Metropolitan Transportation Plan for Clark County

Updated: December 2007
Amended: July 2008

Southwest Washington Regional Transportation Council

METROPOLITAN TRANSPORTATION PLAN

FOR CLARK COUNTY

Adopted: December 4, 2007
RTC Board Resolution 12-07-24

Amended: July 22, 2008
RTC Board Resolution 07-08-10

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Preparation of this Plan was funded by grants from the Washington State Department of Transportation, U.S. Department of Transportation (Federal Highways Administration and Federal Transit Administration) and local funds from RTC member jurisdictions.
The policies, findings, and recommendations contained in this Plan do not necessarily represent the views of the state and federal agencies identified above and do not obligate those agencies to provide funding to implement the contents of the Plan as adopted.

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Agenda Item VII
Resolution 12-07-24

MEMORANDUM

TO: Southwest Washington Regional Transportation Council Board of Directors
FROM: Dean Lookingbill, Transportation Director
DATE: November 27, 2007
SUBJECT: **2007 Metropolitan Transportation Plan, Resolution 12-07-24**

BACKGROUND

The Metropolitan Transportation Plan (MTP) for Clark County is the long-range, regional transportation plan and is made available on RTC's web site at http://www.rtc.wa.gov/programs/mtp/outline.htm. The MTP must have at least a twenty-year planning horizon, therefore the 2007 MTP update plans for a 2030 regional transportation system. The MTP is a part of the required federal transportation planning process and represents the collective strategy for developing a regional transportation system to provide mobility and accessibility for person trips as well as freight and goods movement. The transportation plan is based on the Comprehensive Growth Management Plan for Clark County and supports local land uses and the region's economic development. The MTP identifies future travel needs, recommends policies/strategies, and identifies implementation programs to meet future transportation needs. Federal and state law requires that the Plan undergo periodic review. The RTC Board of Directors adopted the initial Metropolitan Transportation Plan (MTP) for Clark County in December 1994, and the MTP has been subject to annual review. Since 1994, four major updates and five MTP amendments have been adopted. The 2007 MTP update focuses on bringing RTC into compliance with the current federal transportation act, SAFETEA-LU. It also focuses on consistency between state, regional, and local plans with projects from recently updated state and local plans incorporated into the MTP. The Regional Transportation Advisory Committee (RTAC) reviewed the draft 2007 Metropolitan Transportation Plan update at its November 2007 meeting and has recommended adoption by the RTC Board of Directors. RTC Board action on this Resolution will complete the federally-required MTP update process for RTC. The adopted MTP will be forwarded to WSDOT, the Federal Highway Administration, and Federal Transit Administration.

Key elements of the MTP that have been reviewed during 2007 are listed below:

- MTP Framework, Purpose, and Goals (MTP Chapter 1)
- 2030 Horizon Year and Demographic Forecast (MTP Chapter 2)
- Designated Regional Transportation System (MTP Chapter 3)
- 2030 Travel Demand Forecast (MTP Chapter 3)
- Regional Transportation System Needs, Projects and Strategies (MTP Chapter 3, 5 and Appendix A)
- Financial Plan: Revenue Forecast and Cost Estimates (MTP Chapter 4)

- Air quality conformity (MTP Appendix A-2)
- Strategic Plan (MTP Appendix B)
- SAFETEA-LU Compliance and Planning Factors: Security and Environmental Mitigation (MTP Appendices D and E)

The MTP is developed with technical review and input provided by the Regional Transportation Advisory Committee (RTAC) and policy review provided by the RTC Board of Directors.

Throughout the MTP update process, numerous opportunities for public participation were available. These public participation opportunities have included a transportation booth at the Clark County Fair in August and an open house in November where the public were invited to discuss the draft MTP updated with RTC staff. In addition, RTC staff made presentations at neighborhood, community, and civic meetings during the course of the year. The MTP is made available on RTC's web site at http://www.rtc.wa.gov/programs/mtp/outline.htm. Involvement of the public in regional transportation planning builds from local efforts. During 2007, public participation has included meetings hosted by the Columbia River Crossing project and C-TRAN meetings on service changes. There have been meetings hosted by WSDOT on specific projects such as the SR-14 and SR-502 corridor projects. Meetings on the Comprehensive Plan update and on specific transportation topics have also been hosted by local jurisdictions. Monthly meetings of the RTC Board of Directors allow the public to comment on regional transportation issues in a formal setting. All comments at these meetings become part of the meeting record. The MTP update has been a regular agenda item at many of the RTC Board meetings during 2007.

POLICY IMPLICATION

The MTP represents the framework plan and policies for development of the regional transportation system. Projects must first be identified in the MTP before they can be programmed for federal funding in the Metropolitan Transportation Improvement Program (MTIP).

RTC works in coordination with WSDOT, C-TRAN, and local jurisdictions as state and transit plans are developed and as the transportation elements of local comprehensive plans are updated. This coordination helps to ensure consistency between state, regional, and local plans. RTC, as the Regional Transportation Planning Organization (RTPO), must certify that there is consistency between the MTP and the transportation elements of local comprehensive plans required under the Growth Management Act (GMA) and that the transportation elements conform with the GMA's requirements. Completion of the RTPO certification process is anticipated in early 2008 following the 2007 updates to the Clark County Comprehensive Growth Management Plan (September 2007) and this Metropolitan Transportation Plan (MTP) update (December 2007) .

Air quality policies and laws require consultation between RTC and resource agencies in development of the MTP. Given the Clark County region's air quality status, "unclassifiable/attainment" for Ozone and "Maintenance Area" for Carbon Monoxide (CO), the region no longer has to carry out regional air quality conformity analysis. However, the MTP still needs to include a determination of air quality conformity which is documented in Appendix A-2.

On November 1, 2007, staff from the Environmental Protection Agency (EPA), Federal Highway Administration, and State Departments of Ecology and Transportation consulted with RTC on the air quality conformity section of the MTP. Most recently, the EPA made a finding of adequacy, published in the November 19, 2007, Federal Register, for the region's Carbon Monoxide (CO) Second 10-year Limited Maintenance Plan (LMP), 2006-2016.

MTP amendment is anticipated in 2008 to incorporate decisions of the Columbia River Crossing Project, the Clark County High Capacity Transit System Study, and C-TRAN's 20-year Transit Development Plan.

BUDGET IMPLICATION

Regular update and amendment of the adopted MTP is a requirement for the receipt of federal transportation funds. Federal regulations require that the MTP contain a financial plan that demonstrates consistency between proposed transportation investments and available and projected revenues. One of the key federal requirements of an MTP is that it be "fiscally constrained" meaning there should be a reasonable expectation that revenues will be available to provide for the list of projects and transportation strategies contained in the MTP and to support the operations and maintenance of a safe, multimodal, transportation system. The MTP's financial plan is in Chapter 4. Based on analysis of forecast revenues and cost estimates for operations, maintenance, projects, and strategies, the 2007 MTP update appears to meet the federal requirement for "fiscal constraint".

ACTION REQUESTED

Adoption of Resolution 12-07-24, "2007 Metropolitan Transportation Plan".

ADOPTED this 4th day of December 2007,

by the Southwest Washington Regional Transportation Council.

SOUTHWEST WASHINGTON
REGIONAL TRANSPORTATION COUNCIL

Betty Sue Morris
Chair of the Board

ATTEST:

Dean Lookingbill
Transportation Director

Attachments (paper copies provided for Board members; weblink http://www.rtc.wa.gov/board/packets/200712/)

July 22, 2008

BEFORE THE SOUTHWEST WASHINGTON REGIONAL TRANSPORTATION COUNCIL BOARD OF DIRECTORS RESOLUTION 07-08-10

FOR THE PURPOSE OF ENDORSING THE LOCALLY PREFERRED ALTERNATIVE FOR THE COLUMBIA RIVER CROSSING PROJECT AND AMENDING THE 2008 METROPOLITAN TRANSPORTATION PLAN.

WHEREAS, the Metropolitan Transportation Plan (MTP) for Clark County is the long-range, regional transportation plan.

WHEREAS, the MTP is a part of the required federal transportation planning process and represents the collective strategy for developing a regional transportation system to provide mobility and accessibility for person trips as well as freight and goods movement

WHEREAS, the transportation plan is based on the Comprehensive Growth Management Plan for Clark County and supports local land uses and the region's economic development

WHEREAS, the MTP identifies future travel needs, recommends policies/strategies, projects and identifies implementation programs to meet future transportation needs

WHEREAS, the Columbia River Crossing (CRC) is a proposed multimodal bridge, transit, highway, bicycle and pedestrian improvement project sponsored by the Oregon and Washington transportation departments in coordination with Metro, TriMet and the City of Portland as well as the Regional Transportation Council of Southwest Washington, C-TRAN and the City of Vancouver, Washington

WHEREAS, the CRC project is designed to improve mobility and address safety problems along a five-mile corridor between State Route 500 in Vancouver, Washington, to approximately Columbia Boulevard in Portland, Oregon, including the Interstate Bridge across the Columbia River

WHEREAS, the capital costs of the project would be funded by a combination of Federal Transit Administration (FTA) New Starts funding for the transit component, Federal Highway Administration (FHWA) funding for highway, freight, bicycle and pedestrian improvements, with additional funds provided by the states of Oregon and Washington

WHEREAS, tolls are also proposed for the new I-5 bridge to pay for a portion of the capital project and to manage transportation demand

WHEREAS, On June 24, the CRC Task Force initiated the LPA process by approving the following recommendation

- A replacement bridge with three through lanes northbound and southbound.
- Light rail as the preferred high capacity transit mode with an alignment and terminus based on FTA funding, technical considerations and Vancouver City Council and C-TRAN votes in early July 2008.
- Formation of a formal oversight committee.

- Continuation of existing advisory committees dealing with freight, pedestrians and bicycles, urban design, community and environmental justice and creation of a new sustainability working group.
- A list of project and regional elements that have not been made final at this time, but which the CRC Project recognizes the need for consideration.

WHEREAS, the Regional Transportation Advisory Committee (RTAC) reviewed and gave their technical recommendation to the proposed Columbia River Crossing Locally Preferred and amendment to the MTP at their July 18 meeting

WHEREAS, the CRC Draft Environmental Impact Statement has been through extensive public review

WHEREAS, the LPA has been recommended by the following: 1) CRC Task Force, 2) Vancouver City Council, 3) C-TRAN Board of Directors, 4) Tri-Met Board of Directors, 5) City of Portland Council, 6) JPACT, and Metro Council

WHEREAS, RTC Board action on this Resolution will meet the federally-required MTP amendment and will complete the adoption of the LPA by all of the Sponsor Agencies. RTC's and Metro's amended MTP's will be forwarded to the Federal Transit Administration and thereby allow the project to apply for FTA New Starts funding

THEREFORE BE IT RESOLVED, based on the information findings and public comment, this resolution finds that the RTC Board supports a locally preferred alternative for the Columbia River Crossing project as follows:

- I-5 replacement bridge with three through lanes in each direction. The number of auxiliary lanes (two to three) are to be determined through further analysis. The project also includes reconstructed interchanges within the bridge influence area.
- Light rail transit as the high capacity transit mode.
- Clark College terminus with a Vancouver alignment that travels south/north on the Washington-Broadway couplet, then turns east on McLoughlin with a terminus at the Clark College vicinity.

FURTHERMORE, as the project moves forward through the EIS process and to a Record of Decision, the following policy issues need to be addressed.

- The sum of the CRC project elements need to be interwoven to produce a balanced multi-modal project that includes highway, high capacity transit, freight movement, transportation demand management, and bicycle and pedestrian improvements.
- Creation of a formal oversight committee that works as equal partners, striving for consensus and providing for a public process of review, deliberation and decision-making for outstanding major project issues and decisions. The Governors of Washington and Oregon issued a joint letter on June 19, 2008, calling for the committee to include representatives of WSDOT and ODOT, RTC and Metro, C-TRAN and TriMet, and Vancouver and Portland. The Governors' letter also called for the Council to be chaired by two citizens, one from each state.
- Direct the Bi-State Coordination Committee to evaluate the other bottlenecks within the system (e.g. I-405 / I-5 loop, Rose Quarter, etc.)

- Reflecting prior agreements between Oregon and Washington the costs for the design and construction of the I-5 replacement bridge should be shared equally between Oregon and Washington. The costs for the roadway and interchanges in each state would be covered by the respective state. For the HCT capital, operation, and maintenance costs the proportions shall be calculated by dividing the length of the HCT corridor in Washington and the length of the HCT corridor in Oregon, as determined by the State DOT's acknowledged state line in the Columbia River, by the total length of the HCT corridor from the Expo Center Station to the terminus in Clark County.
    - Given the projected inequity between States in the funding derived from tolls, we ask that the oversight committee consider alternate methods to achieve greater funding equity, such as providing Washington residents working in Oregon a deduction on their Oregon Income Taxes for tolls paid.
- A detailed financing plan including costs and sources of revenue must be proposed and presented to partner agencies and the public.
- With regards to possible tolling as a revenue source for the CRC Project, we give the following direction:
    - First, set up a process that works with and educates the public on potential tolls, modeled after (and learning from) the tolling implementation committee created by the Legislature and Governor in House Bill 3096 (creating the same for tolling the SR-520 bridge and reporting to the Governor and Legislature by January 2009)
    - Second, limit the costs of tolls to funding for the local share of the construction costs of the CRC Project within the Bridge Influence Area, and only after all other sources of Federal and State revenue are exhausted.
- Any means chosen to finance operations of the HCT component of the CRC project shall be submitted to impacted C-TRAN voters for approval
- The design of the highway interchanges, bridge, and transit facilities should reflect the principles of sustainability, cost efficiency and context sensitivity. Further analysis should be undertaken of the greenhouse gases from the project.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the RTC Metropolitan Transportation Plan be amended to include the Locally Preferred Alternative as stated herein.

ADOPTED by the RTC Board of Directors this 22nd day of July 2008.

Royce E. Pollard, Chair of the Board

ATTEST:

Dean Lookingbill, RTC Transportation Director

Attachment: RTC Board Memorandum "2008 Metropolitan Transportation Plan Amendment: Columbia River Crossing Locally Preferred Alternative"

RTC

MEMORANDUM

TO: Southwest Washington Regional Transportation Council Board of Directors

FROM: Dean Lookingbill, Transportation Director

DATE: July 15, 2008

SUBJECT: **2008 Metropolitan Transportation Plan Amendment: Columbia River Crossing Locally Preferred Alternative**

BACKGROUND - MTP

The Metropolitan Transportation Plan (MTP) for Clark County is the long-range, regional transportation plan and is made available on RTC's web site at http://www.rtc.wa.gov/programs/mtp/outline.htm. The MTP is a part of the required federal transportation planning process and represents the collective strategy for developing a regional transportation system to provide mobility and accessibility for person trips as well as freight and goods movement. The transportation plan is based on the Comprehensive Growth Management Plan for Clark County and supports local land uses and the region's economic development. The MTP identifies future travel needs, recommends policies/strategies, projects and identifies implementation programs to meet future transportation needs.

BACKGROUND - COLUMBIA RIVER CROSSING PROJECT

The Columbia River Crossing (CRC) is a proposed multimodal bridge, transit, highway, bicycle and pedestrian improvement project sponsored by the Oregon and Washington transportation departments in coordination with Metro, TriMet and the City of Portland as well as the Regional Transportation Council of Southwest Washington, C-TRAN and the City of Vancouver, Washington. (More detailed project information may be found at: http://www.columbiarivercrossing.org/.) The CRC project is designed to improve mobility and address safety problems along a five-mile corridor between State Route 500 in Vancouver, Washington, to approximately Columbia Boulevard in Portland, Oregon, including the Interstate Bridge across the Columbia River.

The capital costs of the project would be funded by a combination of Federal Transit Administration (FTA) New Starts funding for the transit component, Federal Highway Administration (FHWA) funding for highway, freight, bicycle and pedestrian improvements, with additional funds provided by the states of Oregon and Washington. Tolls are also proposed for the new I-5 bridge to pay for a portion of the capital project and to manage transportation demand.

On June 24, the CRC Task Force initiated the LPA process by approving the following recommendation.

CRC Task Force June 24, 2008, Recommendation

- A replacement bridge with three through lanes northbound and southbound.

- Light rail as the preferred high capacity transit mode with an alignment and terminus based on FTA funding, technical considerations and Vancouver City Council and C-TRAN votes in early July 2008.
- Formation of a formal oversight committee.
- Continuation of existing advisory committees dealing with freight, pedestrians and bicycles, urban design, community and environmental justice and creation of a new sustainability working group.
- A list of project and regional elements that have not been made final at this time, but which the CRC Project recognizes the need for consideration.

The Regional Transportation Advisory Committee (RTAC) will review and provide their technical recommendation on the proposed Columbia River Crossing Locally Preferred Alternative at their July 18 meeting. In addition, the CRC Draft Environmental Impact Statement has been through extensive public review. To date, the LPA has now been recommended by the following: 1) CRC Task Force, 2) Vancouver City Council, 3) C-TRAN Board of Directors, 4) Tri-Met Board of Directors, 5) City of Portland Council, and 6) JPACT. RTC Board action on Resolution 07-08-10 will meet the federally-required MTP amendment and will complete the adoption of the LPA by all of the Sponsor Agencies. RTC's and Metro's amended MTP's will be forwarded to the Federal Transit Administration and thereby allow the project to apply for FTA New Starts funding.

Attached for your information are the resolutions from the City of Vancouver, C-TRAN and Metro's JPACT committee.

LOCALLY PREFERRED ALTERNATIVE

The approval of a locally approved alternative is an action that describes the project to be advanced into further analysis, engineering, financing, and impact mitigation. The final project to be proposed for construction will not be fully defined until the final EIS and the Record of Decision are completed.

Based on the information, findings and public comment, the RTC Board supports a locally preferred alternative for the Columbia River Crossing project as follows:

- I-5 replacement bridge with three through lanes in each direction. The number of auxiliary lanes (two to three) are to be determined through further analysis. The project also includes reconstructed interchanges within the bridge influence area.
- Light rail transit as the high capacity transit mode.
- Clark College terminus with a Vancouver alignment that travels south/north on the Washington-Broadway couplet, then turns east on McLoughlin with a terminus at the Clark College vicinity.

As the project moves forward through the EIS process and to a Record of Decision, the following policy issues need to be addressed.

- The sum of the CRC project elements need to be interwoven to produce a balanced multi-modal project that includes highway, high capacity transit, freight movement, transportation demand management, and bicycle and pedestrian improvements.
- Formation of a Project Sponsors Council to continue to guide the development of the project through the EIS process. The Governors of Washington and Oregon issued a joint letter on June 19, 2008 calling for the Project Sponsors Council to include representatives from WSDOT and ODOT, RTC and Metro, C-TRAN and TriMet, and Vancouver and Portland.

The Governors' letter also called for the Council to be chaired by two citizens, one from each state. The committee is charged with advising the two state transportation departments and two transit agencies on a consensus basis to the greatest extent possible regarding the major project development issues.

- A detailed financing plan including costs and sources of revenue must be proposed and presented to partner agencies and the public.
- The design of the highway interchanges, bridge and transit facilities should reflect the principles of sustainability, cost efficiency and context sensitivity. Further analysis should be undertaken of the greenhouse gases from the project.

METROPOLITAN TRANSPORTATION PLAN AMENDMENT

The currently adopted MTP (December 2007) includes the CRC project in the Strategic Plan section of illustrative projects. The CRC project is not currently included in the "fiscally-constrained" portion of the MTP. Approval of Resolution 07-08-10 would amend the fiscally-constrained MTP to include the CRC locally preferred alternative. This federal requirement means that there is a reasonable expectation that revenues will be available to provide for the list of projects and transportation strategies contained within the MTP. The CRC project has developed a project funding strategy that outlines a range of potential project revenues and funding for the $3.5-3.7 billion project.

The CRC project meets the federal and state process requirements for MTP amendment. The CRC project has been developed with extensive public participation opportunities. The CRC project team has also consulted with resource agencies and tribes throughout the DEIS and project development process. Regional air quality conformity analysis is no longer required for update and amendment to the MTP, given the air quality status of the Clark County region.

A Federal Transit Administration New Starts application for the transit portion of the CRC project will be submitted in mid-August. One of the required elements for the New Starts submittal is for the project to be in the region's approved metropolitan transportation plan.

Amending the MTP to include the CRC locally preferred alternative involves changes to Chapter 3: Regional Transportation System, Chapter 4: Finance Plan, Chapter 5: System Improvement and Strategy Plan, Chapter 7: Plan Development and Implementation and Appendices A and B.

The full set of chapters and page locations for amending the MTP are listed below:

- Chapter 3 Regional Transportation System – page 3-6, 3-7, 3-10
- Chapter 4 Finance Plan – page 4-18, 4-19, 4-30, 4-31, 4-33
- Chapter 5 System Improvement and Strategy Plan – page 5-2, 5-14 and 5-21
- Chapter 7 Plan Development and Implementation – page 7-11
- Appendices A and B – page A-2, and B-3

One of the key pages that describes the CRC LPA amendment is Table 4-3: List of Fiscally Constrained Projects 2007-2030. This table is in Chapter 4: Financial Plan. The LPA would amends the table to state that the I-5 Columbia River Crossing from SR-500 in Vancouver to Columbia Boulevard in Portland would include a "Replacement I-5 river crossing and reconstructed interchanges within the bridge influence area. Light Rail Transit with terminus in Clark College vicinity." Two other key references to the amended CRC project are also attached for the Board's

reference. These include, a project description map, and page 4-33 in the Financial Plan chapter which describes the funding assumptions for the project.

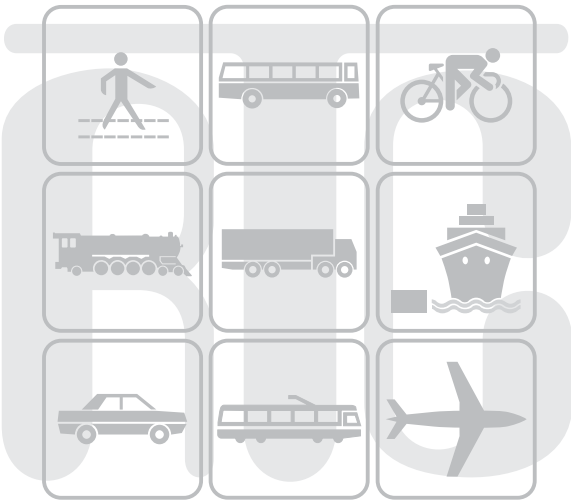
POLICY IMPLICATION

The MTP represents the framework plan and policies for development of the regional transportation system. Projects must first be identified in the MTP before they can be programmed for federal funding in the Metropolitan Transportation Improvement Program (MTIP).

Affirmative action on Resolution 07-08-10 amends the locally preferred alternative for the Columbia River Crossing Project into RTC's Metropolitan Transportation Plan.

BUDGET IMPLICATION

Regular update and amendment of the adopted MTP is a requirement for the receipt of federal transportation funds. Federal regulations require that the MTP contain a financial plan that demonstrates consistency between proposed transportation investments and available and projected revenues. One of the federal requirements of an MTP is that it be "fiscally constrained" meaning there should be a reasonable expectation that revenues will be available to provide for the list of projects and transportation strategies contained in the MTP and to support the operations and maintenance of a safe, multimodal, transportation system. The MTP's financial plan is in Chapter 4. Based on analysis of potential revenues and cost estimates the CRC project meets the federal requirement for "fiscal constraint".



CHAPTER 1

INTRODUCTION: MTP VISION, PURPOSE AND GOALS

The Metropolitan Transportation Plan (MTP) for Clark County is the region's principal transportation planning document. It represents a regional transportation plan for the metropolitan area of Clark County developed through a coordinated process between local jurisdictions working together to develop regional solutions to transportation needs. The *first Regional Transportation Plan* (RTP) for Clark County was adopted in December 1982. An *Interim Regional Transportation Plan*, which acted as a framework for development of Growth Management Act (GMA) transportation elements, was adopted in September 1993. The first MTP for Clark County adopted to comply with the requirements of the federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 was adopted in December 1994. Significant updates were adopted in 1996, 1999, 2002 and 2005 with minor amendments to the Plan adopted in 1997, 1998, April 1999, December 2000 and December 2003[1]. The 2007 update to the MTP uses 2030 as the horizon year and is compliant with the requirements of the current federal transportation act, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU 2005). The MTP update incorporates land uses and growth allocations resulting from the September 2007 update to the local Comprehensive Growth Management Plan. The MTP also includes updated transportation data and recommendations from recent transportation studies. Projects and/or planning concepts whose scale, financial structure and economic significance are beyond the 20-year list of projects contained in the "fiscally constrained" MTP are included in the Strategic MTP section of the MTP's Appendix. The MTP provides an overview of the metropolitan transportation planning process and is intended to be a plan to meet transportation needs over the next 20 years. The July 2008 amendment incorporates the Locally Preferred Alternative for the I-5 Columbia River Crossing project. This introductory chapter presents the vision, purpose, goals, scope, statutory requirements and decision-making process involved in developing the MTP for Clark County.

FRAMEWORK AND VISION

Development of the transportation system is one component required to support the land uses defined in local Comprehensive Growth Management Plans. The MTP is a collective effort to address the development of a regional transportation system that will help to achieve the land use vision presented in the local comprehensive plans, to facilitate planned economic growth and help sustain the region's quality of life.

PURPOSE

The MTP identifies future regional transportation system needs and outlines transportation plans and improvements necessary to maintain mobility within and through the region as well as accessibility to land uses within the region. The MTP is one of the reports needed to fulfill federal requirements to ensure the continued receipt of federal transportation funding to this region. The region has to plan for a future regional transportation system that can adequately support the population and employment growth projected for Clark County. The transportation

[1] A summary of MTP updates and amendments is included in Chapter 7.

system is multi-modal and includes the region's highway system for transportation of people and freight, the transit system, pedestrian and bicycle system, as well as ports, airports and rail facilities of regional significance. Intermodal connecting points are a vital part of the system. The MTP's goals, objectives and policies help to guide jurisdictions and agencies involved in planning and programming of transportation projects throughout Clark County.

MTP GOALS

The MTP is a long-range plan that outlines how transportation system and services will provide for the mobility and accessibility of people and freight within and through the region. The Goals of the MTP are outlined below:

- **Maintain, preserve and improve the existing regional transportation system.**

  It is important to protect the significant investment already made in the existing transportation system by maintaining and preserving the system to keep it usable. Both the structural and operational integrity of the system need to be maintained and preserved as well as the system's capacity to meet travel needs. This is a priority transportation policy at federal, state and local levels.

- **Provide a safe and secure transportation system that allows for the movement of people and freight.**

  Transportation systems must be safe and secure for users. Transportation safety is a priority concern for all transportation modes and users including vehicle drivers and passengers, bicyclists and pedestrians. Transportation system safety relates to safety features and design for all users, behavior of the user and to transportation system policing and enforcement. Transportation system security has also become a prominent concern for all transportation modes that use road, rail, air or water.

- **Support economic development and community vitality.**

  There is a significant link between transportation investment and benefits to a region's economic development and vitality. Transportation system investment can help the region's economic stability and sustainability.

  The goal relates to the strategic use of funds for transportation system investment to support new businesses that will increase the number of family wage jobs within the County.

  The goal also relates to sustaining established businesses already located in the community that currently provide jobs for Clark County workers.

- **Provide an efficient, balanced, multi-modal regional transportation system including highway, bus transit, high capacity transit, rail, aviation, marine, bicycle and pedestrian modes as well as transportation demand management and transportation system management strategies.**

  The region's transportation system must be balanced and multi-modal to accommodate transportation choices and options for people and freight. Providing connections between modes is also important as well as managing the system to make it most efficient.

- **Provide an acceptable level of mobility for personal travel and freight movement throughout the regional transportation network and adequate access to locations throughout the region.**

  The transportation system must perform to provide mobility and access. This goal ranges from meeting overall travel demand, easing movement through the region, providing access to land uses throughout the region and to providing an accessible system with removal of barriers to personal mobility.

- **Provide a transportation system that is sensitive to the quality of the environment and natural resources.**

  Provision of a transportation system to meet travel needs should be balanced with the need to protect the environment and provide for a healthy community. Environmental considerations include air quality, stormwater, noise, sprawl, habitat, cultural resource protection, environmental justice, active living, and neighborhood structure. As transportation projects are developed, environmental analyses are carried out to ensure that identified environmental impacts can be avoided, minimized and/or mitigated.

- **Provide for the development of a financially viable and sustainable transportation system.**

  The region must be able to afford the transportation system that is planned for in the MTP or, in other words, the region needs to be able to implement the Plan.

  There are limited revenues available for transportation system development. Federal law requires that the MTP be "fiscally constrained". There must be a reasonable expectation that revenues will be available to maintain and operate the existing system as well as implement transportation projects and strategies recommended for the next 20 years.

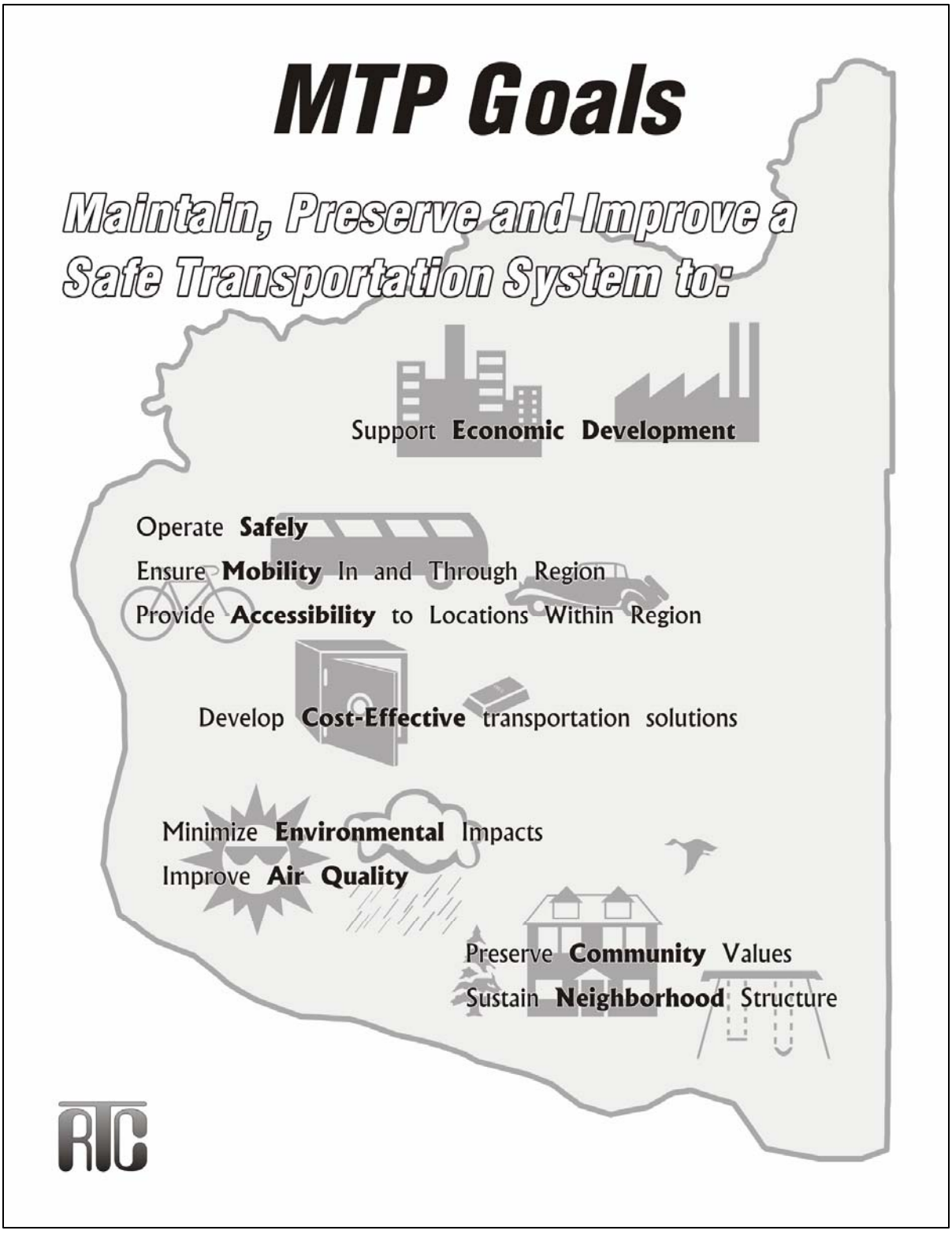
  Least cost planning, benefit/cost analysis and value engineering are some of the tools employed in Washington State to aid the decision making process relating to financial viability.

- **Provide a transportation system that reflects community vision and community values.**

  The MTP identifies a transportation system that reflects the views, values and vision of the community. As its basis, the MTP uses the community vision of local Comprehensive Plans. The MTP also reflects the community's willingness to invest in the transportation system. During the MTP development process, public comment will be sought and will be reflected in the adopted Plan.

Figure 1-1 provides an overview of MTP Goals.

Figure 1-1: RTP Goals



There is general consistency between the MTP goals outlined above and the policies established by local jurisdictions and agencies working together through the state's Growth Management Act (GMA) planning process. These planning policies constitute the Principles and Guidelines with which the transportation elements of local comprehensive plans required under the Growth Management Act are reviewed for certification purposes. Excerpts from the adopted County-wide Planning Policies relating to Transportation found in Chapter 5, Transportation Element, of the 2007 Comprehensive Growth Management Plan are re-printed in the MTP's Appendix C.

SCOPE

The MTP for Clark County takes year 2030 as its horizon year. Travel demand for the region is forecast for this future year and improvements to the transportation system are recommended based on the projected travel demand.

The area covered by the MTP is the whole of Clark County (see Figure 1-2). Clark County is located in the southwestern part of the state of Washington at the head of the navigable portion of the Columbia River. The Columbia River forms the western and southern boundaries of the county and provides over 41 miles of river frontage. The county's northern boundary is formed by the Lewis River and to the east are the foothills of the Cascades. Urban Clark County is part of the northeast quadrant of the Portland-Vancouver-Beaverton metropolitan area.

People and goods move throughout the regional transportation system without consideration for city, county, and state boundaries. Transportation problems extend beyond jurisdictional boundaries so the MTP analyzes the future transportation needs for the entire region and, at the same time, provides a cooperative framework for coordinating the individual actions of a number of jurisdictions.

Figure 1-2: Clark County Washington (location map)

TRANSPORTATION ISSUES ADDRESSED IN MTP

- Transportation system maintenance, preservation and safety.
- Emphasis on existing regional corridors to minimize neighborhood disruption.
- Development of corridors to improve economic development potential.
- The role of transit in serving peak hour commuters and in serving general transportation needs in both peak and non-peak hours.
- The future for high capacity transit alternatives in Clark County.
- Accessibility across the Columbia River in terms of capacity, economic development, corridor location, connecting roadways.
- Encouragement of non-motorized transportation modes.
- The role of system management (TSM) and demand management (TDM).
- Federal, state, local and private sources of revenue for transportation capital and maintenance projects.
- Air quality issues and considerations.
- The role of the private sector in transportation system development.
- Intermodal transportation facilities, such as ports, rail terminals and airports.

STATUTORY REQUIREMENTS

The following section describes federal and Washington state statutory requirements that govern development of the MTP.

FEDERAL

The joint Federal Highways Administration (FHWA) and Federal Transit Administration (FTA) regulations require that, as a condition for receiving federal transportation funding, urbanized areas with over 50,000 population establish a "continuing, cooperative, and comprehensive transportation planning process". The process should result in transportation plans and programs that are consistent with the comprehensive land use plans of all jurisdictions within the region.

Federal regulations require that a designated **Metropolitan Planning Organization** (MPO) be the forum for cooperative decision-making by principal elected officials of the region's general purpose local governments. Southwest Washington Regional Transportation Council (RTC) was designated as the Metropolitan Planning Organization (MPO) for Clark County by agreement of

the Governor of the State of Washington and units of general purpose local governments (representing at least 75 percent of the affected population, including the central cities) on July 8th of 1992. With passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, Clark County became a federally-designated Transportation Management Area (TMA).

The Southwest Washington Regional Transportation Council, as the MPO, in cooperation with the Washington State Department of Transportation and C-TRAN, Clark County's transit operator, is responsible for carrying out federal transportation planning requirements. Federal requirements include the development of a long-range Metropolitan Transportation Plan.

The first Regional Transportation Plan for Clark County was developed by the MPO and was adopted in December 1982. It established regional transportation policies and provided consistency with the regional Transportation Improvement Program (TIP). This MTP version provides a bench-mark document for local decision-makers and meets federal requirements of the FHWA and FTA. Prior to the development of the 1982 RTP, the Portland-Vancouver Metropolitan Area Transportation Study (PVMATS) served as the long-range plan for Portland and Vancouver. PVMATS was developed by the Columbia Regional Association of Governments (CRAG) and listed a number of highway projects needed in the region by 1990.

The federal government requires the MPO to develop a Metropolitan Transportation Plan, to meet the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and its successor Act, the Transportation Equity Act for the 21st Century (TEA-21) of 1998. The current federal transportation act, SAFETEA-LU (the Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users), builds upon the previous Transportation Acts. President George W. Bush signed SAFETEA-LU into law in August 2005. The Act authorizes Federal surface transportation programs for highways, highway safety, and transit for the 5-year period, 2005 to 2009. SAFETEA-LU revises requirements for update of regional transportation plans. In air quality maintenance areas such as ours, MTP updates are now required at least every four years instead of every three years as they were under prior Acts. To comply with requirements of SAFETEA-LU, prior to July 1, 2007, RTC had adopted the Human Services Transportation Plan (January 2007), published an update to the Public Participation Plan, a technical paper relating to environmental issues and a technical paper on security. Plan updates should confirm the Plan's validity and its consistency with developing trends in transportation system use and conditions.

The MPO must also select and prioritize transportation projects for programming in a **Transportation Improvement Program** (TIP). SAFETEA-LU requires that metropolitan TIPs be updated at least every 4 years and must contain at least 4 years of projects and strategies. The TIP specifies federally funded transportation projects to be implemented during the next four years. Projects are listed in the TIP based upon a realistic estimate of available revenues. Projects programmed for funding in the TIP have to be consistent with the adopted MTP.

The MTP should consist of short- and long-range strategies to address transportation needs and should guide effective investments to enhance transportation system efficiency. The transportation plan must be consistent with the region's comprehensive long-range, land use

plans and development objectives as well as the region's overall social, economic, environmental, system performance, and energy conservation goals and objectives.

When developing the transportation plan, the urban transportation planning process shall include:

- consideration of social, economic and environmental effects as required by the federal Transportation Act and the Clean Air Act,
- provisions for citizen participation,
- no discrimination on the grounds of race, color, sex, national origin, or physical disability under any program receiving federal assistance,
- special efforts to plan public mass transportation facilities and services for the elderly, people with disabilities and low income,
- consideration of energy conservation goals and objectives,
- involvement of appropriate public and private transportation providers, and
- the following activities as necessary, and to the degree appropriate, for the size of the metropolitan area and the complexity of its transportation problems:
    - analysis of existing conditions of travel, transportation facilities, vehicle fuel consumption and systems management,
    - projections of urban area economic, demographic, and land use activities consistent with urban development goals, and projections of potential transportation demands based on these activity levels,
    - evaluation of alternative transportation improvements to meet area-wide needs for transportation and make more efficient use of existing transportation resources and reduce energy consumption,
    - refinement of transportation plan by corridor, transit technology, and staging studies; and subarea, feasibility, location, legislative, fiscal, functional classification, institutional, and energy impact studies, and
    - monitoring and reporting of urban development, transportation and energy consumption indicators and a regular program of reappraisal of the transportation plan,

The MTP must meet federal planning requirements outlined above and comply with provisions set forth in SAFETEA-LU, the Clean Air Act, the Americans with Disabilities Act, Title VI of the Civil Rights Act of 1964 and Executive Order 12898, a 1994 Presidential Order that directed every federal agency to make environmental justice a part of its mission. ISTEA outlined sixteen planning factors which were to be incorporated into the regional transportation planning process in non-attainment areas for carbon monoxide or ozone. TEA-21 legislation consolidated

these planning factors into seven broad areas to be considered in the planning process and SAFETEA-LU now requires security of the transportation system be a stand-alone planning factor. The growing importance of operating and managing the transportation system is recognized as a focal point for transportation planning as well as an increase in importance from prior legislation for security which previously was coupled with safety in the same planning factor. The eight planning factors are listed below and RTC's implementation of the factors as part of the metropolitan transportation planning program is reported in Chapter 7. The planning factors are:

1. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;

2. Increase the **safety** of the transportation system for motorized and non-motorized users;

3. Increase the **security** of the transportation system for motorized and non-motorized users;

4. Increase the **accessibility** and **mobility** options available to **people** and for **freight**;

5. Protect and enhance the **environment**, promote **energy conservation**, and improve **quality of life**;

6. Enhance the integration and **connectivity** of the transportation system, across and between modes, for people and freight;

7. Promote efficient **system management** and **operation**; and

8. Emphasize the **preservation** of the existing transportation system.

STATE

Metropolitan Transportation Plans are expected to be consistent with the policy framework and objectives described in Washington's Transportation Plan (WTP) 2007-2026 (WSDOT; November 2006). The WTP is required by state and federal law to be regularly updated. The Washington State Transportation Commission, working together with Washington's citizens, business owners, elected officials, tribes, transportation planners and others, developed the 2007-2026 WTP. The 2007 update to the Washington Transportation Plan (WTP) is a blueprint for transportation programs and investments needed to develop Washington's transportation system for the future. The plan addresses all modes of Washington's transportation system: roadways, ferries, public transportation, aviation, freight rail, passenger rail, marine ports and navigation, bicycles and pedestrians. The 20-Year Transportation Vision is that "Washington's transportation system should serve our citizens' safety and mobility, the state's economic productivity, our communities' livability, and our ecosystem's viability." Five investment guidelines set the overall priorities and form the basis of the Plan:

- **Preservation**

  Preserve and extend prior investments in existing transportation facilities and the services they provide to people and commerce.

- **Safety**

  Target construction projects, enforcement and education to save lives, reduce injuries, and protect property.

- **Economic Vitality**

  Improve freight movement and support economic sectors that rely on the transportation system, such as agricultural, tourism and manufacturing.

- **Mobility**

  Facilitate movement of people and goods to contribute to a strong economy and a better quality of life for citizens.

- **Environmental Quality and Health**

  Bring benefits to the environment and to our citizens' health by improving the existing transportation infrastructure.

Moving away from the historical practice of using gas tax revenue and attempting to build our way out of congestion, the WTP's 20-year plan warns that as we grow, we must choose strategies to manage growth and strategically invest to better move people and goods.

In addition to the investment guidelines, the WTP makes several policy recommendations in various areas such as funding, land use and transportation, safety, reduced reliance on fossil fuels, emergency preparedness, transportation and the economy and rural economic vitality.

The Washington State Highway System Plan (HSP) is the element of Washington's Transportation Plan (WTP) that addresses current and forecast state highway needs. The HSP includes a comprehensive assessment of existing and projected 20-year deficiencies on the state's highway system. It also lists potential solutions that address these deficiencies. The HSP is updated biennially with each version building on the last. The document covers all issues related to the state's highway system. The 2007-2026 version of the HSP takes the WTP's investment guidelines, 1) preservation, 2) safety, 3) economic vitality, 4) mobility and 5) environmental quality and health, and identifies the highway system needs, strategies and performance measurements associated with the guidelines.

HSP Preservation - includes pavement maintenance, preservation of 3,596 statewide structures including bridges, and preservation of other highway assets that include unstable slopes, rest areas, weigh stations and drainage and electrical rehabilitation.

HSP Safety - The objective of the safety program focuses on project reducing and preventing fatalities, decreasing the frequency and severity of disabling injuries and minimizing the societal

costs of accidents. The prevention of crossover accidents and run off the road accidents is a priority.

HSP Economic Vitality – includes the identification of highly productive freight strategy investments.

HSP Mobility – Bottlenecks, traffic incidents, bad weather, work zones, poor signal timing and special events are the most significant causes of congestion. HSP mobility solutions include strategies to address congestion at bottleneck and chokepoint locations, timely response to and clearance of incidents, as well as projects to improve system efficiency where traffic in congested corridors travels at speeds below 70% of the posted speed during the peak hour.

HSP Environmental Quality and Health – includes projects to remove culverts to restore fish passage, reduce highway noise, treat stormwater, reduce flooding, provide pedestrian crossings and bicycle connections.

The WSDOT *Strategic Highway Safety Plan: Target Zero* (SHSP, revised February 2007) was developed to identify Washington State's traffic safety needs and to guide investment decisions in order to achieve significant reductions in traffic fatalities and disabling injuries. The *Public Transportation and Intercity Rail Passenger Plan for Washington State, 1997-2016,* (December 1996), is the twenty-year Plan for preserving public transportation systems while improving mobility for a growing population. Each year, WSDOT reports on the status of public transportation in Washington State as required by Section 35.58.2796 RCW. The *Washington State Summary of Public Transportation 2006*, was published in September 2007. In December 2007 the Washington State Transportation Commission published the *Washington State Rail Capacity and System Needs Study* that documents strategic freight and passenger rail system needs, challenges and opportunities. The WSDOT Aviation Division completed a 20-Year Aviation System Plan in 2003 and is currently working on a long-term air transportation planning study (LATS) for generation aviation and commercial airports statewide.

WASHINGTON STATE'S REGIONAL TRANSPORTATION PLANNING PROGRAM

Washington State's Growth Management Act, enacted in 1990, approved the Regional Transportation Planning Program which created a formal mechanism for local governments and the state to coordinate transportation planning for regional transportation facilities. The Growth Management Act (GMA) authorized the creation of Regional Transportation Planning Organizations (RTPOs) by units of local government. Southwest Washington Regional Transportation Council (RTC) is the designated RTPO for the three-county area of Clark, Skamania and Klickitat. In 1994 further state legislation clarified the duties of the RTPO outlined in the GMA and further defined RTPO planning standards.

The duties of the RTPO, as outlined in state law, include:

- Designation of the regional transportation system.

- Development of a six-year **Transportation Improvement Program** (TIP) to include regionally significant city road projects, county road projects, transit capital projects and WSDOT transportation projects. The TIP must include a financial plan.

- Development of a **Regional Transportation Plan** (RTP) to include a regional transportation strategy, identification of existing and planned facilities and programs, Level of Service standards, a financial plan, assessment of regional development patterns and capital investment using a regional transportation approach. The Plan should also establish the relationship of High Capacity Transit to other public transportation providers. The concept of least cost planning is to be used in development of the RTP.

- Review of the Regional Transportation Plan at least every two years to ensure that it is current.

- Establish guidelines and principles for development and evaluation of local comprehensive plan transportation elements and certify that the transportation elements meet the requirements of the GMA and are consistent with the MTP.

- Develop a regional Level of Service (LOS) standard for the regional system as required by the LOS Bill.

The Regional Transportation Planning Program is designed to be integrated with, and augment, the federally-required Metropolitan Planning Organization (MPO) Program. The RTPO has to be the same organization as that designated as the current MPO. The regional transportation planning program extends transportation planning by the RTPO's to rural areas not covered by the federal program. The Regional Transportation Planning Program is also intended to tie in and be consistent with local comprehensive planning in urban, and rural areas.

The regional transportation planning process should to follow the principles listed below. The process should:

- guide the improvement of the regional transportation system
- use regionally consistent technical methods and data
- consider environmental impacts
- ensure early and continuous public involvement
- be consistent with the local comprehensive planning process
- be an ongoing process
- incorporate multimodal planning activities
- address major capacity expansion and operational improvements to the regional transportation system

- be a partnership, including federal, state, and local governments, special districts, private sector, general public and others during conception, technical analysis, policy development and decision-making

To meet the requirements of the state's 1990 Growth Management Act RTC continues the established regional transportation planning process for the MPO, supplemented by the regional transportation planning standards formulated by WSDOT for RTPOs. To comply with the state standards the MTP will include the following components:

- description of the designated regional transportation system,
- regional transportation goals and policies. Level of service standards will be established and used to identify deficient transportation facilities and services,
- regional land use strategy. Existing and proposed land uses defined on local comprehensive land use plans determine the regional development strategy and will be used as the basis for transportation planning,
- identification of regional transportation needs. An inventory of existing regional transportation facilities and services, identification of current deficiencies and forecast of future travel demand will be carried out,
- development of financial plan for necessary transportation system improvements,
- regional transportation system improvement and strategy plan. Specific facility or service improvements, transportation system management and demand management strategies will be identified and priorities determined,
- establishment of a performance monitoring program. The performance of the transportation system will be monitored over time. The monitoring methodology, data collection and analysis techniques to be used will be outlined, and
- plans for implementation of the MTP.

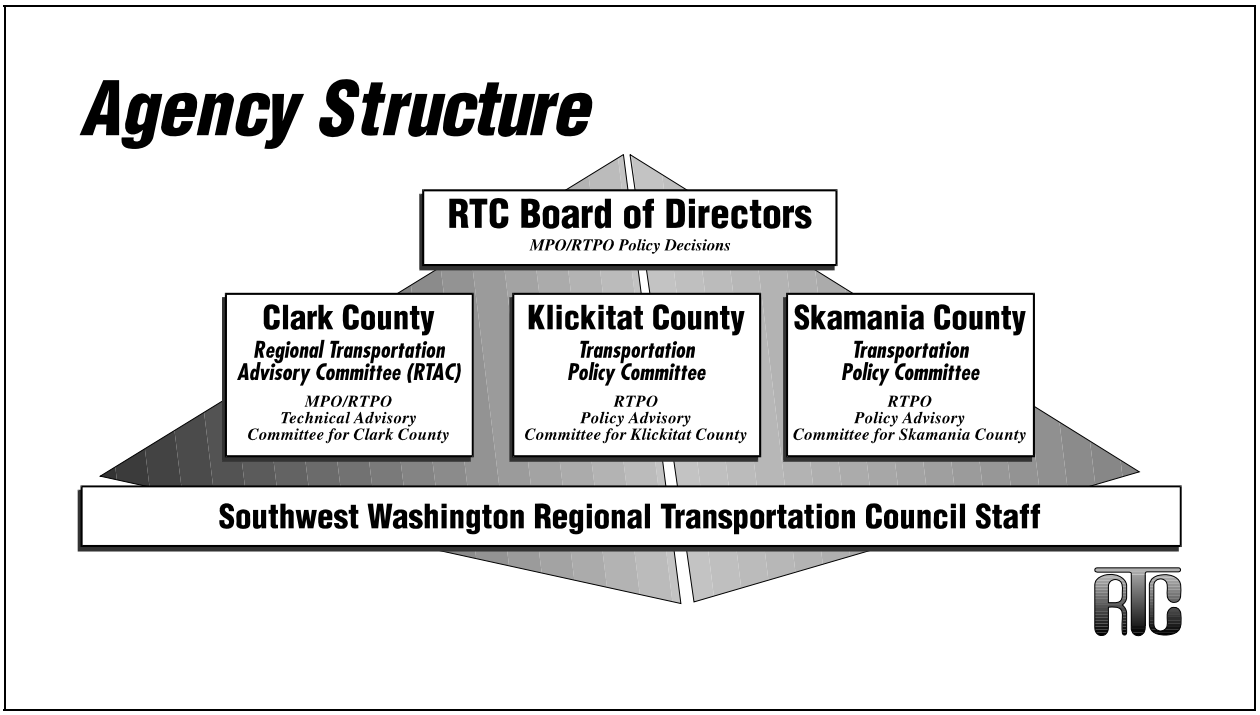
State legislation of significance in regional transportation planning includes the Growth Management Act (1990), High Capacity Transit legislation (1990), the Clean Air Washington Act (1991), and the Commute Trip Reduction law (1991).

INTERGOVERNMENTAL COORDINATION - CLARK COUNTY MTP UPDATE DEVELOPMENT PROCESS

In order to make the MTP a Plan to provide solutions to transportation issues and problems and a Plan that all jurisdictions can subscribe to and implement, the regional transportation planning committee structure is established. Committees are established by RTC to carry out MPO/RTPO activities and to strengthen the process of MTP development. Consistent with the 1990 GMA legislation, a three-county RTC Board of Directors is established and meets monthly to serve the RTPO region. Individual County Committees and Boards also play a part in regional transportation decision-making. The regional transportation committee structure is outlined in Figure 1-3. Current representation on the RTC Board of Directors includes three representatives

from Clark County, one from Skamania County, one from Klickitat County, two from the City of Vancouver, one from small cities to the East, one from small cities to the north, one from C-TRAN, one representative of the Ports of Clark County and state legislators of the 15th, 17th, 18th and 49th districts. Representation on the RTC Board of Directors and individual County Policy Boards and Committees is described in the *Bylaws of Southwest Washington Regional Transportation Council* (July 7, 1992; amended February 3, 2004 and April 6, 2004) and *Interlocal Agreement for Establishment of the Southwest Washington Regional Transportation Council*. For Clark County, the Regional Transportation Advisory Committee (RTAC) provides technical advice to the RTC Board of Directors.

Figure 1-3: RTC Agency Structure



BI-STATE COORDINATION

Clark County, Washington, forms part of the Portland-Vancouver-Beaverton metropolitan area. The remainder of the metropolitan area is in the state of Oregon. Planning for transportation within the metropolitan area is undertaken by two regional planning agencies, the Metropolitan Service District (Metro) in Portland, Oregon and the Southwest Washington Regional Transportation Council (RTC) in Clark County. Each agency carries out transportation planning activities for its respective geographic areas in accordance with the designated federal, state and local authority. However, since the two agencies represent the interests of a single metropolitan area it is necessary to have coordination between them to address interstate transportation issues and problems.

Coordination and cooperation in transportation planning activities between the two states are afforded by cross-representation on transportation committees and by coordination in development of the Metropolitan Transportation Plans, Transportation Improvement Programs

and Unified Planning Work Programs (UPWPs) for the two respective areas. Membership of both the RTC Board of Directors and Regional Transportation Advisory Committee (RTAC) includes representatives from Oregon Department of Transportation (ODOT) and Metro. The Metro Joint Policy Advisory Committee on Transportation (JPACT) includes representatives from WSDOT, Clark County and the City of Vancouver and the Metro Transportation Policy Alternatives Committee (TPAC) includes representatives of WSDOT and RTC, with C-TRAN as an associate member. The Bi-State Coordination Committee is key to the coordination of bi-state transportation issues. The Committee is charged with reviewing all issues of bi-state significance for transportation and presenting recommended actions to RTC and JPACT. Membership is drawn from agencies serving on JPACT and the RTC Board with representation in Washington from WSDOT, C-TRAN, City of Vancouver, Clark County, the Port of Vancouver, and a small city. In Oregon, membership is from ODOT, Tri-Met, one of the counties of the tri county region, City of Portland, Metro, the Port of Portland and smaller city.

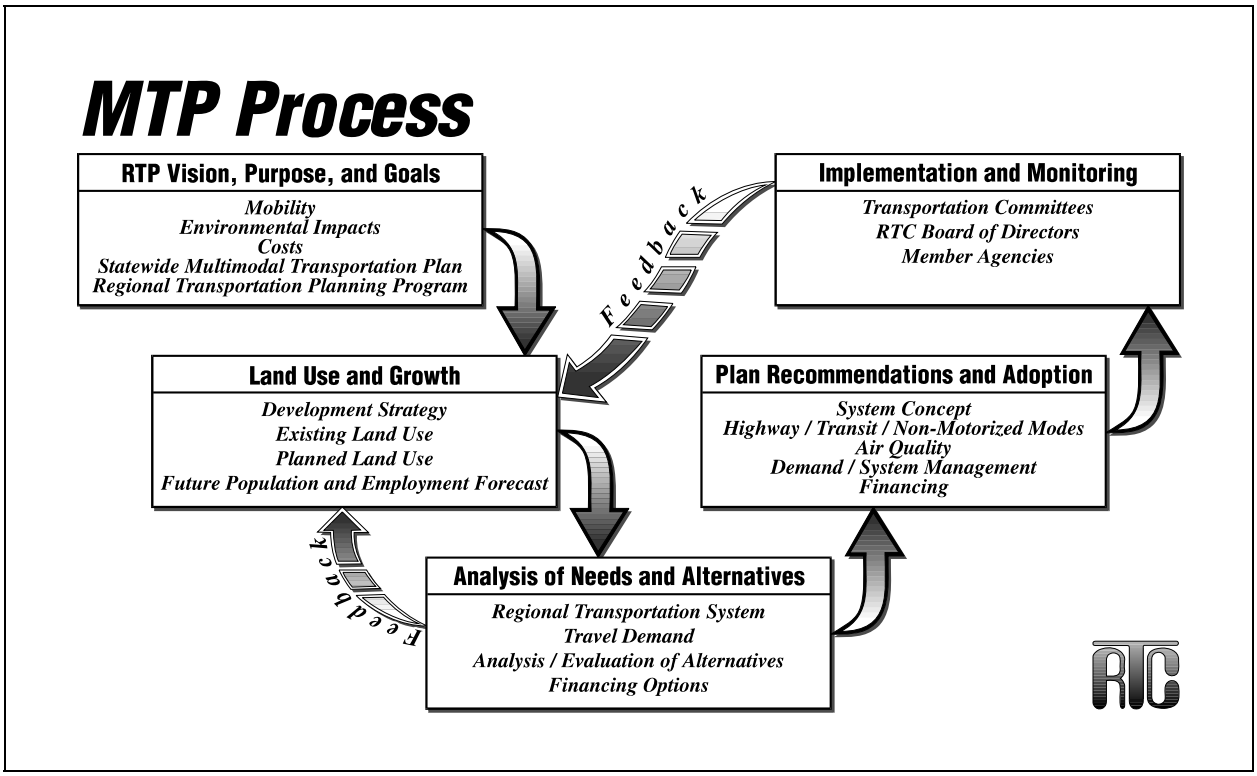
LEVEL OF SERVICE STANDARDS

Level of service standards represent the minimum performance level desired for transportation facilities and services within the region. They are used as a gauge for evaluating the quality of service on the transportation system and can be described by travel times, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The Washington State Growth Management Act states that these standards should be regionally coordinated. The standards are used to identify deficient facilities and services in the transportation plan, and are also to be used by local governments to judge whether transportation funding is adequate to support proposed land use developments. Level of service standards for Clark County, are further addressed in Chapter 3.

