare, sheltered workshops, the Association for Retarded Citizens-Arc, Assisted Living Centers, and Head Start programs.

Sports Utility Vehicle (SUV)

A high-performance four-wheel drive car built on a truck chassis. It is a passenger vehicle which combines the towing capacity of a pickup truck with the passenger-carrying space of a minivan or station wagon. Most SUVs are designed with a roughly square cross-section, an engine compartment, a combined passenger and cargo compartment, and no dedicated trunk. Most mid-size and full-size SUVs have three rows of seats with a cargo area directly behind the last row of seats. Compact SUVs and mini SUVs may have five or fewer seats. Reporting manual reference: RU-10

Standing Capacity

The number of standing passengers that can be accommodated aboard the revenue vehicle during a normal full load (non-crush) in accordance with established loading policy or, in absence of a policy, the manufacturer's rated standing capacity figures. Reporting manual reference: A-30

State Capital Assistance

Financial assistance from any state agency to assist in paying capital costs. Reporting manual reference: RU-20

State Government Funds

Financial assistance obtained from a state government(s) to assist with paying the costs of providing transit services. Reporting manual reference: F-10

State Operating Assistance

Financial assistance from any state agency that supports the operation of the transit system. It includes, but is not limited to:

- Tax levies — A specified amount from state levies that is dedicated to supporting public transit system operating costs.
- General funds — Transfers from the general fund of state governments to cover the Local Share portion of the transit system budget.
- Specified contributions — Contributed from the state towards the Local Share portion of the transit system budget.

Reporting manual reference: RU-20

Station Concessions

The revenue earned from granting operating rights to businesses (e.g., concessionaires, newsstands, candy counters) on property maintained by the transit agency. Reporting manual reference: F-10

STIC

FTA Small Transit Intensive Cities Formula

STP

Surface Transportation Program

Subscription Service

Shared use transit service operating in response to on-going reservations made by passengers to the transit operator, who can schedule in advance a consistent trip to pick up the passenger and transport them to their destination. Reporting manual reference: RU-20

Subsidies from other Sectors of Operations

The funds obtained from other sectors of a transit agency's operations to help cover the cost of providing transit service. Subsidies from other sectors of transit operations include subsidies from utility rates where the transit agency is a utility company, subsidies from bridge and tunnel tolls owned and operated by the transit agency, subsidies from other sources provided by the same entity that operates the transit agency. Reporting manual reference: F-10

Subsidy

Government financial assistance. Reporting manual reference: F-10

Subway Tunnel / Tube

Rail transit way below surface with a cover over the tunnel. Cut and cover, bored tunnel, underwater tubes, etc., are included. Reporting manual reference: A-20

Surface Transportation Program (STP)

Federal Highway Administration (FHWA) funds transferred from the Surface Transportation Program (STS) to FTA for transit projects. These funds may be used for capital projects including, ridesharing projects, bicycle and pedestrian facilities, transit safety improvements and transportation control measures; and, for planning activities including transit research and development, environmental analysis and wetland mitigation. Reporting manual reference: F-10

Switch

Track device to diverge cars / trains to another track. Reporting manual reference: S&S-40

System

A system is a group of devices or objects forming a network especially for distributing something or serving a common purpose (e.g. telephone, data processing systems). Reporting manual reference: F-20

System Security (161)

Component activities include providing supervision and clerical support for security activities, patrolling revenue vehicles and passenger stations during revenue operations, patrolling and controlling access to yards, buildings and structures, monitoring security devices such as closed circuit TV and alarm systems, and reporting breaches of security. Security activities associated with the fare collection and counting process should be included as part of ticketing and fare collection (151). Reporting manual reference: F-30

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Tangent Track

Straight track. Reporting manual reference: S&S-40

Taxes (507)

The taxes levied against the transit agency by Federal, state and local governments. Reporting manual reference: F-30

Taxicab Operator

A private for profit company where passenger vehicles are for hire by the riding public. Reporting manual reference: B-30

Taxicab Sedan (TS)