CLARK COUNTY METROPOLITAN TRANSPORTATION PLAN UPDATE: WORK PLAN

Development of the MTP for Clark County follows a work plan outlined in Figure 1-4. The work plan outlines major tasks to be covered in the development of the MTP. The MTP is designed as a benchmark Plan to meet federal MPO requirements for regional transportation planning in Clark County and incorporates elements required by the state regional transportation planning standards resulting from the 1990 GMA legislation and SHB 1928 legislation passed in 1994.

Figure 1-4: MTP Process



An outline of the chapters of the Plan follows. The MTP relies on regional transportation policies, analysis of growth trends and regional travel forecasting results to determine regional transportation needs.

OUTLINE OF MTP CHAPTERS

Chapter 1: **Introduction; MTP Vision, Purpose and Goals**. The MTP is introduced and its general goals, policies, statutory authority and purpose are described. The MTP process is outlined as well as regional transportation committee structure and intergovernmental cooperation and coordination in MTP development. The concept of level of service standards is introduced.

Chapter 2: **Regional Land Use and Growth**. Clark County's demographic data, development trends and regional development strategy are discussed. Existing and future land uses and development patterns are identified.

Chapter 3: **Identification of Regional Transportation Needs**. The regional transportation system is designated and defined. The characteristics and patterns of today's and future regional travel demand, today's transportation problem locations and future regional needs are described. Needs criteria such as acceptable levels of service, safety and accessibility are outlined. Transportation system alternatives are described and evaluated.

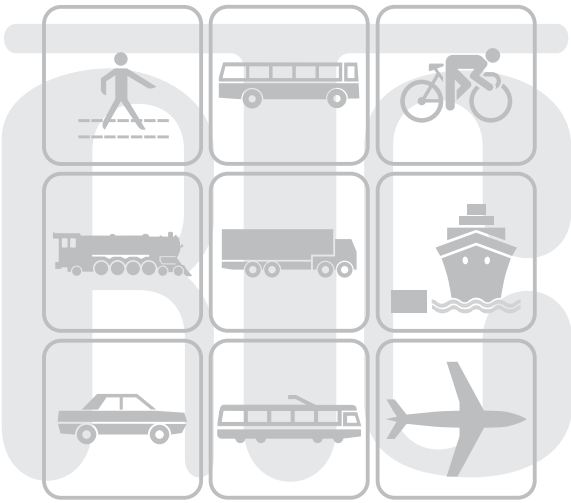
Chapter 4: **Financial Plan**. Revenue sources are identified and described and a plan for financing transportation system improvements is presented.

Chapter 5: **System Improvement and Strategy Plan**. Recommendations for development of the regional transportation system are made. Highways, transit systems, transportation system management and demand management are considered.

Chapter 6: **Performance Monitoring**. Performance monitoring measures are described. Procedures to maintain the MTP's consistency with the state transportation plan, local transportation plans, major land use decisions and regional demographic projections are outlined.

Chapter 7: **Plan Development and Implementation**. Provisions for participation of the public in development of the MTP are described. Provisions for implementation of regional transportation goals, policies and actions established by the MTP are described. The MTP review and amendment process is outlined, should changing policies, financial conditions or growth patterns warrant amendment of the Plan. The GMA-required biennial review process and need for update every four year to satisfy federal requirements is described.

Appendices: The Appendices to the MTP contain a list of projects identified as needed in the MTP process. These projects are the basis for the transportation network included in the regional travel forecast model. The Appendices also include a report on air quality conformity determination and the Strategic Plan element of the MTP that outlines MTP projects and/or planning concepts that currently cannot be brought into the “fiscally-constrained” MTP but are being considered and/or recommended in regional transportation studies and should be brought to the attention of the community for possible future inclusion into the Plan. The Appendix also includes technical papers in support of the MTP.



CHAPTER 2

LAND USE, GROWTH AND TRANSPORTATION

LAND USE AND TRANSPORTATION

In developing a metropolitan transportation plan the fundamental relationship between transportation and land use should be recognized and the effect that land use and growth have on transportation considered.

The linkage between land use and transportation is a complex issue but on a simple level the linkage can be thought of as working in two ways:

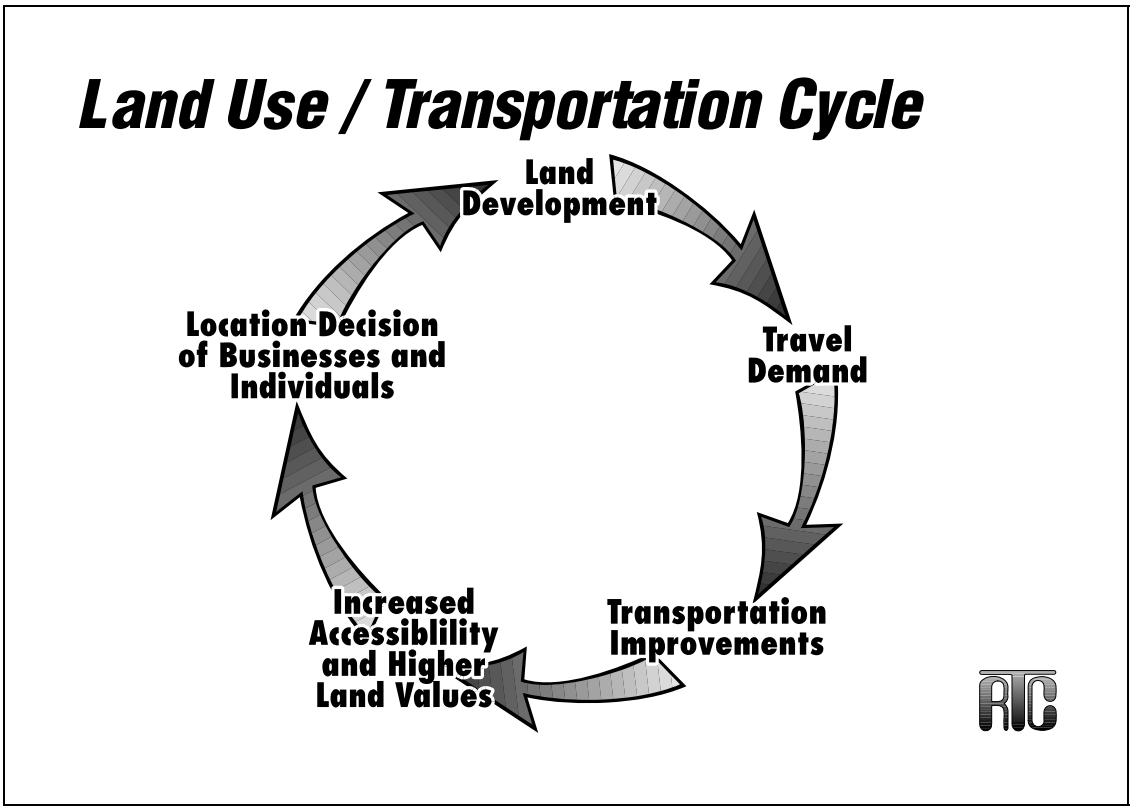
1) The spatial distribution and type of land use activity influences both the demand for travel and travel characteristics.

   Different types of land use generate and attract differing traffic rates, for example, retail land uses will generate more trips than residential land uses.

2) Improving access by expanding the transportation system allows for the development of land that was formerly inaccessible.

The Land Use/Transportation cycle is illustrated in Figure 2-1.

Figure 2-1: Land Use/Transportation Cycle



The Washington State 1990 Growth Management Act (GMA) recognized the importance of the linkage between land use and transportation. The Act requires that local comprehensive plans include a transportation element. Under the GMA, RTPOs were established to extend transportation planning. RTC was designated as RTPO for a three-county region which includes Clark, Skamania and Klickitat counties. The RTPOs were authorized to review the transportation elements of local comprehensive plans and certify that they comply with the GMA that requires consistency between land use and transportation elements.

Land use and transportation are inter-linked because land use activities largely determine travel demand and desire. When different land uses are segregated, length of trips tends to increase as, for example, people have to travel between their homes and their workplaces. To meet mobility needs, these longer trips usually have to be served by the automobile, thus reducing the use of transportation alternatives, such as walking or transit.

GROWTH AND DEVELOPMENT

Sustained economic development and growth within a region can be desirable because of the economic benefits that increased employment and a larger tax base can bring. However, while growth can contribute to the health of a region's economy it can also have adverse impacts. Unmanaged, rapid rates of growth can have a severe impact on the ability of a community to provide needed infrastructure and services. The costs of growth can include worsening levels of traffic congestion, decline in air quality, and overall degradation of the quality of life.

The need to maintain economic viability and, at the same time, quality of life is a challenge. Elements that contribute to a desirable quality of life include job opportunities, affordable housing, a healthy environment with clean air and recreational opportunities. An efficient, safe transportation system can also contribute to the quality of life for residents of a region and can act as an attractor for economic development.

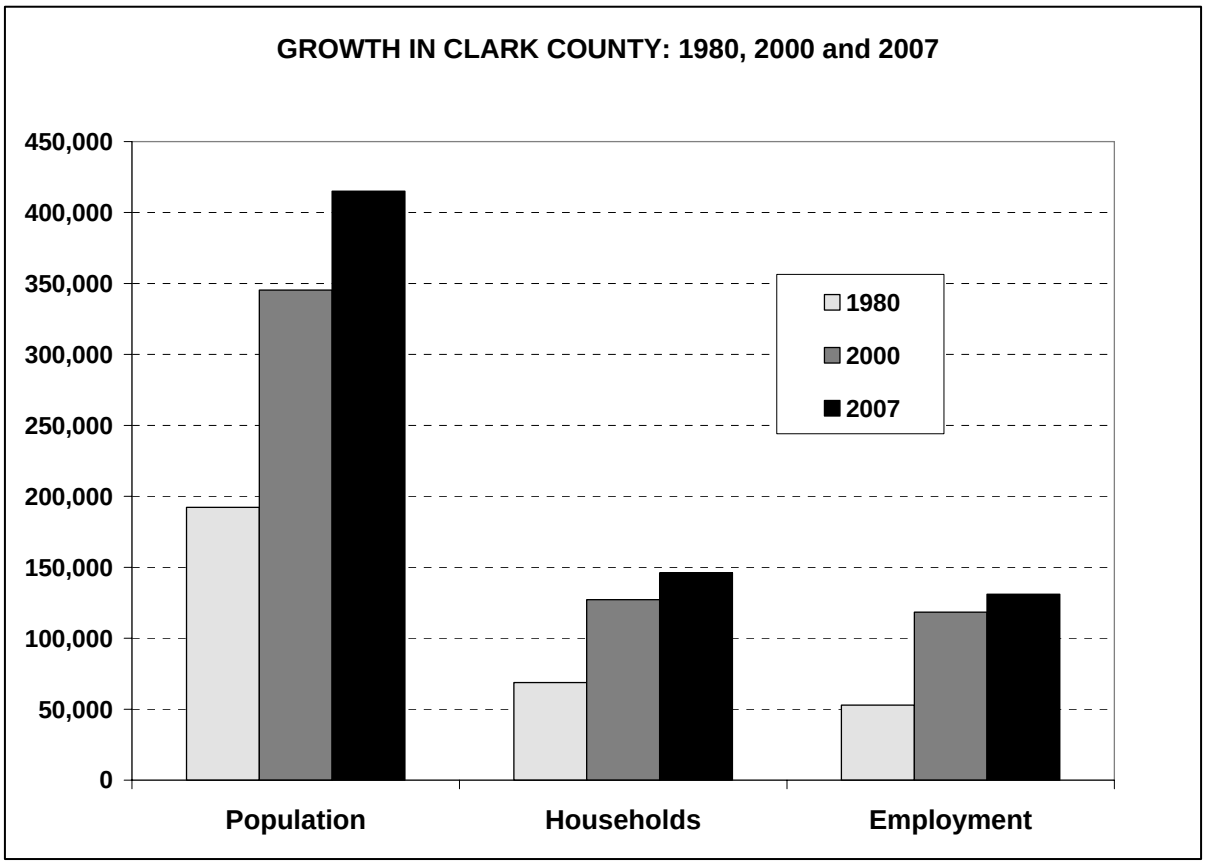
GROWTH IN CLARK COUNTY

Clark County has seen significant rates of growth in the last two decades. Between 1980 and 2000 the population of the county increased by 80% from 192,227 in 1980 to 345,238 in 2000 while the number of households increased by 85% from 68,750 in 1980 to 127,208 in 2000 (see Figure 2-2). Employment[1] in Clark County increased by 124% between 1980 and 2000, from 52,870 in 1980 to 118,310 in 2000. Washington State's Office of Financial Management (OFM) estimates that Clark County's 2007 population is at 415,000. The rapid growth seen in the County in the last two decades has increased demands on the regional transportation system.

[1] Employment numbers used in the MTP are the equivalent of U.S. Department of Labor, Bureau of Labor Statistics (BLS) or 'covered employment'. In comparison, the Department of Commerce, Bureau of Economic Analysis (BEA), reports total employment that includes all wage and salaried jobs as well as proprietors' jobs that includes sole proprietor, self employed and farm employment.

Development of a transportation policy plan to provide for mobility of people, freight and goods has to consider how to plan for a transportation system that can support an increase in travel demand caused by growth in population and employment. At the same time, this system has to be affordable and avoid environmental impacts to maintain the quality of life. A safe, efficient transportation system can work to enhance economic development within a region and development of the transportation system in conjunction with land use plans can contribute to positive growth management.

Figure 2-2: Growth in Clark County, 1980 to 200 and 2007



Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, Was\hington State Office of Financial Management (OFM)

EXISTING LAND USES IN CLARK COUNTY

From the City of Vancouver, the urban hub of the county on the banks of the Columbia River, Clark County spreads through a rapidly growing suburban band, across agricultural lands and a network of smaller cities and towns to the slopes of the Cascade Mountain Range. The county is compact, measuring approximately 25 miles across in either direction and has an area of 405,760 acres (627 square miles).

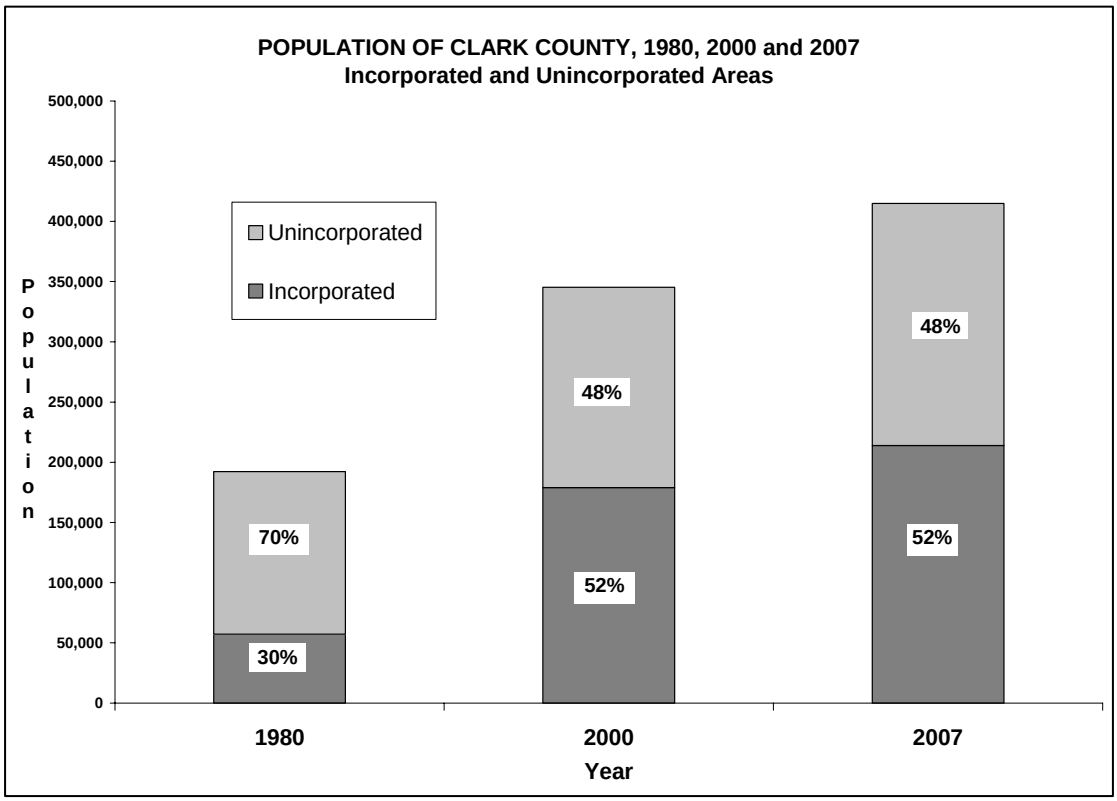
Clark County's growth was stimulated by the development of "traditional" industries such as pulp and paper manufacturing, aluminum production and, during the wartime years, shipbuilding

activities. In recent years the county has proved to be attractive to new manufacturing activities. The region is able to offer reasonably priced land for development in an attractive setting within a metropolitan area. Power is affordable and the region's location on the Pacific Rim, with easy access to Portland International Airport, has contributed to its growth and development. With the establishment of "new" high technology industries the region has been successful in diversifying its economic base. Major employers include the local school districts, Southwest Washington Medical Center, Hewlett-Packard, county and city government, Fred Meyer stores, the Bonneville Power Administration, Safeway stores, Georgia-Pacific Corporation, Wafertech, SEH America, Kaiser Permanente, the Vancouver Clinic, Legacy Hospital – Salmon Creek, Cleark College, Washington State University, the Nautilus Group, Columbia Machine, Frito-Lay, Holland-Burgerville, and Electric Lightwave, Inc.

Clark County's location on the northern periphery of the Portland metropolitan area has contributed to the significant growth in residential developments and employment activities within the county in recent years. The nationwide trend toward development of the suburbs of metropolitan areas for residential developments, as well as employment activities, is apparent in this region. This development trend has implications for the provision of transportation infrastructure and services.

In Clark County the past two decades has seen population growth in both the incorporated and unincorporated areas. Between 1980 and 2000 the incorporated areas saw a growth in population of 213% (57,248 population in 1980 to 178,959 in 2000) while the growth in the unincorporated areas was 23% (from 134,979 population in 1980 to 166,279 in 2000). The proportion of the population living in the unincorporated areas decreased from 70% in 1980 to 48% in 2000 while the proportion living in the incorporated areas increased from 30% in 1980 to 52% in 2000 (see Figure 2-3). Annexations by the City of Vancouver and the County’s smaller cities have resulted in this trend. A large annexation of the Cascade Park area to Vancouver took place in 1997 when Vancouver became the State’s fourth largest city. In 1996, the City of Vancouver’s population was at 67,450 and in 2007 it is estimated at 160,800. In 2007, 213,865 (52%) of Clark County’s population lives in incorporated areas and 201,135 (48% live in unincorporated areas.

Figure 2-3: Incorporated and Unincorporated Population, 1980, 2000 and 2007



Sources: Washington State Office of Financial Management (OFM)

The provision of public facilities and services, including transportation facilities such as highways, bicycle lanes, pedestrian paths, and transit services is a principal determinant of land use patterns. Contemporary land use patterns in Clark County have evolved largely as a result of its residents' dependence on the automobile for mobility. A look at land use maps for Clark County indicates that residential and commercial development has spread out along Highway 99, Fourth Plain, Mill Plain and SR-14. The opening of SR-500 and I-205 stimulated growth in the Vancouver Mall and Cascade Park/East County areas in the late 1980's and 1990's by offering increased accessibility to the two areas.

The City of Vancouver had seen relatively small growth in its population in the 1970's and 1980's. However, several significant annexations of land into the City boosted its population from 65,360 in 1995 to 127,900 in 1997. In 2007, Vancouver's population is estimated at 160,800. In the late 1970's and early 1980's, the focus of retail activity shifted from downtown to the area of the Vancouver regional mall and it was annexed to the City in 1992. In the early 2000's, downtown Vancouver is seeing revitalization with opening of new office buildings, residential units and a new hotel and events center.

The area around Vancouver Mall, now known as Westfield Shoppingtown, was a relatively isolated and undeveloped tract of unincorporated Clark County when the 918,000 square foot shopping mall was constructed in two phases in 1977 and 1980. However, the improved access provided by the completion of I-205 in 1982 and completion of SR-500 in 1984, contributed to

the area's rapid development. New commercial, retail, and residential developments have been attracted to the area, including offices, shops, restaurants, hotel units and apartments. Vancouver Plaza, a 45-acre retail development to the south-west of Vancouver Mall opened in fall 1988, Parkway Plaza to the west of the Mall includes several large office buildings. Columbia Tech Center is now developing in east Vancouver and Hazel Dell Town Center is developing in Hazel Dell.

The Glenn-Jackson Bridge that carries I-205 traffic across the Columbia opened in 1982. This provided a second Portland-Vancouver area river crossing. It relieved the bottleneck on I-5 and opened up access to the Portland region including access to Portland International Airport. Rapid development of the area to the east of I-205 followed. Much of the region's 1990's growth focused on the Mill Plain and 164/162nd Avenue corridors in east County where a mix of residential, commercial and business development took place. Residential development ranges from the adult community at Fairway Village to numerous large apartment developments as well as Fisher's Landing development. Commercial development began in the area in 1978 when Fred Meyer opened a shopping center at Chkalov and Mill Plain. Others were quick to realize the area's commercial potential. Recent commercial developments have included Mill Plain Town Center, anchored by Target, at Mill Plain and 164th Avenue and Columbia Tech Center shops. Business center developments include Columbia Tech Center and Stonemill Business Park.

Over the past few years, there has been significant growth in the smaller cities of Clark County (see Table 2-1) and this trend is continuing. Camas has grown from a city of 6,798 people in 1990 to 16,280 in 2007 (a 139% increase). Battle Ground has grown from a city of 3,758 people in 1990 to 16,240 in 2007 (a 332% increase). Washougal has grown from a city of 4,764 people in 1990 to 12,980 in 2007 (a 172% increase) and Ridgefield has grown from 1,332 people in 1990 to 3,680 in 2007 (a 176% increase). The growth in the smaller cities of Clark County will require improvements to the transportation facilities connecting these urban areas with the larger Vancouver and Portland metropolitan area.

The provision of public facilities and services, including transportation, has shaped the development of land uses in Clark County up to the present and is likely to continue to do so into the future.

Table 2-1: Growth in Population of Clark County Cities, 1980 to 2007

Growth in Population of Clark County Cities, 1980 to 2007						
	1980	**1990**	**2000**	**2007**	**% Increase 1980 to 2007**	**2007 % of County Population**
Clark County Total	192,227	238,053	345,238	415,000	116%	100.0%
Unincorporated	134,979	173,844	166,279	201,135	49%	48.5%
Incorporated	57,248	64,209	178,959	213,865	274%	51.5%
Battle Ground	2,774	3,758	9,322	16,240	485%	3.9%
Camas	5,681	6,798	12,534	16,280	187%	3.9%
La Center	439	483	1,654	2,440	456%	0.6%
Ridgefield	1,062	1,332	2,147	3,680	247%	0.9%
Vancouver	42,834	46,380	143,560	160,800	275%	38.7%
Washougal	34,834	4,764	9,595	12,980	239%	3.1%
Woodland *part*	80	94	92	92	-6%	0.0%
Yacolt	544	600	1,055	1,370	152%	0.3%

LAND USE: PLANS FOR THE FUTURE

Comprehensive plans are the means by which local jurisdictions plan for their future growth and development. Development of these comprehensive plans provides a process for anticipating and influencing the orderly and coordinated development of land. Within Washington State, planning authority is delegated by the state to local governments in RCW 36.70A, 35.63 and 35A.63. Before passage of the Growth Management Act, comprehensive plans were required to have a land use element showing the general distribution and location of land for various uses, as well as a circulation element showing the street system and transportation routes. Under planning provisions contained in the 1990 Growth Management Act, codified in RCW 36.70a and RCW 47.80, local comprehensive plans are now the basis for defining and integrating land use, transportation, capital facilities, public utilities and environmental protection elements. Within the comprehensive planning process these elements have to be inter-related and there has to be consistency between them. The GMA legislation requires that land use decisions should not be made without consideration of transportation needs and impacts.

CLARK COUNTY JURISDICTIONS' COMPREHENSIVE LAND USE PLANS AND ZONING - USE IN THE REGIONAL TRANSPORTATION PLANNING PROCESS

As part of the Growth Management planning process, Clark County adopted a Community Framework Plan in April 1993 to serve as a guide for the County's long-term growth over a period of fifty plus years. The Framework Plan envisioned a collection of distinct communities; a hierarchy of growth and activity centers with land outside the population centers to be

dedicated to farms, forests, rural development and open space. The twenty-year Comprehensive Growth Management Plan for Clark County guides the growth of the County toward the future vision. The Comprehensive Plan was first adopted in 1994 with updates in 1997 and 2004. The Board of Clark County Commissioners adopted the most recent changes to the Clark County Comprehensive Plan, 2004-2024, on September 25, 2007 following an in-depth examination that began in 2005. The updated Comprehensive Growth Management Plan establishes a population forecast of 584,310 for year 2024 and an employment forecast of 230,000[2] jobs.

Comprehensive plans are used in the regional transportation planning process as the basis for determining future land uses and identifying where future development is likely to occur. The MTP update must be based on adopted land use plans of local jurisdictions. The MTP's horizon year is 2030 because an MTP must cover at least a 20 year planning period and it is strongly encouraged by federal agencies that the twenty year horizon be maintained throughout the MTP's period of validity before the MTP is again updated. Therefore, a 2030 horizon year was selected. 2030 land uses are based on the adopted Comprehensive Growth Management Plan for Clark County (Clark County, September 2007) which has a horizon year of 2024, extended six years to the MTP's 2030 horizon. The 2030 demographic projections and land use allocations were developed by local jurisdictions working in partnership with RTC.

POPULATION AND EMPLOYMENT FORECAST

The 1990 state Growth Management Act (GMA) requires that local Growth Management Plans support a population forecast developed by the Washington Office of Financial Management (OFM). The GMA directs OFM to prepare twenty-year GMA planning projections that are updated every five years. Each County's GMA projection is expressed as a range between a High and Low projection. Counties select a GMA planning population within the range established by OFM. In this region, OFM consults with local jurisdictions as well as Metro in Oregon as OFM prepares the forecast. In January 2002, OFM released the GMA County projections to 2025. For Clark County, the OFM-projected 2025 population falls within a range from a low of 473,984 to a high of 621,763 with a mid-range projection of 544,809. For the Portland-Vancouver-Beaverton metropolitan region as a whole, demographic forecasts are usually formulated through a cooperative planning process led by the Metropolitan Service District (Metro), Portland, Oregon. The forecast region includes Clark County in Washington State, as well as Multnomah, Clackamas, Washington, Yamhill, and Columbia counties in Oregon. Worldwide, national and regional economic assumptions are the basis for determining future forecast demographics in the region.

For MTP regional transportation planning purposes, a 2030 population forecast of 639,337 is used with 2030 household numbers forecast at 246,848 and 2030 employment forecast at 283,875 (refer to Figures 2-4 and 2-5). From 2007, these forecasts represent a 54% increase in population (415,000 to 639,337), a 70% increase in households (146,000 to 246,848) and a

[2] Bureau of Labor Statistics equivalent employment or 'covered' employment.

117% increase in employment (131,000 to 283,875) (Bureau of Labor Statistics (BLS) equivalent jobs or covered employment). .

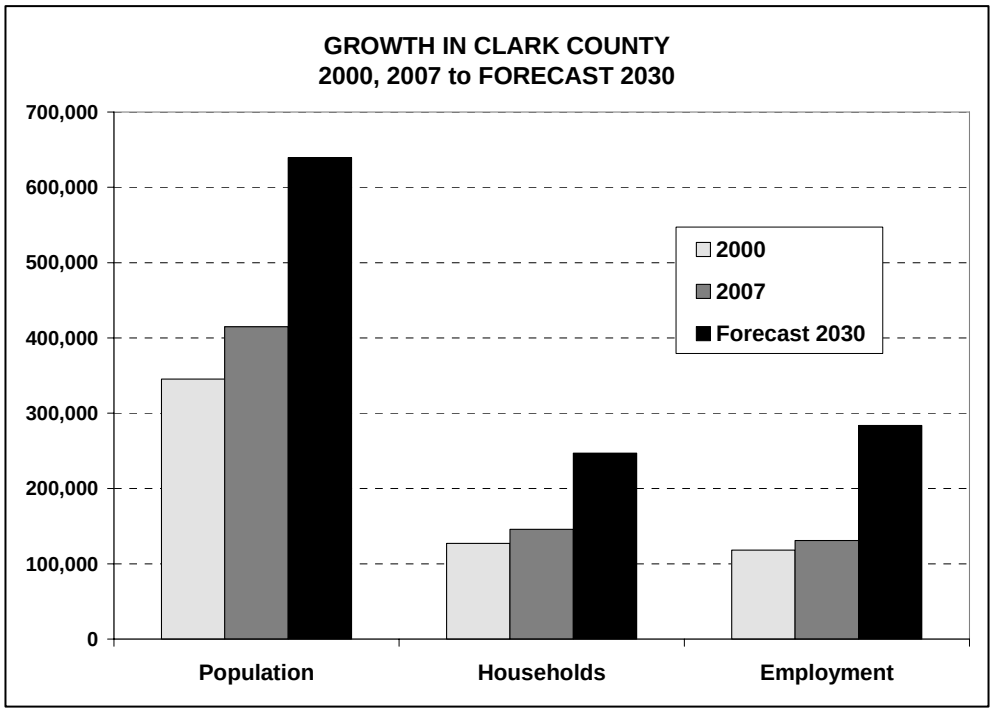
TRANSPORTATION ANALYSIS ZONES

In the regional transportation planning process the forecast growth in housing and employment for the year 2030 is converted into projections of future travel demand. For the purpose of analyzing future travel demand, a "Transportation Analysis Zone" (TAZ) System is used. The Portland metropolitan area is divided into TAZs; there are 650 zones in Clark County and 2 Clark County external zones. For each Clark County TAZ, the comprehensive plan land use designations and existing zoning are used as a basis for distributing 2030 forecasts for housing and employment. The demographic distributions are based on the County Assessor's data, building permit data and on vacant, buildable lands analysis.

DISTRIBUTION OF FUTURE GROWTH

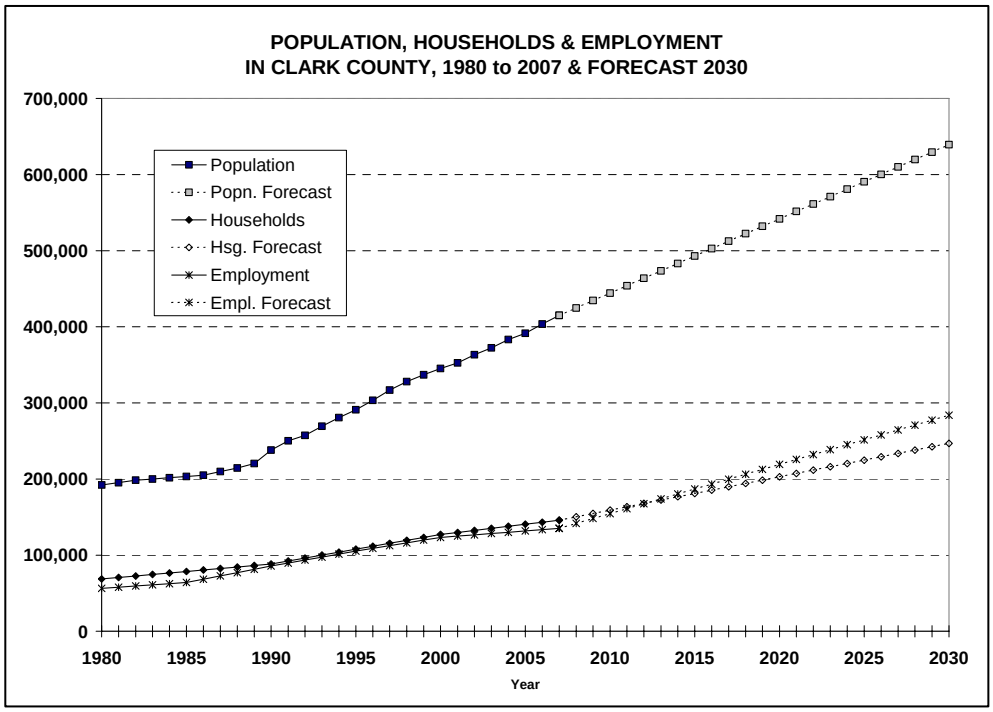
As described above, the population of Clark County is forecast to grow by 247,662 people during the planning period from 2004 to 2030 and employment is set to grow by 162,797. In growth management planning, denser patterns of development are to be encouraged along the main transportation corridors where there is transit service. In significant transit corridors, densities and appropriate urban designs are to be encouraged to maximize the efficiencies of land use and transit usage. The 1994 Comprehensive Plan forecast significant development in three growth centers within the Vancouver UGA: Downtown Vancouver, Vancouver Mall and the Salmon Creek/Washington State University vicinity. More recent Comprehensive Plan updates forecast significant growth for the smaller cities within Clark County. The smaller cities of Clark County are planning for denser development with expanded urban boundaries as they become the focus for growth outside of the core urban area of Vancouver.

Figure 2-4: Growth in Clark County, 2000, 2007 and Forecast 2030



Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, WA State Office of Financial Management (OFM), and Clark Co.

Figure 2-5: Population, Housing and Employment in Clark County, 1980 to 2007 & Forecast 2030



Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, Washington Employment Security, and Clark Co.

DEMOGRAPHIC AND LAND USE TRENDS

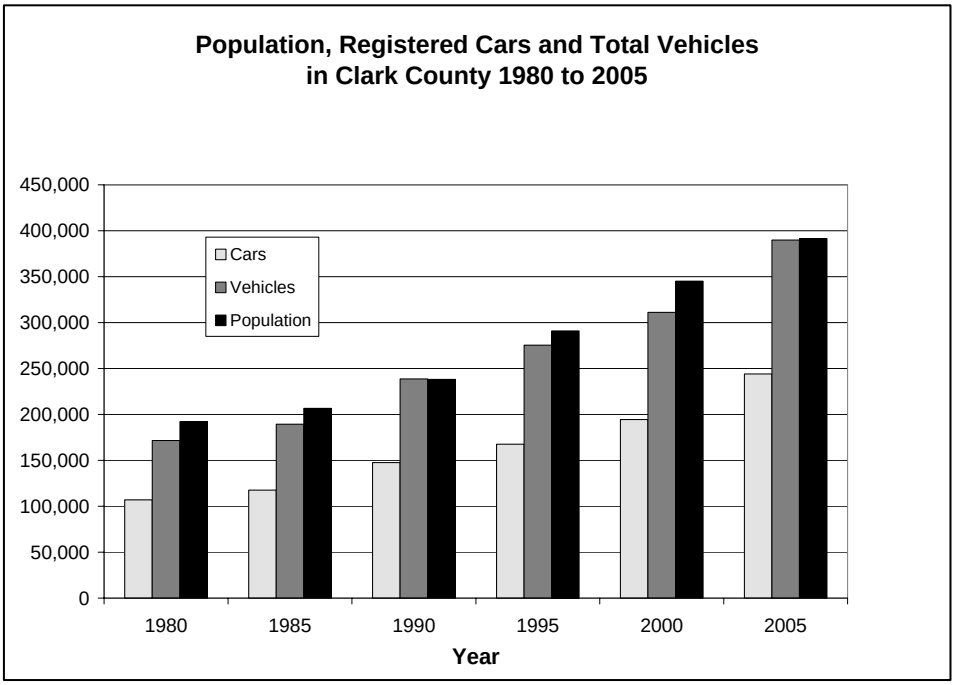
Growth in population and employment, development, and resulting distribution of land uses all affect travel demand. Additional factors that influence travel demand include household size, workforce participation, employment patterns and vehicle ownership.

Household size is a significant demographic factor that influences land use and demand for transportation services. Decreased household size may result in development pressures for more housing and further expansion of land for residential uses to accommodate the additional houses. Expansion of residential land uses requires improvements and expansion to the transportation system to access new and developing residential areas. Over the past two decades, the ratio of single family to multi-family housing has changed in Clark County with a move toward more multi-family housing. In 1980 81% of the homes in the County were single family (including mobile homes) compared with 19% multi-family housing units. By 2000 these housing numbers had changed to 77% single family and 23% multi-family. In the decade of the 1980s there was a trend toward smaller household size due to more single-person households and smaller family size. In 1980, the average number of persons per household in Clark County was 2.76 but by 1990 it had fallen to 2.69. The decade of the 1990's saw no change in average household size in Clark County with the 2000 U.S. Census also recording an average 2.69 persons per household in Clark County.

Employment in Clark County has also changed over time, with a relative decline in traditional, blue-collar, industrial jobs and an increase in service sector employment. There has been growth in "high-tech" employment and a large increase in the retail sector in recent years. The number of jobs is increasing in suburban areas of Clark County and employment is dispersing throughout the region. The "new" suburban places of employment have tended to add to travel demand because of their dispersal. Their design has catered to auto-commuters and they are not as easily served by transit service.

As travel demand has increased, there has also been growth in the number of registered passenger cars as well as total vehicles in Clark County (see Figure 2-6). From 1980 to 2005 there was a 104% increase in population (from 192,227 in 1980 to 391,500 in 2005) and in the same period a 128% increase in passenger cars (from 106,889 in 1980 to 244,161 in 2005) and a 127% increase in total vehicles registered in the County (from 171,474 in 1980 to 389,972 in 2005). Passenger cars represent 62.6% of total registered vehicles in 2005.

Figure 2-6: Population, Registered Cars and Total Vehicles in Clark County, 1980-2005



Source: U.S Census Bureau, State Office of Financial Management, Washington State Department of Licensing

Table 2-2 shows the 1970 to 2000 increase in registered passenger cars and total registered vehicles (includes all trucks, commercial and recreational vehicles plus passenger cars) in Clark County. The number of passenger cars per household has increased at the same time as household size has decreased.

Table 2-2: Clark County Demographic Data, 1970, 1980, 1990 and 2000

CLARK COUNTY GROWTH TRENDS: 1970, 1980, 1990 and 2000										
Year	**Popn.**	**Housing Units**	**Households**	**Persons per House-hold[1]**	**Jobs in Clark County[2]**	**Jobs per Household**	**Registered Passenger Cars**	**Registered Passenger Cars Per Household**	**Registered Vehicles**	**Registered Vehicles Per Household**
1970	128,454	42,816	41,064	3.10	32,610	0.79	62,586	1.52	95,788	2.33
1980	192,227	72,806	68,750	2.76	52,870	0.77	106,889	1.55	171,474	2.49
1990	238,053	92,849	88,440	2.69	80,100	0.91	147,401	1.67	238,629	2.70
2000	345,238	134,030	127,208	2.69	118,310	0.93	194,492	1.53	311,104	2.45

Source: U.S. Bureau of the Census, Washington State Department of Licensing and Washington Office of Financial Management.
[1] from census data
[2] Bureau of Labor Statistics (covered jobs)

Tables 2-3 and 2-4 also provide information that compares 1990, 2000 and 2006 census demographic data which is of relevance in the metropolitan regional transportation planning

process. Table 2-3 reported on demographic data of particular relevance in considering environmental justice and special services transportation needs.

Table 2-3: Summary of Clark County Demographics

		1990	1990 %	2000	2000 %	2006	2006 %
Population		**238,053**		**345,238**		**412,938**	
Age:	Under 65	212,686	89.3%	312,430	90.5%	370,572	89.7%
	65 and Over	25,367	10.7%	32,808	9.5%	42,366	10.3%
Race:	White	225,192	94.6%	306,648	88.8%	359,994	87.2%
	Black or African American	2,976	1.3%	5,813	1.7%	7,170	1.7%
	American Indian and Alaska Native	2,296	1.0%	2,910	0.8%	2,704	0.7%
	Asian*	5,670	2.4%	11,095	3.2%	16,370	4.0%
	Native Hawaiian and Other Pacific Islander	see above		1,274	0.4%	1,458	0.4%
	Other*	1,919	0.8%	17,498	5.1%	25,242	6.1%
Origin:	Non-Hispanic/Non-Latino	232,181	97.5%	328,990	95.3%	387,990	94.0%
	Hispanic/Latino	5,872	2.5%	16,248	4.7%	24,948	6.0%
Language Spoken at Home	Population over 5 years	219,563	100%	318,152	100%	385,084	100%
	Speak English Only	207,291	94.4%	281,613	88.5%	333,744	86.7%
	Language other than English	12,272	5.6%	36,539	11.5%	51,340	13.3%
	Speak English less than "Very Well"	4,556	2.1%	17,638	5.5%	22,919	6.0%
Disability Status	(reported for population 5 years and over)			55,601	17.6%	57,427	15.0%
Poverty:	Total Population for whom poverty status is determined	212,660	100%	341,464	100%	not available	
	Poverty Status (as defined by U.S. Census Bureau)	21,910	10.3%	31,027	9.1%	not available	10.0%

Source: U.S. Census Bureau (including 2006 American Community Survey)

** NOTE: Direct comparison between 1990 and 2000 data is not possible for some categories. In 1990, Asian and Pacific Islanders were grouped together and there was no reporting on two or more races.*

Table 2-4: Clark County Journey to Work

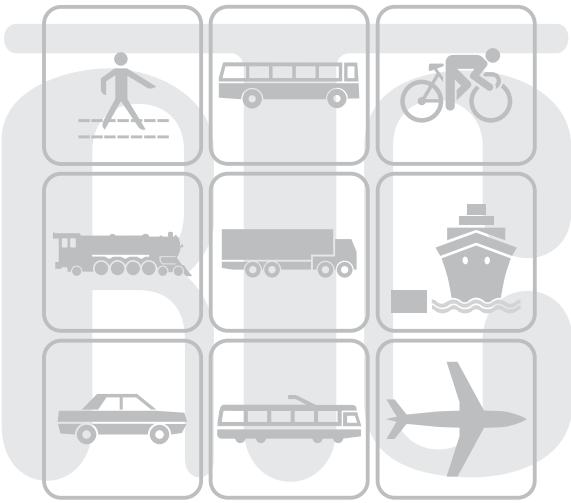
Clark County	1990	1990 Percent	2000	2000 Percent	2006	2006 Percent
Commuters	108,945		161,471		195,873	
Drive Alone	87,748	80.5%	128,014	79.3%	153,425	78.3%
Carpool	12,017	11.0%	18,089	11.2%	20,089	10.3%
Transit	2,275	2.1%	4,228	2.6%	4,2944	2.5%
Walked	2,091	1.9%	2,211	1.4%	3,377	1.7%
Other	1,224	1.1%	1,788	1.1%	3,561	1.8%
Worked at Home	3,590	3.3%	7,141	4.4%	10,477	5.3%
Mean Travel Time to Work (those that work outside home)	21.2 mins.	N/A	24.7 mins.	N/A	25.1 mins.	N/A

Source: U.S. Census Bureau (including 2006 American Community Survey)

Growth in population as well as the other demographic factors described above has resulted in increase in travel demand to be met by Clark County's transportation system. Development of land, growth in population and travel demand requires a combination of expansion of public facilities and service provision and a revision to land use plans to ensure mixed use developments and better balance of jobs and housing throughout the region. One of the goals of the comprehensive plan for the Clark County region, developed under the Growth Management Act (GMA), is to reverse the trend of increased dependence on the automobile. In the comprehensive plan, land uses and transportation have been linked in the planning process and their inter-relationships considered in developing a vision for future growth and future growth patterns. In assessing future transportation needs for the Clark County region the comprehensive plans of its jurisdictions are used as a basis for analysis of the transportation system. The GMA requires that transportation system improvements be put in place, concurrent with land development.

Table 2-5: Summary of Clark County Growth Forecasts

CLARK COUNTY 2000 TO 2030 GROWTH FORECASTS: MTP			
	2000	MTP 2030	% Change 2000 to 2030
Population	345,238	639,337	85%
Households	127,203	246,848	94%
Employment	118,310	283,875	140%



CHAPTER 3

IDENTIFICATION OF REGIONAL TRANSPORTATION NEEDS

INVENTORY OF THE EXISTING REGIONAL TRANSPORTATION SYSTEM

As an introduction to planning for the future development of a regional transportation system, an inventory of the existing system is provided. Also, a brief description of the context for regional transportation planning, with regard to meeting federal requirements and designation of federal transportation area boundaries is described.

FEDERAL TRANSPORTATION BOUNDARIES

The federal Transportation Act requires that an **Urban Area Boundary** (UAB) is defined to delineate areas that are urban in nature distinct from those that are largely rural in nature. The federal transportation Urban Area Boundary is not to be confused with the Urban Growth Areas established under the Washington State Growth Management Act (GMA), as described in Chapter 2. The federal UAB should cover, at a minimum, the area designated by the decennial U.S. Census as "urbanized" by meeting certain population and density criteria. Following the 2000 Census, the Vancouver urbanized area encompasses Vancouver as well as urbanized areas of unincorporated Clark County, Camas, Washougal and Battle Ground. Also, following the 2000 census, the Hockinson Census Designated Place was defined as an Urban Place as its population was over 5,000. (Refer to Figure 3-1; *Transportation Boundaries*).

ISTEA also called for MPO's to establish a **Metropolitan Area Boundary** which marks the area to be covered by MPO regional transportation planning activities and which, at a minimum, has to include the urban area, the contiguous area expected to be urbanized within the next twenty years, and in air quality attainment areas must include the area enclosed by the **attainment area boundary** which in the Clark County region is the Vancouver Air Quality Maintenance Area[1]. The Metropolitan Area Boundary established for the Clark County region includes the whole of Clark county (refer to Figure 3-1; *Transportation Boundaries*).

With a population of over 200,000 the Portland-Vancouver metropolitan area is designated as a **Transportation Management Area** (TMA) by the U.S. Secretary of Transportation. Within TMAs, the MPO must develop a congestion management system which was first adopted by the RTC Board in May 1995 (RTC Board Resolution 05-95-14) and a report on congestion management within the region has been updated by RTC annually. The MPO has authority to select, in consultation with the state, projects to receive federal funds (see Chapter 4 for further details).

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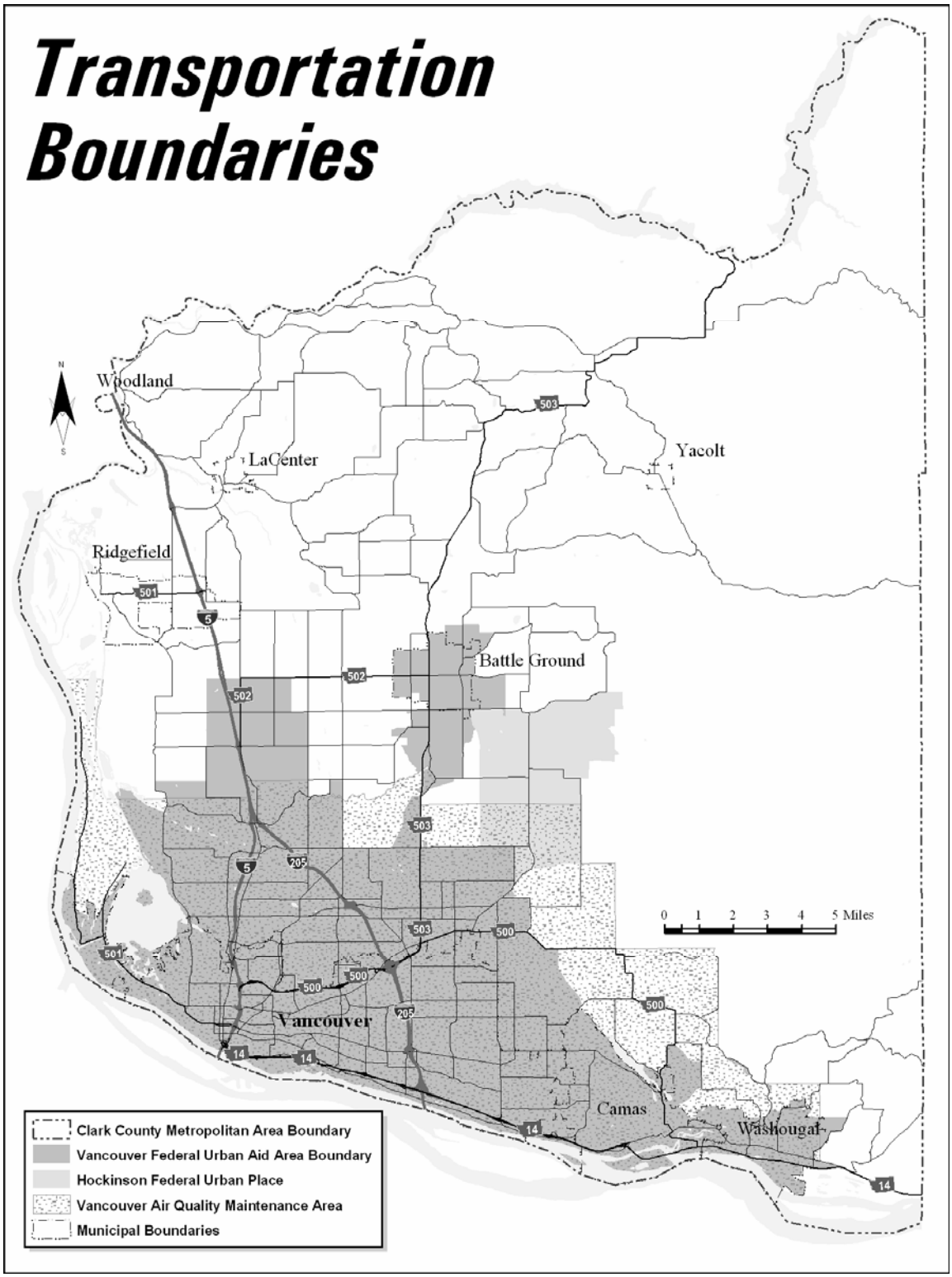
[1] Although classified in the early 1990's by the Environmental Protection Agency (EPA) as a moderate non-attainment area for carbon monoxide and a marginal non-attainment area for ozone, the Vancouver area has since attained unclassifiable/attainment status for the ozone pollutant and limited maintenance status for carbon monoxide. Air quality has implications for regional transportation planning as the region strives to maintain national ambient air quality standards.

Figure 3-1: Transportation Boundaries



FUNCTIONAL CLASSIFICATION OF THE REGIONAL HIGHWAY SYSTEM

Arterials are categorized into a functional classification system; the classifying of highways, roads and streets into groups having similar characteristics for providing mobility and/or land access. Interstate freeways, classified as divided principal arterials, are designed to provide for the highest degree of mobility of large volumes of long-distance traffic, they are not designed to provide for access to land uses. Collector facilities generally provide equal emphasis upon mobility and land use accessibility. Local facilities emphasize access to land uses.

The Federal Functional Classification system for Clark County usually undergoes a comprehensive update at least once every decade following the results of the decennial census and accompanying changes made to the federally recognized Urbanized Area and to the Urban Area Boundary (UAB) for the region. Details of the process for changing the UAB and federal functional classification system are described on Washington State Depart of Transportation's web site at http://www.wsdot.wa.gov/mapsdata/tdo/functionalclass.htm.

The map of Clark County's current federal classification system is at WSDOT's website at: http://www.wsdot.wa.gov/mapsdata/tdo/FunctionalClassMaps/PDF/FCclarkPLOT.pdf

The map of the Vancouver UGA's current federal classification system is at WSDOT's website at: http://www.wsdot.wa.gov/mapsdata/tdo/FunctionalClassMaps/PDF/FCvancouverUA.pdf

Revisions to the functional classification system for the Clark County region were approved by the Federal Highway Administration in December 2003. A review of the federal functional classification system for the Clark County region will be made in 2008 to ensure as close consistency as possible to local classification systems that are part of local comprehensive growth management plans. Clark County maintains a local classification system as part of its Comprehensive Growth Management Plan. This classification system is reported in the Clark County Arterial Atlas, approved by the Board of County Commissioners, and shows arterial and local street cross-sections anticipated for roads in Clark County within the next twenty years.

As a pre-requisite for review of the federal functional classification system, the Urban Area Boundary must be defined (refer to Figure 3-1; *Transportation Boundaries*). Facilities classified as collector or above in urban areas are eligible for federal funding while in the rural area those facilities classified as major collector and above are eligible. Generally, minor collectors in rural areas are not eligible for federal funding. A description of the urban functional classification categories follows:

PRINCIPAL ARTERIALS

Principal arterials permit traffic flow through the urban area and between major elements of the urban area. They are of great importance in the regional transportation system as they interconnect major traffic generators, such as the central business district and regional shopping centers, to other major activity centers and carry a high proportion of the total urban area travel on a minimum of roadway mileage. They also carry traffic between communities. Frequently principal arterials carry important intra-urban as well as intercity bus routes.

Many principal arterials are fully or partially controlled access facilities emphasizing the through movement of traffic. Within the category are (1) interstates (2) other freeways and expressways and (3) other principal arterials.

Spacing of principal arterials may vary from less than one mile in highly developed central business areas to five miles or more in the sparsely developed urban fringes.

MINOR ARTERIALS

Minor arterials collect and distribute traffic from principal arterials to lesser classified streets, or allow for traffic to directly access their destinations. They serve secondary traffic generators such as community business centers, neighborhood shopping centers, multiple residence areas, and traffic from neighborhood to neighborhood within a community. Access to land use activities is generally permitted. Such facilities are usually spaced under two miles apart and in core areas can be spaced at 1/8 to 1/2 mile apart.

COLLECTORS

Collectors provide for land access and traffic circulation within residential neighborhoods and commercial and industrial areas. They distribute traffic movements from such areas to the arterial system. Collectors do not handle long through trips and are not continuous for any great length.

LOCAL STREETS

Local streets provide direct access to abutting land and access to the higher classification facilities. They offer the lowest level of mobility and usually contain no bus routes. They are not intended to carry through traffic but make up a large percentage of the total street mileage.

Rural roads consist of those facilities that are outside of urban areas. They too are categorized into functional classifications:

RURAL PRINCIPAL ARTERIALS

Rural principal arterials are sub-divided into two sets (1) interstate facilities and (2) other principal arterials. They consist of a connected rural network of continuous routes and provide an integrated network without stub connections.

RURAL MINOR ARTERIALS

In conjunction with the principal arterials, the rural minor arterials form a rural network which link cities and larger towns together with other major traffic generators. The principal arterials and rural minor arterials are spaced at such intervals that all developed areas of the state are within a reasonable distance of an arterial highway. Minor arterials should be expected to provide for relatively high overall travel speeds with minimum interference to through movement.

The other rural road classifications are:

Rural Major Collector Roads (are eligible for federal funding)

Rural Minor Collector Roads (are not eligible for federal funding) and

Rural Local Roads

NATIONAL HIGHWAY SYSTEM (NHS)

ISTEA also required that roads be designated as National Highway System (NHS) facilities. Congress approved the NHS System with passage of the National Highway System Designation Act of 1995 (NHS Act). In Clark County the roads listed in Table 3-1 have been designated as NHS facilities.

Table 3-1: Designated NHS Facilities; Clark County

DESIGNATED NHS FACILITIES - Clark County	
Facility	**Extent**
I-5	Oregon State Line to Clark County line (north)
I-205	Oregon State Line to I-5 Interchange
SR-14	I-5 to Clark County line (east)
SR-500	I-5 to SR-503/Fourth Plain intersection
SR-501	I-5 to Port of Vancouver access
SR-502	I-5 to SR-503 intersection
SR-503	SR-500/Fourth Plain intersection to SR-502 intersection

HIGHWAYS OF STATEWIDE SIGNIFICANCE (HSS)

In 1999 the state legislature adopted Highways of Statewide Significance, fulfilling a requirement of House Bill 1487 passed in 1998. In Clark County highway facilities defined as "of Statewide Significance" are I-5, I-205, SR-14 and part of SR-501 to access the Port of Vancouver.

DESIGNATION OF THE RTP REGIONAL TRANSPORTATION SYSTEM

Consistent with the state's Regional Transportation Planning Program Planning Standards, the designated MTP regional transportation system (see Figures 3-2a and 3-2b) includes:

1. All state transportation facilities and services (including highways, state-owned park-and-ride lots etc.).

2. All local freeways, expressways, and principal arterials (the definition of principal arterials can be the same as used for federal classification or be regionally determined).

3. All high-capacity transit systems (any express-oriented transit service operating on an exclusive right-of-way including high occupancy vehicle (HOV) lanes).

4. All other transportation facilities and services, including airports, transit services and facilities, roadways, rail facilities, marine transportation facilities etc. that the RTPO considers necessary to complete the regional plan.

5. Any transportation facility or service that regional need or impact places in the plan, as determined by the RTPO.

It is the designated regional transportation system that is the focus for transportation planning in the MTP.

A detailed description of the designated MTP Regional Transportation System follows:

1. **All state transportation facilities and services** (including state highways, state owned park and ride lots etc.)

In Clark County this category includes Interstate facilities I-5 and I-205. Clark County has a 20.78 mile section of **I-5**, the major interstate freeway serving the west coast of the U.S.A.. I-5 provides for north-south travel and is used for interstate travel from southern California, through the state of Oregon northward through Washington State to the Canadian border. I-5 crosses the Columbia River from Oregon to Washington over the Interstate Bridge. The I-5 Columbia River Crossing Project's Locally Preferred Alternative includes a future replacement I-5 Interstate Bridge. I-5 has three through lanes in each direction from the Interstate Bridge north to the 134th Street off-ramp. North of the I-5/I-205 interchange there are three travel lanes in each direction.

A 10.07 mile stretch of **I-205** traverses Clark County until it joins I-5 just north of N.E. 134th Street. I-205 was constructed as an alternative route to I-5, as a by-pass facility through the Portland/Vancouver metropolitan area. I-205 crosses the Columbia River over the Glenn Jackson Bridge that was opened in 1982. The Glenn Jackson Bridge has four travel lanes in each direction. North of the bridge the facility has three lanes in each direction to a point just north of the interchange with SR-500. I-205 continues as a two lane in each direction facility until it joins I-5, just north of 134th Street.