Vehicle Type: An automobile in which passengers are carried for a fare at a rate usually recorded by a taximeter. Reporting manual reference: A-30

Taxicab Station Wagon (TW)

Vehicle Type: A station wagon in which passengers are carried for a fare at a rate usually recorded by a taximeter. Reporting manual reference: A-30

Taxicab Van (TV)

Vehicle Type: A van in which passengers are carried for a fare at a rate usually recorded by a taximeter. Reporting manual reference: A-30

Taxicabs

Vehicle Type: Three categories of vehicles based upon size: sedan (TS), van (TV), and station wagon (TW). Reporting manual reference: S&S-40

TB

Trolleybus

TB

Vehicle Type: Trolleybus

TEAM

FTA Recipient Identification Number

Temporary Employees

Employees of the transit agency working full time or part time hours, but only for a limited period of time for the completion of a set task. These persons are usually not entitled to receive any benefits and do not have any job security rights. Persons employed through a temporary employment agency are not temporary employees of the transit agency. Reporting manual reference: R-10

Ticketing and Fare Collection (151)

Component activities include providing supervision and clerical support for fare collection and counting activities, producing fare media, controlling tickets and tokens in the custody of sales agents, pulling vaults and downloading credit and debit card data from fare collection devices, transporting cash, credit card and debit card data to accounting facilities, counting cash, transfers and tokens, performing the accounting for credit and debit card sales, destroying used fare media, providing security for the fare collection process, auditing and controlling fare collection including reconciling readings to cash, credit card and debit card collections. The term fare media includes any means of payment or proof of payment distributed by the agency either directly or through agents under private contract, and includes tickets, tokens, transfers, passes, fare cards, and smart cards. Reporting manual reference: F-30

Time Service Begins

Start of morning transit service, i.e., the time when the first revenue service vehicle leaves the garage or point of dispatch. Reporting manual reference: S-10

Time Service Ends

End of night transit service; i.e., the time when a revenue service vehicle returns to the garage or point of dispatch. Reporting manual reference: S-10

Tires and Tubes (504.02)

The lease payments for tires and tubes rented on a time period or mileage basis or the cost of tires and tubes for replacement of tires and tubes on vehicles. Reporting manual reference: F-30

TOS

Type of Service

Total Miles on Active Vehicles during the Period

The total miles accumulated during the period on all active vehicles, based on the end of period inventory. Reporting manual reference: A-30

Total Service

The time from when a transit vehicle starts (pull-out time) from a garage to go into revenue service to the time it returns to the garage (pull-in time) after completing its revenue service. Since total service covers the time between pullout, and pull-in. It therefore includes both deadhead, and revenue service. Reporting manual reference: S-10

TR

Aerial Tramway

TR

Vehicle Type: Aerial Tramways

Train

One or more passenger cars (including locomotives) coupled together and propelled by self-contained motor equipment. Also known as a consist which may be any one of the following:

- A locomotive and one or more passenger cars as in the commuter rail (CR) mode, or
- One or more heavy rail (HR) or light rail (LR) vehicles, or
- One vehicle only, if appropriate to that mode (e.g. cable car (CC)).

Reporting manual reference: S-10

Train Hours

The hours that trains are scheduled to or actually travel while in revenue service (actual train revenue hours) plus deadhead hours. Actual train hours include layover / recovery time; but excludes hours for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Train Miles

The miles that trains are scheduled to or actually travel while in revenue service (actual train revenue miles) plus deadhead miles. Actual train

miles exclude miles for charter services, operator training, and vehicle maintenance testing. Reporting manual reference: S-10

Train Revenue Hours

The hours that trains are scheduled to or actually travel while in revenue service. Train revenue hours include layover / recovery time; but excludes deadhead, training operators prior to revenue service, vehicle maintenance tests, and charter services. Reporting manual reference: S-10

Train Revenue Miles

The miles that trains are scheduled to or actually travel while in revenue service. Train revenue miles exclude deadhead, training operators prior to revenue service, maintenance vehicle tests, and charter services. Reporting manual reference: S-10