State routes in Clark County include SR-14, SR-500, SR-501, SR-502 and SR-503.

Figure 3-2a: Designated Regional Transportation System

Figure 3-2b: Designated Regional Transportation System, Showing Downtown Vancouver Detail

SR-14 provides the main east-west access from the southwest of Washington state to the southeast of the state along the north bank of the Columbia River. The facility extends 21.77 miles through Clark County to the Skamania County line with two lanes in each direction up to milepost 12 and one lane in each direction thereafter.

SR-500 is a 20.37-mile facility entirely within Clark County and allows for east-west cross-county travel. It crosses I-205, provides access to the Orchards area, then traverses rural Clark County until it reaches the Camas urban area. SR-500 intersects with SR-14 in Camas. The facility carries traffic to and from the Clark County regional shopping mall. The segment of SR-500 between I-5 and I-205 was first opened as a limited access facility in 1984.

SR-501 is comprised of two unconnected segments. The south segment extends from the interchange with I-5 westward with three lanes in each direction along the Mill Plain/15th Street couplet to Columbia Street. West of Columbia the facility is two lanes in each direction. This segment of SR-501 carries traffic to and from the Port of Vancouver. The facility reduces to two lanes, one in each direction, and branches into two in the Vancouver Lake lowlands area with both branches terminating in the lowlands. The northern segment of SR-501 extends as a two-lane facility from I-5 westward to the City of Ridgefield where it terminates. Originally it was intended that the two segments be joined to complete a circumferential route around the westside of the Vancouver urban area and to carry traffic to and from the lowlands industrial area. However, the facility was never completed.

SR-502 extends from the I-5/N.E. 179th Street interchange northward to N.E. 219th Street where it turns eastbound toward Battle Ground. An interchange of I-5 and 219th Street is currently under construction in 2007.

SR-503 extends northward from its intersection with SR-500. It carries traffic between the Vancouver urban area and North County through Battle Ground. SR-503 extends into Cowlitz County.

Table 3-2: State Route Mileage in Clark County

STATE ROUTE MILEAGE IN CLARK COUNTY					
Facility	**Beginning Mile Post**	**Begins at: (Description)**	**Ending Mile Post**	**Ends at: (Description)**	**Route Mileage**
I-5	0	Oregon State Line on Interstate Bridge	20.78	Cowlitz Co. Line	20.78
I-205	0	Oregon State Line on Glenn Jackson Bridge	10.57	Interchange with SR-5	10.57
SR-14	0	Interchange with SR-5, Vancouver	21.77	Skamania Co. Line	21.77
SR-500	0	Interchange with SR-5	20.37	Intersection with SR-14, Camas	20.37
SR-501 S. Section	0	Interchange with SR-5	12.72	Terminus of south segment	12.72
SR-501 Couplet	0.61	Interchange with SR-5	1.16	Franklin Street City of Vancouver	0.55
SR-501 N. Section	16.91	City of Ridgefield	19.88	Interchange with I-5/ N.E. 269th St.	2.97
SR-502	0	Intersection with SR-5, at N.E. 179th St.	7.56	Intersection with SR-503	7.56
SR-503	0	Intersection with SR-500	27.87	Cowlitz Co. line	27.87

2. **All local freeways, expressways, and principal arterials**

Local expressways and principal arterials are also designated as part of the regional transportation system. Principal arterials, such as Mill Plain, Fourth Plain, N.E. 78th Street, Padden Parkway, N.E. 112th Avenue, SE/NE164th/162nd Avenue and segments of St. John's and Andresen are included. Future planned arterials on the regional system, such as an extension of NE 18th Street extension west from NE 102nd Avenue to NE 87th Avenue, are marked on Figure 3-2 by a dashed red line.

3. **All high-capacity transit systems** (any express-oriented transit service operating on an exclusive right-of-way including high occupancy vehicle (HOV) lanes).

The I-5 Columbia River Crossing Project's Locally Preferred Alternative is included which has Light Rail Transit extending into Clark County with a terminus in the vicinity of Clark College. The High Capacity Transit System Study is currently underway in 2007/08. The HCT System Study will define future HCT corridors in the Clark County region. See the MTP's Strategic Plan in Appendix B for further information on planning for HCT in the Clark County region.

4. **All other transportation facilities and services considered necessary to complete the regional transportation plan**. These include transit services and facilities, roadways, rail facilities, airports, marine transportation facilities etc.

Clark County Public Transportation Benefit Authority (C-TRAN) provides public transit service in Clark County. All C-TRAN's system and facilities are included as part of the designated regional transportation system. C-TRAN's service and taxing boundary, effective June 1, 2005, includes the City of Vancouver and its urban growth boundary, and the city limits only of Battle Ground, Camas, La Center, Ridgefield, Washougal, and the Town of Yacolt.

C-TRAN operates a FIXED ROUTE BUS SYSTEM on urban and suburban routes as well as premium commuter bus service to Portland, Oregon. C-TRAN also provides general purpose dial-a-ride service and Americans with Disabilities Act (ADA)-compliant paratransit service. Figure 3-2 maps C-TRAN's fixed route system. Table 3-3 summarizes the fixed-route bus system. C-TRAN operates 17 local urban routes, 4 limited routes, 7 express commuter routes, and 5 innovative transit/dial-a-ride services. Operating hours are generally 5:00 a.m. to 9:30 p.m. on weekdays (key urban routes operate until midnight), 6:45 a.m. to 8:15 p.m. on Saturdays, 8:00 a.m. to 6:00 p.m. on Sundays/Holidays.

In November 2007, C-TRAN will implement a major service redesign, extending the span of service on key urban routes, improving local route connections, adding service to new destinations, and opening the 99th Street Transit Center at Stockford Village. Additionally, service in downtown Vancouver will be changed as the 7th Street Transit Center is decommissioned. Extensive public outreach and passenger assistance will support the implementation of these changes.

C-TRAN provides express commuter service directly from park and ride lots to destinations in downtown Portland. In addition, route #105 provides a midday and evening connection between downtown Portland and transit centers along the I-5 corridor, including a stop in downtown Vancouver. In the I-205 corridor, route #65 provides a midday connection to Portland at the Parkrose Transit Center. Limited routes provide a lower cost commute connections to MAX light rails stations at Delta Park/Vanport (I-5corridor) and Parkrose (I-205 corridor) in Portland.

Figure 3-2 (map of 2030 Regional Transportation System) maps C-TRAN's fixed route system. Table 3-3 summarizes C-TRAN's fixed route bus system.

Table 3-3: C-TRAN Fixed Route System (November 18, 2007)

Bus Route	Route Name	Weekday Service First Run Begins	Weekday Service Last Run Begins	Weekday Service Frequency (Peak)	Area Served (TC=Transit Center, P&R=Park & Ride)
2	Lincoln	5:30 am	8:50 pm	40 min.	Downtown Vancouver to 99th Street TC via northwest neighborhoods
3	City Center	5:21 am	9:11 pm	20 min.	Downtown loop around city center area: courthouse, clinics, shopping, and schools
4	Fourth Plain	4:42 am	12:00 am	15 min.	Downtown Vancouver to Vancouver Mall TC via Fourth Plain
7	Battle Ground	6:00 am	8:50 pm	45 min.	Vancouver mall TC to Battle Ground
9	Felida/Salmon Creek	6:00 am	9:00 pm	30 min.	99th Street TC to Felida, WSU Vancouver campus, hospital, and Hazel Dell
25	Fruit Valley	6:00 am	9:10 pm	30 min.	Downtown Vancouver to west Vancouver
25	St. Johns	5:30 am	9:20 pm	30 min.	Downtown Vancouver to 99th Street TC via Clark College and Minnehaha area.
30	Burton	4:58 am	9:54 pm	25 min.	Downtown Vancovuer to Fisher's Landing TC via Burton Road
32	Evergreen/ Andresen	5:54 am.	9:24 pm	30 min.	Downtown Vancouver to Vancouver Mall TC
32	Hazel Dell	5:30 am	9:17 pm	30 min.	Downtown Vancouver to 99th Street TC via Hazel Dell Avenue
37	Highway 99	5:35 am	11:35 pm	15 min.	Downtown Vancouver to Salmon Creek P&R via Highway 99
37	Mill Plain	4:50 am	12:07 am	15 min.	Downtown Vancouver to Fisher's Landing TC via Mill Plain Boulevard

Bus Route	Route Name	Weekday Service First Run Begins	Weekday Service Last Run Begins	Weekday Service Frequency (Peak)	Area Served (TC=Transit Center, P&R=Park & Ride)
39	Clark College/Medical Center	7:45 am	5:13 pm	60 min.	Downtown Vancouver to Clark College, hospital, and VA complex
41	Camas/ Washougal Limited	6:35 am	5:40 pm	1 am trip/ 1 pm trip	Limited from Camas/ Washougal to Delta Park/ Vanport MAX station (Portland)
44	Fourth Plain Limited	5:07 am	6:35 pm	30 min (peak only)	Limited from Orchards to Delta Park/Vanport MAX station (Portland)
47	Battle Ground Limited	6:10 am	5:25 pm	1 am trip/ 1 pm trip	Limited service from Battle Ground P&R to Delta Park/ Vanport MAX station (Portland)
65	Parkrose Limited	5:50 am	7:00 pm.	20 min.	Limited from Fisher's Landing TC to Parkrose TC (Portland)
72	Orchards	5:00 am	9:19 pm	60 min.	Vancouver Mall TC to Orchards area
80	Van Mall/ Fisher's	5:45 am	9:51 pm	30 min.	Fisher's Landing TC to Vancouver Mall TC
92	Camas/ Washougal	5:30 am	8:22 pm	30 min.	Fisher's Landing TC to Camas & Washougal
105	I-5 Express	5:45 am	7:00 pm	15 min.	Express connecting Salmon Creek P&r, 99th Street TC, downtown Vancouver, and downtown Portland
134	Salmon Creek Express	5:20 am	7:05 pm	10 min.	Express from Salmon Creek P&R to downtown Portland
157	Lloyd District Express	6:00 am	5:15 pm	3 am trips/ 3 pm trips	Express from 99th Street TC to Lloyd District (Portland)
164	Fisher's Landing Express	5:20 am	7:10 pm	15 min.	Express service from Fisher's Landing TC to downtown Portland

Bus Route	Route Name	Weekday Service First Run Begins	Weekday Service Last Run Begins	Weekday Service Frequency (Peak)	Area Served (TC=Transit Center, P&R=Park & Ride)
177	Evergreen Express	6:00 am	5:10 pm	3 am trips/ 3 pm trips	Express from Evergreen P&R to downtown Portland
190	Marquam Hill Express	6:00 am	4:30 pm	3 am trips/ 3 pm trips	Express from Kmart P&R and BPA P&R to Marquam Hill (Portland)
199	99th Street Express	5:30 am	6:22 pm	10 min.	Express from 99th Street TC to downtown Portland

During regular C-TRAN service hours, a connection is provided between the Vancouver Amtrak Station and the 7th Street Transit Center through a taxi voucher program.

All C-TRAN routes use lift-equipped buses, making them easily accessible to people with disabilities. C-TRAN also provides an ADA-compliant paratransit service, known as C-VAN. C-TRAN's paratransit service plan is described in the publication 1997 C-TRAN ADA Paratransit Service Plan (January, 1997). C-TRAN attained full compliance with the ADA in January 1997. Table 3-4 provides a summary of paratransit service hours and use between 1996 and 2006.

Table 3-4: C-TRAN; Paratransit Service

C-TRAN PARATRANSIT SERVICE (C-VAN)		
Year	Paratransit Trips	Revenue Hours Per Year
1996	142,495	48,317
1997	170,816	56,728
1998	186,665	67,769
1999	188,367	65,822
2000	162,130	55,308
2001	175,029	58,695
2002	180,867	61,538
2003	189,143	64,042
2004	178,652	66,254
2005	180,264	67,661
2006	192,052	72,410

In 2003, C-TRAN implemented its first innovative transit service, a dial-a-ride route replacing a low performing fixed route in Camas. In 2006, three additional innovative Connector routes were deployed resulting in a significant increase in trips and revenue hours. These additional routes restored a transit connection to smaller cities in C-TRAN's service area. In early 2007, the

Battle Ground Connector was replaced with Route #7 Battle Ground due to ridership demand. The Yacolt Connector has been replaced by an extension of Route #47.

Table 3-5: C-TRAN Connector Service

C-TRAN CONNECTOR SERVICE (Dial-A-Ride/Deviated Fixed Route)		
Year	**Connector Trips**	**Revenue Hours Per Year**
2003	10,381	2,592
2004	21,436	4,845
2005	16,214	4,343
2006	82,031	13,442

Figure 3-2 (map) shows the areas where the Connectors operate.

C-TRAN's facilities include transit centers and park and ride lots described in Tables 3-6 and 3-7 below. C-TRAN park and ride facilities provide more than 2,200 parking spaces at eight locations. Some are operated under a site use agreement. C-TRAN uses security measures to make the transit system safer for its users. These security measures include provision of mobile security patrols at the 99th Street, Fisher's Landing, Vancouver Mall, and Salmon Creek facilities. The City of Vancouver's Police Department maintains a close working relationship with C-TRAN and responds, as needed, to ensure a safe and secure environment for transit passengers. C-TRAN buses are equipped with emergency alarms, automated vehicle locators, and two-way radios. Additionally, C-TRAN's entire fixed route fleet and part of its paratransit fleet are equipped with digital video cameras. Passenger service facilities are located at the 7th Street in downtown Vancouver as well as at the Fisher's Landing and Vancouver Mall Transit Centers. Passenger shelters, benches, and waiting facilities are provided at most park and ride lots.

C-TRAN has installed and maintains approximately 217 passenger shelters and benches throughout the fixed route system within Clark County. C-TRAN has also installed solar-powered shelter flashers and transit stops, which provide passenger activated illumination for safety and to more easily read schedule information, at bus stops along key transit corridors.

All C-TRAN buses are equipped with bicycle racks that hold two bicycles. C-TRAN provides instruction and assistance to bicyclists who plan to use transit for part of their trip. Bicycle locker facilities are provided at many of C-TRAN's transit centers and park and ride lots.

Table 3-6: C-TRAN Transit Centers

Transit Center	Passenger Services	Security	Public Rest Room	Bicycle Locker/ Rack	Operator Lounge	Admin Offices
Fisher's Landing	Yes	Yes	Yes	Yes	Yes	Yes
99th Street	Yes	Yes	Yes	Yes	Yes	No
Vancouver Mall	Yes	Yes	No	Yes	Yes	Yes

Table 3-7: C-TRAN Park & Ride Facilities

Park & Ride	Lot Capacity	Passenger Shelters	Public Rest Rooms	Bicycle Locker/ Rack
Battle Ground	28	Yes	No	Yes
BPA Ross Complex	200+	Yes	No	No
Camas/Washougal	20	No	No	No
Evergreen	271	Yes	No	Yes
Fisher's Landing Transit Center[2]	563	Yes	Yes	Yes
KMART Shopping Center	30[3]	No	No	No
Salmon Creek	495	Yes	No	Yes
99th Street	610	Yes	Yes	Yes

Table 3-8 summarizes the bicycle facilities C-TRAN provides at transit centers, park and ride facilities, and the agency's administrative offices.

[2] Fisher's Landing Transit Center also has a Park & Ride facility.

[3] Approximate – the use agreement does not specify a number of parking spaces.

Table 3-8: CTRAN Bicycle Facilities

Location	Bike Locker[4]	Bike Bank	Bike Rack
7th Street	5	9	N/A
Vancouver Mall	6	6	N/A
Salmon Creek	6	4	1
99th Street	4	N/A	N/A
BPA Ross Complex	N/A	2	N/A
Evergreen	4	8	1
Camas (Burgerville)	2	N/A	N/A
Administrative Offices	2	N/A	1
Annex	2	N/A	1
Fisher's Landing	6	N/A	2

INTER-CITY BUS service from Vancouver to cities throughout the northwest and nation-wide is provided by Greyhound Bus Lines.

Clark County has three **PORT DISTRICTS**; the Port of Vancouver, the Port of Camas-Washougal and the Port of Ridgefield.

The **Port of Vancouver USA** is situated at the terminus of the Columbia River's deep draft channel and forms a natural gateway to the river-barge ports of eastern Oregon/Washington and northern Idaho. The Port operates international cargo docks and currently offers 13 deep draft vessel berths. The Port is served by numerous river and ocean-going barge lines. In 2006, 526 ships made Port calls. In 2007, vessel calls are expected to reach 580 and the Port is on pace to handle more than 5.5 million tons of cargo which represents a 46% jump since 2005. The Port handles a wide range of cargoes including general breakbulk, project and direct transfer cargoes, containers, automobiles, forest products, meal products, and dry bulk commodities such as bauxite, ores, sands, and grains. The Port has dockside warehousing for general cargo and bulk storage warehouses. The Port of Vancouver supports the implementation of the Columbia River Channel Improvement Project. Deepening of the Columbia River channel from the existing 40-foot navigation channel to 43 feet will facilitate the deep-draft transportation of goods for years into the future and will help to keep the region competitive.

The Port is located within 2 miles of I-5 and is served by Burlington Northern Santa Fe and Union Pacific Railroad, Canadian National and Canadian Pacific Railroads. The Port of Vancouver has 600 acres of developed industrial and marine property. The Port has over 1,000

[4] Each bike locker has a capacity for two bicycles.

additional acres of land, including an additional 1.5 miles of waterfront access, proposed for future development. Work began in 2004 on the National Environmental Policy Act (NEPA) process for this additional land's development as part of the Port's Economic Development & Conservation Plan. The Port's future development includes the Columbia Gateway area. The Port focused attention on rail access improvement with a Simulation and Access Study. Additional information on the Port of Vancouver USA can be found at the website at http://www.portvanusa.com/. Rail access improvement is identified as an MTP project in the MTP Appendix A list of projects.

The **Port of Ridgefield** is located about 15 miles north of Vancouver USA. The Port's taxing district extends over 57 square miles and the district is bisected by the I-5 corridor. Port-owned assets include the 75-acre Ridgefield Industrial Park located at the southwest quadrant of I-5 and Pioneer Street which is home to eleven businesses with some 750 jobs. The 75-acre Discovery Pointe Corporate Park is located at the northeast quadrant of I-5 and Pioneer Street. The Port also has a 41-acre industrial site on Lake River, 3 miles from I-5. http://www.portridgefield.org/

The **Port of Camas/Washougal**'s taxing district extends over 95 square miles of land with an industrial park, marina, airport, a park and wildlife refuge. The 430-acre industrial park, located south of SR-14 by Index and 27th to 32nd Streets, has a wide range of industries that provide jobs for over 1,000 employees. The Port has approximately 200 acres of prime property available for development. The marina has moorage to accommodate 356 and a boat launch. The Port district also operates Grove Field Airport (described in a later section). http://www.portcw.com/

There are two mainline **RAIL LINES**, both owned by Burlington Northern Santa Fe (BNSF), that run through Clark County. The mainlines carry both freight and passengers. In addition, the Lewis and Clark Railroad is a 33-mile short line railroad owned by Clark County.

The BNSF Seattle/Vancouver line is in excellent condition and has 70 to 80 trains operating in the corridor each day. The BNSF Vancouver/Eastern Washington line is also in excellent condition and handles about 40 trains daily. Union Pacific Railroad operates some freight trains to Tacoma and Seattle on BNSF's lines.

AMTRAK has an agreement with BNSF to operate passenger service on the freight carrier's rail lines. AMTRAK trains serve Vancouver daily. During the 1990's Washington and Oregon began to invest transportation funds to improve local AMTRAK service. In 1993, Amtrak offered a single local daily round-trip connecting Eugene and Seattle with ridership totaling 94,061 trips. By 2006, service had grown to four daily Amtrak Cascades roundtrips operating between Seattle and Portland, with two extending to Eugene. Between 1993 and 2006, ridership increased by 570% from 94,061 annual riders in 1993 to 629,996 riders in 2006. Total passengers boarding and de-boarding at the Vancouver Amtrak station continues to increase with close to 60,000 total passengers in 2006.

The *Coast Starlight*, with service between Seattle and Los Angeles, via Vancouver and Portland, also provides once a day, daily service. The *Empire Builder* also provides one train a day, on a daily basis, between Chicago and Spokane then one part of the train continues to Seattle and the

other part continues, via Pasco and Bingen-White Salmon, to Vancouver with service terminating in Portland.

The Pacific Northwest Rail Corridor is one of only five designated high-speed corridors in the nation that pre-qualifies the region for federal high-speed rail funding. In late 1995, the Washington State Department of Transportation (WSDOT) and project partners published *Options for Passenger Rail in the Pacific Northwest Rail Corridor* report. An Environmental Impact Statement on corridor improvements was completed and construction on some rail system improvements began in 1998. Custom-built Talgo trains are now in service on Amtrak's Pacific Northwest Rail Corridor service. The Vancouver Amtrak station facility is being upgraded as part of the Eugene to Vancouver B.C. passenger rail service improvements. There is also a funded project to improve rail in the vicinity of the Vancouver Yard. The project will add new rail bypass track and provide a grade-separated crossing of the rail lines for vehicles using west 39th Street in Vancouver. The intent of the Vancouver Rail Project is to increase safety, reduce rail congestion, and improve on-time performance of Amtrak's passenger rail service.

The Chelatchie Prairie Railroad is a 33-mile short line railroad owned by Clark County. The line diverges from the main BNSF northern line around NW 78th Street and traverses the County via Rye Yard off St John's Road and Battle Ground to its terminus at Chelatchie Prairie. This short line railroad is also known as the Lewis and Clark Railroad or the Clark County Railroad. The operating and maintenance responsibilities for the line are leased out under long-term operating contracts to two different railroad operators. On the line segment from Heisson to the south, the Portland Vancouver Junction Railroad (PVJR) is responsible for freight operations. At present, this line segment serves the only active freight shippers on the railroad's main freight corridor. On the line north of Heisson, the Battle Ground, Yacolt, and Chelatchie Prairie Railroad Association (BYCX), a volunteer group, is operating a passenger excursion program originating in Yacolt. On the lower 14 miles from Rye Junction to Battle Ground, it is anticipated that considerable freight growth will continue through the freight operator to help support the economic development vision for Clark County. The upper 19 miles is anticipated for some possible freight operations and tourism. In 2007, the County was awarded $1.1 million from the WSDOT Rail Emergent Fund for rehabilitation to the lower 14 miles of track. This is one of many such state and federal grants anticipated to enable the County to upgrade the track to Class 1 status for safer operation and increased freight on both the upper and lower lines. A new trans-load facility has been created between 78th and 88th Streets. Under the recently adopted Comprehensive Growth Plan, the County has designated an area for railroad industrial. This will enable the development of industry and growth in shippers who will use the line.

Commuter Rail has been considered as an option for travel within the region. The Commuter Rail Feasibility Study (RTC, 1999) considered commuter rail options and reported on future capacity of the rail corridors in the region. Commuter rail was also considered as part of the I-5 Partnership study in 2001/2.

For **AIR TRANSPORTATION**, Clark County largely relies on the Portland International Airport (PIA) located in Portland, Oregon to the southwest of the I-205 Glenn Jackson Bridge. This is a regional airport with domestic and international passenger and freight service. Passenger airlines

currently serving PIA include Air Canada Jazz, Alaska Airlines, American Airlines, Big Sky Airlines, Continental, Delta, Frontier, Hawaiian, Horizon, Jet Blue, Lufthansa, Mexicana, Northwest Airlines, Southwest Airlines, United, and United Express and US Airways. There are nonstop international flights to Vancouver, Canada; Frankfurt, Germany; Guadalajara, Mexico City and Puerto Vallarta, Mexico; and Tokyo, Japan. Service to Amsterdam in The Netherlands is scheduled to begin in March 2008. In addition, air freight carriers that serve Portland currently include Air Transport International, Kalitta Air, United Parcel Service, ABX, Air Cargo Carriers, Air China, Airpac, Ameriflight, Empire, Express Net Airlines, FedEx, Kitty Hawk, MartinAire Partners, West Air Inc and Western. PIA saw rapid growth in passenger numbers and freight in the 1990's and now consistently serves over 1 million passengers per month. In 1998, passenger numbers surpassed 13 million for the first time. In 2006, Portland International Airport passengers totaled 14 million. The airport handles about 23,000 short tons of air freight per month. The airport is served by Tri-Met's MAX light rail which connects the airport to downtown Portland. C-TRAN buses connect to the Airport's MAX light rail line at the Parkrose Station as well as to the Interstate MAX light rail line at the Delta Park/Vanport Station.

Washington State's aviation system is served by a diverse mixture of airports in a range of sized. The system is comprised of public use airports, both publicly and privately owned, and meet a range of transportation needs for commercial, business, personal, recreation, training and medical emergencies. WSDOT's Aviation Division conducts long-term planning to face the challenge of maintaining and improving the aviation system for the future. WSDOT completed an aviation system plan in 2003 that included an assessment of airport conditions with a comprehensive data inventory. WSDOT Aviation is currently working on an update to the state aviation system plan, the "Long-term Air Transportation Study (LATS)".

Within Clark County, general aviation airfields include Pearson Field and Grove Field. **Pearson Field**, located 2 miles south west of Downtown Vancouver off SR-14, is operated by the City of Vancouver and covers 134 acres owned by the U.S. Park Service. The Airpark has one paved runway (3,200 feet by 60 feet) and can accommodate over 170 aircraft. The Airpark is on the Washington State Historical Register. Pearson is designated as a part of the regional transportation system. **Grove Field** is a Basic Utility Stage I Airport operated by the Port of Camas/Washougal. Located in the Fern Prairie area 5 miles north of Camas, Grove Airfield is one of only two publicly owned airfields in the county. Grove Field has a 2,832 foot paved runway illuminated by a low intensity lighting system and also a PAPI system, an above-ground self-fueling station and hangar space for over 60 aircraft.

In addition, there are a number of private airfields located in Clark County that include those described below. Taylor's Green Mountain Airpark is a 23-acre facility, located 9 miles east of downtown Vancouver with one paved runway, six hangars and ten-tie downs. Eight aircraft are based at the Airpark. Goheen Airport, located three miles northwest of Battle Ground, is privately owned. It has one turf runway and provides a base for about 18 planes. 45 acres of Goheen's 60 acre area are zoned for airport use.

The Washington State Department of Transportation's Aeronautics Division and the local pilots' association proposed that an additional airport should be sited in Clark County because of the

vulnerability of existing airfields in the County due to ownership issues and development pressures. Efforts in the 1980's to site such a facility were thwarted when neighborhood residents opposed a proposed airport location in the vicinity of the I-5/Ridgefield Junction. Federal and state agencies and local jurisdictions have to work together to site such facilities and local jurisdictions must ensure that the land uses surrounding the facility are compatible with aircraft operations and remain that way.

REGIONAL TRANSPORTATION SYSTEM PERFORMANCE

GROWTH IN TRAFFIC VOLUMES

As a result of socio-economic and demographic changes described in Chapter 2 Clark County has seen significant growth in traffic volumes in recent years. The MPO compiles traffic count data from local jurisdictions and publishes the compiled data on RTC's website (see below). Traffic count data is factored to adjust for seasonal, monthly, weekly and daily fluctuations in volumes. Examples of growth in traffic volumes at selected Clark County locations are listed in Table 3-9 below.

Permanent traffic recorders are in place on the I-5 and on the I-205 bridges. RTC compiles the traffic counts provided by Oregon Department of Transportation from these recorders or estimates provided by ODOT. In March 1995 RTC published the *Columbia River Bridge Traffic, 1961 - 1994* report. This data is now updated annually and is available on RTC's web site (http://www.rtc.wa.gov/traffic/arterials.asp). Figure 3-3 shows the average weekday traffic volumes crossing the Columbia river bridges, 1980 to 2006. In 2006 the estimated average weekday traffic (AWDT) on the I-5 Interstate Bridge was 131,916 and on the I-205 Glenn Jackson Bridge was 146,127. In 2006, the average northbound weekday evening peak hour crossings of the I-5 Interstate Bridge were 5,120 and 7,506 on the I-205 Glenn Jackson Bridge. In the southbound direction, average weekday morning peak hour crossings were 5,474 on the I-5 Interstate Bridge and were 7,779 on the I-205 Glenn Jackson Bridge.

Table 3-9: Traffic Volumes; 1985 to Current Years

Location	1985 Volumes	Current Volumes	Year of Current Volumes	% Increase	Annual % Increase
I-5 Bridge	92,301	135,835	2006	47%	2.2%
I-5, South of SR-500	54,400	127,528	2006	134%	6.4%
I-5, South of NE 78th St	52,784	99,250	2007	88%	4.0%
I-5, South of Woodland	33,748	66,034	2006	96%	4.6%
Hwy 99, south of NE 99th St	19,653	17,360	2006	-12%	-0.6%
I-205 Bridge	52,568	151,858	2006	189%	9.0%
I-205, south of SR-500	40,440	118,855	2007	194%	8.8%
164th Ave, south of SE 34th St	7,052	40,675	2006	477%	22.7%
192nd Ave, south of SE 34th St	Not Open	13,200	2006	N/A	N/A

Location	1985 Volumes	Current Volumes	Year of Current Volumes	% Increase	Annual % Increase
SR-14, west of SE 164th Ave	22,600	80,771	2007	257%	11.7%
SR-14, west of NW 6th Ave	17,600	40,787	2007	132%	6.0%
Mill Plain, east of NE Andresen	21,021	26,604	2004	27%	1.4%
Mill Plain, east of NE Chkalov	18,220	40,679	2006	123%	5.9%
NE 18th Street, east of 138th Ave	7,557	14,185	2002	88%	5.2%
Fourth Plain, west of NE Andresen	16,060	21,743	2006	35%	1.7%
Fourth Plain, west of 137th Ave	14,671	29,570	2005	102%	5.1%
SR-500, west of NE Andresen	20,054	53,608	2006	167%	8.0%
Padden Parkway, west of NE 94th Ave	3,952	27,678	2007	600%	27.3%
78th St, west of Hwy 99	23,646	33,067	2006	40%	1.9%
139th St, west of NE 10th Ave	11,218	18,950	2006	69%	3.3%
SR-503, south of NE 76th St	17,460	36,858	2006	111%	5.3%
SR-503, south of SR-502	7,360	22,506	2005	206%	10.3%

The highest daily traffic ever recorded on the I-5 Interstate Bridge was on Friday July 2, 2004 when 157,301 bridge crossings were made. The highest evening peak hour traffic ever recorded on the I-5 Bridge was on Tuesday May 28, 1996 when 10,838 bridge crossing were made. For the northbound direction, the highest evening peak hour traffic was recorded on Thursday June 11, 1998 when 5,987 bridge crossings were made. For the southbound direction, the highest morning peak hour traffic was recorded on Wednesday March 31, 2004 when 6,119 bridge crossings were made.

The I-205 Glenn Jackson Bridge's highest daily crossings ever recorded was on Friday June 30, 2006 with 168,503 crossings. The highest evening peak hour traffic recorded on the I-205 Glenn Jackson Bridge was on Friday August 3, 2006 when 13,284 bridge crossings were made. The highest northbound evening peak hour traffic recorded on the Bridge is the 8,426 crossings made on Friday May 24, 1996. For the southbound direction, the highest morning peak hour traffic was recorded on Tuesday October 7, 2003 when 8,247 bridge crossings were made. The highest all-day total river crossings were recorded on Friday, July 2, 2004 when 325,095 trips crossed the Columbia river on the I-5 Interstate and I-205 Glenn Jackson bridges.

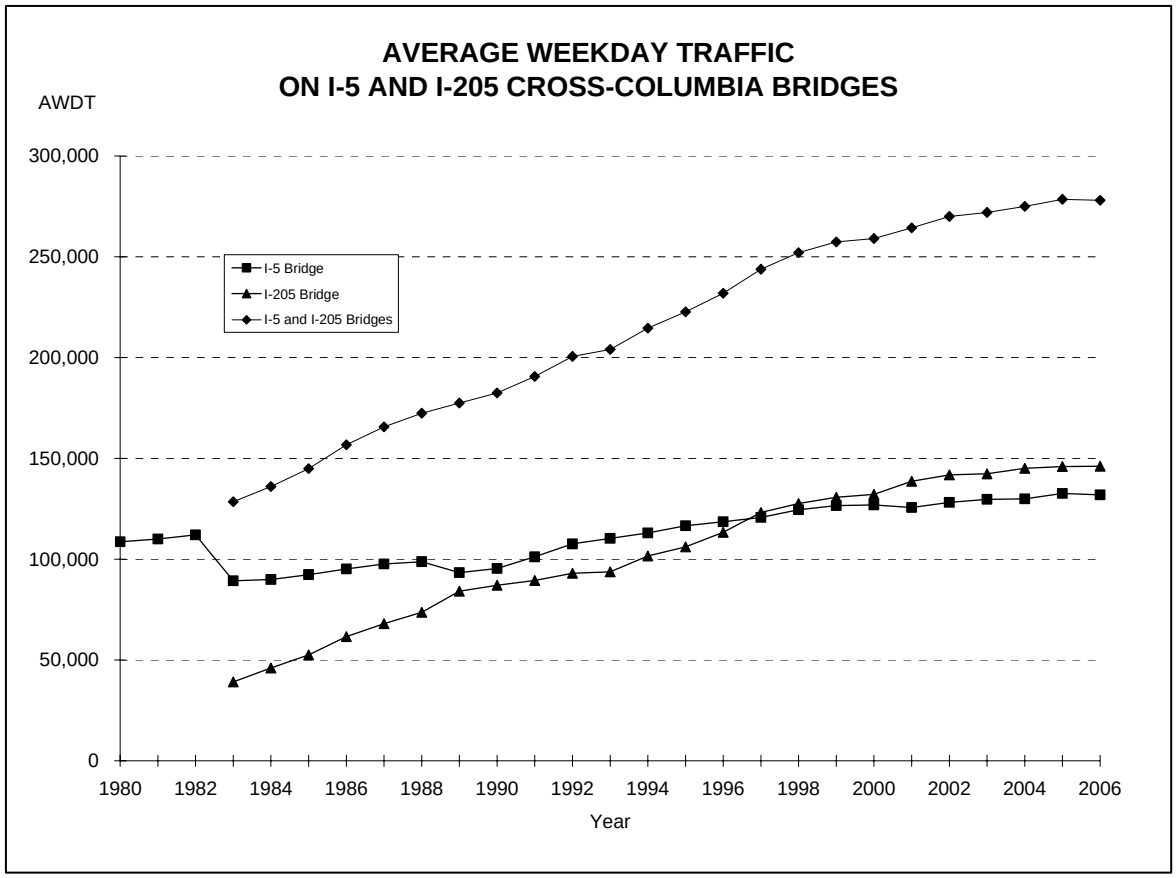


Figure 3-3: I-5, I-205 Average Weekday Bridge Crossings

Regional transportation system intersections with the highest traffic volumes, measured in terms of number of vehicles entering intersection, are listed in Table 3-10.

Table 3-10: Highest Volume Intersections in Clark County, 2006

CLARK COUNTY HIGHEST VOLUME INTERSECTIONS - 2006				
Rank	**East-West**	**North/South**	**Approx. Volume**	**Count Year**
1	State Route 500/Fourth Plain	State Route 503	75,000	2005
2	Mill Plain Blvd.	Chkalov Drive	75,000	2006
3	State Route 500	St. John's Road	67,000	2004
4	State Route 500	NE 54th Avenue	59,000	2003
5	State Route 500	NE 42nd Avenue	58,000	2003
6	Mill Plain Blvd.	136th Avenue	56,000	2006
7	Fourth Plain Blvd.	Andresen Road	54,000	2006
8	Padden Parkway	State Route 503	54,000	2003
9	NE 78th Street	Highway 99	51,000	2006
10	NE 134th Street	20th Avenue/Highway 99	51,000	2006
11	Padden Parkway	Andresen Road	49,000	2004
12	NE 76th Street	State Route 503	47,000	2006
13	SE 34th Street	SE 164th Avenue	46,000	2006
14	Mill Plain Blvd.	123rd / 124th Avenue	46,000	2004
15	State Route 502	State Route 503	46,000	2005
16	Padden Parkway	94th Avenue	45,000	2004
17	Fourth Plain Blvd. (SR-500)	NE 121st Avenue	43,000	2000

Notes: Volumes are based on the total number of vehicles entering an intersection on an average weekday, and are approximate due to the variability from year to year.
Freeway ramp intersections with streets were not considered for this listing
Source: RTC's Regional Traffic Count Program.

REGIONAL TRAVEL FORECASTING MODEL: FORECASTING FUTURE TRAVEL DEMAND AND TRANSPORTATION NEEDS

The Regional Travel Forecasting Model for the Clark County region was used to forecast future traffic volumes on the regional transportation system. The regional travel forecast model uses demographic data as a basis for travel forecasts with the basis for the 2030 travel demand forecast model being the underlying forecast 2030 land uses. The travel model process involves trip generation, trip distribution, mode split and trip assignment to the regional transportation system. EMME/2 software is used to assign trips to the regional transportation system as part of the Clark County region's travel forecast model process.

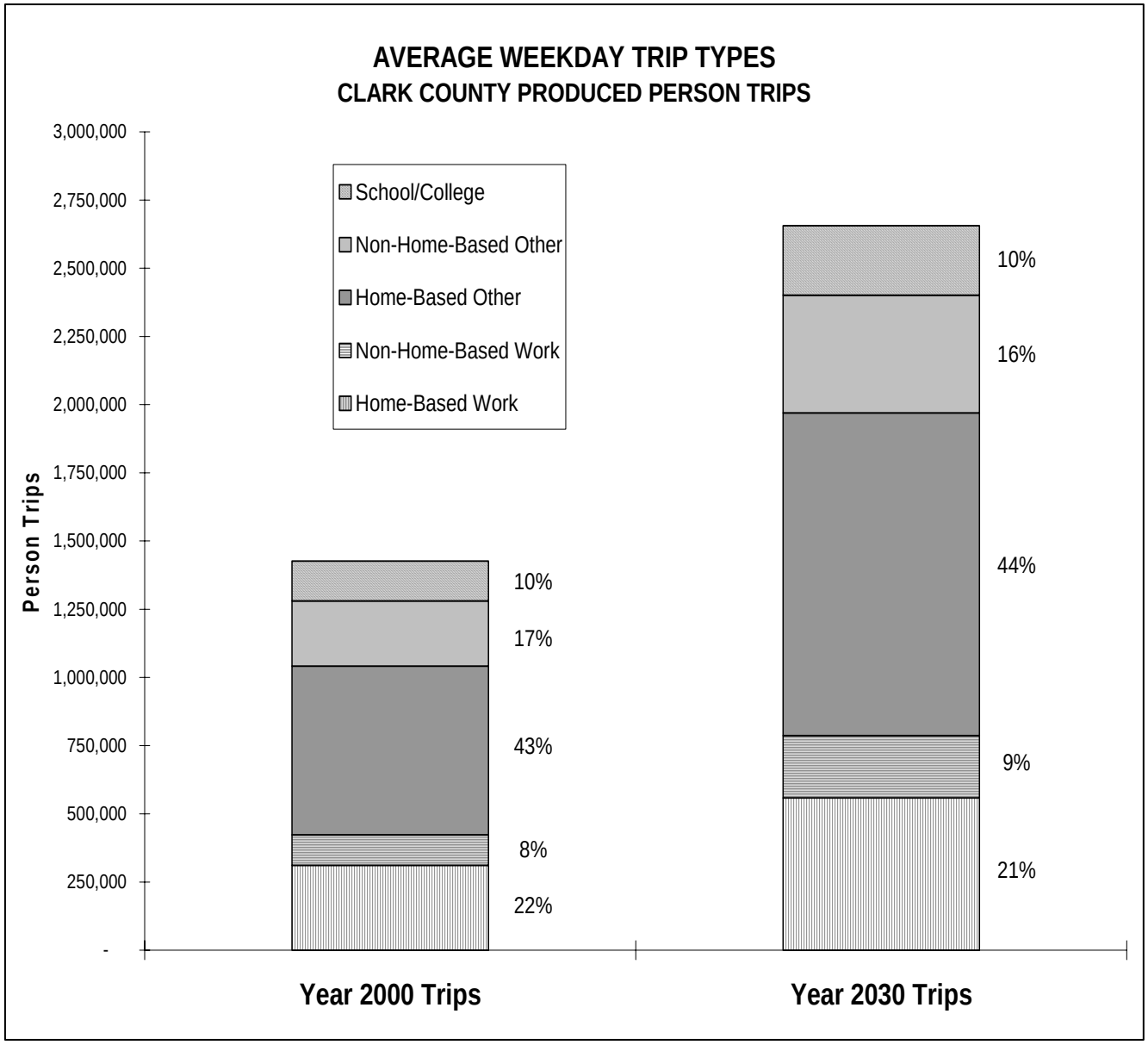
In the modeling process, a base year of 2000 was used and a forecast to the year 2030 was made. As described in Chapter 2, the MTP update must be based on adopted land use plans of local jurisdictions. 2030 land uses are based on the adopted Comprehensive Growth Management Plan for Clark County (Clark County, September 2007) which has a horizon year of 2024, extended six years to the MTP's 2030 horizon. Prior to adoption of the Comprehensive Growth

Management Plans, alternative land use scenarios, and their effect on regional transportation needs, are tested and measured as part of the Growth Management planning process. The 2030 land use allocation to 650 Clark County Transportation Analysis Zones (TAZ's) was developed by local jurisdictions and RTC's partner agencies using their adopted comprehensive land use plans, as well as current zoning, as the basis for forecasting the future location of population, housing and employment within Clark County. Household and employment data allocated to the TAZs are the input to the regional travel forecast model. After trip generation, trip distribution, mode split and trip assignment onto the assumed regional transportation network, output from the regional travel forecast model is used as a tool to identify specific transportation system needs and future transportation solutions.

Trips can be classified according to place of trip production and purpose of trip. The regional travel forecasting model for Clark County categorizes trips into six groups, they are Home-Based Work, Non-Home-Based Work, Home-Based Other, Non-Home-Based Other, School and College trips. Figure 3-4 show the proportion of trips in each of these categories for average weekday Clark County-produced person trips. In Figure 3-5 4 College and School trips have been aggregated.

Figure 3-4 shows that in the 2000 base year the largest proportion of trips during a 24-hour period are Home-Based-Other trips (43%). This category can include trips from home to the grocery store, home to childcare, home to leisure activities etc. The second highest category is Home-Based Work trips (22%). Non Home-Based-Other trips make up 17% of the trips. This category can include such trips as shopping mall to restaurant trips. The home-based categories include trips originating at home and going to a destination as well as the return trip to home. School and college trips make up 10% of trips made on a daily basis and Non-Home-Based Work trips, such as delivery trips, made up 8% of daily trips. The proportions for the year 2030 are 44% Home-Based-Other trips, 21% Home-Based-Work trips, 16% Non-Home Based Other trip, 10% school/college trips and 9% Non-Home-Based Work trips. From 2000 to 2030 there is forecast to be a 86% increase in all-day person trips from around 1,427,000 trips per day in 2000 to over 2.65 million in 2030.

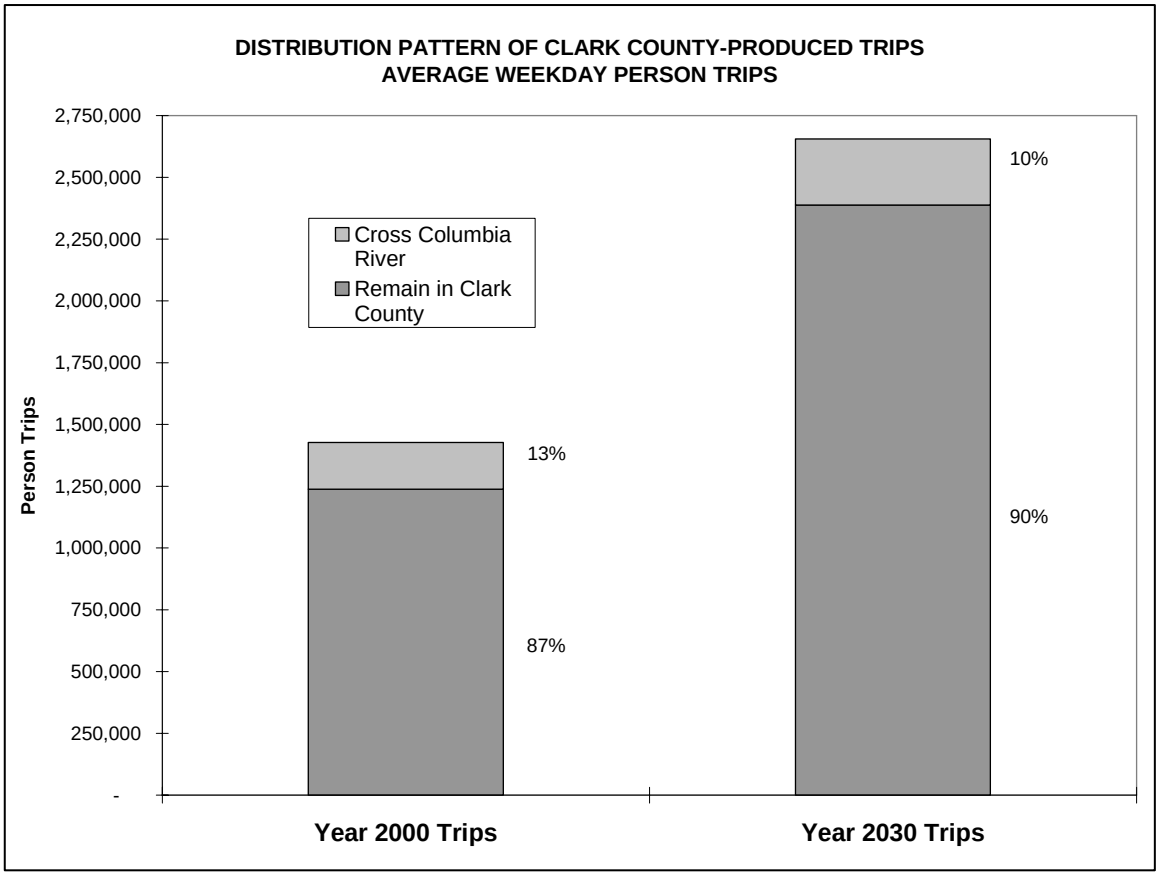
Figure 3-4: Average Weekday Trip Types, Clark County Produced Person Trips



Source: RTC Regional Travel Forecast Model

Trips can also be categorized according to where the trips begin and end. Figure 3-5 shows the proportions of trips that use the Clark County highway system; trips that remain in Clark County (87% of trips in 2000 , 90% in 2030) and trips that cross the Columbia River (13% in 2000, 10% in 2030).

Figure 3-5: Distribution Patterns of Clark County Produced Person Trips, Average Weekday



Source: RTC Regional Travel Forecast Model

Needs analysis was then carried out to determine what impact this forecast growth in travel demand might have on the transportation system. In carrying out analysis of existing and future transportation needs the regional travel forecasting model was used to run three scenarios:

Base-Year 2000 traffic volumes on 2000 highway network

Committed System (Year 2030) Forecast 2030 traffic volumes on "committed" highway network.

The "committed" network has improvement projects for which funds are already committed in the Metropolitan Transportation Improvement Program (MTIP).

MTP (Year 2030) Forecast 2030 traffic volumes on 2030 highway network with *MTP* improvements listed in Appendix A.

MTP improvements are projects for which funds are already programmed and committed in the *2008-2011 Metropolitan Transportation Improvement Program* together with projects for which there is an identified regional need, strong regional commitment, and a reasonable expectation that funds will be available within the twenty-year horizon to construct them.

Tables 3-11, 3-12, 3-13 and 3-14 present system-wide benchmark results from testing the scenarios described above. Each table presents data by functional classification.

Table 3-11: P.M. Peak Hour Speed

AVERAGE PEAK HOUR SPEED ON CLARK COUNTY HIGHWAYS (Results from Regional Travel Forecasting Model, using EMME/2 software)			
	Speed in Miles per Hour		
Facility Type/Region	**Base-Year 2000**	**Committed System (2030 demand on Committed System)**	**2030 MTP**
Interstates (excluding Ramps)	48	32	37
Interstates (including Ramps)	45	32	36
Expressways & Principals	36	33	37
Minor Arterials	31	28	30
Major & Minor Collectors	34	30	33
Other Roads	27	28	28
Total Clark County System	37	31	35

Table 3-12: Peak Hour Vehicle Miles Traveled

VEHICLE MILES TRAVELED ON CLARK COUNTY HIGHWAYS IN P.M. PEAK HOUR (Results from Regional Travel Forecasting Model, using EMME/2 software)			
	Miles of Travel		
Facility Type/Region	**Base-Year 2000**	**Committed System (2030 demand on Committed System)**	**2030 MTP**
Interstates (excluding Ramps)	191,750	298,524	307,538
Interstates (including Ramps)	214,065	331,476	348,076
Expressways & Principals	195,661	297,192	305,927
Minor Arterials	85,773	163,289	150,344
Major & Minor Collectors	106,360	276,478	256,224
Other Roads	12,918	27,497	19,629
Total Clark County System	614,777	1,095,933	1,080,200

Source: Tables 3-11 through 3-14: RTC Regional Travel Forecast Model

Table 3-13: Peak Hour Lane Miles of Congestion

LANE MILES OF CONGESTION IN P.M. PEAK HOUR (Results from Regional Travel Forecasting Model, using EMME/2 software)			
	Lane Miles of Congestion		
Facility Type/Region	**Base-Year 2000**	**Committed System** (2030 demand on Committed System)	**2030 MTP**
Interstates (excluding Ramps)	7	44	23
Interstates (including Ramps)	11	53	30
Expressways & Principals	21	93	35
Minor Arterials	9	37	24
Major & Minor Collectors	4	83	31
Other Roads	1	7	2
Total Clark County System	45	272	122

Table 3-13 (above) presents data on congestion on the Clark County highway system. This measure represents the number of lane miles that operate under congested conditions (at volume to capacity ratio of 0.9 or above; equivalent to level of service E or F) during the full p.m. peak hour. The table's data indicates the relative growth in congestion forecast to occur in the future as travel demand increases.

Table 3-14: Peak Hour Vehicle Hours of Delay

P.M. PEAK HOUR VEHICLE HOURS OF DELAY - CLARK COUNTY HIGHWAYS (Results from Regional Travel Forecasting Model, using EMME/2 software)			
	Hours of Vehicle Delay		
Facility Type/Region	**Base-Year 2000**	**Committed System** (2030 demand on Committed System)	**2030 MTP**
Interstates (excluding Ramps)	484	3,558	2,493
Interstates (including Ramps)	559	3,746	2,618
Expressways & Principals	289	1,245	453
Minor Arterials	110	514	249
Major & Minor Collectors	47	1,308	326
Other Roads	30	74	42
Total Clark County System	1,035	6,886	3,688

Table 3-14 presents vehicle hours of delay. Using the time taken to travel a highway segment at level of service C as a base condition, any road segment operating at LOS D, E or F is measured against the level of service C base condition. The time difference is calculated, aggregated for the entire highway system. The result is Vehicle Hours of Delay. The data is of use in analyzing the relative increase in delay forecast to occur with growth in travel demand in the future.

The preceding system-wide data represents measures of assessing highway system performance, but perhaps more meaningful is an analysis of performance and needs within corridors or on individual system links and at intersecting points. A planning level of analysis, using capacity analysis and level of service standards criteria, was carried out resulting in a first-cut analysis of existing and forecast future deficiencies of the regional transportation system.

LEVELS OF SERVICE

Level of service standards represent the minimum performance level desired for transportation facilities and services within the region. They are used as a gauge for evaluating the quality of service of the transportation system and can be described by travel times, travel speed, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The Washington State Growth Management Act states that these standards should be established locally and standards should be regionally coordinated. The standards are used to identify deficient facilities and services in the transportation plan, and are also to be used by local governments to judge whether transportation funding is adequate to support proposed land use developments.

Levels of service are defined as "qualitative measures describing operational conditions within a traffic stream and their perception by motorists and/or passengers". A level of service definition generally describes these conditions in terms of such factors as speed and travel time, volume conditions, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. These levels of service are designated A through F, from best to worst. Level of service E describes conditions approaching and at capacity (that is, critical density).

For uninterrupted flow conditions (such as freeways and long sections of roadways between stop signs or signalized intersections), the following definitions[5] apply:

- Level of Service A describes free flow conditions, with low volumes and high speeds. Freedom to select desired speeds and to maneuver with the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

- Level of Service B is in the range of stable flow but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver with the traffic stream from LOS A.

- Level of Service C is still in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and

[5]..From *Highway Capacity Manual*, Transportation Research Board, 1985

maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

- Level of Service D represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

- Level of Service E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

- Level of Service F describes forced or breakdown flow. These conditions usually result from queues of vehicles backing up from a restriction downstream. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. It marks the point where arrival flow exceeds discharge flow.

These definitions are general and conceptual in nature, and they apply primarily to uninterrupted flow. Levels of service for interrupted flow facilities vary widely in terms of both the user's perception of service quality and the operational variables used to describe them.

Table 3-15 below quantifies Level of Service as defined by the Highway Capacity Manual: Special Report 209, Third Edition (Transportation Research Board, 1998). The average travel speeds are shown with their corresponding level of service designation.

Table 3-15: Level of Service Definitions (HCM)

Level of Service Definitions (Highway Capacity Manual)						
LOS Class	**A**	**B**	**C**	**D**	**E**	**F**
Type I Urban Arterials Roadway Segment: Average Travel Speed (mph)	≥ 42	≥ 34	≥ 27	≥ 21	≥ 16	< 16
Type II Urban Arterials Roadway Segment: Average Travel Speed (mph)	≥ 35	≥ 28	≥ 22	≥ 17	≥ 13	< 13
Signalized Intersections Control Delay per Vehicle (seconds)	≤ 10	>10 & ≤ 20	>20 & ≤ 35	>35 & ≤ 55	>55 & ≤ 80	> 80
Unsignalized Intersections Delay per Vehicle (seconds)	≤ 10	>10 & ≤ 15	>15 & ≤ 25	>25 & ≤ 35	>35 & ≤ 50	> 50

LEVEL OF SERVICE STANDARDS ON HIGHWAYS OF STATEWIDE SIGNIFICANCE AND HIGHWAYS OF REGIONAL SIGNIFICANCE

Congestion and Levels of Service continue to be issues of significance for Clark County as the region continues to experience rapid growth. In 1998 the Washington State Legislature passed House Bill 1487, otherwise known as the Level of Service (LOS) Bill. The Bill set new requirements relating to transportation and growth management planning. The LOS Bill aimed at clarifying how state-owned transportation facilities should be planned for and included in city and county comprehensive plans required under the Growth Management Act. The intent of the legislation was to enhance the coordination of planning efforts and plan consistency at the local, regional and state levels. The LOS Bill amended several laws including the Growth Management Act (RCW 36.70A), Priority Programming for Highways (RCW 47.05), Statewide Transportation Planning (RCW 47.06) and Regional Transportation Planning Organizations (RCW 47.80). The combined amendments to these RCWs were provided to enhance the identification of, and coordinate planning for major transportation facilities identified as "transportation facilities and services of statewide significance". The key requirements to the bill are listed below

- Designation of Highways of Statewide Significance (HSS) completed in 1999 and most recently updated in 2004. The State must give higher priority to correcting identified deficiencies on transportation facilities of statewide significance. In the Clark County region the HSS system is I-5, I-205, SR-14 and SR-501 between I-5 and the Port of Vancouver.
- State-owned facilities, including Highways of Statewide Significance, to be included in local plans.
- Level of Service for Highways of Statewide Significance is set by the State in consultation with other jurisdictions.
- Level of Service for regional state highway facilities (not part of the HSS) to be set through a Regional Transportation Planning Organization (RTPO) coordinated process with state, regional and local input.
- Highways of Statewide Significance (HSS) are statutorily exempt from local concurrency requirements.
- The LOS Bill does not address concurrency requirements for regional state highway facilities.

For the HSS system the Bill requires that the transportation element of the comprehensive plan address the land use impact on the state highway facilities. The State, in consultation, will set the LOS for the HSS system and they are exempt from local concurrency analysis. In Clark County, WSDOT has established a LOS ‘C’ for rural HSS facilities and ‘D’ for urban HSS facilities.

Non-HSS state highways, otherwise known as Highways of Regional Significance, in Clark County include SR-500, non-HSS segments of SR-501, SR-502, and SR-503 must also be addressed in the comprehensive plan, and have LOS set in coordination with the RTPO. The law is silent in terms of including or exempting them from local concurrency rules. In December

2001, the RTC Board adopted LOS 'E' or better for non-HSS urban state highway facilities and LOS 'C' or better on rural non-HSS facilities.

Urban areas and urban facilities are defined by the GMA urban growth boundaries. Rural areas and rural facilities are outside of the GMA urban growth boundaries. Although local agencies may establish their own methodology for analyzing LOS, these LOS standards must be consistent with the Highway Capacity Manual LOS criteria.

Local agencies should incorporate the LOS standards established for both the Highways of Statewide Significance and regional state highway facilities (or non-HSS) into the transportation elements of their Comprehensive Growth Management Plans. Once local Growth Management Plans are updated, RTC must certify that the local transportation elements are consistent with the Metropolitan Transportation Plan, include LOS standards for the HSS and non-HSS segments and describe the impacts of land uses on the state highway system.

CLARK COUNTY/VANCOUVER LOS STANDARDS

Capacity analysis is an estimate of the maximum amount of traffic that can be accommodated by a facility while maintaining prescribed operational qualities. The definition of operational criteria is through levels of service, as described above, or by other operational criteria. The Growth Management Act requires local jurisdictions to set levels of service standards for transportation facilities. This ties in with the GMA concurrency requirement that transportation and other infrastructure is available concurrent with development. Levels of Service (LOS) standards are to be regionally coordinated and were coordinated within the region during the GMA planning process in 1994.

Vancouver adopted a corridor-based concurrency ordinance in March 1998. In 1999, the City of Vancouver amended the existing Level of Service (LOS) standards contained in the Mobility Management element of the Comprehensive Plan. Vancouver regularly reports to its Council on the concurrency program. Levels of service standards to meet Vancouver's concurrency test requirements include: 1) corridor travel times (maximum allowable travel time between two designated points along a corridor); 2) an Average Signalized Intersection Performance Standard (a quantitative standard of the performance of all signalized intersections within an identified transportation corridor or Transportation Management Zone (TMZ); and 3) Mobility Index (the maximum number or percentage of signalized intersections which may have an operating level below the Average Signalized Intersection Performance Standard. Concurrency only applies to arterial streets in the City; local streets are not included in concurrency requirements. The City of Vancouver's concurrency corridors are listed below (Table 3-16):

Table 3-16: City of Vancouver Concurrency Measurement Corridors

Andresen Rd
- Mill Plain to SR-500
- SR-500 to 78th St.

Burton Rd
- Andresen Rd. to 112th Ave

NE 28th St
- 112th Ave to 138th Ave
- 138th Ave to 162nd Ave

Mill Plain Blvd
- I-5 to Andresen Rd.
- Andresen Rd. to I-205
- I-205 to 136th Ave
- 136th Ave to 164th Ave

164th Ave
- SE 1st St to SR-14

162nd Ave.
- SE 1st St. to Fourth Plain Blvd.

192nd Ave.
- SR-14 to 18th St.

Fourth Plain Blvd.
- Port of Vancouver to I-5
- I-5 to Stapleton
- Stapleton to I-205

St John's Blvd.
- Fourth Plain Blvd to 78th St.

NE 18th St.
- 112th Ave to 138th Ave
- 138th Ave to 162nd Ave

NE 112th Ave
- Mill Plain Blvd to 28th St
- 28th St to 51st St

NE 136th Ave
- Mill Plain Blvd to 28th St.

NE 138th Ave
- NE 28th St. to Andresen

Further information on the City's Concurrency program can be found at the web site address, http://www.ci.vancouver.wa.us.

On October 10, 2000, the Board of Clark County Commissioners adopted a new Transportation Concurrency Ordinance and related levels of service. For details of the Clark County Concurrency program and travel speed standards refer to County website at http://www.clark.wa.gov/Public-Works/transportation/concurrency.html and Clark County Code Section 40.350.020 for details on the Clark County concurrency ordinance. The County's Level of Service standards rely on meeting minimum travel speeds in each of the transportation corridors designated by the County as outlined in Clark County Code Section 40.350.020. The corridor travel speeds are periodically reviewed and updated with the latest update in September 2004. Minimum corridor travel speed range between 13 miles per hour and 27 miles per hour, depending on the corridor. Facilities also have to meet thresholds for travel delay at signalized intersections within the designated corridors. Individual movements at each signalized intersection of regional significance shall not exceed an average of two cycle lengths or two hundred and forty seconds of delay, whichever is less. Outside of designated transportation corridors, all signalized intersections of regional significance shall achieve LOS D or better except for the intersections of SR-500/Falk Road and SR-500/NE 54th Avenue which shall achieve LOS E or better. All unsignalized intersections of regional significance in

unincorporated County shall achieve LOS E standards or better (if warrants are not met) and LOS D or better if warrants are met. There are some exemptions that can apply to concurrency requirements.

Table 3-17: Clark County Concurrency Measurement Corridors

Clark County Concurrency Measurement Corridors: Corridors and Corridor Limits Description

North-South Roadways

Lakeshore Avenue
Bliss Rd to NE 78th St

Hazel Dell Avenue
Highway 99 to NE 63rd St.

Highway 99 & NE 20th Avenue
North: NE 15th/20th Avenue , NE 179th St. to S of NE 134th St.
Central: N of NE 134th St. to NE 99th St.
South: NE 99th St. to NE 63rd St.

St. Johns Road
NE 119th St. to NE 68th St.

NE 72nd Avenue
SR-502 to NE 119th St.

Andresen Road
NE 119th St. to NE 58th St.

Gher/Covington Road/NE 94th Avenue
Padden to SR-500

SR-503
North: SR-502 to NE 119th St.
South: NE 119th St. to Fourth Plain

Ward Road
Davis Rd. to SR-500

NE 137th Avenue
NE 119th St. to Fourth Plain

NE 162nd Avenue
Ward Rd. to NE 39th St.

NE 182nd Avenue
Risto Rd. to Davis Rd.

East-West Roadways

SR-502
NW 30th Ave (Battle Ground) to NE 179th St.

179th Street
West: NW 41st Ave. to I-5
West Central: I-5 to NE 72nd Ave.

139th St. & Salmon Creek Ave.
139th Street (West), Seward Rd. to I-5
Salmon Creek Ave. (W. Central), I-5 to NE 50th Ave.

119th Street
West: Lakeshore to Hazel Dell
West Central: Hwy 99 to NE 72nd Ave.
East Central: NE 72nd Ave. to SR-503
East: SR-503 to NE 182nd Ave.

99th Street
West: Lakeshore to I-5
West Central: I-5 to St. John's Rd.
East: SR-503 to NE 172nd Ave.

Padden Parkway
East Central: I-205 to SR-503
East: SR-503 to Ward Rd.

78th/76th Street
West: Lakeshore to I-5
West Central: I-5 to Andresen
East Central: Andresen to SR-503
East: SR-503 to Ward Rd.

Fourth Plain Boulevard
East Central: I-205 to SR-503

NE 88th Street
West Central: Hwy 99 to Andresen

63rd Street
West Central: Hazel Dell to Andresen
East Central: Andresen to NE 107th Ave.

TRANSIT LOS INDICATORS

In 1994, as part of the GMA planning process, C-TRAN also identified LOS indicators to assess the operational quality of the transit system. This matrix has been updated and is presented in Table 3-18. It can be used as a guide to assess where transit service would be feasible in areas within C-TRAN's service boundary.

Table 3-18: C-TRAN Level of Service Indicators

C-TRAN LOS INDICATORS								
	PERFORMANCE INDICATORS						PLANNING INDICATORS	
Service Category	Passengers/ Revenue Hour	Load Factor	Peak/ Non-peak Headways	Bus Stop Spacing	Accessibility (within service boundary)	Span of Service	Density	Supporting Factors
Premium Commuter	TBD	1.0	10-15/NA	NA (or P&R sites)	Within 5 miles of 80% of pop+emp	M-F, peak	High density employment district as destination	Full cost recovery, parking mgmt, sufficient P&R spaces/transit connections
Commuter Shuttle	TBD	1.0	15/TBD	NA (or P&R sites)	Within 5 miles of 80% of pop+emp	M-F, mainly peak	High density employment district as destination	Parking mgmt, sufficient P&R spaces/transit connections
Urban Corridor	TBD	1.5	15/30	1/8 mile	Within 1/4 mile of 75% of pop+emp	M-F, 15 hours	More than 8 residential units per acre, mixed employment /comercial uses	Land use/zoning compatibility, pedestrian/ bike facilities, trip generators/destinations along corridor
Urban/ Suburban Residential	TBD	1.5	30/60	1/4 mile	Within 1/4 mile of 75% of pop+emp	M-F, 15 hours	4-8 residential units per acre, mix of uses along routes	Land use/zoning compatibility, pedestrian/ bike facilities, connection to major activity centers
Rural	TBD	1.25	60/120	TBD	Within 5 miles of 75% of pop+emp	M-F, TBD	2-4 residential units per acre	Pedestrian/bike facilities, citizen requests for service
Subscription	TBD	1.0	As needed	Desig-nated sites	NA	M-F, peak	NA	Specialized employer needs
Paratransit	TBD	1.0	NA	NA	Within 3/4 mile of fixed routes	M-F, 15 hours	NA	Passengers who cannot access fixed route, caregivers/providers who learn how to work effectively with C-TRAN

In 2008, service standards will be presented to C-TRAN's Board of Directors for adoption. Indicators consistent with new service standards will be incorporated in the next MTP update.

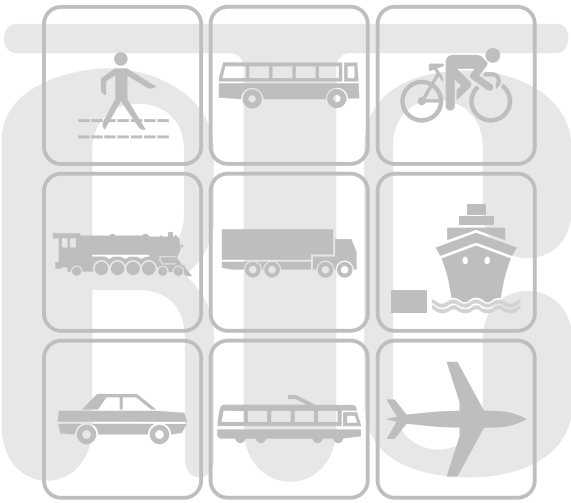
HIGHWAY SYSTEM CAPACITY ANALYSIS

EMME/2 software is used to analyze highway capacity needs for the Clark County region. Appendix A lists projects identified in the *MTP* as needed to meet future forecast capacity deficiencies determined by assigning forecast 2030 trips to an assumed transportation network.

The list contained in Appendix A notes projects which are incorporated into the 2030 regional travel forecasting model.

TRANSPORTATION SYSTEM ANALYSIS

Highway capacity is not the only consideration in analysis of the regional transportation system. Consecutive federal Transportation Acts, The Intermodal Surface Transportation Efficiency Act (1991), Transportation Equity Act for the 21st Century (TEA-21) and SAFETEA-LU (2005), emphasize the need to develop alternative modes and increase capacity of the existing highway system through more efficient use by, for example, ridesharing, system management and transit use. Other alternatives have to be considered before capacity expansion. Such strategies are described in more detail in Chapter 5, System Improvement and Strategy Plan. In addition, Chapter 5 also addresses the need for maintenance and preservation of the existing regional transportation system, safety of the transportation system, development of non-motorized modes and high capacity transportation systems.



CHAPTER 4

FINANCIAL PLAN

OVERVIEW

Federal rules require that the MTP be "fiscally constrained" meaning that there must be a reasonable expectation that revenues will be available to provide for the estimated costs of implementing the 20-year list of projects contained in the MTP and to support the operations and maintenance of the multimodal transportation system. The MTP Finance Plan focuses on the Designated Regional Transportation System (as described in Chapter 3)

Potential transportation projects proposed in this Plan are intended to meet the MTP policy objective of making the most efficient use of and enhancing the existing transportation system. The potential highway, transit and non-motorized recommendations are designed to meet transportation planning goals addressed in MTP Chapter 1.

The availability of federal, state and local moneys will have a significant impact on the ability to fund proposed projects. Demands on the transportation system have grown significantly over the past 20-years.

This chapter describes revenue sources and discusses changes to revenue sources as a result of federal and state legislation. The projection of funding ability is based on historic funding levels. The ability of the projected funding to meet MTP costs is determined.

User fees have traditionally been used as major revenue sources for transportation systems. Today, the most significant transportation revenue sources continue to be gas tax and license fees, as well as transit fare box revenues. Some jurisdictions also use property taxes to fund transportation. The Motor Vehicle Excise Tax (MVET) was repealed after passage of Initiative-695 in 1999. Gas tax is imposed at the Federal level ($0.184 per gallon) which costs the average motorist about $96 per year. As of June 30, 2007, Washington State had the 8th highest gas tax in the nation. Washington state gas tax was increased in July 2007 to $0.36 per gallon which costs the average motorist $188 per year. The gas tax rate will rise to $0.375 in July 2008. The 18th amendment to the Washington State Constitution dedicates motor fuel tax collections to "highway purposes."

FINANCE ISSUES

Over the past several years, there has been much to celebrate with the Clark County region seeing transportation funds for several significant projects. State gas tax increases are helping to bring funding for major projects within the region. However, the State cautions that fuel tax revenues have been impacted by the cost of gasoline and, at the federal level, there is concern about the highway trust fund and how, with current spending levels, the fund would be depleted by 2009.

Nevertheless, within the past 10 years, Clark County has generated over $1.09 billion in state and federal revenues for transportation uses. Local revenue sources for transportation adds considerably more. In addition, the State Legislature enacted fuel tax increases that will bring

close to $700 million in state highway projects through the Nickel and Partnership packages to Clark County.

Several significant regional transportation system capital improvement projects have been completed, or are nearing completion, or were purchased for use in the Clark County region since adoption of the last MTP in December 2005. These include C-TRAN bus replacement purchases, completion of I-5 widening from 99th Street to I-205, construction of the Burton Road/28th Street project, opening of the extended 192nd Avenue corridor that now connects to the SR-14 interchange, and construction of the I-5/219th Street interchange is now underway.

In 1999 the Motor Vehicle Excise Tax (MVET) was repealed resulting in reduction of funding for transit service. C-TRAN was faced with a 40% revenue reduction (about $12 million annually). In September 2005, voters in Clark County approved an increase in the sales tax rate of two-tenths of a percent which should raise about $9.4 million annually for C-TRAN service.

In August 2005, the City of Vancouver voted to increase sales tax by two-tenths of a percent to raise an additional $4.2 million a year for City of Vancouver's transportation needs.

ASSUMPTIONS

- The Finance Plan addresses a twenty-three year period from 2007 to 2030.
- Revenue data on which to base the Finance Plan come from WSDOT's Economics Branch and includes data from the past decade.
- MTP project cost estimates are provided by WSDOT, local jurisdictions and agencies.
- The financial information provided for C-TRAN assumes an additional 0.4 percent sales tax to maintain service levels commensurate with population growth. This yields an estimated 633,750 service hours for fixed route and paratransit in 2030.

CURRENT REVENUE SOURCES

Revenues for transportation system development are available from federal, state, local and private sources. Funding sources that have been historically available are extrapolated into the future to provide an estimate of the resources reasonably expected to be available. It is assumed that funds that have traditionally been available for transportation will continue to be available. For example, it is assumed that federal Demonstration funds will continue to be available.

FEDERAL FUNDING

The federal funding picture changed significantly with the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, and successor Acts, the Transportation Equity Act for the 21st Century (TEA-21) passed in 1998, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) passed in August 2005. Federal funding programs now allow much greater flexibility in the way money may be used. The

federal funding programs now have a multimodal emphasis especially the Surface Transportation Program, which gives regions greater independence to invest in alternate modes of travel, including capital transit projects, such as High Occupancy Vehicle (HOV), Light Rail Transit (LRT), and park and ride facilities. ISTEA was considered landmark legislation because of this and because it enhanced the role of the Metropolitan Planning Organization in the programming, planning, and prioritization of STP funds. The Act also established Transportation Management Areas (TMAs) and made funding available for transportation projects to help regions meet air quality standards. In states, such as Washington State, where the amount of public lands and Indian lands exceed 5% of the total State area, the federal share for projects will be increased above those outlined in SAFETEA-LU.

SAFETEA-LU is funded through projected revenues from the Highway Trust Fund and General Fund as well as ethanol tax reforms. SAFETEA-LU includes $286.5 billion in guaranteed spending for all programs over the six years of the Act, 2004 through 2009. This is a 38% increase over TEA-21's $218 billion for transportation programs. Approximately 75% is for highway and safety programs, 18.5% for transit and 6% for additional safety and other programs. By 2009 each state should receive at least 92 cents annually for each $1 of federal transportation taxes and fees contributed. Washington State should average about 92.3 cents return on the dollar. Washington State is estimated to receive about $3.5 billion from 2004 through 2009. SAFETEA-LU allocates $24 billion, amounting to 8.5% of the total bill, to about 6,300 earmarked projects identified by Congress. These federal earmarked projects either located within Clark County or that significantly impact Clark County travel include:

- I-5 Columbia River Crossing Preliminary Engineering and EIS: $14.2 ($8 million Washington and $6.2 million Oregon)
- I-5/Delta Park to Lombard (Portland, OR: $16.2 million ($4 million Washington; $12.2 Oregon)
- I-5/Salmon Creek Area Improvement Project: $10.772 million
- 18th Street between 87th Avenue and 192nd Avenue: $3.2 million
- SR-14 Corridor Camas/Washougal: $1.5 million
- I-5/SR-501 Interchange Replacement in Ridgefield: $9 million
- Confluence Project: $4.5 million
- Mill Plain Boulevard Improvement: $1.25 million
- Vancouver Advanced Traffic Management System: $500,000

A brief description of the existing funding programs available through the federal Act follows.

Interstate Maintenance (IM) Program

The Interstate Maintenance (IM) program provides funding for resurfacing, restoring, rehabilitating and reconstructing (4R) most routes on the Interstate System. Construction of additional Single Occupancy Vehicle (SOV) lanes are ineligible for IM program funds. Under SAFETEA-LU, the IM program funding, is set at $25.2 billion, nationwide for years 2005 through 2009.

National Highway System (NHS)

The NHS program provides funding for improvements to rural and urban roads that are part of the National High System. These roads include the interstate system; other routes identified for their strategic defense characteristics; routes providing access to major ports, airports, public transportation and intermodal transportation facilities; and principal arterials that provide regional service. Funding in this category may be used for a wide variety of projects. In addition to roadway construction, operational and maintenance improvements, eligible projects include: start-up for traffic management and control, infrastructure-based intelligent transportation system capital improvements, fringe and corridor parking, carpool and vanpool projects, bicycle and pedestrian projects, and wetlands and natural habitat mitigation. In certain circumstances, transit projects in the corridor are also allowed if they benefit the NHS facility. The state selects projects for funding. For non-interstate projects, the costs are shared approximately 86.5% Federal and 13.5% local match. For interstate projects, the costs are shared approximately 90.66% Federal and 9.34% local match. Under SAFETEA-LU, the funding level for the NHS program is $30.542 billion nationwide for years 2005 through 2009.

Surface Transportation Program (STP)

The Surface Transportation Program is a block grant type funding program which provides flexible funding that may be used by States and localities for projects on any Federal-aid highway with a federal functional classification above local in urban areas and above rural minor collector in rural areas. These include the National Highway System, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. A portion of the funds reserved for rural areas may be spent on rural minor collectors. In addition to eligibility for operational and capacity improvements to roadways, it allows for the programming of transit capital projects, intracity and intercity bus terminals, carpool projects, fringe and corridor parking, capital and operating costs for traffic monitoring, management or control, transportation enhancements, transportation planning, and transportation control measures for air quality. If an area, such as the Vancouver region, is designated a Transportation Management Area (TMA) then road capacity improvements should be consistent with the region's Congestion Management Process.

Of the money received by the state, 10% must be set aside for transportation enhancements such as pedestrian and bicycle facilities. Under SAFETEA-LU, total funding for the STP program is $32.55 billion nationwide for years 2005 through 2009. In Washington State federal STP program funds require a 13.5% local match though interstate projects are shared approximately 90.66% federal funds and 9.34% state match. 50% of the State's STP funding is allocated to areas based on population threshold.

The following outlines the STP subprograms:

Transportation Enhancements: 10% of STP funds are set aside for transportation enhancement projects (bikeways, walkways, highway beautification, scenic or historic transportation projects). The MPO (RTC) prioritizes projects and the State selects projects. Allocation of funds is determined at the State level.

Regional Allocation: STP-Urban: Available to cities, counties, and other public agencies on a county basis. To be eligible, road projects must be on a federal functionally-classified route of rural major collector or above, except for planning studies and enhancement projects. The MPO (RTC) selects projects for funding in cooperation with local jurisdictions and agencies. The STP-Urban program is a formula allocation to the Clark County Transportation Management Area (TMA) based on the population of the Vancouver Urban Area.

Regional Allocation: STP-Rural: The STP-Rural program is a formula allocation for projects outside the Urban Areas. The MPO (RTC) selects projects for funding in cooperation with local jurisdictions and agencies.

STP-State: Formula allocation to the Washington State Department of Transportation, for use on State highway projects. The State selects projects.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program is established as a new core program, separately funded for the first time. The program replaces the 10% STP set aside for safety. It allows states to target funds to their most critical safety needs to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. States are required to develop and implement a Strategic Highway Safety Plan and submit annual reports describing at least 5% of the State's most hazardous locations, progress in implementing projects and their effectiveness in reducing fatalities and injuries. WSDOT revised its Strategic Highway Safety Plan: Target Zero in February 2007. Available programs include: 1) Railway/Highway Crossing, 2) Intersection and Corridor Safety, 3) Rural County Two-Lane Roadway. From 2006 through 2009, funding for this program is $5.1 billion nationwide with $880 million set aside for the Railway-Highway Crossing program. The costs are shared approximately 90% Federal and 10% local match, except that the Federal share is 100% for certain safety improvements.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide (CO), and particulate matter (PM-10, PM-2.5) which reduce transportation related emissions. SAFETEA-LU adds new requirements that States and MPOs will give priority to projects and programs to diesel retrofits and other cost-effective emission reduction activities, and cost-effective congestion mitigation activities that provide air quality benefits. Money in this fund is apportioned by population and weighted by the severity of pollution. Funds in this category cannot be used for new highway capacity. However, construction of high occupancy vehicle lanes are allowed with the understanding that capacity may be used by single occupancy vehicles during the non-rush hour period. Projects or programs that improve transportation systems management and operations that mitigate congestion and improve air quality can be funded under this program. The Clean Air Act Amendments of 1990 require that highest priority for funding be given to the implementation of the transportation elements of applicable State Implementation Plans (SIPs) and Transportation Control Measures identified in applicable SIPs.

From 2005 through 2009, funding for this program is $8.608 billion nationwide. RTC is one of five MPO's in Washington State eligible for CM/AQ funding.

Highway Bridge Replacement and Rehabilitation Program (HBRRP)

The Highway Bridge Replacement and Rehabilitation Program provides funding to enable States to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventive maintenance. The Washington State Department of Transportation established the Bridge Replacement Advisory Committee (BRAC) to advise staff on the selection of bridge projects. The nationwide program provides $21.607 billion in funding from 2005 through 2009. The costs are shared approximately 80% federal and 20% local match.

High Priority (Demonstration) Projects

The High Priority Program provides designated funding for specific projects identified by Congress and listed in SAFETEA-LU. 5,091 projects, costing a total of $14.83 billion, are identified in SAFETEA-LU. These funds generally require a 20% local match. In total, Congress has allocated $24 billion, amounting to 8.5% of the total bill, to about 6,300 earmarked projected they have identified. In the Clark County region, 9 projects were earmarked amounting to $25.5 million in funding.

Transportation and Community and System Preservation Pilot (TCSP)

The TCSP Program is intended for eligible projects to integrate transportation, community, and system preservation plans and practices that improve the efficiency of the transportation system of the United States, reduce the impacts of transportation on the environment, reduce the need for costly future investments in public infrastructure, provide efficient access to jobs, services, and centers of trade and examine community development patterns and identify strategies to encourage private sector development. A total of $270 million is authorized for this program for FYs 2005-2009. Clark County received TCSP funds to investigate the impacts of concurrency and Growth Management on implementation of the comprehensive plan. Projects are selected at the federal level with 80% federal and 20% local share.

Intelligent Transportation System (ITS) Integration

Federal funds are available to accelerate the implementation of Intelligent Transportation System projects in metropolitan and rural areas. ITS funds are for improvement of transportation efficiency, promotion of safety, traffic flow increase, reduction of air pollutant emissions, improvement of traveler information, enhancement of alternative transportation modes, further development of existing Intelligent Transportation System projects and promotion of tourism. Federal ITS funds must not exceed 50% of the total project cost. Projects are selected at the federal level.

National Corridor Infrastructure Improvement Program

This is a discretionary program that provides funding for construction of highway projects in corridors of national significance to promote economic growth and international or interregional trade. The program replaces the TEA-21 National Corridor Planning and Development program. The nationwide program provides $1.9 billion in funding from 2005 through 2009. Projects are selected at the Federal level and require a 20% local share.

National Scenic Byways Program

The program recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities and provide for designation of these roads as National Scenic byways, All-American Roads or America's Byways. Projects are prioritized at the State level and selected at the Federal level. The nationwide program provides $175 million in funding from 2005 through 2009. The funds require a 20% local match.

Community Development Block Grant (CDBG)

Community Development Block Grant (CDBG) funds are administered by the Department of Housing and Urban Development (HUD). Grants can be used for public facilities, economic development, housing and comprehensive projects which benefit low and moderate income households. Transportation projects that use CDBG funds are usually sidewalk projects and small capital improvements. Projects are selected by the County Commissioners from recommendations by the Urban County Policy Board composed of local Mayors and one county commissioner.

Safe Routes to School Program

The Safe Routes to Schools Program is to enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development, and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The nationwide program provides $612 million in funding from 2005 through 2009. The Federal share is 100%.

Recreational Trails Program

The Recreational Trails program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The nationwide program provides $370 million in funding from 2005 through 2009.

Federal Lands Highways

The Federal Lands Highways Program provides for transportation planning, research, engineering, and construction of highways, roads, and parkways and transit facilities that provide access to or within public lands, national parks, and Indian reservations. The nationwide

program provides $4.465 billion in funding from 2005 through 2009. The federal share is 100%. Projects are selected at the federal level.

Projects of National and Regional Significance (PNRS)

The Projects of National and Regional Significance program provides funding for high cost projects of national or regional importance. The nationwide program provides $1.78 billion in funding from 2005 through 2009. Projects are selected at the federal level. The funding share is 80% Federal and 20% local match.

STATE FUNDING

The State gas tax is the major state revenue source for highway maintenance and arterial construction funding. In 2003 the state legislature passed a nickel gas tax increase and in 2005 a 9.5 cent gas tax increase to fund the Transportation Partnership Account (TPA) that funds the following projects in the Clark County region:

- SR-500, Gher Road/NE 112th Avenue Interchange, (completed, $26.1 million project)
- I-205, Mill Plain Southbound Off-ramp, (completed, $0.440 million)

- I-5/Columbia River Crossing/Vancouver, $66.46 million
- I-5, Salmon Creek to NE 134th St, $44.31 million
- I-5, Reconstruct Interchange at NE 134th St., $81.88 million
- I-5, NE 219th St/SR-502 Interchange, $56.13 million
- I-5, SR-501/Pioneer Ridgefield Interchange, $13 million
  (additional funding needed to complete project)
- I-205, Mill Plain Interchange to NE 18th St – Stage 1, $11.1 million
- I-205, Mill Plain Interchange to NE 18th St – Stage 2, $85.9 million
- I-205, Mill Plain/NE 112th Connector, $12.7 million
- SR-14, Camas – Washougal, Widening and Interchange, $57 million
- SR-14, Lieser Rd Interchange Traffic Signals, $1 million
- SR-500, St John's Interchange, $48.35 million
- SR-500, I-205 Interchange Improvement, $0.98 million
- SR-502, I-5 to Battle Ground, Widen, $87.7 million
- SR-502, /10th Avenue to 72nd Avenue, add turn lanes, $1.79 million
- SR-503/SR-500/Fourth Plain Intersection, $0.87 million
- SR-503, Lewisville Park Climbing Lanes, $7.8 million
- SR-503, Gabriel Road Intersection Improvement, $0.43 million
- Vancouver Rail Yard and 39th Street Overcrossing, $114.95 million
  (state funds total $57 million for this project)

TOTAL FUNDING TO CLARK COUNTY PROJECTS
2007 Legislative Budget $692.3 million

Washington State Department of Transportation (WSDOT)

The Washington State Department of Transportation administers state and federal funded state highway projects. State transportation revenues are divided into separate programs. The budget for these programs is determined by the state legislature. WSDOT then prioritizes projects and determines which projects can be constructed within the budget of each program.

Transportation Improvement Board (TIB) Programs

The Washington State Legislature created the Transportation Improvement Board (TIB) to foster state investment in quality local transportation projects. The TIB distributes grant funding, which comes from the revenue generated by three cents of the statewide gas tax, to cities and counties for funding transportation projects. The TIB identifies and funds the highest-ranking transportation projects based on criteria established by the Board for each program.

TIB Urban and Small City Funding Programs

The Transportation Improvement Board provides funding to urban areas and small cities through its state-funded grant programs. Eligible projects are located within the federally designated urban areas. Urban projects require financial participation by the local agency. Minimum local match ranges from ten to twenty percent for urban programs and between zero and ten percent for small city programs depending on the assessed value of the local agency. Local match is typically a mixture of private and public funds. Projects are selected annually using a rating system based on criteria developed by the Board. Applications are rated by TIB staff and reviewed in the field. The highest rated projects within the funding range are presented to the Board for selection. TIB awards approximately $70 million to new projects each year. Once selected, TIB staff provides grant oversight, participates in Value Engineering (VE) studies, and acts as facilitators to bring projects to completion.

Urban Arterial Program (UAP): for roadway projects that improve safety and mobility along arterial streets in urban areas. The program requires a minimum 20% local match.

Urban Corridor Program (UCP): for arterial street improvements coordinated with multiple funding partners that expand capacity. The program requires a minimum 20% local match.

Sidewalk Program (SP): for sidewalk projects that improve safety and mobility. The urban program requires a minimum 20% local match., while the small city program generally requires a 5% match.

Small City Arterial Program (SCAP): Provides funding to preserve and improve the arterial roadway system for cities under 5,000 population. A local match of 5% or greater is required; a jurisdiction with a population under 500 needs 0% local match.

Small City Pavement Preservation Program (SCPPP): Provides funding for rehabilitation and maintenance of the small city roadway system, in some cases in partnership with WSDOT or county paving projects.

Road Transfer Program (RTP): provides state funding to offset extraordinary costs associated with the transfer of state highways to cities

Federal Match: funding provided to meet the local match of some federally funded projects in small cities (population under 5,000). The program provides match for federal Bridge and FEMA projects. The match varies by program between 12.5% and 20%. The Transportation Improvement Board funds are made available following approval of federal funds.

Table 4-1 provides an overview of TIB funding received by Clark County, 1990 to 2007.

Table 4-1: TIB Funding Provided to the Clark County Region, 1990 to 2007

TIB Funding Programs	TIB Program Funds to Clark County 1990 to 2007
Urban Corridor Program (UCP, formerly TPP)	$101,290,623
Urban Arterial Program (UAP, formerly AIP	$34,693,201
Small City Arterial Program (SCAP)	$2,853,677
Sidewalk Program (SP) formerly Pedestrian, Safety & Mobility Program (PSMP)	$1,514,281
City Hardship Assistance Program (CHAP)	$249,654
Federal SAFETEA/ISTEA/TEA-21 Local Match	$1,780,965
Total	**$142,382,401**

County Road Administration Board (CRAB)

The County Road Administration Board was created by the Legislature in 1965 to provide statutory oversight of Washington's thirty-nine county road departments. The County Road Administration Board (CRAB) manages two grant programs to assist counties in meeting their transportation needs.

County Arterial Preservation Program (CAPP)

The County Arterial Preservation Program (CAPP) helps counties to preserve their existing paved arterial road networks. Funding is provided to counties as direct allocations based on paved arterial lane miles. The program generates approximately $14 million a year for road improvements.

Rural Arterial Program (RAP)

The Rural Arterial Program (RAP) is funded by fuel tax revenues and is available for road and bridge reconstruction funding on a competitive basis. Proposed projects for this program are rated by a specific set of criteria including (1) structural ability to carry loads, (2) capacity to move traffic at reasonable speeds, (3) adequacy of alignment and related geometrics, (4) accident rates and (5) fatal accident rates. The program generates approximately $19 million a year for road improvements.

Community Economic Revitalization Board (CERB)

The Community Economic Revitalization Board (CERB) was established by the legislature to make loans and/or grants for public facilities, including roads, which will stimulate investment and job opportunities, reduce unemployment, and foster economic development. The Community Economic Revitalization Board selects projects.

Public Works Trust Fund (PWTF)

The Public Works Board was created by the 1985 legislature. The mission of the Public Works Board is "to assist Washington's local governments and private water systems in meeting their public works needs to sustain livable communities." The Public Works Trust Fund (PWTF) provides low interest loans to local governments for infrastructure improvements and is funded by utility taxes. The loans have a 4-year term for pre-construction and 20-years for construction with an interest rate of one-half percent.

WSDOT Grant Programs

WSDOT administers many transportation related grants that are available to local agencies. However, many of these programs are dependent on the legislature allocating funding and can vary from year to year.

LOCAL FUNDING

Local revenue comes from a variety of sources such as property tax for road projects and sales tax for transit projects. Other revenues include moneys from street use permits, gas tax, utility permits, and impact fees.

Property Tax

Clark County allocates a portion of their property taxes to the County Road Fund (Approximately $2.25 per $1,000 of assessed value). Cities also receive transportation dollars from the city's general funds, of which property taxes are a major revenue source.

Arterial Street Fund

This is the distribution of a portion of the state gasoline tax to cities and counties based on each jurisdiction's population. The funding can be used for street rehabilitation and construction.

Transportation Impact Fees (TIF)

Transportation impact fees were authorized in HB 2929 by the 1990 Legislature to address the impact of development activity on transportation facilities. Jurisdictions within Clark County have established Transportation Impact Fee programs and are periodically reviewed. Generally, new developments and redevelopments are assessed a Traffic Impact Fee, based on their impact to the transportation system.

Road Improvement District (RID)

RID's can be formed and funded by properties benefiting from an improvement. They are usually formed at the request of property owners. Local government will build the project using revenue bonds from the road improvement district.

Frontage Improvement Agreements

Most developments are required to construct frontage improvements. In cases where the development abuts a proposed road improvement project, it is often beneficial for the developer to pay local government for their share of the road improvement and for local government to construct the improvements as part of the overall capital project.

Latecomers Fees

According to State law, new developments and re-developments may be charged "Latecomer Fees" by the County for improvements that would have been required for their development, but have been constructed by the County.

TRANSIT REVENUES

Revenue sources that have been described above are intended exclusively for highway investment or have the flexibility to be used for highway/transit funding. Transit systems are also funded by farebox proceeds, federal funds and other local funds. This section will address revenue sources specifically for the purpose of funding transit needs. C-TRAN is the Public Transportation Benefit Area for the Clark County region. As such it has the authority to impose up to 0.9 percent local sales tax to support operations with majority support from registered voters in the Public Transportation Benefit Authority area.

In September 2005, a majority of voters supported a funding proposition that added 0.2 percent sales and use tax to C-TRAN's previously approved 0.3 percent, for a total of 0.5 percent (five cents on a $10.00 purchase). This additional funding brought stability and modest expansion to C-TRAN service. To provide service to meet demands of a growing population would require additional sales and use tax to be approved by voters. It is estimated that an additional 0.4 percent would be needed through 2030 to keep pace with growth.

Transit: Farebox

Over the past few years, C-TRAN has focused on increasing its farebox recovery, the percentage of operating costs paid for by farebox revenues. In 2006, fixed route farebox recovery was 22.67%, a dramatic increase over the 12.20% achieved in 1999. The total amount of funding received through passenger fares for fixed route services was $4.8 million in 2006. C-TRAN's policy is to evaluate fares annually, making incremental changes as needed.

Transit: Federal

The federal Surface Transportation Program places much greater emphasis on intermodal flexibility and allows funds to be used for transit capital projects. In addition, federal National Highway System funds can be used on alternative arterials or transit projects within the NHS corridors if there is a direct benefit to an NHS facility. C-TRAN received $1,170,309 from federal sources in 2006. These funds include Section 5307 monies for buying or maintaining buses and facilities, Section 5209 discretionary funds for specific projects awarded through Congressional earmarks, Section 5208 funds for information technology projects, and Transit Enhancement funds.

FTA Section 5208

Section 5208 funds are intended for integration and interoperability of an ITS system, and must be part of an approved plan. Projects are selected at the federal level. Federal section 5208 funds require a 50% match.

FTA Section 5307

Section 5307 funds are apportioned by a formula and are available for both capital and operating assistance. The costs are shared approximately 80% federal and 20% local match.

FTA Section 5308

Section 5308 funds provide capital grants for clean fuel buses and related facilities in air quality non-attainment or maintenance areas. Up to 25% of the funds can be used for “Clean Diesel” buses.

FTA Section 5309

Section 5309 funds provide capital assistance for transit projects. These are discretionary funds. These projects are eligible for 80% federal participation with ah a 20% local match. Projects are selected at the federal level.

FTA Section 5311

Section 5311 funds are provided to assist the operation of non-urban transportation service. Federal participation for operating costs is 50%, matched by 50% local funds. For capital acquisition, the Federal share is 80% with a 20% local match.

The three funding programs described below are generally directed at meeting special service transportation needs. In January 2007, RTC adopted the Coordinated Human Services Transportation Plan (RTC Board Resolution 01-07-02) to support projects that seek to use the three funding programs described. Development of an HSTP is a condition for receiving formula funding under the three Federal Transit Administration (FTA) programs described below. In December 2006, the RTC Board concurred with C-TRAN’s designation as recipient

of JARC and New Freedom funds (Resolution 12-06-32). The Governor of the state of Washington designated C-TRAN as a funding recipient in September 2007. From the needs identified in the HSTP development process, human services transportation providers develop projects to submit to WSDOT for funding consideration through the consolidated public transportation grant program. Within Washington State, WSDOT created a consolidated grant application process in 2003 to combine the applications for both state and federal public transportation grants. Applicants for WSDOT's public transportation grant program are required to participate in the HSTP planning process with their local Regional Transportation Planning Organization (RTPO). For the 2005-2007 biennium, WSDOT's consolidated grant program awarded $50 million in public transportation grants for projects statewide with funding from a combination of state and federal sources. Therefore, within Washington State, the Human Service Transportation Plan is the framework for prioritizing projects to receive Federal Transit Administration (FTA) Section 5310 Elderly Persons and Persons with Disabilities funding, Section 5316 Job Access Reverse Commute (JARC), and Section 5317 New Freedom funding as well as FTA Section 5311, General Public Transportation for Non-urbanized Areas and state transit funds for paratransit and special needs and rural mobility competitive programs. The MPO/RTPO works with local stakeholders and human service transportation providers to prioritize these projects.

Elderly Persons and Persons with Disabilities/Section 5310

Section 5310 funds are designed to provide mass transit services which meet the special needs of elderly and handicapped persons. Section 5310 specifically assists private, nonprofit organizations in obtaining equipment to provide service where transportation services for this group are unavailable, insufficient, or inappropriate for their use. The allocation formula is generally 80% federal and 20% local funds.

Job Access and Reverse Commute (JARC)/Section 5316

The federal Job Access and Reverse Commute grant program assists states and localities in developing new or expanded transportation services that connect welfare recipients and low income persons to jobs and other employment related services. Job Access projects are targeted at developing new or expanded transportation services such as shuttles, vanpools, new bus routes, connector services to mass transit, and guaranteed ride home programs for welfare recipients and low income persons. Reverse Commute projects provide transportation services to suburban employment centers from urban, rural and other suburban locations for all populations. From FY 2006, the Job Access and Reverse Commute (JARC) program is administered as a formula program. In 2002, C-TRAN used $718,500 in JARC funds to implement the Connector service to enhance employment access to the industrial and commercial area of East Vancouver/Camas. The service debuted in 2003 and was expanded to other smaller communities in 2006. All projects funded under this program must be the result of a collaborative planning process that includes states and Metropolitan Planning Organizations (MPOs). Federal JARC funds require a 50% match; other federal funds can be used as part of the local match.

New Freedom/Section 5317

FTA Section 5317 New Freedom Program fund are directed to elderly and disabled transportation services that go beyond those required by the Americans with Disabilities Act (ADA). All projects funded under this program must be the result of a collaborative planning process that includes states and Metropolitan Planning Organizations (MPOs). The match share is flexible to encourage coordination.

Transit: State

C-TRAN currently receives Special Needs funding from WSDOT. This funding is used to serve persons with special transportation needs.

Competitive grant funding is available through the Office of Transit Mobility's Regional Mobility Grants program. C-TRAN was successful in obtaining grants in both 2005 and 2006, totaling $1.2 million.

Transit: Sales and Use Tax

C-TRAN's major revenue source is a 0.5 percent sales and use tax. A 0.3 percent sales tax that was approved in 1980 and an additional 0.2 was approved by voters in 2005. C-TRAN received $26 million in sales tax revenue during 2006 (at the 0.5 percent rate). C-TRAN's tax authority allows as much as 0.9 percent for operation, maintenance and capital needs of the transit system, subject to voter approval.

POTENTIAL TRANSPORTATION REVENUES

The revenue sources described in this section are programs approved by the State Legislature that authorize jurisdictions to impose fees at the local level for specific transportation infrastructure categories with voter approval. These programs have not been instituted in this region.

Real Estate Excise Tax (REET)

The use of REET is restricted to capital projects identified in the capital facilities plan element of the comprehensive plan. Clark County now collects REET to the extent authorized under state law but does not use the funds for transportation capital facilities. The funds are currently used for park capital facilities and the balance is dedicated to the economic development revolving fund.

Commercial Parking Tax

RCW 82.80.030 authorizes a tax on commercial parking which can include paid parking lots as well as parking spaces that accompany the lease of nonresidential space. The proceeds may be used for general transportation purposes. The tax could be based on gross proceeds or fee per vehicle.

Motor Vehicle Fuel Tax (MVFT)

With voter approval, a 10% surcharge can be imposed on state Motor Vehicle Fuel Tax (MVFT) for fuel sales in the county. Revenue generated would be shared, based on population, between the county and the cities within the county.

Transportation Benefit Districts

2005 legislation (Senate Bill 5177), codified primarily to RCW 36.73, allows jurisdictions to form a transportation benefit district. Funds generated can be used for improvements listed in the statewide transportation plan or the Metropolitan Transportation Plan (MTP). The District, if formed, could impose new taxes and fees if approved by the electors of the District. New taxes and fees can include 1) a sales and use tax not to exceed 0.2% for a duration of up to 10 years and extendable, by vote of the electors, for an additional 10 years, 2) a vehicle license fee up to $100 per vehicle, 3) an impact fee with credit given for any impact fee charged to that same development by a participating jurisdiction with exemption for residential developments of less than 20 units, and 4) tolls for facilities approved by the District. In addition, authority typically granted to cities and counties, is extended to the District. This authority includes imposition of property tax in excess of the 1% limitation and to bond revenue streams if approved by voters, authority form a local improvement district, to form a road improvement district and to impose a commercial parking tax.

MTP REVENUES

Data received from WSDOT Economics Branch on transportation revenues generated in the Clark County region during the past decade is used to provide a basis for determining revenues likely to be generated for future transportation needs. Historic data derived from Transportation Improvement Programs (TIPs) adopted by local jurisdictions and by RTC since the passage of the ISTEA are also used as the basis for annual revenue estimates. Currently, funding is programmed in the Metropolitan Transportation Improvement Program (MTIP) through 2011.

Table 4-2 presents a summary of potential transportation revenues that could be generated in Clark County in the next twenty-three years. However, it should be noted that not all revenues generated in the Clark County region are distributed back to this region for use here. Also, it should be noted that local revenues generated have to fund local projects as well as regional type transportation improvements. It is the regional transportation projects that are the focus of the MTP's financial plan and the "fiscal constraint" test.

Table 4-2: Potential Revenues Generated in Clark County

POTENTIAL REVENUES GENERATED IN CLARK COUNTY	
REVENUES GENERATED:	**MTP (23-YEARS)**
Federal and State	$2,498,391,100
Local	$1,835,000,000
Federal for Transit Capital Equipment (assumes average of $3.5 m per year)	$87,500,000
Sub-Total	**$4,420,891,100**
TRANSIT REVENUES:	(2008-2030)
Sales Tax, Fare Box Recovery, Interest, Operating Grants, Other	$1,772,886,139

Source: State and Federal Transportation Revenue And Expenditure Tables, By County
WSDOT Economics Branch, C-TRAN

MTP COSTS

ASSUMPTIONS

Costs of improvements to the Designated Regional Transportation System are the focus of this section. Year of expenditure costs are considered in the metropolitan transportation planning process. Capacity improvement costs, capital costs for the transit system as well as transportation system maintenance, preservation and operations costs are considered in the regional transportation planning process. Costs for regional system highway, transit, pedestrian and bicycle projects are considered in the Finance Plan as well as costs for Intelligent Transportation System, Transportation System Management improvements and Transportation Demand Management. Costs for other modes, e.g. freight rail system improvements and inter-city passenger rail, are assumed to be met at the statewide or national level or by private interests.

SYSTEM MAINTENANCE, PRESERVATION AND OPERATIONS

Before consideration can be given to system expansion, the region needs to ensure that sufficient money is available to adequately maintain, preserve and operate the transportation system already in existence. It costs, on average, $30.2 million annually to maintain and operate the highway system in Clark County.

In 2002, WSDOT reported on example maintenance costs. The WSDOT analysis showed that in 2002 State highway maintenance costs about $27.47 per registered vehicle per year. Some of the component maintenance costs: $5.52 per vehicle per year for snow and ice control, $3.45 for pavement maintenance, $2.49 for vegetation maintenance, $2.25 for bridge maintenance and

operations, $2.18 for storm water management, $1.50 for striping, marking and guidepost maintenance, $1.11 for highway lighting, $1.07 for rest area maintenance and operations, $0.94 for traffic signal maintenance, $0.88 for sweeping and cleaning, $0.84 for roadway hazard patrol and removal, $0.80 for sign maintenance and $0.77 for litter control.

The estimated annual cost of operating C-TRAN's existing service (spring 2007) is about $34 million. As the transportation system ages and grows over the 23 year period, these operating and maintenance costs will consume a greater percentage of the available revenues. Additionally, as the Clark County population ages, the demand for paratransit service will increase, resulting in a greater portion of available resources supporting this service. Projected funding for transit system operation and improvement is outlined in C-TRAN's Transit Development Plan (TDP). The latest published TDP, issued in June 2007, provides a review of 2006 and covers the years 2007 through 2012.

C-TRAN's Board of Directors has adopted a 50-Year Vision. C-TRAN is currently updating its 20-Year TDP, which will provide policy guidance for future service levels and the funding required to build toward the 50 Year Vision. Adoption of the 20-Year TDP is expected in the spring of 2008.

SYSTEM IMPROVEMENTS

Capital costs of the proposed improvements to the Designated Regional Transportation System are addressed in this section. In a rapidly growing region such as Clark County, there is large demand for system expansion. MTP highway system expansion and transit capital costs have been estimated at over $2.4[1] billion over the twenty-three year period (see Table 4-3). However, $648 million in funding is already secured for these listed projects, therefore the MTP needs to assure that $1.7 billion in funding can be reasonably assumed to be available to implement these projects and strategies. The total cost of capital projects listed in Appendix A, that includes both Designated Regional Transportation System projects and local projects, amounts to $3.2 billion[2].

[1] Cost estimates for the Plan were reviewed in 2007.

[2] The costs do not include costs for the Columbia River Crossing project which is described separately as a bi-state project, on page 4-33 of the MTP (as amended July 2008).

NOTE*: Project cost estimates provided in Table 4-3 are planning level cost estimates only. Cost estimates are liable to change as more detailed pre-design and design work is initiated for each of the projects. Cost estimates are reviewed in detail at each MTP update.*

Projects are consistent with those identified in Washington State Highway Systems Plan and local Capital Facilities Plans.

Table 4-3: MTP List of "Fiscally Constrained" Projects 2007-2030

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
I-5	Columbia River Crossing (CRC). SR-500 in Vancouver, Washington to Columbia Boulevard in Portland, Oregon	Replacement I-5 river crossing and reconstructed interchanges. Light Rail Transit with terminus in Clark College vicinity.	3 lanes each direction		WSDOT/ ODOT	See page 4-33 for bi-state CRC project funding assumptions
I-5	Salmon Creek to I-205	3 lanes each direction	2 lanes each direction	2006	WSDOT	$44,308,000
I-5	SR-502/219th St. Interchange	New Interchange	None	2008	WSDOT	$56,130,000
I-5	Pioneer Street (Ridgefield)/ SR-501 Interchange	Replace Interchange	Interchange	2009	WSDOT/ Ridgefield	$33,000,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
I-5	The Salmon Creek Interchange Project (SCIP) at 134th/139th Street	Construct NE 139th St. from NE 20th Ave. to NE 10th Ave. Reconstruct interchange with ramps added at 139th St. NE 10th Ave. Improve NE 10th Ave. from 134th to 149th St. with turn lanes	Interchange	2010-2013	WSDOT/ Clark Co	$141,000,000
I-5/I-205	Salmon Creek Interchange Phase II	Improve access to I-205 with flyover from 134th St to I-205 southbound		2013-2020	WSDOT	$35,000,000
I-5	319th Street Interchange	Rebuild Interchange	Interchange	2011-2015	WSDOT	$40,000,000
I-5	I-205 to 179th Street	Auxiliary lane in each direction	3 lanes each direction	2012-2013	WSDOT	$22,000,000
I-5	179th Street to SR-502	Auxiliary lane in each direction	3 lanes each direction	2016-2025	WSDOT	See above
I-5	179th Street Interchange	Reconstruct Interchange	Interchange	2016-2025	WSDOT	$40,000,000
I-205	Mill Plain Exit (112th Avenue connector)	Build direct ramp to NE 112th Avenue	None	2007	WSDOT	$12,672,000
I-205	Mill Plain to NE 18th St - Stage I	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th	2011	WSDOT	$11,088,000
I-205	Mill Plain to NE 18th St - Stage II	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th/28th	2016	WSDOT	$85,933,000
I-205	Mill Plain to 28th Street	Ramps/Frontage Road between Mill Plain and 28th Streets	Overpass/ underpass	2020-2030	WSDOT	$20,000,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
I-205	I-205/SR14 Interchange	Rebuild Interchange		2020-2030	WSDOT	$100,000,000
I-205	SR-14 to Mill Plain	Ramp Separation	Interchanges	2016-2025	WSDOT	$40,000,000
I-205	28th St to SR 500	North ramps	None	2016-2025	WSDOT	$40,000,000
I-205	SR-500	WB SR-500 to SB I-205 Flyover	Interchange	2016-2025	WSDOT	$33,000,000
I-205	Padden Parkway Interchange	Rebuild interchange	2 lanes each direction	2016-2025	WSDOT	$30,000,000
I-205	SR-500 to Padden Parkway	3 general purpose and 1 auxiliary lanes each direction	2 lanes each direction	2016-2025	WSDOT	$100,000,000
I-205	Padden Parkway to 134th Street	3 lanes each direction	2 lanes each direction	2016-2025	WSDOT	$90,000,000
SR-14	I-205 to 164th Avenue	3 lanes ea. direction	2 lanes each direction	2016-2025	WSDOT	$25,500,000
SR-14	NW 6th Av. to SR-500/Union	2 lanes ea. direction w. interchange	1 lane each direction with intersections	2012	WSDOT	$57,000,000
SR-14	SE Union Street to 32nd Street	Add lanes and construct interchanges (for safety and capacity)	1 lane each direction with intersections	2016-2025	WSDOT	$119,000,000
SR-500	at I-205	Extend westbound auxiliary lane	3 lanes each direction	2009	WSDOT	$981,000
SR-500	St. Johns Interchange	New Interchange	Intersection	2011	WSDOT	$48,347,000
SR-500	42nd Avenue	Grade Separation	Intersection	2016-2025	WSDOT	$51,000,000
SR-500	54th Avenue	Interchange with collector-distributor connecting to Andresen	Intersection	2016-2025	WSDOT	See above
SR-500	at SR-503/ Fourth Plain	Construct turn lanes	Intersection	2011-2016	WSDOT	$1,000,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
SR-501, Port of Ridgefield Rail Crossing, vicinity of Pioneer Street, Ridgefield	Extend Pioneer St to Port of Ridgefield Rail Overcrossing to Port of Ridgefield	Grade separated crossing of mainline railway. Feasibility study and environmental impacts review	at-grade rail crossings	2010-2013	Port of Ridgefield/ WSDOT	$11,900,000
SR-502	NE 10th Avenue to Battle Ground	2 lanes each direction	1 lane each direction	2013	WSDOT	$87,729,000
SR-503	at SR-502	Intersection improvement		2011-2016	WSDOT	$2,100,000
SR-503	at Padden Parkway	Add Interchange	None	2016-2025	Clark Co./ WSDOT	$32,000,000
SR-503	Padden to SR-502	Add Lanes, 3 lanes each direction	2 lanes each direction	2025-2030	WSDOT	$132,000,000
SR-503	SR-502 to Gabriel Road	Add Lanes, 2 lanes each direction	1 lane each direction		WSDOT	$34,000,000
SR-503	East Fork Lewis River	Northbound and southtbound climbing lane	1 lane each direction	2011	WSDOT	$7,753,000
Vancouver Rail and 39th Street	RR at 39th Street	Vancouver Rail Bypass and W. 39th Street	At-Grade Crossing	2010	WSDOT	$114,950,000
Fleet Expansion and Replacement	System Wide	Fleet expansion and replacement for fixed route, demand response, and vanpool, including vehicles with alternative fuel technology	Follow replacement schedule, add vehicles as needed to provide service	Ongoing	C-TRAN	$5,000,000 per year average
Transit Enhance-ments	System Wide	Improvements/ amenities at bus stops, super stops, and transit centers - new and existing	Continuation of existing programs	Ongoing	C-TRAN	$5,750,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008

(projects listed are included in the Regional Travel Forecast Model)

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate
Admini-stration, Operations, and Maintenance Facility	65th Street & 18th Street	Expansion/ redevelopment	Current facility is 20 years old and over capacity	2010-2015	C-TRAN	TBD
7th Street Passenger Service	7th Street & Washington	Redevelopment of C-TRAN property at 7th Street	Transit Center being decommission ed, only passenger service remains		C-TRAN	$500,000
Central County Park & Ride	I-205 & Padden Parkway	Develop Park & Ride	C-TRAN owns property	2010-2015	C-TRAN	$10,000,000
Evergreen Park & Ride	18th Street & 136th Avenue	Replacement or expansion of existing facility	Current park and ride lacks visibility and easy access to I-205	2014-2023	C-TRAN	$14,000,000
219th Street Park & Ride	I-5 & SR-502	Park & Ride facility at new interchange	N/A	2020-2030	C-TRAN	$16,000,000
Salmon Creek Park & Ride	I-5 & 134th/139th Streets	Relocate existing park & ride as part of interchange project	Existing park & ride needs to move for interchange improvements	2008-2010	C-TRAN	$1,000,000
179th/ Fairgrounds Park & Ride	I-5 & NE 179th Street	Develop Park & Ride	N/A	2020-2030	C-TRAN	$5,000,000
Fisher's Landing Transit Center	SR-14 & 164th Avenue	Expansion of park & ride facility	Existing park & ride with land for phase 2 expansion	2014-2023	C-TRAN	$10,000,000
Vancouver Mall Transit Center	SR-500 & Thurston Way	Upgrades/ improvements to transit center	Existing facility needs improvements/ overhaul	2008-2010	C-TRAN	$1,250,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
High Capacity Transit	TBD	Alternatives Analysis for recommended corridor(s) from HCT Study (New Starts and/or Small Starts)	Congested roadways with opportunities for HCT investment	2008-2009	C-TRAN	$6,000,000
ITS Deployment	System Wide	Deploy ITS Phase 2 and 3, including digital radio system	Phase 1 complete	Ongoing	C-TRAN	$13,000,000
119th Street	72nd Avenue to SR-503 (117th Av.)	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Clark County	$26,220,000
119th Street	Salmon Creek Av. to 72nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2016	Clark County	$12,176,000
119th Street	NW 7th Av to NW 16th Av	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$7,350,000
179th Street	NE 10th to NE 29th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2010-2013	Clark County	$18,498,000
179th Street	NE 29th Avenue to NE 72nd Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$29,000,000
179th Street	NE 72nd Avenue to Cramer Road	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$15,660,000
179th Street	Cramer Road to NE 112th Av.	1 lane ea. direction, w/turn lane	None	2013-2030	Clark County	$4,524,000
179th Street	I-5 to NW 11th Avenue	2 lanes ea. direction, w/turn lane	I-5 to Delfel: 2 lanes each direction w/ turn lane Delfel to NW 5th: 2 lanes EB, 1 lane WB with Center Turn Lane	Completion will be by frontage improve-ments 2013 to 2030	Clark County	$14,550,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
72nd Avenue	N. of 88th Street to 110th St	2 lane ea. direction, w/turn lane	1 lane each direction	2008	Clark County	$8,740,000
Andresen	Padden Parkway	Add Interchange	Intersection	2013-2030	Clark County	$42,000,000
Highway 99	NE 99th Street to NE 119th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016	Clark County	$21,622,000
Highway 99	122nd to 129th Street	2 lanes each direction w/ turn lane	2 lanes each direction	2013-2030	Clark County	$8,700,000
Highway 99	South RR Bridge (Ross Street) to NE 63rd Street	2 lane ea. direction, w/turn lane (rail bridge)	2 lanes each direction	2013-2030	Clark County	$4,200,000
NE 119th Street	SR-503 to NE 172nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$14,703,000
NE 182nd Avenue	NE 159th to NE 174th St	Intersection improvements	1 lane each direction	2013-2030	Clark County	$2,320,000
NE 72nd Avenue	119th to 133rd Street	2 lanes each direction w/ turn lane	1 lane each direction	2023	Clark County	TBD
NE 72nd Avenue	NE 133rd to NE 219th St	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$42,430,000
NE Ward Rd.	NE 88th Street to NE 172nd Ave	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$14,500,000
NE Ward Rd.	NE 172nd Avenue to Davis Rd	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,699,000
NE Ward Rd.	NE Davis Rd to NE 182nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,500,000
Padden Parkway	SR-503	Add Interchange	Intersection	2013-2030	WSDOT/ Clark Co	See WSDOT section
St. John's Blvd.	NE 50th Avenue to 72nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2008	Clark County	$18,000,000
St. John's Blvd.	NE 68th St to NE 50th Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	*2013-2020*	Clark County	$12,560,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
Ward/172nd Av.	S. 99th Street to 119th St.	Realignment	Curved	2009	Clark County	$11,117,000
Grace Avenue	Grace Av/East Main St	Align S Grace and N Grace	Unaligned intersections	2009	Battle Ground	TBD
NE 199th Street	SE Grace to East City Limits	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2011-2015	Battle Ground	$2,000,000
SE Grace Avenue	East Main St to NE 199th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facils.	1 lane each direction	2007-2010	Battle Ground	$1,700,000
SR-502/12th Avenue	Reconfigure roadway system and signal removal	1 lane ea. direction, w bicycle and pedestrian facilities	None	2009	Battle Ground	TBD
SR-503 and NE 199th Street		Improve intersection - add turn lanes		2011-2015	Battle Ground	$215,000
38th Avenue	Bybee Road to Astor	1 lane ea. direction, w/turn lane	1 lane each direction	2010-2016	Camas	$4,530,000
NW 6th Av	Ivy to Division	1 lane ea. direction, w/turn lane	2 lanes each direction	2010-2016	Camas	$1,200,000
E 4th Street	Highland to E. City Limits	Urban upgrade	Unimproved road segment	2007	La Center	$1,488,912
E 4th Street		Culvert/bridge replacement		2010-2016	La Center	TBD
La Center Road	at Timmen Road	Construct left turn lanes	Unimproved intersection	2010-2016	La Center	$1,326,513
SR-501 Deceleration Lane	SR-501 and NW 26th Street	Add deceleration lane on north side of SR-501	1 lane each direction	2009	Port of Vancouver	TBD

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
West Vancouver Freight Access	5 Schedules (stages) - Schedule 1 new acess to BNSF mainline/spurs to LaFarge and Albina Fuel; Schedules 2 - 4 internal rail improvments; Schedule 5 new access to Columbia Gateway	Cost estimates are in the range of $77 million to $100 million	Hill track access from BNSF mainline, internal rail system. No service to Columbia Gateway	Phased, 2007-2020	Port of Vancouver	$77,000,000
Hillhurst Road	Royle to 229th extension	Upgrade to 5 lane principal arterial	1 lane each direction	2012	Ridgefield	$8,500,000
Hillhurst Road	SR-501 to Royle Road	1 lane each direction w/ turn lane	1 lane each direction	2013	Ridgefield	$4,053,000
Hillhurst Road	Realign and connect to 8th Ave.	Extend existing road	1 lane each direction	2015	Ridgefield	$2,375,000
I-5	219th St. to SR-501	NB auxiliary lane along I-5	None		Ridgefield/ WSDOT)	$6,460,000
I-5	SR-501 to 219th St.	SB auxiliary lane along I-5	None		Ridgefield/ WSDOT)	$5,911,000
Pioneer Street Bridge	over Gee Creek	Bridge Replacement	2 lane bridge	2015	Ridgefield	$1,500,000
Pioneer Street/SR-501	I-5 NB Ramps to S 10th Street	2 lanes each direction w/ turn lane	1 lane each direction	2008	Ridgefield	$4,238,000
Pioneer Street/SR-501	.5 mile west of S 45th to I-5 NB ramps	2 lanes each direction w/ turn lane	1 lane each direction	2010	Ridgefield	$2,269,000
Pioneer Street/SR-501	.5 miles west of S 45th to W of Reiman Road	Widen, 1-2 lanes each direction	1 lane each direction	2015	Ridgefield	$4,178,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
112th Avenue	Mill Plain to 49th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016-2025	Vancouver	$22,000,000
137th Avenue	49th Street to Vancouver City Limits	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$6,150,000
138th Avenue	28th Street to 39th Street	2 lanes ea. direction, w access management	1 lane each direction	2007-2012	Vancouver	$4,850,000
164th Avenue	SE 1st to SE 34th St	Reconstruct intersections to improve traffic flow	Unimproved intersections	2007-2012	Vancouver	$4,500,000
18th Street	162nd Avenue to 192nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Vancouver	$9,500,000
18th Street	97th Avenue to NE 138th Avenue	2 lanes ea. direction, w/turn lane		2007-2012	Vancouver	$28,858,000
18th Street	138th Avenue to 162nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$13,232,000
18th Street	87th Avenue to 97th Avenue	Extend existing street 1 lane ea. direction, w/turn lane	No street	2013-2030	Vancouver	$10,345,000
192nd Avenue	SE 1st Street to NE 18th Street	2 lanes ea. direction, w/turn pockets	1 lane each direction	2010	Vancouver	$7,000,000
49th Street	122nd to 137th Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver	$2,043,000
E. Mill Plain	136th Ave. Intersection	Intersection improvement	Substandard	2010	Vancouver	$2,500,000
Fourth Plain	I-5 to Railroad Bridge	2 lanes each direction	1 lane each direction with center turn lane	2013-2030	Vancouver	$15,000,000
Fourth Plain Boulevard/ Andresen	Intersection Influence Area	Reconstruct Fourth Plain in vicinity of 65th/66th		2007-2013	Vancouver	$2,500,000

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008

(projects listed are included in the Regional Travel Forecast Model)

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate
		Avenue to Andresen				
Fruit Valley Rd	Whitney to 78th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2020	Vancouver	$12,000,000
Grand Blvd.	Columbia House Way Intersection	Intersection improvement	Substandard	2008	Vancouver	$1,250,000
MacArthur Blvd.	Lieser Rd. Intersection	Intersection improvement	Substandard	2012	Vancouver	$2,500,000
Main Street	5th Street to McLoughlin	Convert to two-way street	One-way street	2008	Vancouver	$8,282,000
Main Street	5th Street to Columbia Way	Re-connect to waterfront S. of rail berm	No street	2011	Vancouver	$9,000,000
NE 28th Street	142nd Avenue to 162nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver	$3,997,000
SE 15th Street	164th to 192nd Ave.	Upgrade to collector arterial		2013-2030	Vancouver	$3,843,441
SE 1st Street	164th Avenue to 192nd Ave.	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$2,385,000
E Street/ D Street	West City Limits (Lechner/6th) to 32nd St	Boulevard Design Improvement (1 lane each direction with left turn, sidewalks and bike lanes)	2 lanes each direction (west of 39th St) 1 lane each direction (east of 39th St)	2009	Washougal	$3,350,000
County-wide	County Wide	Walkway & Bicycle Programs		Continuing	County-wide	$20,000,000
County-wide	County Wide	Demand Management		Continuing	County-wide	From CTR Plans
Various	System Wide	Intelligent Transportation System (ITS) Additions	None	Continuing	County-wide	From VAST Plan
TOTAL PROJECT COSTS						**$2,407,681,866**

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (11/27/07), amended July 2008						
(projects listed are included in the Regional Travel Forecast Model)						
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Juris-diction/ Agency**	**Cost Estimate**
FUNDING ALREADY IDENTIFIED						**$647,564,000**
TOTAL PROJECT COSTS						**$1,693,654,866**

Note: the construction of any Columbia River Crossing project is not included in the fiscally constrained MTP at this time. The MTP will be amended to include CRC recommendations in 2008 (see Strategic Plan description in MTP Appendix B).