Trains in Operation

The maximum number of trains actually operated to provide service on an average weekday, average Saturday and average Sunday. Reporting manual reference: S-10

Transit

Synonymous term with public transportation. Reporting manual reference: B-10

Transit Employee / Contractor

An individual who is compensated by the transit agency for directly operated (DO) services, the labor expense for the individual is reported in object class 501 labor. For purchased transportation (PT) service, the labor expense for the individual meets the same criteria as object class 501 labor. Reporting manual reference: S&S Introduction, S&S-40

Transportation Administration and Support (011)

Component activities include supervising station and terminal transportation activities, providing clerical support for transportation administration activities, making operators available for revenue vehicle operation (i.e., report, standby, breaks other than layovers, and turn-in time), instructing operators, except that instructor's base pay for platform instruction time is included in revenue vehicle operation (030), inspecting operator performance by service inspector, reporting accidents and appearing as a witness, selecting runs during sign-up, representing union, and administering sign-ups. Reporting manual reference: F-30

Trespass

The unauthorized entry of transit owned land, structure, or other real property not intended for public use. Reporting manual reference: S&S Introduction, S&S-40, S&S-50

Trespasser

A person in an area of transit property not intended for public use (i.e., an unauthorized area). Reporting manual reference: S&S Introduction, S&S-40, S&S-50

Trolleybus (TB)

A transit mode comprised of electric rubber-tired passenger vehicles, manually steered and operating singly on city streets. Vehicles are propelled by a motor drawing current through overhead wires via trolleys, from a central power source not onboard the vehicle. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Trolleybuses (TB)

Vehicle Type: Rubber-tired, electrically powered passenger vehicles operated on city streets drawing power from overhead lines with trolleys. Reporting manual reference: A-30, S&S-40

True Lease (TL)

Vehicles leased in a manner so that the lessee does not acquire the capital appreciation of the vehicles as lease payments are made. However, a true lease (TL) may include an option to buy the vehicles after the term of the lease at the depreciated or at a prearranged value. Reporting manual reference: A-30, RU-20

TS

Vehicle Type: Taxicab Sedan

TV

Vehicle Type: Taxicab Van

TW

Vehicle Type: Taxicab Station Wagon

Type of Service (TOS)

Describes how public transportation services are provided by the transit agency: directly operated (DO) or purchased transportation (PT) services. Reporting manual reference: Introduction, Internet Reporting, B-10, F-20, F-30, F-40, A-10, A-20, S-10, S-20, R-20, FFA-10, Declarations, MR Introduction, MR-10, MR-20, S&S Introduction, S&S-10, S&S-40, S&S-50, RU-10

Typical Day

A day on which the transit agency operates its normal, regular schedule and there are no anomalies such as extra service added for a convention or reduced service as a result of weather. Reporting manual reference: S-10

U

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UA

Urbanized Area Formula Program (funded vehicles)

UAF

FTA Urbanized Area Formula Program

UAF

Urbanized Area Funding

Uniform Financial Accounting and Reporting Elements (FARE)

Transit industry initiative for a uniform reporting system for transit agencies. Reporting manual reference: Introduction, MR Introduction, RU Introduction

Uniform System of Accounts (USOA)

A structure of categories and definitions used for NTD reporting to ensure uniform data. The USOA contains:

1. Various categories of accounts and records for classifying financial (Chart of Accounts) and operating data
2. Definitions of the data elements included in each category
3. Definitions of practices for the orderly and regular collection and recording of the data.