A summary of costs of transportation system needs is presented in Table 4-4.

Table 4-4: Projected Costs of MTP Regional Transportation System Needs

Projected Costs of MTP Transportation System Needs		
	COSTS	
Transportation System Component	**Annual Cost**	**MTP 23-YEARS**
HIGHWAYS		
Total Highway Maintenance and Preservation	$30,200,000	$694,600,000
Regional Highway and Transit Capital Costs	$73,637,168	$1,693,654,866[3]
Transportation Demand Management	$2,000,000	$46,000,000
Transportation System Management	$2,000,000	$46,000,000
Pedestrian and Bicycle Projects	$4,000,000	$92,000,000
Sub-Total		**$2,572,254,866**
TRANSIT OPERATIONS*		**(2008-2030)**
Transit Operations	varies	$1,661,622,547

Source: State and Federal Transportation Revenue And Expenditure Tables, By County, WSDOT Economics Branch, C-TRAN

CONSISTENCY BETWEEN MTP AND STATE SYSTEMS PLAN AND LOCAL PLANS

All recommended projects contained within the MTP are consistent with State and local plans. The *MTP* financial plan is required by the federal government to be "fiscally constrained". The MTP includes state projects identified in the State Highway System Plan, 2007-2026 (2007). However, the State's Highway System Plan identifies some transportation needs beyond the revenue levels currently available for regional transportation uses identified in this MTP.

REVENUES AND COSTS

Federal law requires that the *MTP* be "fiscally constrained"; there must be sufficient revenues to fund the costs of identified transportation system improvements. With limited revenues available for funding transportation improvements, the most cost-effective transportation solutions must be identified and selected. The analysis of transportation needs and revenues presented in local Growth Management Act (GMA) plans, including their Capital Facilities Plan element, the *2007-2026 State Highway System Plan*, and *Metropolitan Transportation Improvement Program (MTIP) 2008-2011* are used as the basis for the MTP's financial plan.

[3] The bi-state I-5 Columbia River Crossing Project is addressed separately on page 4-33 of this MTP.

Both state and local transportation planning processes are required to exercise fiscal responsibility in preparing transportation finance plans. The GMA requires that local jurisdictions prepare a Capital Facilities Plan (CFP) element that includes transportation projects.

In comparing revenues generated in Clark County (Table 4-2) with estimated cost of regional transportation system elements presented in the MTP's Chapter 4 (summarized in Table 4-4), it appears that the MTP is fiscally constrained. There appear to be sufficient funds to fulfill the identified regional transportation system elements.

However, it should be pointed out that financial analysis for transportation needs over twenty plus years into the future is challenging. Table 4-2 reports on all transportation revenues; these revenues need to fund both the regional transportation system that is the focus of the MTP's Chapter 4 financial plan as well as fund the local transportation system. An uncertainty in financial analysis for the region is the future status of the region in terms of donor/recipient status. Clark County has been a 'donor' region within Washington over the past few decades. The County region collects more in transportation taxes and fees than it receives back in transportation revenues to spend on transportation projects. Between 1997 and 2006, the Clark County region generated over $1.1 billion in state and federal transportation revenues[4] and received back $880.6 million to use in funding transportation system improvements. This amounts to a ratio of 0.81 and a difference of $330.18 million over ten years. Another uncertainty is the inflation factor. It is recognized that costs for projects and strategies increase as the years go by and year of expenditure costs will be different from costs in 2007 dollars. The inflation factor has an impact on both the revenues and costs sides of the equation. On the revenues side, gas tax is a flat tax and does not keep pace with inflation. On the project costs side, the longer a project is deferred, the more expensive it will be. Another problem that the transportation sector faces is that although the federal government authorizes transportation dollars at a certain level, the actual appropriation for their use is at a lower level.

In funding the transportation system, revenues have to be allocated to project or operating costs based on funding eligibility requirements. For example, the 18th Amendment to the Washington State Constitution dedicates motor fuel tax proceeds to "highway purposes". Also, projects and/or operating costs have to fit the rules for the specific program from which funds are obtained. The funding of large highway construction projects, such as adding freeway lanes, improving intersections and constructing new freeway interchanges, almost always involves a mix of funding sources which must be packaged together in order to move forward with a particular project.

The type of project and the jurisdiction who owns the roadway (interstate, state highway, local/regional arterial) are often good indicators for how the transportation project is funded. Roadway operations, maintenance and preservation, pedestrian and bicycle projects are usually funded locally through an annual budget process. Projects that add system capacity, such as adding lanes on street arterials, state highways, or on the interstate system, will most likely involve multiple sources and may include various competitive grant programs.

[4] From Sources such as Motor Vehicle Fuel Tax, Motor Vehicle Licenses, Permits, Fees, etc

COLUMBIA RIVER CROSSING FUNDING ASSUMPTIONS

The Columbia River Crossing (CRC) Project is a collaboration of Oregon Department of Transportation, Washington State Department of Transportation, Metro, the Southwest Washington Regional Transportation Council, TriMet and C-TRAN as well as the cities of Portland and Vancouver. The CRC Project is a national transportation priority as it has been designated a "Corridor of the Future" by the Federal Highway Administration (FHWA). Accordingly, the FHWA has indicated that it is a high priority to address the safety and congestion issues related to the segment of Interstate-5 between Columbia Boulevard in Portland, Oregon to SR-500 in Vancouver, Washington.

The Federal Transit Administration (FTA) awards transit capital construction grants on a competitive basis. The CRC project will be submitting an application to the FTA for entry into Preliminary Engineering and eventually for a full funding grant agreement. The Metro region has been highly successful in securing FTA funds and it is considered reasonable, based on early cost-effectiveness rating analyses, that the high capacity transit component of the CRC Project will secure the federal transit funding shown in the table below.

In addition, the Governors of Oregon and Washington have stated their commitment to work with their respective state legislatures to provide state funds to add to federal funding.

Also, given that there is very little diversion of traffic to collectors or residential streets, and that tolling I-5 would provide an additional funding source not available to many transportation projects in the area and tolling would also provide a substantial demand management tool, tolling is another unique source of funding for the project. The state of Washington has accumulated credits from tolls imposed on other projects in the state that can be used as local match for federal funds. The state has indicated support for using a portion of these credits for the transit component of this project. These assumed funding sources for the total bi-state project are summarized below (all figures in millions of dollars).

Table 4-5: Columbia River Crossing – Total Project Costs
(both Oregon and Washington sides in millions of dollars)

Costs		Low		High
Highway		$2,773		$2,920
Transit		$750		$750
	Total	$3,523		$3,670
Revenues		**Low**		**High**
Toll Bond Proceeds		$1,070 - $1,350		$1,350
Federal Discretionary Highway		$400 - $600		$400 - $600
State Funds		$823 - 1,303		$970 - $1,450
FTA New Starts		$750		$750
Toll Credits		$188		$188
	Total	$3,523		$3,670

FUNDING STRATEGIES

Transportation projects and strategies identified in the fiscally-constrained MTP are mostly projects that are identified in the state Highway System Plan and in local Comprehensive Plans' Capital Facilities Plan elements. As such, they have already withstood the test of fiscal constraint and funding feasibility in the state and local planning processes. Clark County is a 'donor' region as the region collects more in transportation taxes and fees than it receives back in transportation revenues. As a significant urban area in Washington State, this region can expect to continue as a 'donor' region but if the ratio of collections to distributions changes in Clark County's favor, this could have a significant impact on the ability to fund transportation system improvements in this region.

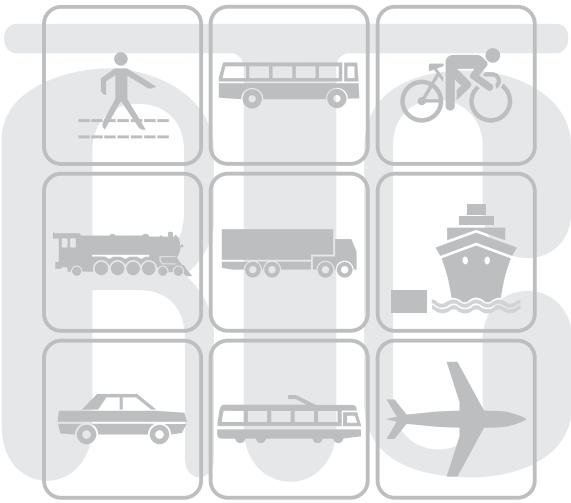
C-TRAN is currently in the process of updating its 20-Year Transit Development Plan, which will provide policy guidance for service, supporting capital projects, and funding for the next 20 years. C-TRAN would need to seek voter approval for additional sales and use tax to keep pace with transit demand as the population grows.

FISCAL CONSTRAINT AND THE MTP

The MTP for Clark County represents a fiscally-constrained transportation Plan in that projected revenues appear to be available in the twenty-three year time horizon to meet the estimated cost of designated regional transportation system projects[5] (in 2007 dollars and year of expenditure) listed in Appendix A. The financial outlook can change if cost estimates for certain projects are increased and/or if projected revenues increase or decrease.

The Clark County region does have additional transportation needs beyond those improvements addressed in the "fiscally-constrained" MTP. Projects to meet these needs cannot be incorporated into the Plan at this time as they require further study as part of the comprehensive growth management planning process or state planning process, but these needs will be reviewed again in the next MTP update anticipated for late 2008.

[5] Regional projects include all state transportation facilities, principal arterials and some minor arterials. Local projects (remainder of the minor arterial system, collectors and local roads) are not included in the MTP's detailed fiscal analysis.



CHAPTER 5

SYSTEM IMPROVEMENT AND STRATEGY PLAN

OVERVIEW: DEVELOPMENT OF A BALANCED REGIONAL TRANSPORTATION SYSTEM

This chapter summarizes the solutions and strategies needed to provide an adequate level of regional mobility and accessibility over the next 20 plus years and to support the Comprehensive Growth Management Plan land use goals for the region. A wide range of solutions and strategies are needed to meet regional travel demand. There are strategies to address the travel demand side as well as transportation system supply side, strategies to increase the efficiency of the existing regional transportation system as well as strategies to provide for capacity expansion to accommodate growth, solutions requiring physical construction and solutions requiring planning applications with consideration for multiple transportation modes. In developing a balanced regional transportation system it is not only capacity deficiencies that must be addressed but also preservation and maintenance of the existing regional transportation system, as well as plans to make for a safer regional transportation system for mobility of people and freight. All transportation modes are to be addressed. Development of a balanced regional transportation system with reduced dependence on the single occupant vehicle (SOV) relies on development of alternative modes of transportation, transit and non-motorized modes, changed land use densities and patterns and/or changes in lifestyle. The chapter concludes with a map showing transportation system capacity expansion improvements included in the fiscally constrained MTP.

MAINTENANCE OF THE EXISTING REGIONAL TRANSPORTATION SYSTEM

Of prime importance in the planning for the regional transportation system is the need to maintain the existing system. Maintenance addresses the day-to-day activities needed to keep the transportation system in good working order; daily operations that keep the system safe, clean, reliable and efficient. Such activities include incident response, filling potholes, repairing bridges, drainage ditches, guardrails, plowing snow, removing rocks, and efficiently operating traffic signals. The Washington State Department of Transportation (WSDOT) and local jurisdictions monitor the condition and operation of the existing system and program projects to maintain the system. The *MTP* supports the routine, regularly-scheduled and necessary maintenance work identified by local jurisdictions. The MTP supports maintenance being given high priority in the programming of transportation funds.

Maintenance, preservation and safety are primary policy considerations in the Washington Transportation Plan (WTP) published by WSDOT in November 2006. The issues are also addressed in WSDOT's Highway System Plan 2007-2026. Both documents can be reviewed at WSDOT's website: www.wsdot.wa.gov

PRESERVATION OF THE EXISTING REGIONAL TRANSPORTATION SYSTEM

Preservation of the existing regional transportation system is also important to protect the heavy investments already made in the system. Preservation can prolong the life of the existing transportation system through such projects as repaving roads, rehabilitating bridges, seismic retrofit and rock fall protection. Preservation needs are identified through the Pavement Management System (PMS) and local needs analysis and the MTP is highly supportive of giving prime consideration to such project needs.

BRIDGES

Bridge maintenance and preservation needs are identified through the Washington State Bridge Inventory System (WSBIS). WSDOT's Highway System Plan, 2007-2026, address bridges and structure. Bridges on the Clark County highway system include: I-5 bridge crossings of the Columbia River, Salmon Creek, NE 129th Street, NE 134th Street, East Fork Lewis River and Lewis River; SR-14 crossings at West Camas Slough and Lawton Creek; SR-501 crossing of the rail lines in Vancouver, SR-503 crossings of Cedar Creek, Salmon Creek, Chelatchie Creek and the Lewis River at Yale; the La Center Bridge and Heisson Bridge. Bridge needs can include deck preservation, steel bridge painting, seismic retrofits, movable bridge repair, and scour protection. The I-5 Columbia River Crossing Project's (CRC's) Locally Preferred Alternative (LPA) includes a replacement Interstate-5 bridge.

SAFETY

Accidents, their number, location, and type, are monitored by WSDOT and local jurisdictions and if there is deemed to be a safety deficiency then remedial measures are considered and corrective action taken. The MTP supports regional system safety projects identified through Safety Management System (SMS) planning and local plans and programs to correct safety deficiencies on the regional transportation system. In November 2007, the RTC Board supported the construction of roundabouts on SR-14 through Washougal as a short-term solution to intersection safety and capacity issues rather than invest in upgrading the existing signalized intersections at 15th Street and 32nd Street. The long-term transportation solution will be to construct grade-separated interchanges. The WSDOT "Strategic Highway Safety Plan: Target Zero" (SHSP; revised February 2007) was developed to identify Washington State's traffic safety needs and to guide investment decisions in order to achieve significant reductions in traffic fatalities and disabling injuries. WSDOT has identified both crossover accidents and run off the road accidents as two safety areas to focus on.

In March 2007, the Washington State Department of Licensing convened the At Risk Driver's Task Force to provide recommendations on how to reduce fatalities and serious injury collisions from drivers determined to be "at risk." The Task Force focused on three areas: 1) Young and aggressive drivers, 2) Elderly and medically impaired drivers, and 3) Drug impaired drivers. The Task Force published its final report in October 2007.

Measures to improve the safety and security of the transit system for transit passengers and employees will continue to be implemented by C-TRAN in keeping with guidance from the Federal Transit Administration.

ECONOMIC DEVELOPMENT AND FREIGHT TRANSPORTATION

Economic development is linked to the market conditions, policies as well as provision of infrastructure to support development. Therefore, the prosperity of a region is somewhat dependent on the provision of transportation infrastructure to support its economic development. In RTC Board discussion, economic development emerged as a prime evaluation criteria for prioritizing MTP projects. Economic development is also a significant focus of the updated Comprehensive Growth Management Plan for Clark County (September 2007).

FREIGHT TRANSPORTATION

At the statewide level, freight transportation is recognized as a vital component for Washington's economic health. The Washington's Transportation Plan addresses (WTP; November 2006) addressed freight transportation and speaks of three components to the freight transportation system: 1) international gateways, 2) transportation serving Washington's producers and manufacturers, and 3) the retail and wholesale distribution systems. Freight transportation underpins our national and state economies, supports national defense, directly sustains hundreds of thousands of jobs, and distributes the necessities of life to every resident of the state everyday. Washington is a gateway state, connecting: 1) Asian trade flows to the U.S. economy, 2) Alaska to the Lower 48, and 3) Canada to the U.S. West Coast. About 70 percent of international goods entering Washington gateways continue on to the larger U.S. market. 30 percent become part of Washington's manufactured output or are distributed in our retail system. Washington state's manufacturers and farmers rely on the freight system and Washington producers generate wealth and jobs in every region of the state. Washington's distribution system is also a fundamental local utility, since without it citizens would have nothing to eat, wear, or read, no spare parts, no fuel for cars, and no heat for homes. Without freight transportation, the economy of the region would no longer function. What is known is that the value and volume of goods moving in these freight systems is huge and is growing. More information on freight transportation in Washington state can be found at WSDOT's website at: http://www.wsdot.wa.gov/planning/wtp/documents/Freight.htm

WSDOT adopted a Statewide Freight and Goods Transportation System (FGTS) in 1995 that categorizes highways and local roads according to the tonnage of freight they carry. The FGTS is updated periodically. Washington State also created the Freight Mobility Strategic Investment Board (FMSIB) with a mission to create a comprehensive and coordinated state program to facilitate freight movement between and among local, national and international markets in order to enhance trade opportunities. The Board is also charged with finding solutions that lessen the impact of the movement of freight on local communities. The Board proposes policies, projects, corridors and funding to the legislature to promote strategic investments in a statewide freight mobility transportation system.

At the local level, Clark County's economy is integrally linked with that of the larger Vancouver/Portland metropolitan area. The Vancouver/Portland metro region is connected by two bridges over the Columbia River on I-5 and I-205. Recognizing the importance of freight transportation to this region's economy, RTC, WSDOT and the Port of Vancouver have participated in recent Bi-state regional freight transportation planning efforts. The "Portland and Vancouver International and Domestic Trade Capacity Analysis" (Port of Portland et al) was published in 2006 to determine the impact of increased international and domestic trade on the region's supply of and demand for trade support infrastructure, including surface transportation. The report addresses 1) the overall growth rate for the region's freight volumes to 2035, 2) assesses global market dynamics that may affect trade volumes through Portland/Vancouver gateways, and 3) identifies challenges and opportunities trade volume growth presents to the region. Significantly, the report forecasts a doubling of trade volume in the region by 2035. The Study can be referenced at the following website address: http://www.flypdx.com/PDFPOP/Trade_Trans_Studies_TrdCap_Exec_Smry.pdf

In 2006 to 2007, WSDOT, RTC and Port of Vancouver staff has also participated in the Regional Freight and Goods Movement Task Force convened by Metro to address regional freight transportation system needs.

As reported in Chapter 3 (pages 3-17 to 3-18), there are three Port districts in Clark County; the Port of Vancouver, Port of Ridgefield and Port of Camas/Washougal. The Ports help the region to achieve jobs' growth and have a significant interest in freight transportation.

FREIGHT RAIL

In Washington State, freight rail needs were recently addressed in the Washington State Transportation Commission study, "Statewide Rail Capacity and System Needs Study" (December 2006). The Study notes that the economic vitality of Washington State requires a robust rail system capable of providing businesses, ports, and farms with competitive access to North American and overseas international markets. However, the rail system is nearing capacity and pressure on the rail system will increase as the state economy grows. The total freight tonnage moved over the Washington State rail system is expected to increase by about 60% between 2005 and 2025. The Study recommends policies, procedures and approaches to governance and management of the State's rail programs and assets that will help the State make effective and responsible improvements to the rail system. The State's role is shaped by the fact that nearly all freight railroads are privately owned for profit companies. While the major freight railroads are investing to add capacity and improve service in Washington State, their business practices and investment priorities are driven primarily by the railroads' national-level needs and competition.

Earlier, in 1990 the Washington State Legislature had defined the purpose of the state's freight rail program and planning activities. WSDOT was directed to maintain and improve the freight rail system in the state through better freight rail planning, better cooperation to preserve rail lines, and increased financial assistance from the state. In 1995 the Legislature had broadened the focus of the WSDOT Freight Rail Program to include not only light density lines and rail corridor preservation, but also mainline congestion and port access. The *Washington State Freight Rail Plan* provided detailed information about the state rail system, state freight rail programs and projects, rail line analysis, and funding priorities for the future.

The "Portland and Vancouver International and Domestic Trade Capacity Analysis" (Port of Portland et al; 2006) provides an assessment of the outlook for rail. The Study concluded that while the tonnage of goods will double between 2006 and 2035, the rail's share of total tonnage is forecast to drop because of the continuing structural shift in the economy toward industries and trade that generate lighter, higher-value, freight shipments. Nevertheless, rail tonnage will increase. The Pacific Northwest (Washington and Oregon) will grow faster than the national average. Therefore, the region will see a doubling or more of freight demand. In the Portland/Vancouver region, total freight tonnage is expected to grow from about 300 million tons today to 600 million tons in 2035. Demand for rail will grow more slowly than truck, but rail will carry about 50% more tonnage than it does today. The Portland/Vancouver region generates about 35 million tons for rail today and this will grow to over 56 million tons by 2035.

Freight rail needs were addressed in the Portland-Vancouver region were addressed as part of the I-5 Transportation and Trade Partnership. The Partnership concluded that several low-to-medium cost solutions can significantly improve existing rail capacity. One such "incremental improvement" is a proposed two-main track bypass around BNSF's Vancouver Yard. The Portland-Vancouver region "incremental improvements" are sufficient to address capacity needs for approximately 5 to 10 years given a growth rate of 1.625% to 3.25% per year. Beyond this, additional improvements will be required that will require further study to fully identify. The Vancouver Rail Project, to add new Vancouver Yard rail bypass tracks and provide a grade-separated crossing of the rail yard by West

39th Street, is now funded as one of the state "nickel package" projects. The intent of the Vancouver Rail Project is to increase safety, reduce rail congestion, and improve the on-time performance of Amtrak's passenger rail service. The Port of Vancouver has recommended improved rail access to the Port's industrial lands and a project to provide improved freight rail access to the Port of Vancouver is identified in the MTP list of projects. A project to provide a grade-separated crossing of the main BNSF north/south rail-line to improve access to the Port of Ridgefield is included in this MTP.

MARINE FREIGHT

Freight also travels to and from our region via the Columbia River. As noted in Chapter 3 (page 3-17) the primary marine port in Clark County is the Port of Vancouver, located on the Columbia River. The Port emphasizes the importance of channel depth to its activities. The current channel depth limits service from ocean-going vessels, making it difficult for shippers to transport goods cost-effectively, especially if the vessels cannot be loaded to maximum capacity to sail out of the Columbia River. A $188 million project involves deepening the 40-foot navigation channel to 43 feet for 106 miles between the mouth of the Columbia River to the Port of Vancouver. A deeper channel will allow larger ships to import and export cargo more efficiently that will benefit trade. Nearly 40 percent of the nation's wheat is exported down the Columbia River so this transportation corridor impacts both farmers in the region and across the nation.

AIR FREIGHT

As noted in Chapter 3 (page 3-19), the Clark County region relies on access to the Portland International Airport in Oregon for air freight needs.

NON-MOTORIZED MODES

The Regional Transportation Plan supports the development of pedestrian and bikeway facilities to both access the transit system and for use as alternative transportation modes. Reduced reliance on automobiles is largely dependent on the development of adequate sidewalks and bikeways to access activity centers and to allow for intermodal connections in use of the transit system. The development of non-motorized transportation modes is a strategy that can maximize the capacity of the existing transportation system. Sidewalk and bicycle path/lane projects are most appropriately identified at the local level. If pedestrian and bicycle projects are forwarded to compete for regional funding, such as federal Surface Transportation Program Enhancement funds, then projects can be prioritized through the regional transportation program. Local jurisdictions within Clark County are giving more emphasis than in previous programs to non-motorized projects in efforts to redress the balance in transportation system development from highway and auto dependence to provision of alternative modes. There is additional description of walking and bicycling modes in Appendix A of the MTP.

In 2005, the Washington State legislature enacted amendments to the Growth Management Act to require new elements in local comprehensive plans. These new requirements are designed to promote an increase in the physical activity of the citizens of Washington State. The legislature found that regular physical activity is essential to maintaining good health and reducing the rates of chronic disease. The legislation says that, "providing opportunities for walking, biking, horseback riding, and other regular forms of exercise is best accomplished through collaboration between the private sector and local, state, and institutional policymakers. This collaboration can build

communities where people find it easy and safe to be physically active. It is the intent of the legislature to promote policy and planning efforts that increase access to inexpensive or free opportunities for regular exercise in all communities around the state." The transportation elements of local comprehensive plans must now include a pedestrian and bicycle component to identify planned improvements for pedestrian and bicycle facilities. There is also a requirement that, wherever possible, the land use element should consider utilizing urban planning approaches that promote physical activity.

Pedestrian and bicycling needs are identified through state and local planning programs, including recommendations from the Clark County Bicycle Advisory Committee, the local and Clark County Comprehensive Growth Management Plans, capital facilities plan elements, local transportation corridor plans and the *Regional Trail and Bikeway System Plan* (1992, updated 2006). The 2006 Plan has growth to encompass 16 regional trails. There are eight trail additions to the 1992 Plan; four new regional trails and four trail extensions. The Plan envisions a trail network of nearly 240 miles of regional trails and bikeways in Clark County and is the next step toward providing citizens and visitors transportation alternatives to daily vehicle trips and safer, more accessible opportunities for a healthier lifestyle. The Plan notes it has "one foot in the transportation system and one foot in the parks system and it needs both feet to work". Trails outlined in the Plan are: 1) Lewis & Clark Discovery Greenway, 2) Chelatchie Prairie Railroad, 3) Lake to Lake, 4) Salmon Creek Greenway, 5) Padden Parkway, 6) I-5 Corridor, 7) I-205 Corridor, 8) East Fork of the Lewis River, 9), Battle Ground/Fisher's Landing, 10) Washougal River Corridor, 11) North Fork of the Lewis River Greenway, 12) Whipple Creek Greenway, 13) North/South Powerline, 14) East Powerline, 15) Livingston Mountain Dole Valley, 16) Camp Bonneville and 17) Lower Columbia River Water Trail. The Plan seeks to develop a seamless trail and bikeway system throughout the region. As such, the Plan reviewed the developed and planned trail and bikeway facilities to complete a gap analysis of the existing system. The Plan also contains design guidelines and notes the cultural and historic resources this region possesses that can be enjoyed through trails development. Detailed information on the trails system can be found at: http://www.ci.vancouver.wa.us/parks-recreation/index.asp

Also of regional significance is improvement of pedestrian and bicycle facilities that will improve access to transit facilities. There are many areas where coordinated efforts to improve pedestrian facilities will improve access to transit. Bike racks are already provided on C-TRAN fixed-route buses and bike lockers are provided at C-TRAN Transit Centers and Park and Rides.

Local jurisdictions have adopted design standards for arterials that include sidewalks and bicycle facilities.

Local jurisdictions work in partnership with School Districts on a Safe Routes to Schools Program to identify transportation improvements that can improve safe access to schools. These improvements can include signage, curb cuts, sidewalks, crosswalks, bike lanes and bike paths. They should also include enforcement of traffic rules to ensure a safe journey to school and encouragement of bike and walk modes for school students.

The pedestrian and bicycle modes are promoted through the Active Community Environments program in Clark County; a program that encourages human powered transportation for mobility and health. Monthly meetings of the Active Community Environments Task Force were held throughout 2005 and 2006 with participation of Community Choices, citizens, local jurisdictions, advocates for people with disabilities and for older people within the community, the Community Cycling Center

and the Discovery Walks Festival. In 2007, the work continues with the Walkability Policy Team and Walkability Awareness Campaign Team.

BICYCLE TRANSPORTATION

Clark County's Bicycle Advisory Committee helps to identify and prioritize needed bike projects. In addition, jurisdictions in Clark County have addressed the need for bicycle and pedestrian projects in their Comprehensive Growth Management Plans and as noted above in the *Regional Trail and Bikeway System Plan* (1992, updated 2006). In addition to the trails listed in the section above, notable existing pedestrian and bicycle trails in Clark County include the Columbia River Waterfront Trail, the Discovery Trail, the Columbia River/Evergreen Highway Trail, as well as bike lanes on priority arterials. Also of regional significance is improvement of bicycle facilities which will improve access to transit facilities. Bike racks are already provided on C-TRAN fixed-route buses and bike lockers are provided at C-TRAN Transit Centers and Park and Rides. Clark County produces a map showing bicycle facilities and routes throughout the County. A "Cycling Clark County" map is published by Clark County and was updated in 2006. The Clark County Geographic Information System (GIS) section also includes an information layer for bicycling on its "Clark County maps Online, the Digital Atlas". In October of 2005, the City of Vancouver was awarded a Bronze level Bicycle Friendly Community designation by the League of American Bicyclists. The City of Vancouver has published a new, bi-state, "Cycling the Cities" bicycle map showing bike facilities, routes and trails in the Vancouver and Portland area. The complete bicycling guide contains a map of both the Vancouver urban area (north to Salmon Creek and east to Camas) and the City of Portland. Helpful cycling tips and contact information are also listed in the guide.

PEDESTRIAN TRANSPORTATION

Local jurisdictions program projects to provide for better connectivity in the pedestrian walkways throughout Clark County. The local transportation elements of the Comprehensive Plans for each city include recommendations for pedestrian transportation in each jurisdiction. The City of Vancouver and Clark County have programs to prioritize and install curb cuts for better sidewalk accessibility. C-TRAN also notes that pedestrian facilities are also important for access to transit.

Both bicycle and pedestrian facilities are integral design elements in road projects. As roads are upgraded throughout the County then bicycle and sidewalks are added.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The MTP supports TDM as a strategy to maximize the efficiency of the existing transportation system. Transportation demand management strategies to reduce vehicle trips on the regional transportation system can include use of transit, carpooling, vanpooling, working of flexi-hours and/or compressed work week, and working from home with use of communications technology, known as telecommuting. A list of many TDM strategies is outlined in Table 5-1. Such TDM strategies will become increasingly important as travel demand in the region continues to grow and transportation investments do not keep pace. TDM strategies can help to preserve transportation system capacity and RTC Board direction is to promote the use of such strategies throughout the Clark County region.

Table 5-1: Outline of Transportation Demand Management Strategies

Outline of Transportation Demand Management Strategies

Type	Description
Education	Transport agencies, professionals and the public consider and understand TDM
TDM Marketing	Provide public information and encouragement programs
Commute Trip Reduction Programs	Employee commute trip reduction (CTR) programs
TMAs	Transportation Management Associations provide trip reduction services in a commercial or employment center
Manage Special Transport Activities	Manage special types of transport and special events for efficiency
Financial Planning	TDM competes against capacity expansion in terms of cost effectiveness
Transportation Allowance	Provide commuter with a transportation allowance rather than free parking
Transit	Maximize efficiency and effectiveness of transit service
Park and Ride	Parking at urban-fringe transit stops
Vanpool Programs	Promotion/organization of vanpools
Rideshare Programs	Rideshare promotion and matching
HOV Preference	Transit and rideshare lanes and other priority measures
Free Transit Zones	Free transit in commercial centers
Bicycle Improvements	Improved bicycle planning and facilities
Intermodal Bike	Bike lockers at transit stops, bike racks on transit vehicles
Telecommuting	Working at home to avoid commute trips
Alternative Work Hours	Flex time and alternative work weeks (such as 4 10-hour days)
Guaranteed Ride Home	Provide a limited number of free rides home for transit and rideshare commuters
Security	Address security concerns of rideshare, transit, cycle and pedestrian commuters
Parking Pricing	Charge users directly for parking. Charge by the hour or day rather than the month
Full Cost Pricing	Pricing reforms to encourage efficient transport
Road Pricing	Road tolls and congestion pricing
Mileage Fees	Per-mile charges for road use and/or distance-based vehicle insurance and registration fees
Fuel Taxes	Increase federal and state fuel taxes
Vehicle Restrictions	Prohibit vehicle use in specific areas
Cash Out Parking	Provide employees who do not drive the cash equivalent of parking subsidies
Reduce Parking Requirements	Reduce parking requirements in zoning laws
Preferential Parking	Preferential parking for rideshare vehicles
Vehicle Rentals	Encourage car-share cooperatives and neighborhood vehicle rentals
Land use Reforms	Higher density, mixed use, growth management
Neotraditional Planning	Develop neighborhoods that encourage walking bicycling and transit use
Traffic Calming	Use strategies to reduce vehicle traffic speeds when appropriate
Monitor TDM	Perform surveys and other monitoring of TDM program effectiveness

COMMUTE TRIP REDUCTION (CTR)

In 2006, the **Commute Trip Reduction** Efficiency Act (RCW 70.94.527) was passed by the Washington legislature. The 2006 law took the place of the Commute Trip Reduction law passed by the Washington State legislature in 1991. The 1991 law required that local jurisdictions with major employers adopt a Commute Trip Reduction Ordinance and that employers who have 100 or more employees arriving at work between 6 a.m. and 9 a.m., year-round, should establish a commute trip reduction program for their employees. Under the 1991 law, all affected Clark County jurisdictions adopted CTR ordinances. Following the 2006 law, the CTR program is now designed to ensure that CTR plans and employer goals are coordinated with transportation and growth plans. The CTR program now focuses on Urban Growth Areas (UGAs) with the most congested state highways. These Urban Growth Areas are the areas with greatest need and potential benefit to be derived from CTR programs. Within Clark County, these Urban Growth Areas are Vancouver, Camas and Washougal as well as the unincorporated Clark County portion of the Vancouver UGA. The overall goals of the CTR program are to improve transportation system efficiency, conserve energy, and improve air quality by decreasing the number of commute trips made by people driving alone.

The CTR program requires that local jurisdictions, Regional Transportation Planning Organizations (RTPOs), major employers, transit agencies, WSDOT, and the CTR Board work collaboratively. During 2007, Commute Trip Reduction Plans were developed for jurisdictions and the region. Guidance on implementation and update of the Plans is provided through Washington Administrative Chapter 468-63. In early October 2007, the RTC Board of Directors adopted the Southwest Washington Regional Transportation Council, Draft Regional Commute Trip Reduction Plan, endorsed the local CTR Plans for the City of Vancouver, Unincorporated Clark County, City of Camas and City of Washougal, and certified the Downtown Vancouver Growth and Transportation Efficiency Center voluntarily developed by the City of Vancouver. (RTC Board Resolution 10-07-21)

Local CTR Plans

The local CTR plans developed by the City of Vancouver, Unincorporated Clark County, City of Camas and City of Washougal analyze local conditions, establish goals and suggest a funding plan and program recommendations to achieve compliance with performance goals in the Act. RTC is responsible for ensuring that local CTR plans are consistent with the CTR rules (Washington Administrative Code 468-63) and the regional CTR plan. RTC found the four local plans to be in compliance with the CTR rules, consistent with the Regional CTR Plan and the Plans were submitted to the state CTR Board. Following submittal of draft local plans in October 2007, updates to local plans must be submitted by March 31 every two years. All local CTR Plans in the Clark County region set the goals of a 10% reduction in trips, the equivalent of a 13% reduction in vehicle miles traveled.

Regional CTR Plan

The CTR Efficiency Act expands the role of Regional Transportation Planning Organizations (RTPOs), such as RTC, in CTR planning. Under the CTR Efficiency Act, the MPO/RTPO is now required to develop a regional CTR plan. The purposes of the Regional CTR plan are to 1) Describe Regional Land Use and Transportation Conditions, 2) Establish Minimum Criteria for Growth and Transportation Efficiency Centers, 3) Establish Regional Program Goals and Targets, 4) Describe how Progress will be Measured, 5) Describe Planned Local Services and Strategies for Achieving Goals and Targets and 6) Provides a Sustainable Financial Plan. Following submittal of the Regional CTR Plan in October 2007, updates must be submitted by March 31 every two years if changes are made. Updates are expected to be developed concurrent with update of the regional

transportation plan. RTPOs with a regional CTR plan have to submit a first annual progress report to the CTR Board by June 2008 and every year thereafter. The report must describe progress in achieving the regional CTR goals and targets and highlight any problems encountered.

Growth and Transportation Efficiency Centers (GTECs)

Under the CTR law, local jurisdictions have the option to propose Growth and Transportation Efficiency Centers (GTECs) that allow flexibility in implementing CTR programs. RTPOs, such as RTC, have to certify GTECs proposed by local jurisdictions before they can be forwarded to the state for funding eligibility consideration. The City of Vancouver analyzed two potential GTECs in Downtown Vancouver and the area of Columbia Tech Center in east Vancouver and in 2007 year submitted the Downtown Vancouver GTEC for state funding consideration. The GTEC proposal is voluntary on the part of City of Vancouver but outlines a higher goal for trip reduction in an area where employment is concentrated.

After the state CTR Board approves the Plans, cities and counties will update their CTR ordinances and the new CTR program will be underway in January 2008. Future Comprehensive Plan updates will be expected to reflect the requirements of the CTR program and to support its successful implementation.

Currently, there are forty affected employers in Clark County. Another eight employers participate voluntarily in the program. The Clark County Commute Trip Reduction report card for 2005 to 2007 indicates that the CTR program results in 4,372,745 fewer vehicle miles traveled. The program in 2005 to2007 also reduced CO_2 emissions by 2,076 tons per year and saved 212,491 gallons of fuel.

The I-5 Partnership in 2002 concluded that Transportation Demand Management (TDM) and Transportation System Management (TSM) are essential strategies for improving our mobility. Today, the Columbia River Crossing project (CRC) is also developing a bi-state TDM program as part of the cross-Columbia travel strategies. TDM is about reducing auto trips, shortening some, eliminating others and making our transportation system more efficient.

CarpoolMatchNW.org provides a secure, online matching service that allows people in the Clark County, Portland and Salem region to find others who are interested in sharing a ride to work. Its usage has increased, especially following the significant increase in gas prices experienced since 2005. Recently, www.ClarkCommute.org was launched to provide access to information for people interested in CTR, in finding alternative transportation solutions.

TRANSPORTATION SYSTEM MANAGEMENT (TSM)

TSM is also a strategy to maximize the efficiency of the existing transportation system. In 1993, a study to investigate the feasibility of various transportation system management strategies was conducted by ODOT. The ODOT Advanced Transportation Management System (ATMS) study was coordinated with WSDOT and included analysis of traffic surveillance, traffic control and traveler information needs in the I-5, I-205, SR-14 and SR-500 corridors. TSM measures include a wide range of strategies, most of which are ITS related to an intelligent transportation system. These include an incident response program, increased signage to alert motorists of travel conditions, ramp metering, improved communication means, Intelligent Vehicle/Highway System (IVHS) projects, and traffic signal interconnects to improve the efficiency of operation of the regional transportation system. Other TSM elements include minor capital upgrades such as channelization of traffic at

intersections. The need for ramp metering on some of the interchange ramps, with greatest need in the I-5 corridor, was identified in the WSDOT Systems Plan component of the *Statewide Multimodal Transportation Plan*.

INTELLIGENT TRANSPORTATION SYSTEM (ITS)

Like TSM, ITS is also part of the transportation tool kit to better manage the transportation system. The key difference is the ITS uses real time information to integrate and manage conventional transportation system components such as roads, transit, ramp meters, traffic signals, and managing incidents for more efficient operations and performance. ITS uses advanced technology and information to improve mobility and productivity and enhance safety on the transportation system.

The Vancouver Area Smart Trek program plan was initiated in 1999 and completed in January 2001. the ITS Plan was developed through a partnership of transportation agencies working together to plan, develop and implement an intelligent transportation system for the Clark County region to improve the operation, safety, and efficiency of the transportation system. ITS efforts are being coordinated with the Oregon Department of Transportation to ensure that ITS strategies throughout the bi-state region are integrated and complementary. The VAST Steering Committee, made up of the Southwest Washington Regional Transportation Council, the City of Vancouver, the Washington State Department of Transportation, C-TRAN, Clark County, the City of Camas, and The Oregon Department of Transportation, meets regularly to facilitate the coordination, planning, funding, and deployment of ITS projects. This committee promotes the integration of ITS projects, the communications system, and the operation of ITS system elements. The VAST Program contains the following seven initiatives that, together, are intended to improve the efficiency of the transportation system:

Communications Infrastructure - Communications infrastructure is the backbone for all ITS deployment.

Traveler Information - Traveler information provides travelers with the ability to make an intelligent choice regarding mode, route and travel time through a wide range of distribution methods. This includes, but is not limited to websites, variable message signs, kiosks, television, radio, phone, and highway advisory radio. It uses both static and real-time information.

Incident Management - The freeway and arterial incident management plan covers operation of any function, device or system that is dedicated to the response to or monitoring of incidents on arterials and freeways. Early detection and a coordinated effort to respond to and clear roadway incidents can greatly reduce their impact on congestion and delay.

Transportation Management - The freeway and arterial transportation management plan covers the operation of all functions, devices and systems installed or developed for managing freeways and arterials. It includes the implementation of transportation management centers for the freeway and arterial network for the coordinated management of the transportation system.

Transit Priority - Public transit plays an important role in passenger transportation in the cities of Clark County. The C-TRAN bus system carried over 5 million passengers in 2006. Giving priority for buses at traffic signals under certain conditions can make transit more attractive to travelers by providing shorter and more consistent travel times. Signal prioritization can also help maximize limited transit service hours over the MTP planning period.

Transit Operation and Management - The two key components of transit operation and management are: (1) transit traveler information systems and (2) transit agency operations and management. Transit traveler information systems can deliver real-time bus arrival information to transit patrons using changeable message signs, the internet and other communication devices. Transit operation and management tools use advanced technology to help transit providers increase efficiency and improve quality of service provided to the public.

The VAST Implementation Plan is a twenty-year project list developed around the initiatives above and is based on a regional ITS architecture, or blueprint, developed in cooperation with the ITS stakeholders. The ITS architecture provides agencies with a high level physical representation of the important interfaces and major components of the system to ensure an integrated system. It provides a high-level structure around the processes, data flows, and connections between the ITS elements.

The Implementation Plan is consistent with the architecture and contains a description of each project, its priority, estimated costs and benefits and its relationship with other projects in the plan. There is also an Implementation Schedule for the plan that lists in general short, medium, and long-term time frames. The short-term projects include interconnected and adaptive signal control, freeway cameras and roadway detection, variable message signs, a traveler information system, and a traffic management center. C-TRAN's VAST projects include automatic vehicle locators, automatic passenger counters, and automated ADA call-outs, real time next bus information at transit centers, and computer aided dispatch. For more information, refer to the VAST website at http://www.vastrek.org/travelinfo.htm

TRANSIT

Transit system improvements should be supported in the MTP. The transit transportation mode supports the land use goals established in the GMA Plans that envision denser developments in growth centers and in primary transportation corridors. Transit service expands roadway capacity by providing more person throughput, helping the system operate more effectively along transit corridors. Transit is also important in meeting the mobility needs of those unable to drive automobiles because of age, infirmity, disability, or low income. In addition, transit provides a viable option for those who have automobiles but choose the convenience and cost savings of utilizing transit for their commute and other local trips.

The level of service provided by Clark County's transit system was stabilized with passage of a funding proposition in September 2005. In addition to preserving existing service through 2011, this additional 0.2 percent sales tax allowed restoration of basic service to La Center, Ridgefield, and Yacolt as well as to Washington State University-Vancouver. The service redesign being implemented in late 2007 will expand the span of service until midnight on key urban routes in addition to other improvements, resulting from a thorough system evaluation and extensive customer and stakeholder input.

While C-TRAN has achieved stability, the future will bring challenges as continuing growth creates demand for greater levels of transit service and operating costs increase. The C-TRAN Board of Directors has adopted a 50-Year Vision to guide the agency. Currently, C-TRAN is developing and evaluating options for growth over the next 20 years. Adoption of a 20 Year Transit Development Plan is expected in 2008, providing guidance for capital and service priorities.

COORDINATED HUMAN SERVICES TRANSPORTATION PLAN (HSTP)

In 2002, the RTC Board adopted the Area-Wide Jobs Access and Reverse Commute Plan to support grant applications for the Job Access and Reverse Commute (JARC) grant program. The JARC program addresses transportation needs relating to jobs access. The SAFETEA-LU-required Human Services Transportation Plan expands on the existing JARC program to address the needs of the aged, people with disabilities as well as low income workers. By identifying the transportation needs of the aged, low income and people with disabilities, the HSTP provides a framework for project identification and development to meet these transportation needs. Development of an HSTP is a condition for receiving formula funding under three Federal Transit Administration (FTA) programs: 1) Section 5310, Special Needs of Elderly & Individuals with Disabilities, 2) Section 5316(g), Job Access and Reverse Commute, and 3) Section 5317(f), New Freedom. The JARC program is to fill gaps in employment transportation to provide access to jobs for previous welfare recipients and low-income workers and to provide transportation for those who may live in the city core and work in suburban locations. New Freedom funds are to support new public transportation services and transportation alternatives for individuals with disabilities. New Freedom funds should be used for transportation services beyond those required by the Americans with Disabilities Act. The RTC Board adopted the Human Services Transportation Plan for Clark, Skamania and Klickitat Counties in January 2007 (RTC Board Resolution 01-07-02).

The intent of the Human Services Transportation Plan is to identify transportation needs and solutions and thereby improve transportation services for people with disabilities, seniors, and individuals with lower incomes. Development of a Human Service Transportation Plan ensures that communities coordinate transportation resources provided through multiple federal programs. A Coordinated plan can help to enhance transportation access, minimize duplication of services, and encourage the most cost-effective transportation possible. Development of the Human Services Transportation Plan brings together service providers, agencies that distribute funds, riders, and the community at-large to improve special needs transportation throughout the region.

Elements of the Human Services Transportation Plan, as recommended by the state's Agency Council on Coordinated Transportation (ACCT) to meet both state and federal requirements include the convening of a stakeholder group, data and information collection and gathering, identification of unmet transportation needs, and development of transportation alternatives. In Clark County, the Stakeholders Group included Clark County Community Services Departments, Developmental Disabilities Program, Columbia River Mental Health Services, Cowlitz Indian Tribe, C-TRAN, Washington Department of Social and Health Services, Employment Services Division - Work Source, EOCF/Head Start/ECEAP, Goodwill Job Connection, Human Services Council Transportation Brokerage, Loaves & Fishes/Meals-on-Wheels, Partners in Careers (SWWPIC), Ride Connection, Share Outreach, and RTC.

The human service transportation needs identified in Clark County include the need to maintain and preserve existing transportation services, such as the transportation brokerage. Medical/seniors transportation needs include curb to curb transportation, rides to life sustaining medical treatment, rides for seniors to nutrition programs, extension of paratransit to rural areas as C-VAN is not available in rural areas of Clark County. Jobs transportation needs includes longer fixed route transit service hours, alternatives to fixed route transit for those whose needs are not accommodated, transportation to overcome the challenges of getting children to/from childcare on way to/from work, and transportation solutions in rural areas of Clark County which is outside C-TRAN's fixed route service area. Those with low incomes often face are challenged by the inability to pay for

transportation; this can be a problem for low income, elderly and people with disabilities. Strategies to help special needs transportation in Clark County include the need for recruitment, organization and training of volunteer drivers or transportation assistants as an efficient and cost effective way to to help meet curb to curb transportation needs for elderly, people with disabilities and those needing medical transportation. Volunteers could provide curb to curb transportation for those outside of the C-VAN service area.

C-TRAN has worked with transportation providers in coordinating with the region's social service providers, including Washington Department of Social and Health Services and the Clark County Human Services Council, to develop a regional welfare to work transportation plan and pursue program grant funding. Program elements of the welfare to work transportation plan may include: supporting and developing services such as connector services to mass transit; vanpools; sharing buses with elderly and youth programs; coordinated human services and public transit transportation resources; employer provided transportation; Geographic Information System (GIS) based ride matching; guaranteed ride home programs; and public-private transportation partnerships. Some of these programs currently exist, and the outcome of the welfare to work plan will encourage coordinating the services into a seamless system to address the transportation problems for the region's welfare recipients and other low income persons.

More details can be found in RTC's Human Services Transportation Plan that can be found at the following website: http://www.rtc.wa.gov/reports/index.htm#HSTP

HIGH CAPACITY TRANSIT (HCT)

The planning process to analyze the feasibility of High Capacity Transit in the Clark County region is currently underway. The MTP includes the I-5 Columbia River Crossing Project's Locally Preferred Alternative (LPA, June 2008) to construct a replacement Interstate-5 Bridge and extend Light Rail Transit into Clark County with a terminus in the vicinity of Clark College. The MTP's Strategic Plan section in Appendix B describes additional planning for future high capacity transit in Clark County through the Clark County High Capacity Transit System Study. Websites references are:
http://www.columbiarivercrossing.org/ and http://www.rtc.wa.gov/hct/

The history of Light Rail Transit (LRT) planning in the region includes study of high capacity transit options advanced in the South/North High Capacity Transit Corridor Study. A *Tier I Recommendation Report*, published by Metro, September 14, 1994, recommended that Light Rail Transit be developed in the I-5 corridor to Clark County with Phase I terminating in the vicinity of NE 99th Street and Phase II terminating in the vicinity of NE 134th Street. On July 19, 1994, Metro released the *South North Transit Corridor Study, Draft Briefing Document, Tier I Technical Summary Report* to support the South/North HCT Corridor study recommendations. In 1995 the Clark County voters voted no to funding LRT development. A Draft Environmental Impact Statement (DEIS) was prepared through a coordinated process led by Metro, Portland with a northern terminus in the vicinity of Clark College. The purpose of the DEIS was to identify and disclose anticipated impacts of a potential light rail line from the Clackamas Town Center area to Clark County compared to a "No-build" alternative. Alternatives and options were described in detail in the *South/North Corridor Project Draft Environmental Impact Statement* (FTA/Metro, February 1998). FTA/Metro issued a South/North Corridor Project Supplemental Draft Environmental Impact Statement in April 1999 to address an LRT line along Interstate Avenue with

a terminus at the Expo Center in Oregon. The Interstate MAX Yellow Line with terminus at Delta Park, opened in 2004. The I-5 Partnership recommended the development of an LRT Loop within Clark County to provide for internal Clark County trips as well as cross-river trips. Further analysis of transportation needs was carried out through the I-5 Columbia River Crossing Project. The CRC's Locally Preferred Alternative (June 2008) includes extension of the LRT line to Clark County.

COMMUTER RAIL/RAIL CAPACITY ISSUES

RTC completed the Commuter Rail Feasibility Study in May 1999. The purpose of the Study was to determine if commuter rail has the potential to serve as a low cost option to improve bi-state travel mobility by making more effective use of the existing Burlington Northern Santa Fe rail transportation corridor between Vancouver and Portland. Commuter rail provides passenger service by shared use of rail tracks with freight operators and other rail users. The Study examined critical issues in the implementation of commuter rail and included: schedule reliability, operations, the impact of shared use with freight and inter city passenger needs, capital and operating costs, and ridership.

The Study concluded that, in a five year horizon, moderate levels of commuter rail service could be implemented between Vancouver and Portland with minor rail capacity improvements. By 2013, however, any level of commuter rail service would require a dedicated passenger track to accommodate the commuter service and the expected increases in freight and intercity passenger trains. The findings of this feasibility study indicate that a commuter rail system should not be pursued unless it is determined that a major rail investment necessary to support future intercity passenger and freight rail growth in the corridor is to be made. This rail corridor is severely constrained in terms of how much growth it can support without major capital investment. The commuter rail operations added a relatively small number of trips to the system but enough to trigger the requirement for a dedicated passenger alignment. Current plans for intercity passenger and freight growth could trigger the need for major capacity improvements before the 2018 horizon year. The results of this Study have created the awareness of the need to initiate regional discussion about long-term rail capacity issues affecting freight and passenger needs. The capacity constraints in this corridor need to be discussed further, not only in the context of the commuter rail system concept, but also as they relate to the rapid growth of rail freight traffic in the corridor and plans for greatly increased intercity passenger service.

In 2002 the question of commuter rail was again revisited as part of the I-5 Partnership. Findings concluded that commuter rail service cannot operate effectively on the freight rail network over the next 10 to 20 years, even with the identified incremental and additional network improvements commuter rail service could be instituted only on a separated passenger rail-only network. A separate passenger rail-only high speed rail system would improve intercity passenger rail service and could drive the feasibility of commuter rail. The cost of separated passenger network could be of the order of magnitude of $1.5 to $1.7 billion. The utility of the Chelatchie Prairie Railroad for HCT is currently being studied as part of the Clark County High Capacity Transit System Study.

TRANSPORTATION MANAGEMENT AREAS (TMA'S)

The Clark County region was designated as a Transportation Management Area under the federal Transportation Act, ISTEA, in 1991. The region is designated as a TMA because it has a population

greater than 200,000. In addition to meeting all the specified metropolitan transportation planning process requirements, MPO's representing Transportation Management Areas must meet additional requirements. In TMAs, the MPO must have a **Congestion Management Process** that provides for the effective management of new and existing facilities through the use of travel demand reduction and operational management strategies. In air-quality non-attainment TMAs, highway capacity expansion projects that result in a significant increase in single occupancy vehicles can only be programmed if consistent with the Congestion Management System. The CMP serves as the process for identifying deficient regional travel corridors, for evaluating non-SOV alternatives to address congestion, and for managing the performance of the system.

CONGESTION MANAGEMENT PROCESS (CMP)

The Congestion Management System (CMS) for Clark County was developed and operational by the federal deadline of October 1, 1995. The CMS identifies projects and programs for consideration in the metropolitan planning process. In November 1993, RTC released the *Intermodal Surface Transportation Efficiency Act, Transportation Management Systems for: Traffic Congestion, Public Transportation Facilities and Equipment, Intermodal Transportation Facilities and System, Phase I, Final Report.* In October 1994, the *CMS Phase I Compliance Statement and Work Plan* was issued. Elements of the CMS included the identified CMS network performance measures and data monitoring plan as described in the two reports mentioned above. The CMS network is a sub-set of the regional transportation system; now a set of 30 transportation corridors to be monitored and evaluated on an ongoing basis as part of the CMS. The *RTC Board adopted the Southwest Washington ISTEA Transportation Management Systems, Phase II Final Report, containing the CMS,* on May 2, 1995 (RTC Board Resolution 05-95-14). The CMS was intended to be an evaluation tool for monitoring traffic congestion and for identifying improvement strategies. The CMS allowed for the systematic monitoring of performance, identification of deficiencies, and the evaluation and recommendation of strategies. The evaluation becomes a part of MTP development. Performance of the CMS network was and continues to be monitored under the SAFETEA-LU-required Congestion Management Process (CMP) on an annual basis as new traffic volume, freight classification counts, travel time data, transit ridership and vehicle occupancy data is available.

SAFETEA-LU requires development of a Congestion Management Process. RTC's Congestion Management Process was adopted by the RTC Board in April 2006. The Congestion Management Process includes: 1) Identification of congestion management network, 2) Monitoring and analysis of system performance to identify needs, and 3) Implementation of identified needs.

It is recognized that selecting project priorities involves the consideration of many factors, of which congestion relief is just one. See Chapter 6 of this MTP for more details of RTC's ongoing Congestion Management Process.

TRANSPORTATION PLANNING AND THE ENVIRONMENT (INCLUDING ENVIRONMENTAL MITIGATION)

The interrelationships between transportation planning, project development and both natural and human environments are acknowledged in federal, state, regional and local policies and practices. Regional MTP policies include a policy that specifically addresses the environment, "provide a transportation system that is sensitive to the quality of the environment and natural resources" and goes on to explain that provision of a transportation system to meet travel needs should be balanced with the need to protect the environment and provide for a healthy community. Environmental

considerations and stewardship include air quality, climate change, stormwater, noise, sprawl, habitat, cultural resource protection, historic preservation, environmental justice, active living, and neighborhood structure.

As transportation projects are developed, environmental analyses are carried out to ensure that identified environmental impacts can be avoided, minimized and/or mitigated. More detailed information on the laws and guidance that pertain to consideration of the environment and environmental mitigation in the metropolitan transportation planning process can be found in Appendix E of this document. Included in Appendix E is a summary matrix that addresses environmental mitigation efforts in the Clark County region that will be updated with each MTP update as well as mapped data that can be used in environmental and transportation decision-making.

AIR QUALITY

Mobile emissions are a significant source of air pollution. Mobile source emissions can be minimized through increased use of non-motorized transportation modes, through increased transit use, through transportation systems management measures (such as inter-connecting traffic signals and enhanced timing of signals) and travel demand management techniques (such as work flex-time, parking charges, carpooling and vanpooling programs); all supported by the MTP. Mobile emissions can also be reduced through technology-based transportation command and control measures, such as enhanced emissions testing (I/M) programs, expansion of I/M and fuel requirements.

Historically, the Vancouver Air Quality Maintenance Area (AQMA) has been classified as non-attainment for both ozone (O_3) and carbon monoxide (CO) pollutants. As a result, transportation planning and project programming could occur without consideration for air quality impacts. On March 15, 1991, the Governor of Washington State designated the urban area of the Vancouver portion of the Portland-Vancouver Interstate Air Quality Maintenance Area as a marginal non-attainment area for ozone (O_3) and a moderate carbon monoxide (CO) non-attainment area. The action was taken in accordance with Section 107 of the Federal Clean Air Act as amended in 1990. Subsequently, the Southwest Clean Air Agency (SWCAA) developed, as supplements to the State Implementation Plan, two Maintenance Plans; 1) for Carbon Monoxide (CO), and 2) for Ozone (O_3). The Environmental Protection Agency (EPA) approved the CO Maintenance Plan in October 1996 and the Ozone Maintenance Plan in April 1997. The RTC Board of Directors endorsed the mobile source strategies included in the Maintenance Plans in 1996 (Resolution 02-96-04).

Currently, under the new 8-hour federal Ozone standard, the Vancouver/Portland Air Quality Maintenance Area (AQMA) has been reclassified from “maintenance” to “unclassifiable/attainment” for Ozone and no longer needs to demonstrate air quality conformity for Ozone.

The Vancouver AQMA is currently designated as a Carbon Monoxide maintenance area. The Southwest Clean Air Agency submitted a Carbon Monoxide, Second 10-year Limited Maintenance Plan (2006-2016) in January 2007. The CO Limited Maintenance Plan for the Vancouver AQMA was found to be adequate by the Environmental Protection Agency (EPA) and on November 19, 2007, EPA published notice of its adequacy for transportation conformity purposes in the Federal Register. Based on the population growth assumptions contained in the Vancouver Limited Maintenance Plan and the LMP’s technical analysis of emissions from the on-road transportation sector, it was concluded that the area would continue to maintain CO standards. Therefore, regional

conformity is presumed and regional emissions analyses and emission budget tests are no longer required.

As described in Appendix A, RTC consults with clean air partners and agencies, such as the Southwest Clean Air Agency, Washington State Department of Ecology, and the federal Environmental Protection Agency, to develop a methodology for mobile source emissions analysis and uses the regional travel model data to provide data needed to develop mobile source emissions inventories.

The Limited Maintenance Plan does not include mobile source Transportation Control Measures (TCMs) for this Air Quality Maintenance Area, however, several tiered contingency measures are listed in the LMP that could be triggered in the event that the triennial emission inventory shows that annual county-wide on-road mobile emissions have increased over 2005 levels. The escalating responses include: confirmation of emissions inventory methodology, evaluation of "other" source categories, temporary CO "hot spot" monitoring, and reinstitution of oxygenated fuels.

The transportation strategy identified in the SIP for the Vancouver Air Quality Maintenance Area continues the emissions testing (I/M) program for the area of Clark County within the Air Quality Maintenance Area (AQMA) which contributes to maintaining National Ambient Air Quality Standards (NAAQS).

Although regional conformity is presumed, both the MTP and TIP include statements describing the current conformity requirements for the Vancouver AQMA. A conformity statement for the *Metropolitan Transportation Plan* with the federal Clean Air Act, as amended in 1990, and the Washington Clean Air Act can be found in Appendix A of this document. Conformity with the Clean Air Act is also addressed in the Metropolitan Transportation Improvement Program for the Clark County region. At the project level, non-exempt transportation projects must still undergo conformity analysis for carbon monoxide to show they meet federal and state air quality standards before completion of the design phase.

WATER QUALITY

Transportation projects must be mindful of water quality impacts. Water quality is a significant issue in the Pacific Northwest. Transportation projects often include measures to mitigate for the construction of impervious surfaces. Bioswales and street trees are becoming part of the design for many transportation projects. Another issue that relates to water quality is the listing of certain species, such as the Pacific salmon species, under the Endangered Species Act.

MTP REGIONAL SYSTEM IMPROVEMENTS AND PRIORITIZATION PROCESS

Figure 5-1 is a map showing identified capacity improvements on the regional transportation system. The map shows the location of highway capacity expansion projects identified needed to address safety and/or level of service issues. Appendix A provides a list of needed improvements, both on and off the regional transportation system, which have been assumed in the regional travel forecasting model process for MTP development and its accompanying air quality conformity analysis. The list focuses on system expansion projects for it is these that are most readily incorporated into the regional travel forecasting model and their impacts measured. The MTP Appendix also outlines the wide array of transportation system improvements, which will contribute to the development of a balanced regional transportation system. Even with the extensive list of

transportation improvements, increased congestion can be expected on Clark County's transportation system by the year 2030. In many of the transportation corridors, further system expansion through widening of existing highways will not be feasible. Therefore, it is imperative that this region continue to develop a more balanced transportation system to create transportation options for its residents and to encourage use of alternative transportation modes to the Single Occupant Vehicle.

Federal and state legislation, together with citizen input, has prompted the identification and implementation of alternative transportation solutions. Alternative solutions provide a way to avoid increasing capacity of the highway system through road widening projects. The MTP provides for strategies and solutions to meet regional travel demand and to develop a balanced regional transportation system over the 20+ -year planning period.

RTC periodically conducts a prioritization of transportation projects. Such a prioritization process followed adoption of the MTP for Clark County in December 1997. This process arose out of concern that funding for transportation "mobility" improvements is limited compared with the growing needs. With limited funding availability, it is prudent to reach regional consensus on the highest priorities. RTC is the forum for discussion and analysis of project priorities at times such as development of projects for grant request to the state Transportation Improvement Board and discussion of projects for federal earmarking consideration. A prioritization process helps the region to make most effective use of limited transportation funding to meet transportation system improvement needs.

In December 2001 the RTC Board reviewed regional priorities with "Mobility" type improvements a prime focus because these are the projects that the region finds increasingly difficult to fund after maintenance, preservation and safety needs are addressed. In a rapidly growing, urbanizing region such as Clark County, there is need for significant investment in "mobility" projects to complete the arterial street system and to improve the design standard of facilities to support urban transportation needs. It is recognized that Transportation System Management and Transportation Demand Management strategies can contribute toward system capacity preservation and were also considered in the 2001 prioritization process. The following key policy issues again emerged in 2001 as the most important to emphasize in terms of project prioritization: 1) Economic Development, 2) Land Use and Transportation System Performance, 3) Transportation Demand Management (TDM), 4) Funding and 5) Bi-state Transportation Strategy. Economic development is the prime criteria for project prioritization.

The project prioritization process is dynamic and project priorities are reviewed periodically to consider emerging trends and results and recommendations from ongoing transportation studies.

Decisions on funding and phasing of regional transportation projects are made during the development process for the Metropolitan Transportation Improvement Program (MTIP). Transportation improvements require programming and it is in the regional MTIP that federal funds are programmed. Projects that use local funding are programmed in the local Transportation Improvement Programs which are developed each year by individual local jurisdictions.

BI-STATE TRANSPORTATION

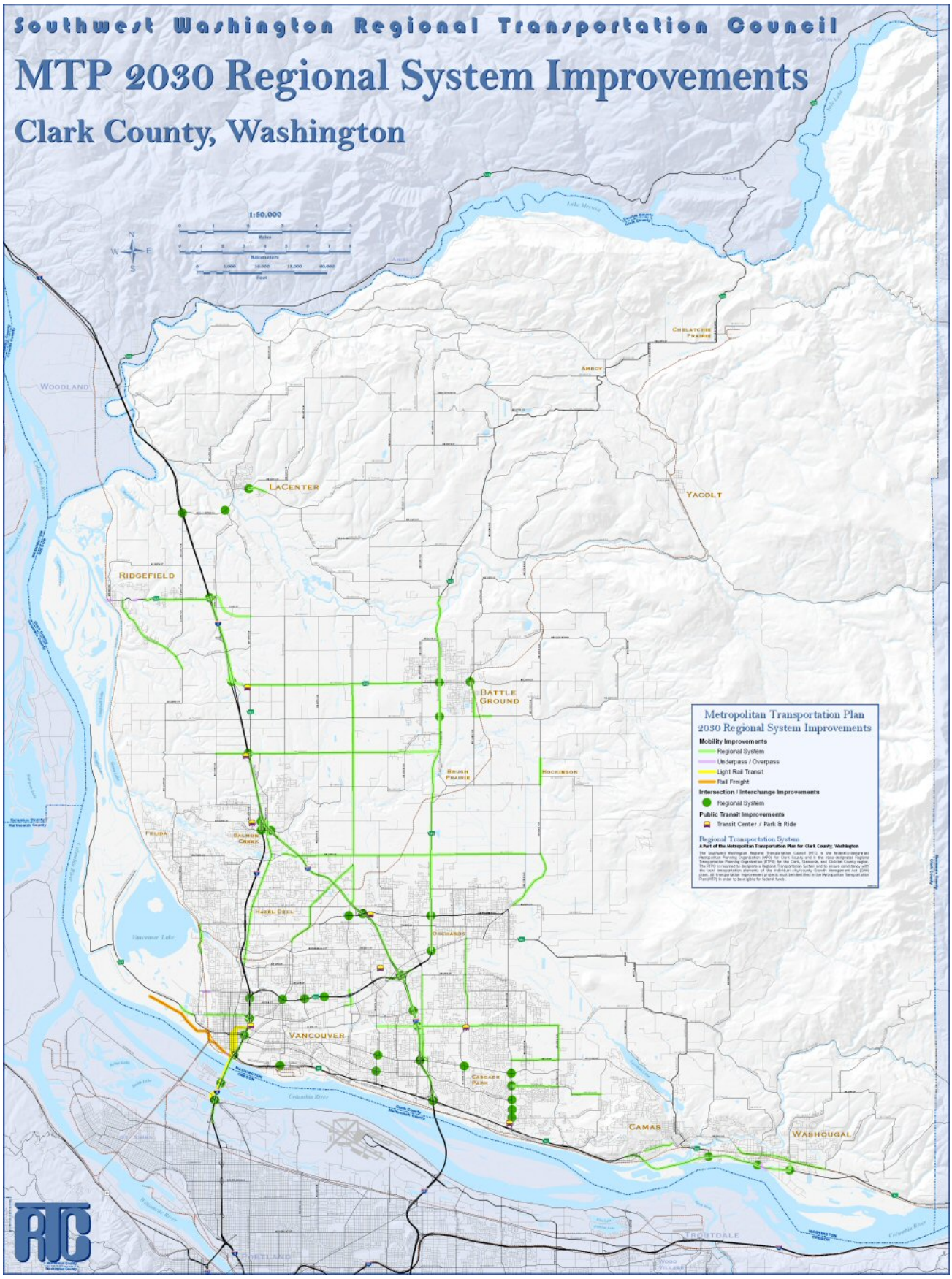
BI-STATE COORDINATION COMMITTEE

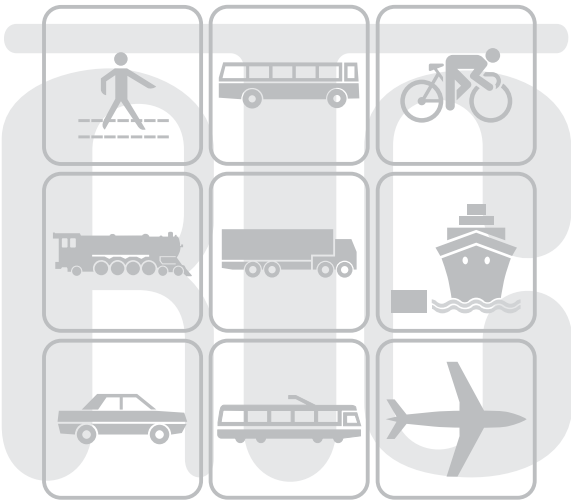
The Bi-State Transportation Committee was established in 1999 to ensure that bi-state transportation issues are addressed. This Committee was reconstituted in 2004 to expand its scope to include both transportation and land use according to the Bi-State Coordination Charter. The Committee is now known as the Bi-State Coordination Committee. The Committee's discussions and recommendations continue to be advisory to the Southwest Washington Regional Transportation Council (RTC), and Metro's Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council on issues of bi-state transportation significance. On issues of bi-state land use and economic significance, the Committee advises the appropriate local and regional governments.

COLUMBIA RIVER CROSSING PROJECT

The Portland-Vancouver I-5 Transportation and Trade Partnership study concluded in 2002 with key policy recommendations for cross-Columbia river travel in the I-5 corridor. The Columbia River Crossing project (CRC) evolved from the previous I-5 Partnership. The CRC is aimed at improving the mobility, reliability, and accessibility for automobile, freight, transit, bicycle, and pedestrian users of the I-5 corridor from State Route 500 in Vancouver to Columbia Boulevard in Portland. The CRC's process includes examination of bridge capacity and analysis of a range of modal options. The Draft Environmental Impact Statement (DEIS) for the project was released in May 2008. It assessed four build alternatives compared to a No Build alternative (Alternative 1). The build alternatives analyzed were: Alternative 2, a replacement crossing with Bus Rapid Transit, Alternative 3, a replacement crossing with Light Rail , Alternative 4, supplemental crossing with Bus Rapid Transit, and Alternative 5, a supplemental crossing with Light Rail. In June 2008, the CRC Task Force recommended a Locally Preferred Alternative (LPA) for the Columbia River Crossing Project to include a replacement crossing with light rail terminating in the Clark College vicinity and in July, the MTP for Clark County was amended to incorporate the CRC's LPA.

Figure 5-1: MTP Regional System Improvements





CHAPTER 6

PERFORMANCE MONITORING

The transportation planning process requires that monitoring of system performance take place. Several elements of system monitoring activities are described below.

GMA AND CONCURRENCY MANAGEMENT

Monitoring of the regional transportation system's performance is an ongoing activity for RTC and local jurisdictions. The GMA-required Concurrency Management System necessitates monitoring of transportation system performance to measure its performance against established Level of Service standards. Requests for future development have to be considered in light of the established Levels of Service for transportation facilities. If Level of Service standards cannot be met, then development can be halted or mitigation measures required. Concurrency management requires not only monitoring of transportation system performance but also tracking of development in the region and update of transportation modeling tools to ensure accuracy of data.

REGIONAL TRAVEL FORECASTING MODEL

RTC uses a regional travel forecast model to forecast future transportation needs. Performance measures, in terms of speed, vehicle miles traveled, lane miles of congestion and vehicle hours of delay are calculated within the model. The performance measures were reported on in Chapter 3 (Tables 3-11 through 3-14).

TRAVEL BEHAVIOR AND HOUSEHOLD ACTIVITY SURVEY

Results from travel behavior and household activity surveys provide valuable information that can be used to refine and update the regional travel forecast model. In the Portland-Vancouver region, surveys were fielded in 1977, 1985, and 1994. For this region, a survey update is anticipated within the next two years. Travel behavior and household activity surveys conducted in other regions can also provide useful information. The American Community Survey (U.S. Census Bureau) now provides annual update to questions on journey to work including travel time and transportation mode used.

CONGESTION MANAGEMENT PROCESS

The federal Intermodal Surface Transportation Efficiency Act (ISTEA), passed in 1991, required the development of a Congestion Management System (CMS) to be used as a tool for monitoring traffic congestion and for identifying improvement strategies to alleviate the congestion. The *Southwest Washington ISTEA Transportation Management Systems, Phase II Final Report* (May 1995), which contains the CMS, was adopted by the RTC Board on May 2, 1995 (RTC Board Resolution 05-95-14). The CMS network is a sub-set of the regional transportation system; a set that is now comprised of 30 transportation corridors to be monitored and evaluated on an ongoing basis as part of the Congestion Management Process. SAFETEA-LU required development of a Congestion Management Process. RTC's Congestion Management Process was adopted by the RTC Board in April 2006. The Congestion Management Process includes: 1) Identification of congestion management network, 2) Monitoring and analysis of system performance to identify needs, and 3) Implementation of identified needs.

In August 2007, the RTC Board endorsed the *2006 Congestion Management Report*. The Congestion Management Monitoring project focuses on delivering improved transportation system performance information to decision-makers who must identify the most cost-effective strategies for addressing transportation congestion and improving mobility. Prior to 2000, the transportation system performance reported in the Congestion Monitoring Report focused on a single corridor congestion index for each of the congestion management corridors. Over time, the report has been expanded to include travel time, speed, vehicle occupancy, transit ridership, bus capacity, intersection delay, areas of concern, and other transportation system related information. The 2006 Congestion Monitoring Report is the eighth year for publication of the Report and continues the collection and reporting of baseline data. As part of the ongoing monitoring process, the Corridor Congestion Index (CCI) and speed as a percent of posted speed limit were updated to reflect 2006 traffic counts collected as part of the Congestion Management Monitoring program. The following table (Table 6-1) reports Corridor Congestion results from the 2006 counts.

AIR QUALITY MONITORING

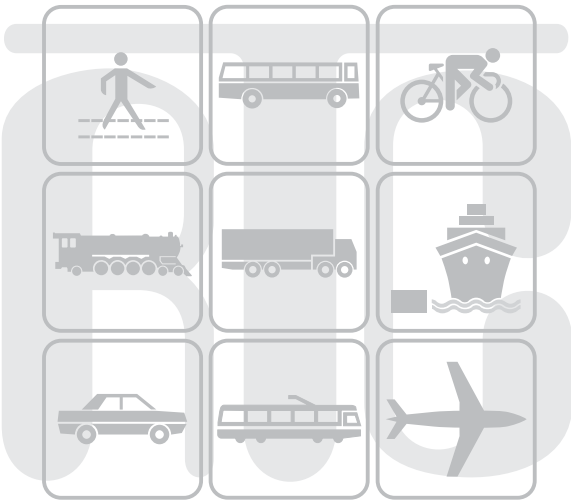
Air quality has a direct relationship to the transportation system and its performance because mobile source emissions are a significant source of air pollution. With the Vancouver/Portland Air Quality Maintenance Area's (AQMA's) reclassication from "maintenance" to "unclassifiable/attainment" for Ozone, the region no longer needs to demonstrate air quality conformity for Ozone. Similarly for carbon monoxide, regional conformity is presumed and regional emissions analyses and emission budget tests are no longer required. However, as described in the MTP's Chapter 5's Air Quality section and MTP Appendix A, RTC continues to consult with clean air partners and agencies, such as the Southwest Clean Air Agency, Washington State Department of Ecology, and the federal Environmental Protection Agency, to develop a methodology for mobile source emissions analysis and uses the regional travel model data to provide data needed to develop mobile source emissions inventories.

COMMUTE TRIP REDUCTION (CTR) LAW IMPLEMENTATION

Monitoring of the success of the Commute Trip Reduction program is carried out to ensure that the 10% trip reduction goal is being met or being actively worked toward. CTR affected worksite surveys are conducted every two years with data analysis carried out by WSDOT. Within the Clark County region, Urban Growth Areas that must have CTR plans under the 2006 CTR Efficiency Act (RCW 70.94.527) are Vancouver, Camas and Washougal as well as the unincorporated Clark County portion of the Vancouver UGA.

Table 6-1: Corridor Monitoring Process: Corridor Congestion Summary

Facility Name	Start Point	End Point	A.M. Corridor Congestion Index (CCI)	P.M. Corridor Congestion Index (CCI)	AM Speed Percentage of Posted Speed Limit	PM Speed Percentage of Posted Speed Limit
			Corridor Congestion .80 or Greater		**Speed 65% or less than Posted Speed**	
I-5	County Line	I-205 Junction	0.51	0.60	98%	95%
I-5	I-205	Main St	0.59	0.64	80%	95%
Hwy 99	134th St	Main St	0.35	0.57	76%	62%
Hazel Dell	117th St	Main St	0.47	0.68	82%	**63%**
I-5	Main St	State Line (S)	0.96	1.03	26%	**86%**
Main St	I-5	Fourth Plain Blvd	**0.80**	0.41	62%	61%
I-205	I-5	SR-500/4th Plain	0.78	0.80	**90%**	**101%**
I-205	SR-500/4th Plain	State Line (S)	0.96	**0.98**	94%	87%
112/Chkalov/Gher	SR-500	Mill Plain	0.51	0.69	76%	52%
St. Johns/Ft. Vanc	NE 72nd Ave	Mill Plain	0.56	0.51	64%	58%
Andresen/ 72nd	119th Street	SR-500	0.66	**0.76**	**80%**	64%
Andresen Rd	SR-500	Mill Plain	**0.71**	0.62	80%	52%
SR-503	119th Street	Fourth Plain	**0.84**	0.91	56%	**69%**
SR-503	SR-502	119th Street	0.78	**0.81**	86%	70%
136/137/138th Av.	Padden Parkway	Mill Plain	0.58	0.67	69%	63%
162nd Ave	Ward Road	Mill Plain	0.55	0.63	80%	73%
164th Ave	Mill Plain	SR-14	0.65	**0.72**	**76%**	**68%**
SR-14	I-5	I-205	**0.75**	**0.81**	96%	97%
SR-14	I-205	164th Ave	**1.03**	**1.04**	68%	94%
SR-14	164th Ave	County Line (E)	0.72	0.79	90%	87%
Mill Plain Blvd	I-5	Fourth Plain	0.47	0.53	104%	69%
Mill Plain Blvd	I-5	I-205	0.40	0.58	70%	72%
Mill Plain Blvd	I-205	164th Ave	0.63	0.80	**70%**	53%
Fourth Plain	I-5	NW 26th Av	0.46	0.56	76%	**54%**
Fourth Plain Blvd	I-5	Andresen	0.31	0.51	89%	69%
Fourth Plain Blvd	Andresen	SR-503	0.48	0.65	71%	59%
Fourth Plain Blvd	SR-503	162nd Ave	**0.73**	0.95	**99%**	**71%**
SR-500	I-5	Andresen	0.77	**0.84**	73%	51%
SR-500	Andresen Rd	SR-503	0.75	0.76	62%	51%
78th/76th St	Lakeshore Av.	SR-503	0.43	0.57	76%	62%
Padden Pkwy	78th St.	Ward Road	0.59	0.68	71%	66%
99th St.	Lakeshore Av.	St John's Rd.	0.48	0.64	73%	68%
Burton/28th	Andresen Rd	164th Ave	0.65	**0.73**	**80%**	50%
18th St	112th Ave	164th Ave	0.65	**0.88**	44%	**39%**
134th/139th	NW 36th Ave	50th Ave	0.47	**0.71**	**83%**	**73%**
SR-502	I-5/179th St	SR-503	0.64	**0.82**	82%	79%
SR-501	I-5	9th Street	0.53	0.54	61%	67%
La Center Road	I-5	E. Fork Lewis R.	**0.72**	0.80	**88%**	**86%**



CHAPTER 7

PLAN DEVELOPMENT AND IMPLEMENTATION

PUBLIC PARTICIPATION IN METROPOLITAN TRANSPORTATION PLANNING PROCESS

Public participation is an important part of the regional transportation decision-making process carried out by RTC. RTC's Public Participation Plan outlines a broad range of opportunities for the public and stakeholders to participate in the region's transportation planning process. In the Plan, RTC continues its commitment to publish, or make available for public view, transportation plans and Transportation Improvement Programs (TIPs), and to hold public meetings at convenient and accessible times and locations. RTC also commits to use maps, charts, graphics and website information in order to help explain the metropolitan transportation planning process and to make metropolitan transportation planning information available to the public.

The latest update to RTC's Public Participation Plan was adopted by the RTC Board in 2007 (RTC Board Resolution 08-07-15). The current Plan meets federal requirements for metropolitan transportation planning. The Plan was adopted following release of a draft Plan for public comment on May 8, 2007. The draft Plan was then circulated to interested parties. Notice of its release for public comment was published in local newspapers, including The Columbian, The Reflector (Battle Ground), the Camas-Washougal Post-Record, the El Hispanic News and The Skanner. The draft Plan was made available at branches of the Fort Vancouver library system and at Camas library. The draft Plan was also posted to RTC's website (www.rtc.wa.gov)

The Metropolitan Transportation Plan and Metropolitan Transportation Improvement Program updates are considered at regular meetings of the RTC Board of Directors. All RTC Board meetings and technical committee meetings are open to the public. Meeting notices for the RTC Board of Directors are published in the local newspapers. At each month's meeting of the RTC Board, there is time set aside for public comment on regional transportation planning issues including MTP and Metropolitan Transportation Improvement Program (MTIP) development.

Public involvement efforts build from those carried out at the local level in development of local plans and programming of transportation projects. Since the last MTP update in December 2005, there have been numerous public meetings regarding regional transportation issues. These public meetings, hosted by RTC member agencies and jurisdictions, include regularly scheduled C-TRAN Board meetings, meetings hosted by C-TRAN regarding changes to transit service and fares and long range planning, Clark County Transportation Improvement Program Involvement Team (TIPIT), public meetings held as part of the Clark County Comprehensive Growth Management planning process, the Fourth Plain Traffic Safety Corridor outreach efforts, open houses on the Section 30 Sub-area Plan, and WSDOT hosted outreach meetings focused on development of state funded projects such as SR-502 widening, the SR-14 corridor planning study, the Salmon Creek Interchange Project and on traffic operations and preservation projects. RTC continues to participate on the annual Columbian newspaper's Economic Forecast panel. Numerous public meetings for the I-5 Columbia River Crossing project (CRC) have been held and will continue to be held for the duration of the project. A full listing of public outreach efforts related to the regional transportation planning program is included in the Unified Planning Work Program's Annual Report published by RTC in late summer of each year.

Through the coordinated efforts of RTC and local jurisdictions a public information booth on regional transportation issues is set up each year at the Clark County Fair. The Fair's attendance exceeds 220,000 people annually. RTC and jurisdictions' staff at the transportation booth solicit comments from Fair attendees and the public can fill in survey forms about the region's transportation system. Staff manned the booth to answer questions from the public and to receive comments on the MTIP and the MTP. RTC and local jurisdictions also coordinate outreach events. RTC staff also make presentations to neighborhood associations and civic groups to provide information on regional transportation issues and to gather feedback from citizens.

Transportation issues, studies, plans and programs are outlined and reported on at RTC's web site at http://www.rtc.wa.gov. The adopted MTP is available for reference at the web site. Also, draft update elements of the Plan are posted to the web site and public comments are invited. The public is given opportunity to make formal comments on both the MTIP and the MTP at monthly RTC Board meetings which are advertised in the local media and which are open to the public. Board meetings agenda and minutes are posted to RTC's web site. Updates and amendments to the MTP are presented to the RTC Board for the Board's consideration and adoption.

METROPOLITAN TRANSPORTATION PLANNING PROGRAM: REQUIRED PLANNING FACTORS IMPLEMENTATION

Under the provisions of the Federal Transportation Act, SAFETEA-LU, Metropolitan Planning Organizations (MPOs) are required to consider eight planning factors in the development of transportation plans and programs. These factors are outlined in Table 7-1 below

Table 7-1: RTC's Implementation of Planning Factors, Status Report

METROPOLITAN PLANNING PROGRAM SOUTHWEST WASHINGTON REGIONAL TRANSPORTATION COUNCIL (RTC) STATUS REPORT ON THE FEDERALLY-REQUIRED PLANNING FACTORS (OCT. 2007)		
Under the provisions of the Federal Transportation Act, SAFETEA-LU, Metropolitan Planning Organizations (MPOs) are required to consider eight planning factors in the development of transportation plans and programs.		
	FACTORS	**HOW RTC IMPLEMENTS THE FACTORS**
1	Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency	**Competitiveness, Productivity, Efficiency** • Metropolitan Transportation Plan (MTP) Project Priorities: Economic development is the prime policy criteria for prioritizing MTP transportation projects (MTP Prioritization Process (1998), updated December 2001) and reconsidered regularly. • Interstate Travel: In 1998, the Washington State Department of Transportation (WSDOT) partnered with the Oregon Department of Transportation (ODOT) and other local jurisdictions and agencies in Washington and Oregon, including RTC, to plan for and implement improvements along the **I-5 corridor** from I-84 in Oregon to I-205 in Washington. Two studies, the Portland/Vancouver I-5 Trade Corridor Freight Feasibility and Needs Assessment Study, completed in 2000,

METROPOLITAN PLANNING PROGRAM
SOUTHWEST WASHINGTON REGIONAL TRANSPORTATION COUNCIL (RTC)
STATUS REPORT ON THE FEDERALLY-REQUIRED PLANNING FACTORS (OCT. 2007)

Under the provisions of the Federal Transportation Act, SAFETEA-LU, Metropolitan Planning Organizations (MPOs) are required to consider eight planning factors in the development of transportation plans and programs.

	FACTORS	HOW RTC IMPLEMENTS THE FACTORS
		and the Portland/Vancouver I-5 Transportation and Trade Partnership Study, completed in 2002, included a variety of corridor-wide improvement and traffic management recommendations. Planning for the I-5 corridor continues with the Columbia River Corridor (CRC) project. The **I-205 corridor** in Clark County was addressed in the I-205 Corridor, Access Point Decision Report (2001) and environmental assessment was completed for the corridor in 2007. • Access to Ports/Industry: Mill Plain Extension for Port of Vancouver access was completed in 2000. There have been recent improvements to Fruit Valley Road and there are plans to construct NW 26th Avenue. The Port of Vancouver is currently reviewing potential alignments to improve rail access to the Port as part of the Port of Vancouver's Economic Development & Conservation Plan to support the Port's development and opening up of the Port's Gateway area. SR-14/Grand interchange project (completed 1996) improved access to Columbia Shores Business Park. MTP recommends SR-14 improvements to improve access to the Port of Camas/Washougal and improvements at the I-5/Ridgefield/Pioneer Street interchange. • Airports: Clark County is served by Portland International Airport. The small, general aviation airfields in the County are being encroached upon by urban development. Efforts to locate a new airport in the late 1980's resulted in Pioneer II site selection but public criticism halted any project development. Clark County Airports Advisory Task Force convened in 1997 to further address need for airfields in Clark County. Evergreen Airport (off Mill Plain) is making way for commercial development.. • Intermodal transportation facilities: freight, transit centers, park & rides. • Freight distribution: A 1994 freight study located major freight generators in Clark County. The Congestion Management Process monitors truck percentages on regionally significant corridors in Clark County. The Regional Freight Committee (Portland-Vancouver region) meets to address freight issues including assessing regional freight data collection study. The "Portland and Vancouver International and Domestic Trade Capacity Analysis" (Port of Portland et al) was published in 2006. • Rail: BNSF lines run through Clark County (north to Seattle, south to Portland and east to Spokane) to serve increasing rail freight movement. RTC worked with BNSF on Amtrak rail station planning and on Commuter Rail Feasibility Study (May 1999). The Vancouver Rail Project, to improve rail through the Vancouver Yard and to cross the Yard by highway bridge at 39th Street, was funded by the 2002 Washington Legislature's "Nickel Package". • Ship and Barge: river transportation to Port of Vancouver. Use of barges includes use for transportation of garbage from Clark County to

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	FACTORS	HOW RTC IMPLEMENTS THE FACTORS
		landfill in eastern Oregon. • Pedestrian and Bicycle: Regional Trail and Bikeway System Plan (1992, updated 2006). RTC hosted four Walkable Community Workshops in 2004. The workshops emphasized the contribution a quality pedestrian and bicycle environment can make to the area's economy, quality of life and health. Safe Routes to School Program implemented. Active Community Environments program as part of the Community Choices program focuses on human powered transportation with an established Walkability Policy Team and Walkability Awareness team. **Recreational Travel and Tourism** • The Fort Vancouver National Historic Site, Officers' Row and Pearson Airfield are prime tourist sites near downtown Vancouver. Clark County is also the gateway to the Columbia River Gorge via SR-14. SR-503 provides access to the Mount St Helens National Scenic Area.
2	Increase the **safety** of the transportation system for motorized and non-motorized users	**Safety** • Safety is called out as a priority issue in the MTP. Assessment of highway system safety needs is carried out by WSDOT for interstate and state facilities and by the local jurisdictions for local arterials. WSDOT revised the "Strategic Highway Safety Plan: Target Zero" (February 2007). RTC uses the information to help determine funding priorities as part of project programming. Washington State Department of Transportation (WSDOT) uses safety as a significant factor in benefit/cost analysis to determine funding priorities.
3	Increase the **security** of the transportation system	**Security** • RTC developed a Technical Paper on "Transportation Security in the Vancouver/Clark County Region" (incorporated into 2007 MTP update). • C-TRAN devotes a portion of its budget to transit security measures including surveillance cameras on buses and contract security personnel. • Transit security measures are described in the MTP, Chapter 3.
4	Increase the **accessibility** and **mobility** options available to **people** and for **freight**;	**Overall** • Vehicle Miles Traveled, Vehicle Hours of Delay and other measures of performance of the regional transportation system are reported in the MTP with each MTP update. • The Metropolitan Transportation Improvement Program (MTIP) contains a listing of all regionally significant transportation projects to be undertaken in local jurisdictions in the shorter term. **Congestion Management** • Congestion is addressed in the adopted Congestion Management Process (CMP) and subsequent annual Congestion Management Monitoring reports for the Clark County region. Monitoring of system performance and CMP strategies are incorporated into the MTP. Evaluation of CMP

METROPOLITAN PLANNING PROGRAM
SOUTHWEST WASHINGTON REGIONAL TRANSPORTATION COUNCIL (RTC)
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	FACTORS	HOW RTC IMPLEMENTS THE FACTORS
		corridors is conducted annually with updated traffic counts and transportation system use data. **Intelligent Transportation System (ITS)** • Vancouver Area Smart Trek (VAST) deployment plan. Implementation of ITS solutions, Transportation System Management (TSM) and Advanced Traveler Information System (ATIS) strategies to better manage the existing transportation system. **Transit Service** • C-TRAN publishes the *Transit Development Plan* to outline plans for the future of the transit system within the next six years. • C-TRAN is in the process of developing a 20-Year Transit Development Plan consistent with the 50-Year Vision adopted by its Board of Directors in 2006. The 20-Year Transit Development Plan is anticipated in the spring of 2008. • RTC coordinates with C-TRAN on ridership surveys and on travel forecasting. **Transportation Enhancements** • Prioritization of enhancement projects is a collaborative process by Regional Transportation Advisory Committee (RTAC) representatives. Projects are evaluated then forwarded to the State for selection. • Enhancement projects are incorporated into MTP and MTIP. • For bike and pedestrian projects, guidance for system development is provided by *Clark County's Trails and Bikeway System Plan* (Dec. 1992) and by the transportation elements of local Comprehensive Growth Management plans. • Walkable Community Workshops were hosted by RTC in 2004. **Movement of Freight** • WSDOT Freight and Goods Transportation System (FGTS). • Port access proposed improvements: SR-14 Camas/Washougal area, I-5/Ridgefield Junction. • Chelatchie Prairie Railroad.
5	Protect and enhance the **environment**, promote **energy conservation**, and improve **quality of life**	**Environment** • RTC developed a Technical Paper on "Consideration of the Environment and Environmental Mitigation in the Metropolitan Transportation Planning Process" (incorporated into 2007 MTP update). • The natural, built and human environments are considered at the earliest opportunity in the transportation planning process. RTC relies on the inventory of resource lands and critical areas undertaken by Clark County as part of the Comprehensive Plan for the County. RTC carries out air quality analysis for specific transportation projects. **Energy Conservation**

METROPOLITAN PLANNING PROGRAM
SOUTHWEST WASHINGTON REGIONAL TRANSPORTATION COUNCIL (RTC)
STATUS REPORT ON THE FEDERALLY-REQUIRED PLANNING FACTORS (OCT. 2007)

Under the provisions of the Federal Transportation Act, SAFETEA-LU, Metropolitan Planning Organizations (MPOs) are required to consider eight planning factors in the development of transportation plans and programs.

	FACTORS	HOW RTC IMPLEMENTS THE FACTORS
		• Commute Trip Reduction program. • Analysis of Vehicle Miles Traveled. • Jobs/housing balance. • Planning and construction of facilities for non-motorized modes (consistent with *Regional Trails & Bikeway System Plan*, 2006). **Quality of Life (Land Use and Transportation Linkage)** • The 50-year Community Framework Plan for Clark County (March 1993) and the 20-year Comprehensive Growth Management Plan for Clark County (September 2007) specifically link policies and planning for land use and transportation. • The MTP and Comprehensive plans are consistent.
6	Enhance the integration and **connectivity** of the transportation system, across and between modes, for people and freight	• Hierarchical functional classification system for Clark County roads. Clark County maintains an "Arterial Road Atlas" that shows desired classifications and design standards for arterials within the County. • SR-14 to east (RTC's planning area includes Skamania and Klickitat counties to the east). • I-5 to north (information and formal coordination with Southwest Washington RTPO to north). • I-5 south (includes coordination with Metro, ODOT, TriMet and Oregon local jurisdictions on bi-state issues).
7	Promote efficient **system management** and **operation**	• Congestion Management System (adopted by RTC, May 1995) and Congestion Management Process adopted in April 2006. Annual Congestion Management Monitoring report process. • Vancouver Area Smart Trek (VAST) implementation includes intelligent transportation system implementation, fiber network for communications, signal timing and signal coordination projects, ramp metering, coordination with Oregon on a Regional Advanced Traveler Information System.
8	Emphasize the **preservation** of the existing transportation system	• Preservation receives high priority in policies and programming of projects through the Washington's Transportation Plan (WTP), WSDOT Highway Systems Plan, local Comprehensive Growth Management Plans, the Metropolitan Transportation Plan (MTP), and the Metropolitan Transportation Improvement Program (MTIP). • As road improvements occur, sidewalks and bike lanes are added. • Cost to maintain pavement and bridges is addressed in the MTP. • I-5 Bridge (life expectancy, maintenance needs). • Bridge needs are addressed in the MTP.

MTP IMPLEMENTATION

Implementation of regional transportation goals, policies and actions established by the *MTP* are carried forward through the regional decision-making process that takes place in development of the regional **METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (MTIP).** It is in the MTIP that transportation needs identified in the *MTP* can be programmed for receipt of federal funding.

MTP UPDATE PROCESS

The state's Growth Management Act requires that the *MTP* be reviewed for currency every two years. Under the federal Intermodal Surface Transportation Efficiency Act (1991) and Transportation Equity Act for the 21st Century (TEA-21), MTP update was required at least every three years. The federal transportation reauthorization act, SAFETEA-LU, has revised requirements for update of regional transportation plans requiring update at least every four years instead of every three years in air quality maintenance areas. The MTP must comply with all the revised requirements for the planning process established in SAFETEA-LU. The revised requirements under SAFETEA-LU include expanded consultation requirements, discussion of potential environmental mitigation activities developed in consultation with Federal, State and Tribal wildlife, land management and regulatory agencies, and changes to public participation requirements. The Plan is required to have at least a twenty-year horizon. Should changing policies, financial conditions or growth patterns warrant, then Plan amendments can take place subject to the public participation requirements, air quality consideration and fiscal constraint. A summary of Metropolitan Transportation Plan for Clark County adoption, update and amendment actions is provided in Table 7-2.

The 1998 MTP amendment focused on changes to Chapter 4 (Financial Plan) and Chapter 5 (System Improvement and Strategy Plan). The language in the Chapter 4 Financial Plan was amended to make clear that the Plan is fiscally constrained. Only projects from a fiscally constrained Plan could be included in the air quality conformity analysis. In turn, only projects from air quality conforming plans can be advanced for programming of funds in the Transportation Improvement Program. The description of funding programs in Chapter 4 was updated to reflect the new funding levels in the federal Transportation Equity Act for the 21st Century (TEA-21) and recent funding history for state Transportation Improvement Board (TIB) programs. Chapter 5 was amended to include description and recommendations of the MTP Prioritization Process carried out during 1998. The 1998 amendments did not change the identified projects listed in Appendix A of the MTP. Therefore the air quality conformity analysis carried out on the December 1997 version of the MTP (documented in Appendix A of the Plan) remained valid.

A minor amendment in April, 1999 incorporated plans for a new interchange at I-5 and NE 219th Street into the MTP. The 1999 MTP update addressed the need to keep the MTP up-to-date with developments in the planning of transportation facilities and services. The focus of the 1999 MTP update was to extend the horizon year of the Plan to 2020, thereby meeting federal requirements to have a Plan with at least a twenty year horizon. Demographic data was updated to the 2020 horizon year, a revised regional travel forecasting model prepared, transportation

deficiencies considered, the list of transportation needs and projects revised, the financial plan reviewed and updated and an update to the air quality conformity analysis prepared.

The issue of cross-Columbia travel continued to be the subject of bi-state transportation efforts. The feasibility and utility of High Occupancy Vehicle (HOV) treatments in Clark County was studied during 1998 which culminated in the publication of "Clark County High Occupancy Vehicle Study" (December, 1998). The 1998 Study defined HOV policies and objectives, identified HOV need and benefits and identified the location of possible HOV corridors and/or facilities. A study of the operational feasibility of an I-5 HOV lane was carried out in 2000. A report on commuter rail as a cross-river travel option was published in May, 1999. A Bi-State Transportation Committee was convened in 2000 to address transportation issues of bi-state concern and has continued to meet as the Bi-State Coordination Committee.

The 2002 MTP update provided a new base year of 2000, incorporated newly-available 2000 Census data, extended the horizon year of the MTP to 2023, included recommendations from recently completed corridor studies of I-5 North and I-205, and included recommendations of the I-5 Partnership in the new Strategic MTP. The Plan update included a revised list of proposed transportation improvements anticipated within the next twenty years and an update to the air quality conformity analysis. The 2003 MTP amendment added the Port of Ridgefield's Rail Overpass Project and made minor amendment to the Financial Plan element to acknowledge the State's "nickel projects". The MTP's Strategic Plan that provides for the inclusion of "illustrative projects" and/or planning concepts not fully developed and not ready for inclusion in the fiscally-constrained MTP, was also amended to focus description on need and purpose for transportation improvements and to update the status of the Strategic Plan elements. A description of the Federal Transit Administration's New Start Alternatives Analysis (AA) process for high capacity transit in the I-5/I-205/SR-500 loop was provided.

The 2005 MTP update included extending the horizon year of the Plan to 2030 together with accompanying demographic forecasts. It also included update to the Plan Goals and Policies, update to the Designated Regional Transportation System, to the Financial Plan and a major update to the list of projects identified in the MTP to include a large number of projects needed to provide internal circulation improvements for the rapidly growing smaller cities of Clark County.

The 2007 MTP update focuses on meeting SAFETEA-LU compliance requirements and on bringing the MTP into consistency with local Comprehensive Plans and with WSDOT's updated Washington Transportation Pan (2006) and the Highway System Plan (HSP). The list of identified projects is updated to be consistent with Capital Facilities Plans developed as part of the comprehensive growth management planning process.

Results and recommendations from transportation studies underway will be incorporated into future MTP updates or amendments. The next amendment to the MTP is anticipated in 2008 to incorporate the recommendations of the Columbia River Crossing project and the Clark County High Capacity System Study. A revised federal functional classification system will also be incorporated that will reflect the updated Comprehensive Growth Management Plans of local jurisdictions.

Table 7-2: Chronology of MTP Update and Amendment, 1994 to 2008

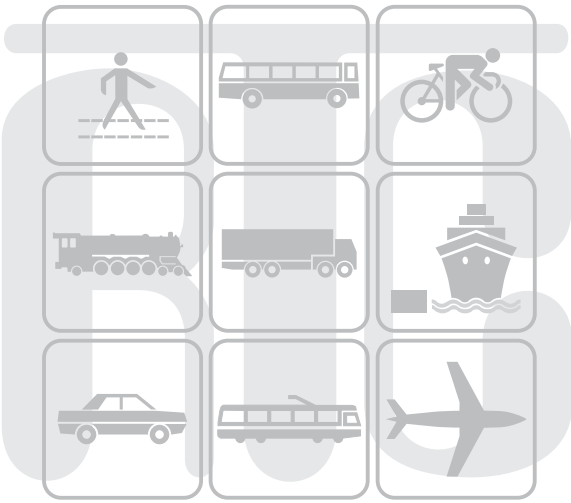
Chronology of MTP Update and Amendment, 1994 to 2008		
Date	**Action**	**Notes** *Employment is Bureau of Labor Statistics (BLS) equivalent or 'covered' employment*
December 1994	MTP Adoption RTC Board Resolution 12-94-30	This was the first MTP adopted following formation of RTC. The 1994 MTP met all requirements of the federal Intermodal Surface Transportation Efficiency Act passed in 1991. The Plan was fiscally constrained and met air quality standards. **Year** **Population** **Households** **Employment** Base 1990 238,053 88,438 80,100 Forecast 2015 380,425 152,170 138,300
1995	None	RTC staff reviewed the 1994 MTP and listed elements to change and enhance at the next MTP update. An RTAC memo, dated October 31, 1995, outlined the changes and enhancements identified for the next update.
December 1996	MTP Update RTC Board Resolution 12-96-22	The update extended the horizon year from 2015 to 2017. Land use inputs consistent with the *Clark County 20 Year Comprehensive Growth Management Plan* and forecasts consistent with the population forecast supplied by Washington Office of Financial Management (OFM) were used in MTP process. Also updated was the designated regional transportation system, transportation system performance measures and list of identified transportation projects for the 20-year period. **Year** **Population** **Households** **Employment** Base 1990 238,053 88,438 80,100 Forecast 2017 437,167 171,842 154,500
December 1997	MTP Amendment RTC Board Resolution 12-97-23	The amended MTP included changes to the designated regional transportation system, transportation system performance measures and list of identified transportation projects for the 20-year period. **Year** **Population** **Households** **Employment** Base 1990 238,053 88,438 80,100 Forecast 2017 437,167 175,577 154,500
October 1998	MTP Prioritization Process RTC Board Resolution 10-98-16	The MTP Prioritization Process was adopted in October 1998. This focussed on major mobility type projects. A Summary Report on the Prioritization Process was published including policy criteria, technical evaluation of projects and results. Economic development and existing commitments to business and industry were prime criteria for prioritization. Congestion Mitigation/Concurrency Deficiencies, project cost-effectiveness, completion of the transportation system, freight movement and bi-state movement were all considered. The significance of Transportation Demand Management (TDM) was noted.
December 1998	MTP Amendment RTC Board Resolution 12-98-24	Incorporated into the Dec. 1998 MTP amendment were • Results from the prioritization process. • A matrix of potential TDM strategies. • Chapter 4 (finance) updated to show balance between estimated revenues and forecast expenditures on MTP

Chronology of MTP Update and Amendment, 1994 to 2008

Date	Action	Notes *Employment is Bureau of Labor Statistics (BLS) equivalent or 'covered' employment*
		transportation needs. • Chapter 5 (system development) updated to include Prioritization Process, additional TDM detail and economic development description.. **Year** **Population** **Households** **Employment** Base 1990 238,053 88,438 80,100 Forecast 2017 437,167 175,577 154,500
April, 1999	MTP Amendment RTC Board Resolution 04-99-09	Phase I of the I-5/NE 219th Street; planning and design of a proposed new interchange was included in the MTP.
October 1999	MTP Update RTC Board Resolution 10-99-26	The demographic forecast was extended to 2020. The MTP update includes the new federally-required planning factors, adds several arterial improvements and has an updated air quality conformity analysis. **Year** **Population** **Households** **Employment** Base 1996 303,500 120,312 104,200 Forecast 2020 473,898 192,716 170,900
December 2000	MTP Amendment RTC Board Resolution 12-00-30	The amendment included the following elements: (i) I-5 AM peak period HOV lane project (ii) Base Year updated from 1996 to 1999 C-TRAN service description updated (July, 2000) (iii) Appendix A; projects under construction or fully funded noted. **Year** **Population** **Households** **Employment** Base 1999 337,000 137,974 112,490 Forecast 2020 473,898 192,716 170,900
Update: December 2002	MTP Update RTC Board Resolution 12-02-24	The update included the following elements: (i) Base year updated to year 2000 and horizon year extended to 2023. (ii) Update to Chapter 4 Finance Plan. (iii) Updated list of MTP "fiscally-constrained" recommended improvements. (iv) Strategic Plan element incorporated into MTP Appendix includes recommendations of the I-5 Partnership Governors' Task Force (June 2002). **Year** **Population** **Households** **Employment** Base 2000 345,238 127,203 118,310 Forecast 2023 486,225 200,094 185,370
December 2003	MTP Amendment RTC Board Resolution 12-03-32	The amendment included the following elements: (i) Add Port of Ridgefield Rail Overpass Project. (ii) Amend Strategic Plan Recommendations (Appendix B). (iii) Minor Amendments to Financial Plan to acknowledge funding of state "nickel package" projects. **Year** **Population** **Households** **Employment** Base 2000 345,238 127,203 118,310 Forecast 2023 486,225 200,094 185,370

Chronology of MTP Update and Amendment, 1994 to 2008

Date	Action	Notes *Employment is Bureau of Labor Statistics (BLS) equivalent or 'covered' employment*
December 2005	MTP Update RTC Board Resolution 12-05-24	The update included the following elements: (i) Review and update of MTP Goals and Policies. (ii) Horizon year extended to 2030. (iii) Update to the Designated Regional Transportation System Map. (iv) Update to Chapter 4 Finance Plan. (v) Updated list of MTP "fiscally-constrained" recommended improvements. (vi) Strategic Plan element update in Appendix B. **Year** **Population** **Households** **Employment** Base 2000 345,238 127,203 118,310 Forecast 2030 592,378 220,215 238,515
December 2007	MTP Update RTC Board Resolution 12-07-24	The update included the following elements: (i) Consistency with state and local plans (ii) Update to the Designated Regional Transportation System Map (transit system). (iii) Update to Chapter 4 Finance Plan. (iv) Updated list of MTP "fiscally-constrained" recommended improvements. (v) Strategic Plan element update in Appendix B. (vi) Incorporation of technical papers on security and environmental mitigation. **Year** **Population** **Households** **Employment** Base 2000 345,238 127,203 118,310 Forecast 2030 639,337 246,848 283,875
July 2008	MTP Amendment RTC Board Resolution 07-08-10	The amendment includes the following element: (i) Add the I-5 Columbia River Crossing project's Locally Preferred Alternative. The LPA is added to the map of the Regional Transportation System in Chapter 3, is included in Chapter 4 (Financial Plan) which includes a description of the financing assumptions, and is added to the Transportation Improvements map in Chapter 5. The Plan's amendment is acknowledged in Chapter 7. Appendix A is amended to include the CRC's LPA and Appendix B (Strategic MTP) is amended to delete the CRC project as it is brought into the fiscally constrained Plan. **Year** **Population** **Households** **Employment** Base 2000 345,238 127,203 118,310 Forecast 2030 639,337 246,848 283,875



MTP APPENDIX A

TRANSPORTATION CAPACITY IMPROVEMENTS ASSUMED IN MTP NETWORK

Assignment of forecast future year trips onto the *MTP* transportation network in the regional travel forecasting model process shows where there are likely to be deficiencies in the transportation system over the longer term. Locations where future traffic volumes exceed MTP system capacity require analysis and identification of remedial projects or strategies to help solve these forecast deficiencies. Along with technical analysis, the projects can only be identified in the MTP is they also meet the test of "fiscal constrain"; there must be a reasonable expectation that revenues will be available to complete the identified project or strategy.

Between now and 2030 Clark County jurisdictions have planned for transportation solutions in locations with existing or forecast future capacity problems. The MTP transportation system is the existing transportation network with improvements made on those links where projects are programmed in the Transportation Improvement Program. In addition, improvement projects are included where regional need has been identified in the MTP development process and for which there is strong regional commitment. Projects included in the MTP transportation system may eventually be programmed using funding from federal, state, Transportation Improvement Account (TIA), local sources and/or private sources.

The list (overleaf) is of the major transportation improvements[1] which have been incorporated into the *MTP* transportation network for Clark County. These listed projects are identified in the Metropolitan Transportation Plan needs analysis. Projects programmed for funding in the *Metropolitan Transportation Improvement Program (MTIP) for Clark County* should be identified in the MTP.

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[1] Additional highway lanes, additional or re-constructed interchanges, construction of new highway segments, expanded transit service.