Reporting manual reference: Introduction, B-10, F-30, F-50, S-10, FFA-10, Declarations, MR Introduction

Unlinked Passenger Trips (UPT)

The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. Reporting manual reference: Internet Reporting, F-10, S-10, FFA-10, Declarations, MR Internet Reporting, MR-20

UPT

Unlinked Passenger Trips

Urbanized Area (UZA)

An area defined by the U. S. Census Bureau that includes one or more incorporated cities, villages, and towns (central place), and the adjacent densely settled surrounding territory (urban fringe) that together have a minimum of 50,000 persons. The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. Urbanized areas do not conform to congressional districts or any other political boundaries. Reporting manual reference: Introduction, Internet Reporting, B-10, S-10, FFA-10, Declarations, MR Introduction, S&S Introduction, RU Introduction

Urbanized Area Formula Program (UA) (funded vehicles)

Vehicles purchased with funds administered under the Urbanized Area Formula Program. Reporting manual reference: A-30

USOA

Uniform System of Accounts

Utilities (505)

The payments made to various utilities for utilization of their resources (e.g., electric, gas, water, telephone, etc.). Utilities include propulsion power purchased from an outside utility company and used for propelling electrically driven vehicles, and other utilities such as electrical power for purposes other than for electrically driven vehicles, water and sewer, gas, garbage collection and telephone. Reporting manual reference: F-30

UZA

Urbanized Area

UZA Number

A code assigned by FTA that is a numerical ranking by urbanized area (UZA) population size. Urbanized area (UZA) and population are based on 2000 US Bureau of the Census statistics. Reporting manual reference: B-10, FFA-10

V

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Vandalism

The willful or malicious destruction or defacement of transit property or vehicles. Reporting manual reference: S&S-50

Vandalism Repairs of Buildings, Grounds and Equipment (131)

Repairing all special damage to buildings, grounds and equipment resulting from willful or malicious destruction or defacement. Reporting manual reference: F-30

Vandalism Repairs of Revenue Vehicles (071)

Repairing all special damage to revenue vehicles resulting from willful or malicious destruction or defacement. Reporting manual reference: F-30, R-20

Vanpool (VP)

A transit mode comprised of vans, small buses and other vehicles operating as a ride sharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles shall have a minimum seating capacity of seven persons, including the driver. For inclusion in the NTD, it is considered mass transit service if it is operated by a public entity, or is one in which a public entity owns, purchases, or leases the vehicle(s). Vanpool(s) (VP) must also be in compliance with mass transit rules including Americans with Disabilities Act (ADA) provisions, and be open to the public and that availability must be made known. Other forms of public participation to encourage ridesharing arrangements, such as the provision of parking spaces, use of high occupancy vehicle (HOV) lanes, and coordination or clearing house service, do not qualify as public vanpools. Reporting manual reference: B-10, MR-10, S&S Introduction, S&S-10, RU-10

Vanpool Service

Transit service operating as a ride sharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles shall have a minimum seating capacity of seven persons, including the driver. Vanpool(s) must also be open to the public and that availability must be made known. Does not include ridesharing coordination. Reporting manual reference: RU-20

Vans (VN)

An enclosed vehicle having a typical seating capacity of 8 to 18 passengers and a driver. A van is typically taller and with a higher floor than a passenger car, such as a hatchback or station wagon. Vans normally cannot accommodate standing passengers. Reporting manual reference: A-30, RU-20

Vehicle Concessions

The revenue earned from granting rights to concessionaires (e.g., food and beverage service) on the transit agency's vehicles. Reporting manual reference: F-10

Vehicle Hours (Miles)

The hours (miles) that a vehicle is scheduled to or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. It is often called platform time. Reporting manual reference: S-10

Vehicle Maintenance (041)

All activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles. In addition, vehicle maintenance includes repairs due to vandalism and accident repairs of revenue vehicles. Reporting manual reference: Internet Reporting, F-20, F-30, R-10

Vehicle Operations (010)

All activities associated with vehicle operations, including transportation administration and support, revenue vehicle movement control, scheduling of transportation operations, revenue vehicle operation, ticketing and fare collection, and system security. Reporting manual reference: Internet Reporting, F-30, R-10

Vehicle Revenue Hours (VRH)

The hours that vehicles are scheduled to or actually travel while in revenue service. Vehicle revenue hours include layover / recovery time; but excludes deadhead, operator training, and vehicle maintenance testing, as well as school bus and charter services. Reporting manual reference: S-10