Table A-1: Metropolitan Transportation Plan (MTP) Update (2007), Amended 2008
Projects Assumed to be Complete by 2030

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)					
(projects listed are included in the Regional Travel Forecast Model)					
This list includes both MTP Designated Regional Transportation System projects and local projects. *Projects in Italics are local transportation system and are not part of the MTP Designated Regional Transportation System*					
Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Jurisdiction / Agency**
I-5	Columbia River Crossing (CRC). SR-500 in Vancouver, Washington to Columbia Boulevard in Portland, Oregon	Replacement I-5 river crossing and reconstructed interchanges. Light Rail Transit with terminus in Clark College vicinity.	3 lanes each direction	2017	WSDOT
I-5	Salmon Creek to I-205	3 lanes each direction	2 lanes each direction	2006	WSDOT
I-5	SR-502 Interchange	New Interchange	None	2008	WSDOT
I-5	Pioneer Street (Ridgefield)/ SR-501 Interchange	Replace Interchange	Interchange	2009	WSDOT/ Ridgefield
I-5	The Salmon Creek Interchange Project (SCIP) at 134th/139th Street	Construct NE 139th St. from NE 20th Ave. to NE 10th Ave. Reconstruct interchange with ramps added at 139th St. NE 10th Ave. Improve NE 10th Ave. from 134th to 149th St. with turn lanes	Interchange	2010-2013	WSDOT/ Clark Co
I-5/I-205	Salmon Creek Interchange Phase II	Improve access to I-205 with flyover from 134th St to I-205 southbound		2013-2020	WSDOT
I-5	319th Street Interchange	Rebuild Interchange	Interchange	2011-2015	WSDOT
I-5	I-205 to 179th Street	Auxiliary lane in each direction	3 lanes each direction	2012-2013	WSDOT
I-5	179th Street to SR-502	Auxiliary lane in each direction	3 lanes each direction	2016-2025	WSDOT

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)

(projects listed are included in the Regional Travel Forecast Model)

This list includes both MTP Designated Regional Transportation System projects and local projects.
Projects in Italics are local transportation system and are not part of the MTP Designated Regional Transportation System

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
I-5	179th Street Interchange	Reconstruct Interchange	Interchange	2016-2025	WSDOT
I-205	Mill Plain Exit (112th Avenue connector)	Build direct ramp to NE 112th Avenue	None	2007	WSDOT
I-205	Mill Plain to NE 18th St - Stage I	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th	2011	WSDOT
I-205	Mill Plain to NE 18th St - Stage II	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th/28th	2016	WSDOT
I-205	Mill Plain to 28th Street	Ramps/frontage road between Mill Plain and 28th Streets	Overpass/underpass	2020-2030	WSDOT
I-205	I-205/SR14 Interchange	Rebuild Interchange	Interchange	2020-2030	WSDOT
I-205	SR-14 to Mill Plain	Ramp Separation	Interchanges	2016-2025	WSDOT
I-205	28th St to SR 500	North ramps	None	2016-2025	WSDOT
I-205	SR-500	WB SR-500 to SB I-205 Flyover	Interchange	2016-2025	WSDOT
I-205	Padden Parkway Interchange	Rebuild interchange	2 lanes each direction	2016-2025	WSDOT
I-205	SR-500 to Padden Parkway	3 general purpose and 1 auxiliary lanes each direction	2 lanes each direction	2016-2025	WSDOT
I-205	Padden Parkway to 134th Street	3 lanes each direction	2 lanes each direction	2016-2025	WSDOT
SR-14	I-205 to 164th Avenue	3 lanes ea. direction	2 lanes each direction	2016-2025	WSDOT
SR-14	NW 6th Av. to SR-500/Union	2 lanes ea. direction w. interchange	1 lane each direction with intersections	2012	WSDOT
SR-14	SE Union Street to 32nd Street	Add lanes and construct interchanges (for safety and capacity)	1 lane each direction with intersections	2016-2025	WSDOT
SR-500	at I-205	Extend westbound auxiliary lane	3 lanes each direction	2009	WSDOT

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
SR-500	St. Johns Interchange	New Interchange	Intersection	2011	WSDOT
SR-500	42nd Avenue	Grade Separation	Intersection	2016-2025	WSDOT
SR-500	54th Avenue	Interchange with collector-distributor connecting to Andresen	Intersection	2016-2025	WSDOT
SR-500	at SR-503/ Fourth Plain	Construct turn lanes	Intersection	2011-2016	WSDOT
SR-501, Port of Ridgefield Rail Crossing, vicinity of Pioneer Street, Ridgefield	Extend Pioneer St to Port of Ridgefield Rail Overcrossing to Port of Ridgefield	Grade separated crossing of mainline railway. Feasibility study and environmental impacts review	at-grade rail crossings	2010-2013	Port of Ridgefield/ WSDOT
SR-502	NE 10th Avenue to Battle Ground	2 lanes each direction	1 lane each direction	2013	WSDOT
SR-503	at SR-502	Intersection improvement	At grade intersection	2011-2016	WSDOT
SR-503	at Padden Parkway	Add Interchange	None	2016-2025	Clark County/ WSDOT
SR-503	Padden to SR-502	Add Lanes, 3 lanes each direction	2 lanes each direction	2025-2030	WSDOT
SR-503	SR-502 to Gabriel Road	Add Lanes, 2 lanes each direction	1 lane each direction		WSDOT
SR-503	East Fork Lewis River	Northbound and southbound climbing lane	1 lane each direction	2011	WSDOT
Vancouver Rail and 39th Street	RR at 39th Street	Vancouver Rail Bypass and W. 39th Street	At-Grade Crossing	2010	WSDOT
Fleet Expansion and Replacement	System Wide	Fleet expansion and replacement for fixed route, demand response, and vanpool, including vehicles with alternative fuel technology	Follow replacement schedule, add vehicles as needed to provide service	Ongoing	C-TRAN
Transit Enhancements	System Wide	Improvements/amenities at bus stops, super stops, and transit centers - new and existing	Continuation of existing programs	Ongoing	C-TRAN

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Administration, Operations, and Maintenance Facility	65th Street & 18th Street	Expansion/redevelopment	Current facility is 20 years old and over capacity	2010-2015	C-TRAN
7th Street Passenger Service	7th Street & Washington	Redevelopment of C-TRAN property at 7th Street	Transit Center being decommissioned, only passenger service remains		C-TRAN
Central County Park & Ride	I-205 & Padden Parkway	Develop Park & Ride	C-TRAN owns property	2010-2015	C-TRAN
Evergreen Park & Ride	18th Street & 136th Avenue	Replacement or expansion of existing facility	Current park and ride lacks visibility and easy access to I-205	2014-2023	C-TRAN
219th Street Park & Ride	I-5 & SR-502	Park & Ride facility at new interchange	N/A	2020-2030	C-TRAN
Salmon Creek Park & Ride	I-5 & 134th/ 139th Streets	Relocate existing park & ride as part of interchange project	Existing park & ride needs to move for interchange improvements	2008-2010	C-TRAN
179th/ Fairgrounds Park & Ride	I-5 & NE 179th Street	Develop Park & Ride	N/A	2020-2030	C-TRAN
Fisher's Landing Transit Center	SR-14 & 164th Avenue	Expansion of park & ride facility	Existing park & ride with land for phase 2 expansion	2014-2023	C-TRAN
Vancouver Mall Transit Center	SR-500 & Thurston Way	Upgrades/improvements to transit center	Existing facility needs improvements/overhaul	2008-2010	C-TRAN
High Capacity Transit	TBD	Alternatives Analysis for recommended corridor(s) from HCT Study (New Starts and/or Small Starts)	Congested roadways with opportunities for HCT investment	2008-2009	C-TRAN

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ITS Deployment	System Wide	Deploy ITS Phase 2 and 3, including digital radio system	Phase 1 complete	Ongoing	C-TRAN
119th Street	72nd Avenue to SR-503 (117th Av.)	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Clark County
119th Street	Salmon Creek Av. to 72nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2016	Clark County
119th Street	NW 7th Av to NW 16th Av	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
179th Street	NE 10th to NE 29th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2010-2013	Clark County
179th Street	NE 29th Avenue to NE 72nd Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
179th Street	NE 72nd Avenue to Cramer Road	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
179th Street	Cramer Road to NE 112th Av.	1 lane ea. direction, w/turn lane	None	2013-2030	Clark County
179th Street	I-5 to NW 11th Avenue	2 lanes ea. direction, w/turn lane	I-5 to Delfel: 2 lanes each direction w/ turn lane Delfel to NW 5th: 2 lanes EB, 1 lane WB w Center Turn Lane	Completion will be by frontage improvements 2013 to 2030	Clark County
63rd Street	*Andresen Road to I-205 overcrossing*	*2 lanes ea. direction, w/turn lane*	*1 lane each direction*	*2008*	*Clark County*
72nd Avenue	N. of 88th Street to 110th St	2 lane ea. direction, w/turn lane	1 lane each direction	2008	Clark County
Andresen	Padden Parkway	Add Interchange	Intersection	2013-2030	Clark County
Bridges and Misc. Projects	*Various locations*			*2007-2030*	*Clark County*
Hazel Dell Av.	*99th Street to 114th Street*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*

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Highway 99	NE 99th Street to NE 119th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016	Clark County
Highway 99	122nd to 129th Street	2 lanes each direction w/ turn lane	2 lanes each direction	2013-2030	Clark County
Highway 99	South RR Bridge (Ross Street) to NE 63rd Street	2 lane ea. direction, w/turn lane (rail bridge)	2 lanes each direction	2013-2030	Clark County
Intersection Improvements	*Various locations*			*2007-2030*	*Clark County*
NE 10th Avenue	*149th to 164th Street*	*1 lane ea. direction, with turn lane*	*1 lane each direction*	*2007-2012*	*Clark County*
NE 10th Avenue	*NE 141st St .to NE 149th Street*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2010-2014*	*Clark County*
NE 10th Avenue	*NE 164th St to Fairgrounds Ent.*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NE 119th Street	SR-503 to NE 172nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
NE 137th/ 142nd Av	*NE 119th St to 173rd Circle*	*1 lane ea. direction, w/turn lane*	*None*	*2013-2030*	*Clark County*
NE 152nd Avenue	*Ward Road to 99th St*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NE 15th Avenue	*179th Street to NE 10th Avenue*	*1 lane ea. direction, w/turn lane*	*None*	*2013-2030*	*Clark County*
NE 15th/ 20th Avenues	*NE 154th to NE 15th Avenue*	*Street upgrade*	*1 lane each direction*	*2015-2020*	*Clark County*
NE 182nd Avenue	NE 159th to NE 174th St	Intersection improvements	1 lane each direction	2013-2030	Clark County
NE 199th Street	*NE 10th Av. To NE 72nd Av.*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NE 29th Avenue	*NE 134th to NE 179th St*	*Complete pedestrian connections*	*Some sidewalk segments*	*2013-2030*	*Clark County*
NE 50th Avenue	*LaLonde to 119th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NE 50th Avenue	*NE 119th to 179th St*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*

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NE 72nd Avenue	119th to 133rd Street	2 lanes each direction w/ turn lane	1 lane each direction	2023	Clark County
NE 72nd Avenue	NE 133rd to NE 219th St	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
NE 88th Street	*Highway 99 to St. Johns Road*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2015*	*Clark County*
NE 88th Street	*St. Johns Road to Andresen Road*	*1 lane ea. direction, w/turn lane*	*l lane each direction*	*2009-2010*	*Clark County*
NE 88th Street	*Hazel Dell Avenue to Highway 99*	*1 lane ea. direction, w/turn lane*	*None*	*2013-2030*	*Clark County*
NE 94th Avenue	*Padden Parkway to NE 119th Street*	*1 lane ea. direction, w/turn lane*	*1 lane/none*	*2030*	*Clark County*
NE 99th Street	*St. Johns Rd. to 72nd Av.*	*1 lane ea. direction, w/turn lane*	*None/1 lane*	*2030*	*Clark County*
NE 99th Street	*72nd to 94th Av.*	*1 lane ea. direction, w/turn lane*	*None/1 lane*	*2030*	*Clark County*
NE 99th Street	*94th to 117th Av.*	*1 lane ea. direction, w/turn lane*	*None/1 lane*	*2030*	*Clark County*
NE 99th Street	*NE 117th to 137th Av*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2009-2010*	*Clark County*
NE 99th Street	*NE 137th Av to 172nd*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NE Ward Rd.	NE 88th Street to NE 172nd Ave	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
NE Ward Rd.	NE 172nd Avenue to Davis Rd	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
NE Ward Rd.	NE Davis Rd to NE 182nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County
NW 11th Ave.	*NW 139th Street to 146th Street*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2013-2030*	*Clark County*
NW/NE 199th Street	*NW 11th Av.to NE 10th Av.*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2013-2020*	*Clark County*
Padden Parkway	SR-503	Add Interchange	Intersection	2013-2030	WSDOT/ Clark Co

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St. John's Blvd.	NE 50th Avenue to 72nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2008	Clark County
St. John's Blvd.	NE 68th St to NE 50th Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	*2013-2020*	Clark County
Ward/ 172nd Av.	S. 99th Street to 119th St.	Realignment	Curved	2009	Clark County
Grace Avenue	Grace Av/ East Main St	Align S Grace and N Grace	Unaligned intersections	2009	Battle Ground
Heisson Rd/ NE 10th St	*NE Heisson to East City Limits*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*1 lane each direction*	*2016-2025*	*Battle Ground*
N Parkway Avenue	*NE 5th St. to N Onsdorff Blvd*	*1 lane ea. direction, w/turn lane, median, bicycle and pedestrian facilities*	*1 lane each direction*	*2008*	*Battle Ground*
N Parkway Avenue	*Onsdorff to NE 244th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*1 lane each direction*	*2011-2015*	*Battle Ground*
NE 112th Ave	*NE 244th to NE 239th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
NE 112th Ave	*NE 199th to NE 189th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
NE 132nd Ave	*NE 199th to NE 179th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
NE 189th Street	*NE 12th Ave to SR-503*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
NE 199th Street	SE Grace to East City Limits	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2011-2015	Battle Ground
NE 199th Street	*NE 112th Av to SR-503*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2011-2015*	*Battle Ground*

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NE 1st Street	*N Parkway to Grace*	*Widen road lanes, w pedestrian facilities*	*1 lane each direction*	*2011-2015*	*Battle Ground*
NE 244th Street	*SR-503 to Parkway*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2011-2015*	*Battle Ground*
NE 244th Street	*N Parkway to NE 142nd Av*	*New urban collector with bike lanes and sidewalks*		*2011-2015*	*Battle Ground*
NE 244th Street	*NE 112th Av to SR-503*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
NE Onsdorff Blvd	*N Parkway to NE 142nd Av*	*New urban collector with bike lanes and sidewalks*		*2011-2015*	*Battle Ground*
NW 20th Ave	*SR-502 to Onsdorff*	*1 lane ea. direction, w bicycle and pedestrian facilities*		*2007-2010*	*Battle Ground*
NW 29th Av	*NE 239th to NW 3rd St*	*New urban collector with bike lanes and sidewalks*		*2011-2015*	*Battle Ground*
NW Onsdorff Blvd	*NE 239th St to NE 20th Av*	*New urban collector with bike lanes and sidewalks*		*2011-2015*	*Battle Ground*
NW/SW 1st St	*Frontages parallel to Main St*	*1 lane ea. Direction*	*None*	*2007-2010*	*Battle Ground*
S Parkway Avenue	*S 10th St to NE 199th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*1 lane each direction*	*2007*	*Battle Ground*
SE 1st Street	*S Parkway to Grace*	*Widen road lanes, w pedestrian facilities*	*1 lane each direction*	*2010*	*Battle Ground*
SE Grace Avenue	East Main St to NE 199th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2007-2010	Battle Ground
SE Rasmussen Blvd	*SE Grace to Commerce Ave*	*New road with sidewalks*	*None*	*2007-2010*	*Battle Ground*
SE Scotton Way	*East terminus to Grace*	*1 lane ea. direction, w bicycle and pedestrian facilities*	*None*	*2007-2010*	*Battle Ground*
SR-502 and 29th Ave		*Add south leg of intersection*		*2011-2015*	*Battle Ground*

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SR-502/ 12th Avenue	Reconfigure roadway system and signal removal	1 lane ea. direction, w bicycle and pedestrian facilities	None	2009	Battle Ground
SR-503 and NE 199th St.		Improve intersection - add turn lanes		2011-2015	Battle Ground
SR-503 and Scotton Way		*Add east and west intersection legs*		*2016-2025*	*Battle Ground*
SR-503 and SW Rasmussen Blvd.		*Add east and west legs of intersection*	*No intersection*	*2011-2015*	*Battle Ground*
SW 20th Ave	*SW Rasmussen Blvd to NE 199th St*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*		*2016-2025*	*Battle Ground*
SW 20th Avenue	*SR-502 to SW Rasmussen*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*1 lane each direction*	*2007-2010*	*Battle Ground*
SW 4th St	*S Parkway to west terminus*	*Widen road lanes, w pedestrian facilities*	*1 lane each direction*	*2007-2010*	*Battle Ground*
SW 7th Av	*Rasmussen to SW Scotton Way*	*1 lane ea. direction, w pedestrian facilities*	*None*	*2007-2010*	*Battle Ground*
SW 7th Avenue	*NE 199th St to SW Scotton Way*	*1 lane ea. Direction, w/turn lane, bike and pedestrian*	*None*	*2007*	*Battle Ground*
SW 7th Avenue	*Rasmussen to NE 199th St*	*1 lane ea. direction, w pedestrian facilities*	*None*	*2009*	*Battle Ground*
SW 7th Avenue	*Rasmussen to south terminus*	*1 lane ea. direction, w pedestrian facilities*	*None*	*2007-2010*	*Battle Ground*
SW Rasmussen Blvd	*SR-503 to SW 20th*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*None*	*2007-2010*	*Battle Ground*
SW Rasmussen Blvd	*SR-503 to S Parkway Av*	*1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities*	*None*	*2011-2015*	*Battle Ground*
38th Avenue	Bybee Road to Astor	1 lane ea. direction, w/turn lane	1 lane each direction	2010-2016	Camas
Leadbetter Drive	*Lake Road to Parker Street*	*1 lane ea. direction, w/turn lane*	*None*	*2009*	*Camas*

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North Dwyer Creek Master Plan: Street "A"	*NW Lake Rd to Camas Meadows Dr*	*1 lane each direction*	*None*	*2010-2016*	*Camas*
North Dwyer Creek Master Plan: Street "B"	*#NW Friberg to NW Larkspur*	*1 lane each direction*	*None*	*2010-2016*	*Camas*
NW 16th/ Hood/18th	*Klickitat to Astor*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2009*	*Camas*
NW 18th Av	*Whitman to Brady*	*1 lane ea. direction, w/turn lane*	*None*	*2010-2016*	*Camas*
NW 18th Av/ SE Payne Rd	*Whitman St to NW Pac Rim Blvd.*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2007*	*Camas*
NW 38th Av	*Astor to Sierra*	*1 lane each direction*	*None*	*2008*	*Camas*
NW 38th Av/ SE 20th St	*SE Bybee Rd to 192nd*	*1 lane ea. direction, w/turn lane*	*None*	*2010-2016*	*Camas*
NW 43rd Av/ Astor St	*Sierra to 38th*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2008*	*Camas*
NW 6th Av	Ivy to Division	1 lane ea. direction, w/turn lane	2 lanes each direction	2010-2016	Camas
NW Astor St/ NW 11th Av	*Forest Home Rd to McIntosh Rd*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2008*	*Camas*
NW Brady Rd	*16th to 25th*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2007*	*Camas*
NW Cascade St	*12th to 18th*	*1 lane each direction*	*None*	*2008*	*Camas*
NW Friberg St	*SE 1st St to Goodwin*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2010-2016*	*Camas*
NW Larkspur St	*Lake Rd to 60th*	*1 lane each direction*	*None*	*2008*	*Camas*
NW McIntosh Rd	*Brady to 11th*	*1 lane ea. direction, w/turn lane*	*1 lane each direction*	*2010-2016*	*Camas*
NW Payne St	*NW Lake Rd to Camas Meadows Dr*	*1 lane each direction*	*Private Drive*	*2010-2016*	*Camas*
Brezee Creek		*Creek Crossing Pedestrian/bicycle crossing*		*2014-2030*	*La Center*

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Collector roadway	*Highland to E 4th Street*	*New eastside collector roadway*	*None*	*2010-2016*	*La Center*
E 4th Street	Highland to E. City Limits	Urban upgrade	Unimproved road segment	2007	La Center
E 4th Street		Culvert/bridge replacement		2010-2016	La Center
East Fork Bridge		*Second bridge crossing*	*None*	*2014-2030*	*La Center.*
Highland Street	*E 4th Street*	*Realignment and improved intersection*	*Offset intersection with poor sight visibility*	*2007-2013*	*La Center*
Highland Street	*High School to E City Limits*	*Urban upgrade*	*Unimproved road segment*	*2010-2016*	*La Center*
La Center Road	at Timmen Road	Construct left turn lanes	Unimproved intersection	2010-2016	La Center
New Collector "A"				*2014-2030*	*La Center*
New Collector "B"				*2014-2030*	*La Center*
New Collector "C"				*2014-2030*	*La Center*
Timmen Road	*at La Center Road*	*Construct right-turn lane*	*Unimproved intersection*	*2010-2016*	*La Center*
SR-501 Deceleration Lane	SR-501 and NW 26th Street	Add deceleration lane on north side of SR-501	1 lane each direction	2009	Port of Vancouver
West Vancouver Freight Access	5 Schedules (stages) - Schedule 1 new acess to BNSF mainline/spurs to LaFarge and Albina Fuel; Schedules 2 - 4 internal rail improvements; Schedule 5 new access to Columbia	Cost estimates are in the range of $77 million to $100 million	Hill track access from BNSF mainline, internal rail system. No service to Columbia Gateway	Phased, 2007-2020	Port of Vancouver

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	Gateway				
289th Street	*I-5 to NW 11th (65th Avenue)*	*Upgrade to minor arterial*	*1 lane each direction*	*2012*	*Ridgefield*
6th Way	*Timm Road to S 51st Avenue*	*1 lane each direction w/ turn lane*	*Not continuous*	*2008*	*Ridgefield*
8th Street	*Pioneer to Division Street*	*Extend existing road*	*Not continuous*	*2015*	*Ridgefield*
Bertsinger Road	*SR-501 to S 25th Place*	*Realign road*	*1 lane each direction*	*2009*	*Ridgefield*
Carty Road	*Hillhurst to I-5*	*Upgrade to minor arterial*	*1 lane each direction*	*2020*	*Ridgefield*
Division	*8th St. to Main St.*	*Rebuild road*	*1 lane each direction*	*2015*	*Ridgefield*
Hillhurst Road	Royle to 229th extension	Upgrade to 5 lane principal arterial	1 lane each direction	2012	Ridgefield
Hillhurst Road	SR-501 to Royle Road	1 lane each direction w/ turn lane	1 lane each direction	2013	Ridgefield
Hillhurst Road	Realign and connect to 8th Ave.	Extend existing road	1 lane each direction	2015	Ridgefield
I-5	219th St. to SR-501	NB auxiliary lane along I-5	None		Ridgefield/ WSDOT)
I-5	SR-501 to 219th St.	SB auxiliary lane along I-5	None		Ridgefield/ WSDOT)
N 10th Street	*N 45th to N 51st Avenue*	*1 lane each direction w/ turn lane*	*Not continuous*	*2015*	*Ridgefield*
N 10th Street	*Reiman Road to N 45th Avenue*	*1 lane each direction w/ turn lane*	*Not continuous*	*2017*	*Ridgefield*

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)

(projects listed are included in the Regional Travel Forecast Model)

This list includes both MTP Designated Regional Transportation System projects and local projects.
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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
N 10th Street/ 279th street	*E side of I-5 to N 65th Avenue*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2009*	*Ridgefield*
N 35th Street	*SR-501 to N 10th Avenue*	*1 lane each direction*	*Not continuous*	*2009*	*Ridgefield*
N 51st Avenue	*S 15th to Pioneer*	*1 lane each direction w/ turn lane*	*Not continuous*	*2010*	*Ridgefield*
N 51st Avenue	*Pioneer to N 10th Street*	*1 lane each direction w/ turn lane*	*Not continuous*	*2010*	*Ridgefield*
N 56th Avenue	*SR-501 to N 5th Street*	*1 lane each direction w/ turn lane*	*Not continuous*	*2010*	*Ridgefield*
N 5th Street	*N 45th Avenue to N 56th Place*	*1 lane each direction w/ turn lane*	*Not continuous*	*2012*	*Ridgefield*
N 65th Ave./ NW 11th	*Pioneer to NW 289th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2009*	*Ridgefield*
NE 10th Avenue	*NE 259th Street to S 5th Street*	*Rebuild road w/ shoulder*	*1 lane each direction*	*2008*	*Ridgefield*
NE 10th Avenue	*S 5th to NE 279th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2012*	*Ridgefield*
NE 20th Ave.	*NE 279th to NE 259th St*	*Upgrade to collector arterial*	*1 lane each direction*	*2017*	*Ridgefield*
NE 259th St	*NE 10th to NE 20th Av.*	*Upgrade to collector arterial*	*1 lane each direction*	*2017*	*Ridgefield*
NE 279th Street	*NE 10th to NE 20th Av.*	*Upgrade to collector arterial*	*1 lane each direction*	*2017*	*Ridgefield*
NW 11th	*Pioneer to S 5th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2012*	*Ridgefield*
NW 279th Street Extension	*NW 11th Avenue to NE 10th Avenue*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2015*	*Ridgefield*
Pioneer Street Bridge	over Gee Creek	Bridge Replacement	2 lane bridge	2015	Ridgefield
Pioneer Street/ SR-501	I-5 NB Ramps to S 10th Street	2 lanes each direction w/ turn lane	1 lane each direction	2008	Ridgefield
Pioneer Street/ SR-501	.5 mile west of S 45th to I-5 NB ramps	2 lanes each direction w/ turn lane	1 lane each direction	2010	Ridgefield

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
Pioneer Street/ SR-501	.5 miles west of S 45th to W of Reiman Road	Widen, 1-2 lanes each direction	1 lane each direction	2015	Ridgefield
Reiman Road	*SR-501 to NW 279th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2012*	*Ridgefield*
Royle Road	*Hillhurst Road to S 45th Avenue*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2012*	*Ridgefield*
S 10th Street	*Pioneer Extension to NE 10th Avenue*	*1 lane each direction w/ turn lane*	*Not continuous*	*2010*	*Ridgefield*
S 10th Way	*S 35th Place to S 25th Place*	*Rebuild road*	*1 lane each direction*	*2012*	*Ridgefield*
S 15th Street	*S 45th Avenue to S 35th Place*	*Rebuild road*	*1 lane each direction*	*2012*	*Ridgefield*
S 15th Street	*Pioneer Extension to S 45th Avenue*	*1 lane each direction w/ turn lane*	*Not continuous*	*2015*	*Ridgefield*
S 15/35th Av./ Birtsinger	*S 45th Ave to Birtsinger*	*New collector*	*None*	*2015*	*Ridgefield*
S 20th Way	*Timm Road to S 51st Avenue*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2015*	*Ridgefield*
S 25th Place	*S 10th to S 4th Way*	*Rebuild road*	*1 lane each direction*	*2015*	*Ridgefield*
S 35th Avenue	*SR-501 to South UGA*	*1 lane each direction*	*Not continuous*	*2010*	*Ridgefield*
S 35th Avenue	*South UGB to S 15th Street*	*1 lane each direction*	*Not continuous*	*2015*	*Ridgefield*
S 45th Avenue	*S 15th to N 10th Street*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2012*	*Ridgefield*
S 51st Avenue	*S 15th Way to 234th Street*	*New minor arterial*	*None*	*2012*	*Ridgefield*
S 51st Avenue	*S 20th Way to S 15th Way*	*1 lane each direction w/ turn lane*	*Not continuous*	*2015*	*Ridgefield*
S 5th Street	*Pioneer Extension to NE 10th Avenue*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2015*	*Ridgefield*

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
S 5th Street	*NW 11th Street to Pioneer Street Extension*	*1 lane each direction w/ turn lane*	*1 lane each direction*	*2015*	*Ridgefield*
Timm Road	*S 15th St to S 20th Way*	*Widen, 1 lane each direction*	*1 lane each direction*	*2008*	*Ridgefield*
112th Avenue	Mill Plain to 49th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016-2025	Vancouver
131st Avenue	*Fourth Plain to 59th Street*	*1 lane ea. direction, w/turn lane*	*intermittent roadway*	*2013-2030*	*Vancouver*
136th Ave.	*SE 7th St. Intersection*	*Intersection improvement*	*Substandard*	*2011*	*Vancouver*
137th Avenue	49th Street to Vancouver City Limits	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver
138th Avenue	28th Street to 39th Street	2 lanes ea. direction, w access management	1 lane each direction	2007-2012	Vancouver
152nd Avenue	*Fourth Plain south to city limits*	*New arterial street*	*No street*	*2013-2030*	*Vancouver*
157th Avenue	*Fourth Plain to 59th Street*	*1 lane ea. direction, w/turn lane*	*intermittent roadway*	*2013-2030*	*Vancouver*
164th Avenue	SE 1st to SE 34th St	Reconstruct intersections to improve traffic flow	Unimproved intersections	2007-2012	Vancouver
164th Avenue	*SR-14 to Evergreen*	*Upgrade to urban standard*	*1 lane each direction*	*2013-2030*	*Vancouver*
18th Street	162nd Avenue to 192nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Vancouver
18th Street	97th Avenue to NE 138th Avenue	2 lanes ea. direction, w/turn lane		2007-2012	Vancouver
18th Street	138th Avenue to 162nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver
18th Street	87th Avenue to 97th Avenue	Extend existing street 1 lane ea. direction, w/turn lane	No street	2013-2030	Vancouver
192nd Avenue	SE 1st Street to NE 18th Street	2 lanes ea. direction, w/turn pockets	1 lane each direction	2010	Vancouver

2030 MTP: LIST OF MTP AND LOCAL PROJECTS (110/27/07)

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
26th Avenue	*SR-501 to Fruit Valley Road*	*1 lane ea. direction, w/turn lane new minor industrial arterial*	*None*	*2007-2012*	*Vancouver*
39th Street	*At Railroad Tracks*	*Over-Crossing*	*At-Grade Crossing*	*2008*	*Vancouver*
39th Street	*Columbia to Main St*	*Minor Widening*	*1 lane each direction*	*2013-2030*	*Vancouver*
49th Street	122nd to 137th Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver
49th Street	*15th Avenue to St James*	*Reconstruct, widen and upgrade to urban standards*	*1 lane each direction*	*2013-2030*	*Vancouver*
54th Street	*18th Avenue to St James*	*Reconstruct, widen and upgrade to urban standards*	*1 lane each direction*	*2013-2030*	*Vancouver*
59th/56th Street	*137th Avenue to 122nd Avenue*	*upgrade to urban minor arterial*	*intermitten roadway*	*2013-2030*	*Vancouver*
82nd Av./ Thurston Way	*Van Mall Drive to NE 54th Street*	*Urban upgrade to standard*	*Substandard*	*2013-2030*	*Vancouver*
94th Avenue	*Van Mall Drive to NE 54th Street*	*Urban upgrade*	*1 lane each direction*	*2007-2013*	*Vancouver*
9th Street	*I-205 to NE 136th Avenue*	*Close gaps and complete corridor*	*Unconnected street system*	*2013-2030*	*Vancouver*
9th Street/ 11th Street	*NE 136th to 162nd Av*	*Close gaps and complete corridor to 2 lane urban collector*	*Unconnected street system*	*2013-2030*	*Vancouver*
Brady Road West Extenstion	*192nd Ave. interchange to 171st Ave.*	*New arterial roadway from 192nd interchange, west to existing neighborhoods*	*None*	*2013-2030*	*Vancouver*
Columbia Shores	*S. of SR-14*	*Rail Trestle, Widen Portal*	*Under-Pass*	*2013-2030*	*Vancouver*
E. Mill Plain	136th Ave. Intersection	Intersection improvement	Substandard	2010	Vancouver

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
Ellsworth	*SE 10th St to SR-14*	*Upgrade to minor arterial standard*	*Substandard*	*2013-2030*	*Vancouver*
Ellsworth	*SE 10th St to Mill Plain*	*Upgrade to minor arterial standard*	*Substandard*	*2013-2030*	*Vancouver*
Esther Street	*At RR Tracks*	*Railroad undercrossing, new road*	*None*	*2007-2012*	*Vancouver*
Evergreen Highway and Trail	*Chelsea to 192nd Ave.*	*Improve to urban standard with multi-purpose trail on one side*	*1 lane each direction, no sidewalk or bike lane*	*2007-2012*	*Vancouver*
Fourth Plain	I-5 to Railroad Bridge	2 lanes each direction	1 lane each direction with center turn lane	2013-2030	Vancouver
Fourth Plain Boulevard/ Andresen	Intersection Influence Area	Reconstruct Fourth Plain in vicinity of 65th/66th Avenue to Andresen		2007-2013	Vancouver
Fruit Valley Rd	Whitney to 78th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2020	Vancouver
Grand Blvd.	Columbia House Way Intersection	Intersection improvement	Substandard	2008	Vancouver
Jefferson St./ Grant Street	*8th St. to Railroad Ave.*	*Reconstruct and grade separate*	*1.5 lane each direction*	*2010*	*Vancouver*
Jefferson/ Kauffman St.	*Mill Plain to 8th St.*	*Realign offset @ 13th, grade separate from rail @ 8th St.*	*Substandard*	*2012*	*Vancouver*
Lieser Road. NE 87th Ave.	*Lieser to E 5th St*	*Intersection improvement*	*Offset intersection*	*2013-2030*	*Vancouver*
MacArthur Blvd.	Lieser Rd. Intersection	Intersection improvement	Substandard	2012	Vancouver
Main Street	5th Street to McLoughlin	Convert to two-way street	One-way street	2008	Vancouver
Main Street	5th Street to Columbia Way	Re-connect to waterfront S. of rail berm	No street	2011	Vancouver
NE 104th Avenue	*NE 14th Street to NE 18th Street*	*Extend existing street 1 lane each direction*	*Improve & construct new N/S corridor west of I-205*	*2007-2012*	*Vancouver*

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
NE 11th/ NE 13th	*172nd Avenue to 192nd Avenue*	*1 lane ea. direction, w/turn lane*	*none*	*2013-2030*	*Vancouver*
NE 122nd Avenue	*NE 39th Street to NE 49th Street*	*1 lane ea. direction, w/turn lane (collector standards)*	*1 lane each direction*	*2007-2012*	*Vancouver*
NE 127th Avenue	*Fourth Plain to NE 59th Street*	*Upgrade to urban standard*	*partial built*	*2013-2030*	*Vancouver*
NE 131st Avenue	*Fourth Plain to NE 59th Street*	*Upgrade to urban standard*	*partial built*	*2013-2030*	*Vancouver*
NE 147th Avenue	*Ward Road/ Fourth Plain to NE 59th St.*	*Construct new minor arterial 1 lane each direction with turn lane*	*No street*	*2008*	*Vancouver*
NE 15th/ 18th Av	*49th to 54th St*	*New 2 lane urban collector*	*No street*	*2013-2030*	*Vancouver*
NE 28th Street	142nd Avenue to 162nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver
NE 4th St	*Western Terminus to SE 1st*	*New street connection to urban standard*	*No street*	*2007-2012*	*Vancouver*
NE 59th Street	*137th to 162nd Avenue*	*Construct new minor arterial 1 lane each direction with turn lane*	*No street*	*2013-2030*	*Vancouver*
Olympia Drive north extension	*Mill Plain to 1st St.*	*New N/S roadway through Evergreen Airport property*	*No Street*	*2013-2030*	*Vancouver*
Parkway Dr Extension	*72nd to 77th Av*	*Gap completion, urban collector*	*Unconnected street system*	*2013-2030*	*Vancouver*
Railroad Avenue	*Columbia to new Lincoln Avenue grade separated facility*	*New waterfront east-west arterial*	*No street*	*2031-2030*	*Vancouver*
SE 10th Street	*Ellsworth to 98th Av*	*Upgrade to collector arterial*	*1 lane each direction*	*2013-2030*	*Vancouver*

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Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Jurisdiction / Agency
SE 10th Street	*Ellsworth to Chkalov*	*Upgrade to minor arterial*	*1 lane each direction*	*2013-2030*	*Vancouver*
SE 15th Street	164th to 192nd Ave.	Upgrade to collector arterial		2013-2030	Vancouver
SE 188th Ave	*E Mill Plain to SE 1st St*	*New connector access*	*No street*	*2007-2012*	*Vancouver*
SE 1st Street	164th Avenue to 192nd Ave.	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver
SE 20th Street	*192nd Ave. to Camas City Limits*	*New urban minor arterial roadway*	*No Street*	*2007-2012*	*Vancouver*
SE 5th Street	*Blandford to East Reserve*	*Upgrade to 3-lane Modified Collector*	*1 lane each direction*	*2013-2030*	*Vancouver*
Vancouver Mall Drive Extension	*Andresen Road to 66th Avenue*	*1 lane ea. direction, w/turn lane*	*None*	*2007-2012*	*Vancouver*
27th St Extension and RR overpass	*B to E Street*				*Washougal*
27th Street	*B Street to SR-14*	*Widen for turn lane, bike lanes and sidewalk*			*Washougal*
32nd Street	*SR-14 to E Street*	*Widen to 3 lanes*			*Washougal*
32nd Street	*E Street to 34th Street*	*Widen to 3 lanes, plus bike lanes and sidewalk*			*Washougal*
342nd Av/ Lehr Rd	*34th to 20th St*	*Widen to collector standard with sidewalks*			*Washougal*
6th Street	*SR-14 to E Street*	*Widen to 3 lanes, plus bike lanes and sidewalk*			*Washougal*
A Street/ Addy Street Connection	*20th to 27th Street*				*Washougal*
Addy Street	*27th to 45th Street*	*Widen for turn lane, bike lanes and sidewalk*			*Washougal*
B Street, C Street, 17th Street	*15th to 18th Streets*	*Downtown Streetscape Improvements*			*Washougal*
Crown Rd/ 283rd Ave	*North UGB to Camas city limits*	*Widen to 3 lanes, plus bike lanes and sidewalk*			*Washougal*

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Facility	**Cross Streets**	**Project Description**	**Existing Condition**	**MTP 2007 Estimated Completion (Year or Range)**	**Jurisdiction / Agency**
E Street/ D Street	West City Limits (Lechner/6th) to 32nd St	Boulevard Design Improvement (1 lane each direction with left turn, sidewalks and bikelanes)	2 lanes each direction (west of 39th St) 1 lane each direction (east of 39th St)	2009	Washougal
Evergreen Way	*32nd Street to Sunset View Rd*	*Widen to 3 lanes, plus bike lanes and sidewalk*			*Washougal*
Miscellaneous west city collectors					*Washougal*
Stiles Rd/ 34th Street	*32nd Street to UGB*	*Widen to 3 lanes, plus bike lanes and sidewalk*			*Washougal*
Sunset View Road	*Evergreen Way to East city limits*	*2 lane collector with shoulders for bike and pedestrians*			*Washougal*
W Street	*32nd to 49th St.*	*2 lane collector and extension across creek*			*Washougal*
County-wide	County Wide	Walkway & Bicycle Programs		Continuing	County-wide
County-wide	County Wide	Demand Management		Continuing	County-wide
Various	System Wide	Intelligent Transportation System (ITS) Additions	None	Continuing	County-wide

In addition to the listed projects, the RTP is supportive of any other project for which a need has been demonstrated through the regional transportation planning process that will serve to enhance the efficiency and operation of the regional transportation system. These project include **MAINTENANCE, PRESERVATION, SAFETY, PEDESTRIAN, BICYCLE, ENHANCEMENT, TRANSPORTATION SYSTEM MANAGEMENT (TSM), TRANSPORTATION DEMAND MANAGEMENT (TDM).**

Table A-2: Other Transportation System Development Elements

TABLE A-2: OTHER TRANSPORTATION SYSTEM DEVELOPMENT ELEMENTS	
MAINTENANCE	
	Maintenance work ensures a safe, reliable and efficient transportation system on a day to day basis with such activities as pothole filling, repair of damaged bridges, incident response, maximizing operational efficiency by signal timing, snow clearing, vegetation planting and clearing, drainage and fence maintenance and litter removal. The MTP supports regional system maintenance work identified by WSDOT and local agencies.
PRESERVATION	
	Preservation projects ensure that investment in the regional transportation system is protected. Specific projects include repaving of highways, refurbishing rest areas and bridge rehabilitation. Needs and projects are identified by local agencies and WSDOT through such programs as the Highway Performance Monitoring System (HPMS), ISTEA-required Pavement Management System (PMS) and Bridge Management System (BMS).
SAFETY	
	Needs identified through the WSDOT "Strategic Highway Safety Plan: Target Zero" (SHSP, revised February 2007), the WSDOT Highway System Paln and local analysis.
PEDESTRIAN AND BICYCLE MODE (SEE CHAPTER 5)	
	Needs identified through state and local planning programs including recommendations from the Clark County Bicycle Advisory Committee, the Comprehensive Growth Management Plans, local plans and the *Regional Trails and Bikeway System Plan* (2007). There is community interest in providing a trail along the Chelatchie Prairie/Clark County Railroad. Trails of regional significance within Clark County include Bells Mountain Trail, Burnt Bridge Creek Trail, Columbia Renaissance Trail, Cougar Creek Trail, the Discovery Loop, Evergreen Highway Trail, Jason Lee Park Trail, Lacamas Park Trail, Lacamas Heritage Trail, La Center Bottoms Trail, Lewisville Park Trail, Lucia Falls and Moulton Falls Trails, Orchards Park Trail, Salmon Creek Greenway Trail, Steigerwald Trail, Vancouver Lake and Frenchman's Bar Trails, Whipple Creek Park Trail and Wy-East Park Trail. Trails identified in the updated *Regional Trails and Bikeway System Plan* (2007) are: 1) Lewis & Clark Discovery Greenway, 2) Chelatchie Prairie Railroad, 3) Lake to Lake, 4) Salmon Creek Greenway, 5) Padden Parkway, 6) I-5 Corridor, 7) I-205 Corridor, 8) East Fork of the Lewis River, 9), Battle Ground/Fisher's Landing, 10) Washougal River Corridor, 11) North Fork of the Lewis River Greenway, 12) Whipple Creek Greenway, 13) North/South Powerline, 14) East Powerline, 15) Livingston Mountain Dole Valley, 16) Camp Bonneville and 17) Lower Columbia River Water Trail. Some of the trails can accommodate equestrians. Detailed information on the trails system can be found at: http://www.ci.vancouver.wa.us/parks-recreation/index.asp

TABLE A-2: OTHER TRANSPORTATION SYSTEM DEVELOPMENT ELEMENTS	
	PEDESTRIAN AND BICYCLE MODE (CONTINUED) Also of regional significance is improvement of pedestrian and bicycle facilities that will improve access to transit facilities. Bike racks are already provided on C-TRAN fixed-route buses and bike lockers are provided at C-TRAN Transit Centers and Park and Rides. Local jurisdictions have adopted design standards for arterials that include sidewalks for most facilities and bike lanes for some of the arterial segments. Local jurisdictions work in partnership with School Districts on the Safe Routes to Schools Program to identify transportation improvements that can improve safe access to schools. These improvements can include signage, curb cuts, sidewalks, crosswalks and bike lanes and bike paths. Examples of schools within the region that could benefit from improved walk and bike access include to Sarah J. Anderson Elementary School in unincorporated Clark County, to Union Ridge Elementary and the adjacent View Ridge Junior High School in Ridgefield and to Discovery Middle School, Ellsworth, Ogden, Crestline and Image Elementary Schools in the City of Vancouver. The pedestrian and bicycle mode are promoted through the Active Community Environments program through Community Choices which has established a Walkability Policy Team and a Walkability Awareness Team.
TRANSIT	
Fixed-route and Paratransit System	Service Hours [per C-TRAN's service and financial planning process. C-TRAN anticipates completion of a 20-Year Transit Development Plan in 2008. Results will be reported in the 2008 MTP] 2006 Annual Service Hours: 307,667 2030 Forecast Annual Service Hours: 633,750 +/- MTP financial information provided for C-TRAN assumes an additional 0.4 percent sales tax to maintain service levels commensurate with population growth. This yields an estimated 633,750 service hours for fixed route and paratransit in 2030.
Capital Equipment Needs	Bus Purchases to support service hours and replace older fleet.
HIGH CAPACITY TRANSIT CORRIDORS	
	• Frequent bi-state bus service. • High Capacity Transportation Corridors are currently being studied in the Clark County High Capacity Transit System Study. The I-5 Columbia River Crossing Project's Locally Preferred Alternative includes Light Rail Transit extending into Clark County with a terminus in the Clark College vicinity.
REGIONAL TRANSPORTATION PLANNING STUDIES	
	Transportation Studies and Related Studies Currently Underway Include: • Columbia River Crossing project (CRC) • Clark County High Capacity Transit System Study (RTC) • New Transportation Corridors Visioning Study (RTC) • SR-14 Corridor (Camas/Washougal area) • Section 30 Sub-area Plan (Clark County/Vancouver) • Highway 99 Plan (Clark County)

TABLE A-2: OTHER TRANSPORTATION SYSTEM DEVELOPMENT ELEMENTS	
TRANSPORTATION SYSTEM MANAGEMENT (TSM)	
	Potential System Management solutions are outlined in the State's *Statewide Multimodal Transportation Plan, System Plan Component* as well as local Growth Management plans. A key strategy of transportation system management is the implementation of an intelligent transportation system (ITS) for the Clark County region. The Vancouver Area Smart Trek Program (VAST) is the ITS initiative for the region developed as a cooperative effort by jurisdictions and transportation agencies in Clark County. It is made up of seven initiatives to improve the management and operation of the system: 1) Communications infrastructure, 2) Traveler information, 3) incident management, 4) transportation management, 5) advanced traffic control, 6) transit priority, and 7) transit operation and management. The **VAST Implementation Plan** is a twenty-year project list developed around the initiatives above. It contains a description of each project, its priority, estimated costs and benefits and its relationship with other projects in the plan. There is also an Implementation Schedule for the plan that, in general, lists short, medium, and long-term time frames. Short term projects include interconnected and adaptive signal control, freeway cameras and roadway detection, variable message signs, a traveler information system, and a traffic management center. C-TRAN's VAST projects include automatic vehicle locators, automatic passenger counters and computer aided dispatch. For more information, refer to the VAST website at http://www.vastrek.org/travelinfo.htm
TRANSPORTATION DEMAND MANAGEMENT (TDM)	
	Demand management activities are determined through the **Commute Trip Reduction** program in the Clark County region. The Portland-Vancouver I-5 Transportation and Trade Partnership (2002) also included a set of TDM recommendations relevant to the I-5 corridor and the Columbia River Crossing is continuing planning for TDM in the I-5 corridor. Recommended Regional CTR Plan implementation strategies include: • Building upon existing and successful CTR programs, expand programs to unaffected CTR employers and integrate CTR into the region's strategy for managing its transportation system. • Policies and Regulations: o Allow a reduction in the minimum/maximum number of required parking spaces if a development provides ride-share programs. o Encourage new development to incorporate supporting elements that will encourage the use of transit and ridesharing activities. • Services and Facilities o Increase transit services as population in Clark County grows. o Expand the vanpool market and encourage employer participation. o Expand ridematching services through on-line programs. o Improve bicycle and pedestrian connections • Marketing and Incentives o Encourage employers to offer alternative work schedules and telework programs to their employees. o Conduct area-wide promotional campaigns. o Offer transit pass discounts and incentive programs. o Implement parking management programs. o Encourage employers to offer carpool subsidies for carpool commuters o Encourage employers to allow employees to work from home or a closer work site.

When projects in the categories listed above require state or federal funding, they are brought forward to RTC as the region's MPO to carry out a coordinated decision-making process whereby projects are prioritized and selected for funding. Project level conformity analysis, where required, is prepared by RTC for local projects and by WSDOT for State projects.

DETERMINATION OF CONFORMITY WITH AIR QUALITY STATE IMPLEMENTATION PLAN (SIP)

INTRODUCTION

Required under the Federal Clean Air Act, the State Implementation Plan (SIP) provides a blueprint for how maintenance areas will meet the National Ambient Air Quality Standards (NAAQS). Plan conformity analyses and a positive finding of conformity are required by the Federal Clean Air Act, the Transportation Equity Act for the 21st Century (TEA-21) and the Clean Air Washington Act. Positive conformity findings allow the region to proceed with implementation of transportation projects in a timely manner.

Transportation conformity is a mechanism for ensuring that transportation activities, plans, programs and projects are reviewed and evaluated for their impacts on air quality prior to funding or approval. The intent of transportation conformity is to ensure that new projects, programs, and plans do not impede an area from meeting and maintaining air quality standards. Specifically, regional transportation plans, improvement programs, and projects may not cause or contribute to new violations, exacerbate existing violations, or interfere with the timely attainment of air quality standards.

On March 15, 1991, the Governor of Washington State designated the urban area of the Vancouver portion of the Portland-Vancouver Interstate Air Quality Maintenance Area as a marginal non-attainment area for ozone (O_3) and a moderate carbon monoxide (CO) non-attainment area. This action was taken in accordance with Section 107 of the Federal Clean Air Act as amended in 1990.

The Southwest Clean Air Agency (SWCAA) developed, as supplements to the State Implementation Plan, two Maintenance Plans; 1) for Carbon Monoxide (CO) and 2) for Ozone (O_3). In October 1996, the Carbon Monoxide Maintenance Plan and in April 1997, the Ozone Maintenance Plan were approved by the Environmental Protection Agency (EPA). Mobile source strategies contained in the Maintenance Plans were endorsed for implementation by the RTC Board of Directors (Resolution 02-96-04).

AIR QUALITY STATUS

Under the new 8-hour federal Ozone standard, the Vancouver/Portland Air Quality Maintenance Area (AQMA) was re-designated from "maintenance" to "unclassifiable/attainment" for Ozone and no longer needs to demonstrate conformity for Ozone. Consequently, as of June 15, 2005, regional emissions analyses for ozone precursors in the Plan (MTP) and Program (MTIP) were no longer required.

The Vancouver AQMA is currently designated as a CO maintenance area. In January 2007, the Southwest Clean Air Agency submitted a Limited Maintenance Plan (LMP) for CO to the Environmental Protection Agency. Based on the population growth assumptions contained in the Vancouver Limited Maintenance Plan and the LMP's technical analysis of emissions from the on-road transportation sector, it was concluded that the area would continue to maintain CO standards. Therefore, regional conformity is presumed and regional emissions analyses and emission budget tests are no longer required.

APPLICABLE STATE IMPLEMENTATION PLAN

The implementation plans currently in effect are the 1996 Limited Maintenance Plan for Carbon Monoxide and the 1997 Ozone Maintenance Plan for Vancouver, Washington. The SWCAA adopted an Ozone Maintenance Plan for the Vancouver portion of the Portland-Vancouver AQMA in November 2006 for submittal to EPA. The plan demonstrates compliance with the 8-hour ozone standard through 2015 and contains an ozone contingency plan prevent or correct any measured violation of the 8-hour ozone standard. The CO Limited Maintenance Plan for the Vancouver AQMA was found to be adequate

by the Environmental Protection Agency (EPA) and on November 19, 2007, EPA published notice of its adequacy for transportation conformity purposes in the Federal Register.

CO LIMITED MAINTENANCE PLAN

Carbon monoxide emissions forecasts contained in the Limited Maintenance Plan for on-road mobile sources show a continued decline in CO emissions during the Maintenance Plan period. The 2002 base year for the Limited Maintenance Plan shows 383,058 pounds a day for CO on-road mobile sources. Forecast CO emissions for 2019, three years beyond the time period of the Limited Maintenance Plan, are almost half (52%) of the base.

The mobile source emissions forecasts were derived using the population and employment growth assumptions contained in the adopted Clark County Comprehensive Plan. As described in Chapter 2 of this MTP, the population forecast in the Comprehensive Plan is based on the high range of allowable population growth from the Office of Financial Management (OFM) projection. Regional population growth in the long range plan increases at an annual rate of 2.35% to 639,300 in 2030. By comparison, the measured rate of population growth in Clark County was 2.14% per year from 2004 to 2005. OFM data will be used to monitor population growth for Clark County and will be compared with the growth rates assumed in the Comprehensive Plan.

The Maintenance Plan calls for the Southwest Clean Air Agency to track countywide mobile emissions through the Ecology emission inventories triennially to verify continued attainment. Transportation analysis and Vehicle Miles Traveled data required to estimate emission inventories will be provided by RTC.

CONSULTATION PROCESS

Federal and state rules and regulations require formal consultation procedures for conducting conformity analyses. Consultation procedures require the presentation of key assumptions made in the process of conducting conformity analyses. As part of the consultation process, RTC staff reviews with federal and state agencies key analytical assumptions involved in the conformity analysis.

AIR QUALITY CONFORMITY METHODOLOGY AND RESULTS

Regional conformity analysis for ozone and carbon monoxide is no longer required for the Metropolitan Transportation Plan for Clark County.

STATUS OF TRANSPORTATION CONTROL MEASURES

The SIP for Washington State does not include Transportation Control Measures (TCMs) for the Vancouver portion of the Portland-Vancouver Air Quality Maintenance Area.

Although no TCM's are required, the region and the MTP does provide for improved public transit and transit facilities. Washington's vehicle emission inspection program was added to the Vancouver urban area in 1993 and expanded to Brush Prairie, Battle Ground, Ridgefield and La Center in 1997. Additional efforts that contribute to emissions reductions include the Commute Trip Reduction (CTR) Efficiency Act, effective June 2006 (that replaced the 1991 CTR Program). The CTR Program calls for reduction of single occupant vehicle travel by major employers in the affected Urban Growth Areas of Clark County. As required by the CTR Efficiency Act, the RTC Board of Directors adopted RTC's Regional CTR Plan and local CTR Plans for Vancouver, Camas, Washougal and unincorporated Clark County in early October 2007 (Resolution 10-07-21). Vancouver has also voluntarily developed the Downtown Vancouver Growth and Transportation Efficiency Center (GTEC) Plan that was certified by RTC and

submitted to the State along with the regional and local CTR Plans. In addition, public education and outreach programs are supported by Southwest Clean Air Agency.

CONFORMITY DETERMINATION

The 2007 update to the Metropolitan Transportation Plan (MTP) for Clark County does not contribute to violations of ozone or carbon monoxide emission standards.

APPENDIX B

THE STRATEGIC METROPOLITAN TRANSPORTATION PLAN (MTP)

RTC Board approval is required for projects and concepts to be listed in the Strategic Plan. The Strategic Plan projects and planning concepts may be identified through study recommendations outside of the MTP but must have been the result of a public planning process. RTC action on the Strategic MTP can occur as part of action on the full MTP or as a separate action on only the Strategic MTP Appendix.

Though it is required that the MTP be fiscally constrained, federal rules governing MTP development do allow for the MTP to include "illustrative projects" that the region recognizes may be needed as a part of the future regional transportation system. The purpose of including an MTP Strategic Plan is to recognize that there are a number of emerging, long-term regional transportation projects that require major transportation and land use policy decisions coupled with financial commitment that are outside of the fiscally-constrained MTP. However, the Strategic Plan element acknowledges the importance of beginning a process that can examine these potential projects' impacts, their benefits and their contribution toward achieving the region's long-range, 20+ year, land use and transportation system vision and goals. The MTP's Strategic Plan allows for the planning, land use, and financing analysis to move forward without formally incorporating them into the federally approved MTP at this time.

The Strategic Plan is included as an Appendix to the MTP to provide a description of potential projects and concepts that are currently beyond the list contained in the approved, "financially constrained" MTP. These are potential projects and concepts that require additional investigation and analysis. They may be projects of large scale that need further work to determine their financing, and/or projects that may be of economic significance to the region that require further analysis and definition. The Strategic Plan may also provide an outline of concepts that have emerged in the planning process that could have significant land use, economic development and transportation system impacts if they were implemented and developed in the future. While projects that are outlined in the Strategic Plan are outside of the financially-constrained MTP, their inclusion in the Strategic Plan provides a way to identify the concepts and transportation projects that require further analysis to define their purpose/need and feasibility. Description of the potential projects and concepts in the MTP's Strategic Plan also helps to raise awareness in the community regarding emerging land use and transportation issues.

The MTP Strategic Plan outlines three major regional projects and/or planning concepts. They are: the Clark County High Capacity Transit System Study, and future needs of the regional transportation system that have been noted during development of the 2007 MTP update.

The region's adopted long-range Metropolitan Transportation Plan must include a financial plan that shows how projects are to be implemented. The financial plan includes revenues from public and private sources and additional funding strategies in order for the region to be eligible for federal transportation revenues. The Federal Transportation Act, SAFETEA-LU, allows for "illustrative projects" to be identified in the regional transportation planning process outside of the requirements for financial feasibility and transportation air quality conformity. The first three projects/concepts will undergo a regionally coordinated, analytically sound, transportation planning process to investigate project feasibility.

COLUMBIA RIVER CROSSING

Following a decision on the Locally Preferred Alternative in June 2008, the CRC project is now included in the fiscally-constrained MTP.

CLARK COUNTY HIGH CAPACITY TRANSIT SYSTEM STUDY

High levels of traffic congestion and a constrained ability to expand highway capacity in parts of the I-5, I-205 and SR-500 corridors, along with Clark County's growth management policies, calls for the analysis of high capacity transit alternatives. The high demand for travel between the Vancouver and Portland metropolitan area and across the limited capacity of the existing I-5 and I-205 bridges has also created a transportation system bottleneck between the two regions that dramatically increases delay for commuters, business and industry. The I-5 and I-205 corridors provide only marginal room for freeway expansion. Additional high capacity transit can significantly add person-moving capacity for commuters and allow for improved business and economic development capacity.

The purpose of the Clark County High Capacity Transit System Study is to identify a high capacity transit system that provides efficient and high quality transit service connecting county residents with where they want to go. The study will result in the identification of the most promising high capacity transit corridors and modes needed to improve future transit service in Clark County. The study's framework for an HCT system throughout Clark County is targeted for incorporation into future updates to RTC's Metropolitan Transportation Plan, C-TRAN's 20-year Transit Development Plan and the Comprehensive Growth Management Plan. The next phase in the HCT project development process would be to identify the top priority corridor to go into the Federal Transit Administration's New Starts Alternatives Analysis process.

NEW TRANSPORTATION CORRIDORS VISIONING STUDY

- The Southwest Washington Regional Transportation Council Board of Directors acknowledged the need to plan for, and evaluate, future transportation and development. The Board therefore initiated a long-range, visioning process to study the need for new transportation corridors in Clark County.
- Currently adopted land use plans and regional transportation plans include a 20-year growth forecast and transportation needs for the next 20 years but do not look at the longer-term timeframe. Yet, new transportation corridors take a considerable time to

plan for and construct. It was felt that now is the time to define a vision for where long-term growth may take place and the transportation facilities needed to serve it.

- The purpose of conducting the transportation corridor visioning process is to answer the question: "How would we get around within our own community in the longer-term future if our County reaches one million in population?" The study is focused on regional corridors corridors connecting places and nodes of growth in Clark County and is looking at Eastside, north-south, connections between East Vancouver/Camas/Washougal and Battle Ground, east to west connection between Battle Ground and the Discovery Corridor and Westside connections. The study is also analyzing the need for future crossings of the Columbia River.

THE REGIONAL TRANSPORTATION SYSTEM: FUTURE NEEDS

- The 2030 travel demand analysis shows that future volumes could exceed capacities on several corridor segments and locations where transportation projects are not currently identified. These segments and locations need further consideration and analysis, within the constraints of funding availability, as part of the comprehensive planning process and future MTP update process.
- There is need to analyze further the need to provide a transportation grid network as Urban Growth Areas develop to maximize route choice.
- As part of the 2007 MTP update process, specific locations and corridors needing further analysis are identified as:
    - SR-500 to I-5 North connection (this is included as part of the CRC project).
    - SR-14, between I-5 and I-205, as identified by WSDOT in the Highway System Plan 2007-2026.
- **Next Steps** – The potential projects, listed above, will be analyzed further as part of the Comprehensive Growth Management planning process and MTP updates. If projects are feasible, and there is funding capability, then projects can become part of the "fiscally-constrained" MTP.