Vehicle Revenue Miles (VRM)

The miles that vehicles are scheduled to or actually travel while in revenue service. Vehicle revenue miles include layover / recovery time; but excludes deadhead, operator training, and vehicle maintenance testing, as well as school bus and charter services. Reporting manual reference: S-10

Vehicle Type

The form of passenger conveyance used for revenue operations. Reporting manual reference: A-30, S&S-40, RU-20

Vehicles Available for Annual Maximum Service

The number of revenue vehicles available to meet the annual maximum service requirement. Vehicles available for maximum service include spares, out of service vehicles, and vehicles in or awaiting maintenance. But exclude vehicles awaiting sale, and emergency contingency vehicles. Reporting manual reference: Introduction, A-10, S-10, MR Introduction

Vehicles in Operation

The maximum number of vehicles actually operated to provide service on an average weekday, average Saturday and average Sunday. Reporting manual reference: S-10

Vehicles in Total Fleet

All revenue vehicles held at the end of the fiscal year, including those in storage, emergency contingency, and awaiting sale. Reporting manual reference: Internet Reporting, A-30

Vehicles Operated in Annual Maximum Service (VOMS)

The number of revenue vehicles operated to meet the annual maximum service requirement. This is the revenue vehicle count during the peak season of the year, on the week and day that maximum service is provided. Vehicles operated in maximum service (VOMS) exclude atypical days, or one-time special events. Reporting manual reference: Introduction, Internet Reporting, B-10, B-30, A-30, S-10, Declarations, MR Introduction, MR-10, MR-20

Vintage Trolley / Streetcar (VT)

Vehicle Type: Vintage or antique rail cars originally manufactured before 1975. The vehicles are typically operated in mixed traffic right-of-way (ROW), but may also operate on exclusive or controlled access rights-of-way (ROW). Reporting manual reference: A-30

VN

Vehicle Type: Vans

Voluntary NTD Reporter

Transit agency, public or private, which is not a recipient or beneficiary of Urbanized Area Formula Program funds. Reporting manual reference: Introduction, B-10, MR Introduction, S&S Introduction

Volunteer Drivers

Individuals who drive vehicles in revenue service to transport passengers for the transit provider but are not employees of the transit provider and are not compensated for their labor. Reporting manual reference: RU-20

VOMS

Vehicles Operated in Annual Maximum Service

VP

Vanpool

VRH

Vehicle Revenue Hours

VRM

Actual Vehicle Revenue Miles

VRM

Vehicle Revenue Miles

VT

Vehicle Type: Vintage Trolley / Streetcar

W

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Waiver

Relief from a specific reporting requirement based on either a threshold value or good cause. There are three categories of waivers:

1. Nine or fewer vehicles
2. Data
3. Report.

Reporting manual reference: Introduction, Internet Reporting, S&S Introduction, S&S-10

Weekday AM Peak Period

The period in the morning when additional services are provided to handle higher passenger volumes. The period begins when normal scheduled headways are reduced and ends when headways return to normal. Reporting manual reference: S-10

Weekday Midday Period

The period between the end of the AM peak and the beginning of the PM peak. Reporting manual reference: S-10

Weekday Other Period

The nighttime period after the PM peak and before the AM peak when normal scheduled headways are reduced. This is sometimes referred to as night and owl services. Reporting manual reference: S-10

Weekday PM Peak Period

The period in the afternoon or evening when additional services are provided to handle higher passenger volumes. The period begins when normal headways are reduced and ends when headways are returned to normal. Reporting manual reference: S-10

Working Data

A report stage indicating that the NTD Annual Report can be edited and revised by the agency and the edited data and revisions have not been submitted to NTD. Reporting manual reference: Internet Reporting

Y[Back to top](#)**Year of Manufacture**

The year of original manufacture of the vehicle. Reporting manual reference: A-30, RU-20

Year of Rebuild

The year in which the transit agency reinvested in the vehicle to enhance its reliability or extend its useful life. Reporting manual reference: A-30

Last Updated: 09/29/2009

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