MTP APPENDIX C

Excerpts from Clark County's adopted *Community Framework Plan* and the County-wide Planning Policies relating to transportation from the transportation element of the *Comprehensive Growth Management Plan for Clark* County (September 2004) are re-printed below. These constitute the Principles and Guidelines with which the transportation elements of local comprehensive plans required under the Growth Management Act are reviewed for certification purposes.

From the Comprehensive Growth Management Plan for Clark County (adopted 1994, updated August 2004).

COMMUNITY FRAMEWORK PLAN

The Community Framework Plan and the comprehensive plans of the county and its cities envision a shift in emphasis from a transportation system based on private, single-occupant vehicles to one based on alternative, higher-occupancy travel modes such as ridesharing, public transit, and non-polluting alternatives such as walking, bicycling and telecommuting. This shift occurred due to changes in funding constraints at the federal and state level as well as consideration of the thirteen GMA planning goals contained in 36.70A.020 RCW.

Regional policies are applicable county-wide. Urban policies only apply to areas within adopted urban growth areas (UGA's) and are supplemental to any city policies. Rural policies apply to all areas outside adopted UGAs.

5.0 COUNTY-WIDE PLANNING POLICIES

5.0.1 Clark County, Metropolitan Planning Organization (MPO) and the Regional Transportation Planning Organization (RTPO), state, bi-state, municipalities, and C-TRAN shall work together to establish a truly regional transportation system which:

- reduces reliance on single occupancy vehicle transportation through development of a balanced transportation system which emphasizes transit, high capacity transit, bicycle and pedestrian improvements, and transportation demand management;
- encourages energy efficiency;
- recognizes financial constraints; and
- minimizes environmental impacts of the transportation systems development, operation and maintenance.

5.0.2 Regional and bi-state transportation facilities shall be planned for within the context of county-wide and bi-state air, land and water resources.

5.0.3 The State, MPO/RTPO, County and the municipalities shall adequately assess the impacts of regional transportation facilities to maximize the benefits to the region and local communities.

5.0.4 The State, MPO/RTPO, County and the municipalities shall strive, through transportation system management strategies, to optimize the use of and maintain existing roads to minimize the construction costs and impact associated with roadway facility expansion.

5.0.5 The County, local municipalities and MPO/RTPO shall, to the greatest extent possible, establish consistent roadway standards, level of service standards and methodologies, and functional classification schemes to ensure consistency throughout the region.

5.0.6 The County, local municipalities, C-TRAN and MPO/RTPO shall work together with the business community to develop a transportation demand management strategy to meet the goals of state and federal legislation relating to transportation.

5.0.7 The State, MPO/RTPO, County, local municipalities and C-TRAN shall work cooperatively to consider the development of transportation corridors for high capacity transit and adjacent land uses that support such facilities.

5.0.8 The State, County, MPO/RTPO and local municipalities shall work together to establish a regional transportation system which is planned, balanced and compatible with planned land use densities; these agencies and local municipalities will work together to ensure coordinated transportation and land use planning to achieve adequate mobility and movement of goods and people.

5.0.9 State or regional facilities that generate substantial travel demand should be sited along or near major transportation and/or public transit corridors.

MTP APPENDIX D

RTC

Transportation Security in the Vancouver/Clark County Region

Technical Paper

June 2007

Transportation Security in the Vancouver/Clark County Region

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Transportation Security in the Vancouver/Clark County Region

I. INTRODUCTION

The purpose of this memorandum is to fulfill the initial requirements of the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) of 2005 to include transportation security as a separate factor in the transportation planning process. This document will provide background information regarding transportation security in the Vancouver and bi-state metropolitan region. It includes a description of the federal legislation relevant to transportation security, ongoing security planning initiatives in Clark County and the bi-state region, and existing programs and projects in the Vancouver urban area that support transportation security.

II. FEDERAL LEGISLATION, PROGRAMS, AND PROJECTS RELATED TO TRANSPORTATION SECURITY

SAFETEA-LU outlines federal planning requirements for federally designated Metropolitan Planning Organizations (MPOs) and includes eight planning factors that must be addressed as part of the metropolitan transportation planning process. Planning factors include economic vitality, safety, security, accessibility and mobility, environment and energy conservation, transportation system connectivity, transportation system management and operation, and preservation of the existing transportation system. Under SAFETEA-LU, transportation security must be addressed as a separate planning factor.

A. SAFETEA-LU Transportation Security Requirements

Title VI of SAFETEA-LU directs MPOs to specifically consider transportation security as a stand-alone planning factor, separating it from its attachment to safety in TEA-21. The security factor states that the metropolitan transportation planning process shall "increase the security of the transportation system for motorized and nonmotorized users." The Federal Highway Administration and Federal Transit Administration are currently developing specific guidance on ways in which MPOs are to implement this provision, but much of the substance is left to the discretion of the individual agencies. According to Michael Meyer from the Georgia Institute of Technology, MPOs can play a critical role in transportation security planning. The potential role of the MPO may be to serve as a forum for cooperative decision-making about security on a regional level, and that an MPO can serve a range of possible roles in this effort depending on the characteristics of the region and the MPO capabilities. The MPO could function in the following roles:

Traditional - Incorporate system management and operations in ongoing transportation planning activities.
Convener - Act as a forum for plans to be discussed and coordinated with other plans.
Champion - Work aggressively to develop a regional consensus on operations planning.
Developer - Develop operations plans in addition to incorporating operations into transportation plans.

Operator - Responsible for implementing operations strategies. Meyer suggests that the MPO would be most effective in the role of convener or champion, and that reasonable actions for an MPO would include conducting vulnerability analyses on regional transportation facilities and services, analyzing the transportation network for alternate routes in moving large numbers of people, and strategies for dealing with choke points.

RTC has traditionally addressed system management and operations with ongoing planning activities. Through the management and coordination of the regional Vancouver Area Smart Trek (VAST) Program, RTC has worked cooperatively with other agencies to act as a convener and champion to facilitate improved management and operations of the transportation system as it relates to Intelligent Transportation System initiatives in the region. These activities are described in Section IV.

B. Federal Security Initiatives

Several major pieces of legislation have passed into law since the events of September 11, 2001. These include provisions for all modes of transportation, and have emphasized security for both passengers and operators of the transportation system. The Transportation Security Administration (TSA) was created in 2001 within the U.S. Department of Transportation, under the Aviation and Transportation Security Act of 2001, and now oversees transportation security across all modes of transportation nationwide. The TSA was incorporated into the Department of Homeland Security in 2003.

1. Department of Homeland Security

The Department of Homeland Security (DHS) has conceived a set of plans that define the national security initiative. The National Response Plan lays out a comprehensive all hazards approach to emergency situations, including transportation related incidents. It offers best practices for first responders and the public/private sector players. This document is used as the core operational base plan for domestic incident management. A follow up plan dealing with the physical nature of disasters and how to mitigate accordingly is the National Infrastructure Protection Plan. Included in this document is the Critical Infrastructure Identification component that focuses on rating and inventorying susceptible infrastructure. This is accomplished by using a formula that assesses the function of consequences, vulnerability, and threat of a particular object.

2. Aviation and Transportation Security Act of 2001

This act created the TSA and established the Transportation Security Oversight Board. It also established the position of Under Secretary of Transportation for Security, an appointment made by the President. Among other improvements, it required the deployment of federal air marshals and improved airport perimeter access security. Other important sections of this legislation include increased penalties for interference with security personnel, chemical and biological weapon detection, airport improvement programs, flight deck security, mail and freight waivers, land acquisition costs, and air transportation safety and system stabilization. TSA administers several layers of security

procedures including air cargo screening, canine detection teams, and security training for crewmembers and flight deck officers. Other programs from TSA include the Hazmat Threat Assessment Program, requiring commercial drivers to pass additional screening to be allowed to transport hazardous materials. TSA also has a Port Security Training Exercise Program (PortSTEP) to help port facilities train employees for best practices during emergency situations. The Transportation Worker Identification Credential Program (TWIC) is a new identification system that will be used to identify employees in all modes of transportation.

3. National Maritime Transportation Security Act of 2002

This act was passed to implement measures that would protect ports and waterways from a terrorist attack. It requires area maritime security committees and security plans for facilities and vessels that may be involved in a transportation security incident. It required the TSA to create a National Maritime Security Plan as well as Security Incident Response Plans.

4. Urban Area Security Initiative

The Urban Area Security Initiative (UASI) is a program of the DHS that provides funding to enhance domestic preparedness throughout 34 designated urban areas within the United States. The purpose of the UASI Program is to enhance the ability of urban areas to prevent, deter, respond to, and recover from threats and incidents of terrorism. It encourages urban areas to employ regional approaches to overall preparedness and to adopt regional response structures where appropriate.

This program was initiated in 2003 and has to date provided approximately $25 million dollars in funding to the Portland/Vancouver Urban Area. The Portland Urban Area is comprised of the City of Portland, counties of Columbia, Clackamas, Washington and Multnomah in Oregon and Clark County, Washington. Each of the county emergency managers and director from the City of Portland participate on the Urban Area Point of Contact (UAPOC) Committee which meets twice monthly to govern the activities of Portland/Vancouver Urban Area.

The UAPOC Committee has created and updated recently the local Homeland Security Strategy which identifies goals and objectives towards enhancing preparedness throughout the region. The funding received from the federal government is allocated towards accomplishing specific goals and objectives of the Homeland Security Strategy.

The Portland/Vancouver Urban Area grant funding and activities are described in Section III.

5. National Response Plan

The DHS has developed a manual of best practices in the National Response Plan (NRP). It establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. The plan incorporates best practices and procedures

from incident management disciplines - homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector - and integrates them into a unified structure. It forms the basis of how the federal government coordinates with state, local, and tribal governments and the private sector during incidents. The NRP format is used by both Washington State and within Clark County for their Comprehensive Emergency Management Plans (CEMPs). The CEMPs include a description of Emergency Support Functions (ESFs) that define and designate mitigation, preparedness, response, and recovery activities for specific emergency management functions, such as transportation, communications and warning, and evacuation.

III. EXISTING PLANS, PROCEDURES, POLICIES, AND COORDINATION RELATED TO WASHINGTON TRANSPORTATION SECURITY

A. State of Washington

The State of Washington has designated the Emergency Management Division (EMD) of the Washington Military Department as the lead state agency for emergency management activities defined by RCW 38.52.020. The mission of Washington EMD is to coordinate and facilitate resources to minimize the impacts of disasters and emergencies on people, property, the environment, and the economy. Advising the EMD and the Governor is the Washington Emergency Management Council (EMC). The seventeen members on the EMC are appointed by the Governor and represent emergency management stakeholders in the areas of state and local government, emergency services, industry, and the environment. The operation and responsibility of the EMC, the Governor's powers and local organization responsibilities are set out in the Revised Code of Washington (RCW), Chapter 38.52.040 through 38.52.070. The EMC has the responsibility to advise the Governor and the Director (Adjutant General) of the Washington Military Department on all matters pertaining to state and local emergency management. The EMC meets bi-monthly to review the State of Washington's emergency preparedness, response, mitigation and recovery programs and issues. The EMC provides the governor with an annual report on statewide preparedness including hazard mitigation, seismic safety improvements, flood hazards reduction, and hazardous materials planning and response activities. In addition, the EMC has appointed several subcommittees with specific areas of responsibility.

B. Urban Area Work Group Activities

Urban Area Security Initiative activities in the Portland/Vancouver region are governed by the Urban Area Points of Contact (UAPOC) group and a number of discipline-specific working groups. Presently, there are 11 discipline-specific working groups organized by the following categories: Fire/Emergency Medical Services, Law Enforcement, 9-1-1 Communications, Public Works, Emergency Management, Public Health, Citizen Corps, Public Information Officers, Cyber Security, Ports/Marine, and Transit.

Each of the five counties in the Portland/Vancouver region of UASI provides representation on each of these discipline subcommittees. The role of these discipline-based working groups is to complete each of the implementation steps for the goals and objectives of the UASI Homeland Security Strategy. These activities may include participation in planning activities, the procurement of equipment, regional training and exercise activities. The discipline work groups propose projects to the UAPOC Committee for UASI Grant funding (Section II.B.4) and work cooperatively to complete awarded projects.

Between 2003 and 2006, agencies in Clark County have received $2.5 million in direct UASI funding in addition to significant benefits from regional projects which are not considered "direct funding." Transit-specific projects include a cooperative project between C-TRAN and Tri-Met cameras to enhance video surveillance on buses, key transit centers and at park and ride facilities. Additionally, transportation agencies have been involved in the Regional Critical Infrastructure Project which is intended to define and recommend standard security guidelines for critical infrastructure sites throughout the Urban Area. UASI funding has also provided Clark County with enhanced communications interoperability for emergency responders, development of a redundant communications connection between CRESA and Washington State Patrol that will provide a backup dispatch center to CRESA at the WSP, remodeled Emergency Operations Center, training for first responders, support for Urban Search and Rescue teams in the area and better communications tools for fire and law enforcement agencies.

C. Region IV Homeland Security

In addition to Clark County's participation in the Portland Urban Area, Clark County is also assigned to a Homeland Security Region within Washington State. Washington State has developed a Homeland Security Strategic Plan and segmented the state into nine Homeland Security Regions. Clark, Cowlitz, Skamania and Wahkiakum counties make up Region IV. Region IV governs and oversees State Homeland Security Program (SHSP) funds, Law Enforcement Terrorism Prevention Program (LETPP) funds and Citizen Corp Program (CCP) funds. The Regional Coordinating Council, made up of chief officers from a variety of emergency response disciplines, provides the governance for these funds. A multi-disciplinary Technical Committee carries out the projects, goals, and objectives for the local homeland security strategy. The Technical Committee represents Law, Fire, Health, Emergency Management, Public Works, and Transportation disciplines.

Region IV has focused a large percentage of their funding towards interoperable communications throughout the region. While the UASI funds have centered along the I-5 corridor, Region IV funding has supported east-west expansion of interoperability. Other projects have included enhancing emergency management coordination throughout the region, the development of WebEOC (an information management system for Emergency Operations Centers) and a community-wide notification system for earlier warning on disasters.

D. Regional Emergency Management Group (REMG)

The Regional Emergency Management Group (REMG) is an association of bi-state emergency management professionals and elected officials within the Vancouver/Portland metropolitan region. Clark County members of REMG include CRESA, Clark County, City of Vancouver, and City of Camas. The group has two sub-committees: REMTEC (technical group) and REMPAC (policy advisory group composed of elected officials). Both subcommittees have the same agency membership as the REMG. Since its inception in 1993, REMG has created Emergency Transportation Routes (Figure 1) for the region and a Regional Emergency Management Plan.

Figure 1: Emergency Transportation Route Chart Sample

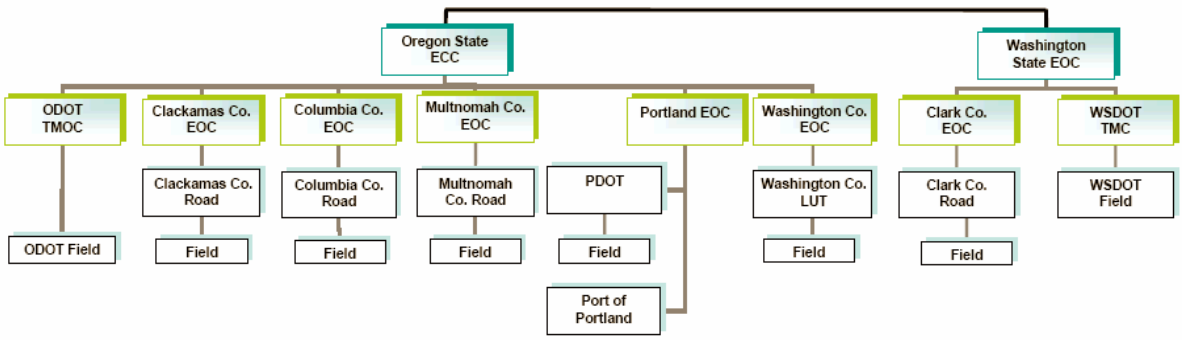
Route Name	From	To	Road Owner	Jurisdiction Responding
NE 78th St./Padden Pkwy.	I-5	Ward Rd.	Clark County/WSDOT	Clark County/WSDOT
NW/NE Hayes Rd./NE Cedar Creek Rd.	I-5	SR 503	Clark County	Clark County
SE/NE 164th/162nd Ave.	SR-14	Ward Rd.	Clark County/City of Vancouver	Clark County/City of Vancouver
SR 501/Mill Plain Blvd	Port of Vancouver	I-5 Interchange	City of Vancouver	City of Vancouver/WSDOT
Mill Plain (Vancouver)	I-5 Interchange	SE 164th Ave.	City of Vancouver	City of Vancouver
I-5	Marion Co.	Cowlitz Co.	ODOT/WSDOT	ODOT/WSDOT
NE Airport Way	I-205	NE 181st Ave	ODOT/PDOT	PDOT/ODOT
NE Airport Way	PDX	I-205	ODOT/Port of Portland	ODOT/Port of Portland
NE 82nd Ave.	NE Alderwood	NE Airport Way	Port of Portland	Port of Portland
I-5	Marion Co.	Cowlitz Co.	WSDOT/ODOT	ODOT/WSDOT
SR 14	I-5	Skamania Co. line	WSDOT	WSDOT
SR 500	I-5	SR 14	WSDOT	WSDOT
SR 502	I-5	SR 503	WSDOT	WSDOT
SR 503	SR 500	Cowlitz Co. line	WSDOT	WSDOT

The Emergency Transportation Routes (ETRs) were created as a part of their earthquake emergency procedure, but can be used for other unforeseen disaster events that require evacuation scenarios as well. Their focus is on moving people and goods into and out of the region as efficiently as possible given potential gaps in the existing system. Another purpose of the routes is to move response resources to heavily damaged areas in a disaster situation. The emergency roads are not presented on a map, but are detailed through the chart provided by Figure 1. REMG is also currently undertaking a Critical Infrastructure Analysis of the bi-state region, which assesses the ability of the region's infrastructure (including, but not limited to, transportation) to withstand several possible emergency scenarios. The full study is scheduled for completion in 2007, however, as

part of this effort, a preliminary analysis of the Interstate and Glenn Jackson Bridges between Washington and Oregon has been completed. The first part of the analysis was development of a buffer zone protection plan for each bridge, which consists of comprehensive emergency response deployment plans based on the severity of a potential event. The plans define roles of the first responders, the location of incident command and control centers, tactical approaches, and public access. Each bridge also underwent a CARVER assessment made up of six factors: criticality, accessibility, recuperability, vulnerability recuperability, and effect. Both bridges scored as high risk based partly on their regional importance and effect of their loss. Other elements affecting the score included easy access to the bridge structure and lack of video surveillance at key locations. The CARVER analysis resulted in a set of projects for each bridge to improve security.

Since one of the most important keys to any emergency agency is interoperability, REMG has put together a communications flow chart, depicted in Figure 2. This shows who is responsible for initiating utilization of the ETR system and sequence of information and notification distribution.

Figure 2: Emergency Transportation Routes Information Reporting



E. Clark County Comprehensive Emergency Management Plan

The Clark County CEMP contains a section on ESF-1, Transportation. The purpose of the transportation section is to coordinate the use of the transportation infrastructure and resources in order to meet the transportation needs of the citizens and to assist in the transportation needs of other ESFs to perform their emergency response, and recovery missions. The Vancouver CEMP contains a similar section on ESF-1, Transportation.

F. Marine/Port Security Plans

Since 2004, the Port of Vancouver, USA (Port) has performed facility security in accordance with 33 CFR, Subchapter H, Part 105 (Maritime Security: Facilities). The Port operates under an approved facility security plan monitored by the US Coast Guard. The Plan outlines procedures governing access control, monitoring, training, and

response to security incidents. The Port receives annual audits to ensure policies and procedures are followed.

The Port also participates with area security organizations including the US Coast Guard Area Maritime Security Committees and the Urban Area Committees focused on regional security and emergency response.

G. Clark Regional Emergency Services Agency (CRESA)

Clark Regional Emergency Services Agency (CRESA) is a regional public safety service agency and provides 911 Public Safety Dispatching, Emergency Management, ambulance contract oversight for Emergency Medical Service District #2, and regional governmental radio system operation and maintenance. Their service area is made up of the seven cities within Clark County - Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal, and Yacolt - as well as the unincorporated areas of the county. As noted is Section C, CRESA also serves as the host agency for Region IV Homeland Security Council, which carries out joint Homeland Security efforts in southwest Washington for Clark, Cowlitz, Skamania, and Wahkiakum counties.

CRESA's emergency management model, unique compared to many regions, has simplified the emergency services process by consolidating the emergency management office to serve at all levels within the county, including both cities and unincorporated areas. CRESA's emergency management objectives are: preparedness, mitigation, response, and recovery. CRESA also places prominence on an educated public. They make an effort to inform the public of all types of disasters, including rare and infrequent types and offer extensive training for government employees and other agencies. In addition to the traditional emergency alert system and radio notification of events, CRESA is implementing a unique Emergency Community Notification System (ECNS) and is the latest technical system added to CRESA's warning and notification capabilities. Referred to as "Reverse 9-1-1", the system uses a confidential phone database that includes unlisted numbers and quickly delivers an automated emergency phone message. It can make up to 6000 calls per minute. By law, it can only be used when other warning methods would be ineffective, dangerous, or too slow in telling the public to take emergency protective actions.

H. C-TRAN

C-TRAN coordinates emergency response with the police department, fire department, and ambulance services through CRESA. C-TRAN is a member of the Urban Area Working Group, and coordinates the Regional Transit Security Working Group and the Regional Transit Security Strategy. The agency has used its UASI funds to install surveillance security cameras at park and ride and transit facilities, upgrade their radio dispatch and communications system, and develop a communications system plan. These efforts have been coordinated with Tri-Met to insure integrated interagency communication. Other projects implemented by C-TRAN with non-UASI funds include:

computer aided dispatch and mapping and automatic vehicle locators on their buses that are linked to their dispatch system.

C-TRAN is also defined as providing a support function in the transportation section of the Clark County and Vancouver CEMPs. C-TRAN responsibilities in the CEMP consist of assisting in emergency evacuation activities by providing buses and vans as well as drivers for this purpose in coordination with Clark County Public Works and the Sheriff's Office.

I. Other Emergency Management Initiatives

Washington, Multnomah, and Clackamas Counties, which comprise the Portland metropolitan area, also have emergency management efforts. Their common elements consist of a countywide program of disaster and emergency mitigation, preparedness, response, and recovery for governments, local residents, and businesses. Included in emergency management systems are: cities, service districts, volunteer agencies, schools, and other organizations with emergency responsibilities. The respective plans lay out the roles and responsibilities of the county-level agencies, communications network, function of the emergency operations center, and its emergency support system.

IV. OTHER EXISITING PROGRAMS AND PROJECTS IN CLARK COUNTY

There are a wide range of other activities to improve management and operation of the regional transportation system and to improve the transportation communications network within Clark County and between state transportation agencies in the Portland/Vancouver region. The key avenue for ongoing coordination in this area is the Vancouver Area Smart Trek (VAST) Program. The VAST Program is the Intelligent Transportation System initiative for the Clark County region. It is a cooperative effort by transportation agencies in Clark County (the Cities of Vancouver and Camas, Clark County, the Washington State Department of Transportation Southwest Region, C-TRAN, and the Southwest Washington Regional Transportation Council). These agencies work together to develop, fund, and deploy ITS projects contained in the 20-year plan. The VAST Steering Committee and the Communications Infrastructure Committee, made up of the VAST agency partners, work together to improve operations and management of the transportation systems and also to improve security. Several activities and projects are underway and support transportation security.

A. Web Based Travel and Event Alerts

The WSDOT, in cooperation with recommendations and development of the VAST agencies, recently improved their traveler information page. This change added regional city streets and county roads to state facilities already on the WSDOT "travel alerts" web page. The alerts page displays state and local information such as road construction and road/lane closures. Discussions are underway to further enhance the site to provide real-time alerts affecting the roadway, such as special events and emergency information.

B. Integrated Bi-state Traffic Camera and Congestion Notification
Additional traveler information improvements consist of an integrated bi-state camera and congestion map on the WSDOT traveler information page. The recent change now has a full Vancouver-Portland metro area display of bi-state camera images, and arterial video images from city and county closed circuit television cameras. Congestion flow information is currently only available in Vancouver, but the development of a bi-state flow map is almost complete.

C. Shared Transportation Communications Asset Database and Mapping
The VAST agency partners have procured asset management software that uses a GIS platform for the Clark County region. It is being used to develop a common database shared between agencies of transportation fiber and communications infrastructure. With this tool, the VAST agencies will easily identify items such as fiber routes, fiber types and attributes, including who owns it, who is using it, and what is not being used. The shared database will be the basis for identifying opportunities for sharing assets between VAST agencies and improved management and maintenance of communication assets.

D. Interagency Agreement to Facilitate the Sharing of Communications Assets
The VAST agency partners have executed the Vancouver Area Smart Trek Communications and Interoperability Agreement to facilitate sharing of fiber communication assets among the VAST members. It identifies specific communication assets for potential shared use, establishes authority to enter into written asset sharing permits between VAST members, and sets general maintenance and operations responsibilities for shared assets. Under the agreement Clark County and WSDOT can act on behalf of CRESA and WSP, respectively.

E. Executed Fiber Permits to Connect Emergency Services and Public Safety
There are currently two individual permits for fiber sharing, executed under the authority of the Communications Agreement, that permit shared fiber use between City of Vancouver, Clark County, and WSDOT and includes specific rules on the number, use, operation, time period, and maintenance conditions for a fiber route that connects CRESA and WSP. This connection allows WSP to operate a backup center in the event that CRESA is unable to operate.

F. Expanded WSDOT Surveillance and Detection Cameras
WSDOT has expanded camera and detection coverage on the state highway system and has funds programmed to complete all the significant corridors in the region including: I-5, I-205, SR-500, and SR-14. The improved coverage results in broader surveillance of transportation infrastructure and more effective incident detection and response.

G. Co-located Centers for WSDOT and the Washington State Patrol
The WSDOT transportation management center and the Washington State Patrol dispatch center are co-located at the Southwest WSDOT regional office in Vancouver. This

structure improves coordination and response of events between the transportation and public safety agencies.

H. Integrated Transportation Operations Center for WSDOT and ODOT

The WSDOT and ODOT Traffic Management Centers (TMC) now have integrated traffic operations management software. Because of the integrated software, each TMC has access to the other's freeway cameras, traffic detectors and variable message signs. The net effect of the common software is improved bi-state freeway management with expanded incident detection and response capabilities, notification to the public of traffic conditions and alternate routes, and the deployment of a comprehensive congestion map of real time traffic information.

I. Enhanced Data Network Project for Transportation and Public Safety Agencies

The purpose of the project is to establish an integrated regional ITS network in Clark County. The key objective of the project is to establish a regional ITS network for data sharing of existing monitoring devices (traffic cameras, detection, and variable message signs) between participating agencies. It will provide better sharing of traveler information and transportation system operations information between local transportation agencies, and will support coordinated emergency and incident management between the state and local agencies.

J. Fourth Plain Integration Pilot Project

This project is a cooperative effort between Clark County, the City of Vancouver, and WSDOT. This segment of Fourth Plain is under the operational control of three agencies, with differing controllers, software and signal systems. This project would develop an integrated approach to improve travel flow. It will result in recommendations and a deployment plan of projects and improvements to enhance mobility and reduce delay through a collaborative effort among the partner agencies. The project will implement recommended improvements and may include upgraded controllers along the corridor and interconnect the signal system along the corridor. Lessons learned in this project will be applied to other corridors in the region to improve operations.

K. I-5/Highway 99 Incident Management Plan and Operations Manual

This project has two key elements. The first is to assess deficiencies and needs in the I-5/Hwy 99/Main Street corridor to improve incident response and management in the corridor. It includes identification and prioritization of improvements in the corridor as well as the implementation of the high priority recommendations. The second is the development of an I-5/Hwy 99 Incident Management Operations Plan and User's Manual for the corridor. The purpose of the plan and user's manual is to reduce the amount of time that freeway operations are disrupted on I-5 due to incidents and to identify specific roles and responsibilities in responding to various levels of incidents in invoking timing plans, rerouting traffic, and managing response.

V. CONCLUSIONS AND IMPLICATIONS FOR TRANSPORTATION SECURITY

Many agencies throughout the Vancouver/Portland metropolitan region are concerned with and are planning for transportation security. The Regional Emergency Management Group REMG has done the most work in coordinating agencies to prepare for emergencies, but left the focus on specific security elements to agencies that have a better foundation in transportation activities. CRESA, C-TRAN, the Port of Vancouver, and WSDOT each have security measures that implement roles and responsibilities for their respective facilities and transportation infrastructure. At a minimum, the MTP process will update current policies to address security issues. The MTP could further consider system management and operations elements during transportation planning activities. Several coordinated management and operations activities have been initiated in the VAST program. RTC could be expanded in the future to be a convener or champion for the existing regional stakeholders to discuss and facilitate decisions regarding transportation security in the Clark County region. As for now, RTC will engage security and emergency management stakeholders to document their current practices as they relate to transportation security and will work to incorporate security components into transportation planning.

MTP APPENDIX E

RTC

Consideration of the Environment and Environmental Mitigation in the Metropolitan Transportation Planning Process

December 2007
with January 2010 Technical Amendment

RTC'S CONSIDERATION OF THE ENVIRONMENT AND ENVIRONMENTAL MITIGATION IN THE METROPOLITAN TRANSPORTATION PLANNING PROCESS

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RTC's Consideration of the Environment and Environmental Mitigation in the Metropolitan Transportation Planning Process

INTRODUCTION

Linking transportation planning and environmental analysis requires an integrated and collaborative approach to transportation decision-making. This approach can provide the opportunity to address environmental, community and economic issues and challenges early in the planning process, as well as avoid and minimize impacts on natural and human resources. These considerations can then be carried through project development, design, construction, and maintenance.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, 2005) established new requirements for the preparation of Metropolitan Transportation Plans (MTPs). One of these new requirements is that the MTP include discussion of potential environmental mitigation activities. Included in this Appendix E to the MTP is a description of the law and its requirements and examples of how the environment and environmental mitigation is considered in the Clark County region's metropolitan transportation planning process and in development of the Metropolitan Transportation Plan (MTP) for Clark County. Web links to significant information used by RTC in development of the MTP is also included. Related to environmental mitigation requirements is the new SAFETEA-LU requirement that the MPO consult with other federal, state, and tribal resource agencies, and have the public actively participate in the MTP's development.

ENVIRONMENTAL MITIGATION IN THE METROPOLITAN TRANSPORTATION PLANNING PROCESS: LAW EXCERPTS

Excerpts from Public Law (109-59, 8-10-05, Section 6001, i2(B)) and Regulations (23 CFR 450, Federal Register dated 2-14-07, Section 7):

§ 450.104 Definitions.
Environmental mitigation activities means strategies, policies, programs, actions, and activities that, over time, will serve to avoid, minimize, or compensate for (by replacing or providing substitute resources) the impacts to or disruption of elements of the human and natural environment associated with the implementation of a long-range statewide transportation plan or metropolitan transportation plan. The human and natural environment includes, for example, neighborhoods and communities, homes and businesses, cultural resources, parks and recreation areas, wetlands and water sources, forested and other natural areas, agricultural areas, endangered and threatened species, and the ambient air. The environmental mitigation strategies and activities are intended to be regional in scope, and may not necessarily address potential project-level impacts.

§ 450.322 Development and content of the metropolitan transportation plan.

(f) The metropolitan transportation plan shall, at a minimum, include: …..

(7) A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation

plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation;

§ 450.318 Transportation planning studies and project development.

(a) Pursuant to section 1308 of the Transportation Equity Act for the 21st Century, TEA–21 (Pub. L. 105–178), an MPO(s), State(s), or public transportation operator(s) may undertake a multimodal, systems-level corridor or subarea planning study as part of the metropolitan transportation planning process. To the extent practicable, development of these transportation planning studies shall involve consultation with, or joint efforts among, the MPO(s), State(s), and/ or public transportation operator(s). The results or decisions of these transportation planning studies may be used as part of the overall project development process consistent with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) and associated implementing regulations (23 CFR part 771 and 40 CFR parts 1500–1508). Specifically, these corridor or subarea studies may result in producing any of the following for a proposed transportation project:

(1) Purpose and need or goals and objective statement(s);

(2) General travel corridor and/or general mode(s) definition (e.g., highway, transit, or a highway/transit combination);

(3) Preliminary screening of alternatives and elimination of unreasonable alternatives;

(4) Basic description of the environmental setting; and/or

(5) Preliminary identification of environmental impacts and environmental mitigation.

Consultation – the (environmental mitigation) discussion shall be developed in consultation with Federal, State, and tribal wildlife, land management and regulatory agencies."

SAFETEA-LU requires Metropolitan Transportation Plans to discuss potential environmental mitigation activities and Plans must be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies (resource agencies). Details on these "discussions of types of potential environmental mitigation activities" are outlined in amended 23 U.S. C. 134. Identical provisions for statewide plans and for transit appear in the amended and 23 U.S. C. 135, 49 U.S. C. 5303 and 49 U.S. C. 5304, respectively. The environmental mitigation requirements must be in place before the Metropolitan Planning Organization (MPO), in this case RTC, can adopt or approve its transportation plan to address SAFETEA-LU provisions.

WHY WAS THE LAW CHANGED?

SAFETEA-LU requires environmental mitigation to be discussed in the MTP because of efforts to build better linkages between transportation planning and the National Environmental Policy Act (NEPA) process.

Congressional intent is that statewide and metropolitan transportation planning should be the foundation for highway and transit project decisions. None of the changes in SAFETEA-LU alters how the National Environmental Policy Act relates to an MTP. Typically, MTPs or other regional long-range plans do not involve specific federal approvals or actions that are likely to cause a significant environmental impact. Therefore, MTPs do not need a NEPA Environmental Impact Statement (EIS) to meet the requirements of SAFETEA-LU. However, the SAFETEA-LU requirements were written to provide a more consistent consideration of environmental issues from transportation planning through project development. Moreover, congressional intent is that agencies and jurisdictions should be able to use information, analysis, and products from the transportation planning process and incorporate them into and rely upon them in NEPA documents.

Washington State has its own environmental policy act, the State Environmental Policy Act (SEPA), that does provide for environmental consideration at the plan level.

THE TRANSPORTATION SYSTEM DEVELOPMENT PROCESS

The legal framework for developing transportation policies, plans, programs and projects with regard to the environment include the federal SAFETEA-LU and National Environmental Policy Act and the Washington State Growth Management Act (GMA) and State Environmental Policy Act (SEPA).

The transportation system development process includes transportation policy making, transportation plan development, programming of transportation projects and eventual engineering and construction of projects. At each step of the process there are environmental considerations to take into account.

- Transportation Policies
- Transportation Plans
- Transportation Programs
- Transportation Projects

ENVIRONMENTAL CONSIDERATIONS:

According to § 450.104, environmental mitigation activities means strategies, policies, programs, actions, and activities that, over time, will serve to avoid, minimize, or compensate for (by replacing or providing substitute resources) the impacts to or disruption of elements of the human and natural environment associated with the implementation of a long-range statewide transportation plan or metropolitan transportation plan. At the metropolitan transportation planning level, the environmental mitigation strategies and activities are intended to be regional in scope, and may not necessarily address potential project-level impacts that are addressed in more detail during project development.

The Physical Environment includes:

- Water (wetlands and water resources)
- Earth (forested, natural areas, agricultural areas)

- Air (ambient air quality)
- Fauna and Flora (endangered and threatened species)

The Human Environment includes:

- Historic (archeology, cultural resources, historic preservation, etc.)
- Neighborhoods, communities, homes and businesses
- Agricultural areas
- Parks and recreation areas

FEDERAL AGENCIES: SUPPORT FOR ENVIRONMENTAL CONSIDERATION AND MITIGATION

US DOT (Federal Highway Administration and Federal Transit Administration). The website (noted below) offers a wealth of information developed and compiled by the FHWA and its partners to assist in strengthening planning and environment linkages

http://environment.fhwa.dot.gov/integ/index.asp

Other federal agencies to consult with in the transportation planning process include:

- Advisory Council on Historic Preservation
- Environmental Protection Agency
- National Marine Fisheries Service (NOAA Fisheries)
- National Park Service
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Forest Service

STATE AGENCIES: SUPPORT FOR ENVIRONMENTAL CONSIDERATION AND MITIGATION

Washington State Department of Transportation: WSDOT develops the Washington Transportation Plan and state Highway System Plan. WSDOT's Environmental Services section provides expertise in consideration of the environment and in environmental mitigation. WSDOT website references that assist consideration of environmental mitigation at the regional level include:

WSDOT Environmental Policy Statement:

http://www.wsdot.wa.gov/Environment/PolicyStatement.htm

WSDOT Environmental Services Team:

http://www.wsdot.wa.gov/Environment/about.htm#management

WSDOT Environmental Procedures Manual M 31-11:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/EPM/230.pdf

Highway System Plan:

http://www.wsdot.wa.gov/planning/HSP.htm

Other state agencies to consult with in the transportation planning process include:

- State Department of Ecology
- Department of Fish and Wildlife
- Department of Natural Resources
- Governor's Office
- Northwest Indian Fisheries Commission
- Office of Archeological and Historic Preservation
- Parks and Recreation Commission

CONSULTATION WITH TRIBES

SAFETEA-LU also requires consultation with tribal governments. Within the Clark County region, these tribal governments may include:

- Chinook
- Columbia River Inter-tribal Fish Commission
- Cowlitz
- Nez Perce
- Spokane
- Yakama Nation

LOCAL JURISDICTIONS: SUPPORT FOR ENVIRONMENTAL CONSIDERATION AND MITIGATION

At the local level, planning work conducted in accordance with the state's Growth Management Act in support of the Comprehensive Plan for Clark County is of significance when considering environmental mitigation at the regional transportation planning level. Local jurisdictions and agencies have specific environmental programs and initiatives relevant to environmental mitigation. The Growth Management Act requires that all local jurisdictions develop a Comprehensive Plan with a required element that addresses the environment.

Website references are provided below for some of the local environmental programs.

Clark County

- Comprehensive Plan for Clark County: process, framework, inventory.
  http://www.clark.wa.gov/longrangeplan/review/index.html
- Comprehensive Plan for Clark County: environmental analysis in Environmental Impact Statement (EIS).
  http://www.clark.wa.gov/longrangeplan/review/eis-scoping.html
- Comprehensive Plan for Clark County (updated September 2007)
  http://www.clark.wa.gov/longrangeplan/review/index.html
- Use of Geographic Information System (GIS) data for delineating topography, critical lands, resource lands, watersheds, etc. Information from Clark County's GIS Digital Atlas for Clark County has been used in planning for new transportation corridors in RTC's New Transportation Corridors Visioning study. The GIS Digital Atlas is a useful analysis tool that allows us to consider the environment in the early planning phases and at the regional

Metropolitan Transportation Plan level. The Atlas includes layer of data, including data on the natural and built environment, as outlined in the following Table 1.

http://nt04/applications/gishome/index.cfm?fuseaction=mapindex

Table 1: Index of Maps within Clark County's Digital Atlas

Index of Maps within Clark County's Digital Atlas	
Land Records – Assessor:	
Basic Property Map	Property, roads, and municipal boundaries
Property Mailings	Create address lists for mailing labels
Recent Property Sales	Current residential and commercial sales history
Planning - Community Development	
Site Plans and Permits	Building and development permits, site plan review
Zoning and Comprehensive Plan	Comprehensive Plan and Zoning Designations
Environmental - Community Development:	
Archaeological Predictability	Archaeological predictability, historic sites
Elevation Contour Maps	Ten- and two-foot topographic contours
Endangered Species Act	Fish distribution, watersheds, sub-watersheds
Priority Habitat and Species	Priority habitat and species buffers
Slopes and Geologic Hazards	Slope characteristics, landslide and erosion areas
Soils and Wetlands Inventory	Soils, wetlands, aquifers, and floodplains
Transportation - Public Works:	
Concurrency Studies	Vancouver concurrency studies
Maintenance Management	Bridge, Signal and Park maintenance, sweeping routes
Transportation Systems	Arterial atlas, truck and bike routes, 2006-2011 projects
Utilities - Public Works:	
Clean Water Program	Program fee types and impervious areas
Storm Sewer System	Lines, manholes, catchbasins, treatment facilities
Surveys and Subdivisions - Public Works:	
Property Surveys	Recorded and un-recorded surveys
Right-of-Way Data	Right-of-way and road establishment notes
Subdivisions and Plats	Recorded subdivisions and short-plats
Survey Control Data	GPS, benchmarks, land corners, quarter sections
Administrative Boundaries:	
Administrative Boundaries	Census, neighborhoods, legislative, elections
Points of Interest	Schools, transit centers, emergency services
Service District Maps	Fire, school, water, sewer, and cemetery districts

Clark County

Clark County Public Works, Environmental Services, includes programs for Water Resources and Clean Water:

http://www.co.clark.wa.us/public-works/index.html

Water Resources and Clean Water Program:
http://www.co.clark.wa.us/water-resources/index.html

Clark County Watersheds. There are 18 major watersheds in Clark County. Clark County publishes a Clark County Streams Health Report that provides a comprehensive overview of the condition of Clark County streams, rivers and lakes. There are watershed protection programs in place for a number of the watersheds. Clark County and planning partners, such as the Washington State University Clark County Extension, coordinate watershed protection:

http://www.co.clark.wa.us/water-resources/watersheds.htmlf

Stormwater Basin Planning:
http://www.co.clark.wa.us/water-resources/basin.html#what

Clark County addresses the Endangered Species Act:

http://www.co.clark.wa.us/esa/index.html

Clark County Public Health, includes environmental resource protection with programs such as the Clean Stream, Salmon Creek Program:
http://www.co.clark.wa.us/health/environmental/index.html

Clean Stream, Salmon Creek Program:
http://www.co.clark.wa.us/health/environmental/Salmon_Creek.html

City of Vancouver

The City's Strategic Plan update addresses the environment:
http://www.cityofvancouver.us/page.asp?menuid=10463

The City of Vancouver also has specific programs that relate to protecting our environment:

The Water All Around Us
Ground and surface water information.

Urban Forestry

Preserves and enhances the urban forest through tree regulations and tree planting coordination.

Vancouver Lake Watershed Partnership
The City has joined with other government agencies and local citizens to explore issues and potential strategies for the future of Vancouver Lake.

Water Resources Protection Program
The Water Resources Protection Ordinance provides the tools Vancouver needs to protect the rivers, lakes, streams and groundwater, which are important to our community and high quality of life. The Ordinance requires everyone to follow minimum standards that help protect the "critical" aquifers underlying the entire city. It also establishes greater standards of compliance for businesses and industries that manage hazardous materials; creates Special Protection Areas around the City's water stations as an additional safeguard; and provides cooperative, cost-effective solutions through technical assistance, education and public outreach.

Burnt Bridge Creek Greenway Project
Through the Burnt Bridge Creek Greenway project, the City of Vancouver is improving water quality, managing surface water, enhancing natural habitat and making a large urban greenway available to the public and for stewardship. The Project is designed to echo nature by re-establishing the natural flood plain and multiple layers of vegetative cover, which will not only provide wildlife feeding, resting and nesting habitat, but also slow and reduce peak runoff, reduce soil erosion and cool water temperatures.

Cities of Clark County:

Clark County and all its cities plan under the state's Growth Management Act. As such, each city's Comprehensive Plan includes a required element that addresses the environment. In these elements, the local cities address such issues as protection and conservation of environmentally critical areas such as wetlands, aquifer recharge areas, and geologically hazardous areas. Plans also address protection and recovery of endangered species, protection, conservation of salmonids, fish and wildlife habitat, update addresses the environment:

RTC's Metropolitan Transportation Plan (MTP): Environmental Process

When a significant MTP update is drafted, RTC conducts a review of the MTP following the prescribed SEPA process. With previous MTP updates, a SEPA checklist has been completed and the checklist distributed to resource agencies and other interested parties. This process ensures consultation and information dissemination to both resource agencies and interested parties.

What Plan Products Could be Used in NEPA?[1]

The following planning products are valuable inputs to the discussion of the affected environment and environmental consequences (both its current state and future state in the absence of the proposed action) in the project-level NEPA analysis and document:

- Regional development and growth analyses;
- Local land use, growth management, or development plans; and
- Population and employment projections.

The following are types of information, analysis, and other products from the transportation planning process that can be used in the discussion of the affected environment and environmental consequences in an Environmental Assessment (EA) or Environmental Impact Statement (EIS):

(a) Geographic information system (GIS) overlays showing the past, current, or predicted future conditions of the natural and built environments;
(b) Environmental scans that identify environmental resources and environmentally sensitive areas;
(c) Descriptions of airsheds and watersheds;
(d) Demographic trends and forecasts;
(e) Projections of future land use, natural resource conservation areas, and development; and
(f) The outputs of natural resource planning efforts, such as wildlife conservation plans, watershed plans, special area management plans, and multiple species habitat conservation plans.

However, in most cases, the assessment of the affected environment and environmental consequences conducted during the transportation planning process will not be detailed or current enough to meet NEPA standards and, thus, the inventory and evaluation of affected resources and the analysis of consequences of the alternatives will need to be supplemented with more refined analysis and possibly site-specific details during the NEPA process.

RESOURCE AGENCY CONSULTATION

Federal and State agencies that may be consulted with were listed on page E-3. Within Washington State the Signatory Agency Committee (SAC) has been established to enable efficient consultation with resource and signatory agencies on specific projects. At the local level the Columbia River Crossing project has established the InterCEP group to bring together resource agencies from both Washington and Oregon as they consider planning for the I-5 interstate bridge area.

Signatory Agency Committee (SAC)
http://www.wsdot.wa.gov/Environment/Compliance/SignatoryAgency.htm

[1] Excerpt from Guidance for Metropolitan Transportation Planning, Federal Register, Feb. 14, 2007.

Interstate Collaborative Environmental Process (InterCEP)
http://columbiarivercrossing.com/materials/meetingmaterials/TaskForce_071206_%20InterCEP%20and%20Tribe%20Briefing2.pdf

THE METROPOLITAN TRANSPORTATION PLAN FOR CLARK COUNTY AND ENVIRONMENTAL MITIGATION

Table 2 provides a summary overview of how the Metropolitan Transportation Plan for Clark County addresses environmental mitigation at the programmatic level. This summary will be brought up to date at each MTP update. Following Table 2 are examples of mapped information available to RTC during transportation plan development through the Clark County's Maps Online program. This information is used to provide base level data in the transportation decision-making process.

Table 2: The Metropolitan Transportation Plan for Clark County and Environmental Mitigation

Environmental Areas of Interest	General Comments/ Environmental Mitigation Resources, Measures and Tools	Clark County Specific Examples of Environmental Mitigation Strategies
Basis for the Metropolitan Transportation Plan for Clark County	• The Metropolitan Transportation Plan (Dec. 2007) supports the Clark County Comprehensive Growth Management Plan (Sep. 2007). • Both Plans, MTP and Comprehensive Plan for Clark County, were developed in synch with each other.	• The Final Environmental Impact Statement (FEIS) for the Clark County Comprehensive Plan (May 2007) includes a summary and analysis of two alternatives to accommodate the projected population and employment growth. • The FEIS for the Clark County Comprehensive Plan, discloses potential environmental impacts for the No Build and Preferred Alternative and suggests mitigation strategies for the preferred alternative.
Environmental Analysis Tools		• Clark County's GIS Digital Atlas includes layers of data, including data on the natural and built environment, e.g. archaeological predictability, historic sites, slope (contours), fish distribution, watersheds, sub-watersheds, priority habitat and species buffers, storm sewer system details (see Clark County map examples at conclusion of Appendix E: (1) Clark County Maps Online, (2) Comprehensive Plan Land Use Designations, (3) Floodplains and Wetlands, (4) Watersheds, (5) Completed Mitigation Projects (wetland and habitat sites), (6) Slope, and (7) Historic Sites. • Allows consideration of the environment in the early planning phases at the programmatic, regional Metropolitan Transportation Plan level.

Table 2: The Metropolitan Transportation Plan for Clark County and Environmental Mitigation

Environmental Areas of Interest	General Comments/ Environmental Mitigation Resources, Measures and Tools	Clark County Specific Examples of Environmental Mitigation Strategies
Environmental Legislation and Documentation	• National Environmental Policy Act (NEPA), • US DOT website e.g. Environmental Competency Building (ECB) Program provides a central source of information. • State Environmental Policy Act (SEPA), • State guidance e.g. WSDOT Environmental Procedures Manual.	• Clark County and its jurisdictions and transportation agencies follow federal and state laws and guidance when carrying out land use and transportation plans and projects.
Natural and Physical Environment		Clark County established an Environmental Services Department in Nov. 2009
Water: wetlands and water resources	• Limit impervious surfaces. • Minimize crossings through sensitive areas. • Comply with local, state and federal laws for protecting water quality and managing stormwater. • Collect and treat stormwater.	• Clark County Clean Water Program http://www.co.clark.wa.us/water-resources/ • Clark County Stormwater Manuals and Ordinances • Clark County Mitigation Opportunities Program and Mitigation Marketplace. • Wetland Mitigation Bank in Clark County • Watershed plans. Clark County Stream Health Report (2004). Monitoring of Clark County watersheds e.g. Columbia Shore, Washougal River, Lacamas Creek, Vancouver Lake/Lake River, Burnt Bridge Creek, Salmon Creek, Whipple Creek, Gee Creek, Flume Creek, Allen Canyon Creek, East Fork Lewis River, Cedar Creek, Canyon Creek.
Air: (ambient air quality) and Energy • Under the new 8-hour federal Ozone	• Transportation Demand Management and System Management programs.	• RTC continues to monitor population growth and growth in Vehicle Miles Traveled (VMT).

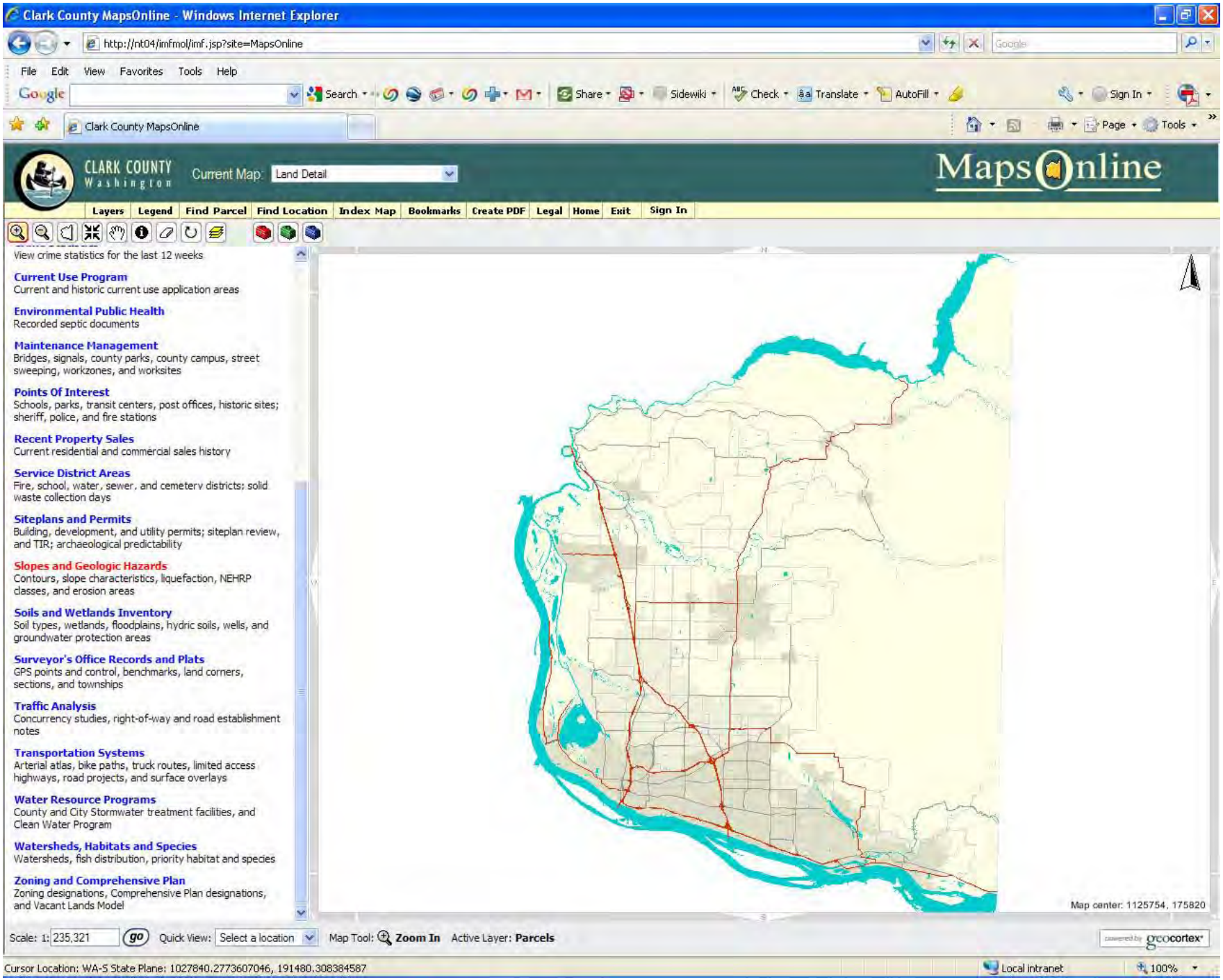
Table 2: The Metropolitan Transportation Plan for Clark County and Environmental Mitigation

Environmental Areas of Interest	General Comments/ Environmental Mitigation Resources, Measures and Tools	Clark County Specific Examples of Environmental Mitigation Strategies
standard, the Vancouver/Portland AQMA is classified as "unclassifiable/attainment". The region no longer needs to demonstrate ozone air quality conformity. • The Vancouver AQMA is designated as a Carbon Monoxide maintenance area. The EPA published a notice of adequacy of a second 10-year Limited Maintenance Plan , 2006-2016, in the November 19, 2007 Federal Register Regional conformity is presumed with regional emissions analyses and budget tests no longer required.	• Manage congestion to reduce idling. • Encourage multimodal alternatives to single occupant automobile travel. • Encourage mixed use development. • Cleaner transportation fleets with reduced emissions.	• RTC is currently participating in the state's climate change team to address how to implement the Governor's Executive Order 09-05 on Climate Change. • Regional Commute Trip Reduction Plan (RTC) and CTR Plans for Vancouver, Camas, Washougal and Urban Growth Area portion of Unincorporated Clark County. • RTC's Congestion Management Process. • Transportation System Management and Operations (TSMO) plan is now underway. • The region has designated funds to cleaner, hybrid vehicles use by C-TRAN the transit agency.
Earth: Forested and Natural Areas Fauna and Flora (endangered and threatened species, wildlife habitat, sensitive habitat and wetland habitat) All the above may be impacted by transportation projects.	• Endangered Species Act implementation. • Mitigation measures are highly site specific. • Minimize impacts to fish bearing streams.	• Clark County is included in the Lower Columbia Salmon Recovery and Fish and Wildlife Sub-basin Plan, which outlines strategies for protecting and restoring endangered and threatened species. See: http://www.clark.wa.gov/esa/plan.html • Clark County Habitat restoration program. • Vancouver Urban Forestry Management Plan (2007)
Transportation:	• Encourage use of alternative and efficient transportation modes, e.g. transit, pedestrian	• Washington State's Growth Management law encourages the integration of land use and

Table 2: The Metropolitan Transportation Plan for Clark County and Environmental Mitigation

Environmental Areas of Interest	General Comments/ Environmental Mitigation Resources, Measures and Tools	Clark County Specific Examples of Environmental Mitigation Strategies
	and bicycling. • Employ demand and system management. • Integrate transportation and land use planning. • Reduce VMT per capita.	transportation planning. • Clark County's Comprehensive Growth Management Plan and RTC's Metropolitan Transportation Plan were developed in synch with each other. • RTC is working with other TMAs in Washington state to reduce VMT per capita per Governor's Executive Order 09-05 on Climate Change.
Human Environment		
Historic: archeology, cultural resources, historic preservation, etc.	• The specific location and nature of the transportation project will determine impacts to historic and cultural resources with mitigation being highly project specific. • Meet federal, state and local, requirements for historic preservation.	• Clark County's GIS Digital Atlas includes layers of data including archaeological predictability and historic sites. • Clark County runs a Historic Preservation Program and has a Historic Preservation Commission.
Community: Neighborhoods, communities, homes and businesses, parks and recreation areas	• Employ context sensitive design in transportation projects. • Analyze projects through NEPA/SEPA, including 4f, processes.	• Team 99's plans for Highway 99 • Clark-Vancouver Parks and Recreation, Trails and Parks Planning program.
Agriculture:	• Encourage protection of agricultural lands.	• Clark County Agricultural Preservation Advisory Committee.
Environmental Consultation		
SAFETEA-LU specifies requirements for MPO consultation with other federal, state, and tribal resources agencies	The following resource agencies and tribes will be consulted on MTP updates: ***Federal***: • Advisory Council on Historic Preservation	

Table 2: The Metropolitan Transportation Plan for Clark County and Environmental Mitigation		
Environmental Areas of Interest	**General Comments/ Environmental Mitigation Resources, Measures and Tools**	**Clark County Specific Examples of Environmental Mitigation Strategies**
	• Environmental Protection Agency • National Marine Fisheries Service (NOAA Fisheries) • National Park Service • U.S. Army Corp of Engineers • U.S. Fish and Wildlife Service • U.S. Forest Service ***State:*** • State Department of Ecology • Department of Fish and Wildlife • Department of Natural Resources • Governor's Office • Northwest Indian Fisheries Commission • Office of Archeological and Historic Preservation • Parks and Recreation Commission ***Tribal Consultation:*** • Chinook • Columbia River Inter-tribal Fish Commission • Cowlitz • Nez Perce • Spokane • Yakama Nation	


Clark County MapsOnline - Windows Internet Explorer
http://nt04/imfmol/imf.jsp?site=MapsOnline
File Edit View Favorites Tools Help
Clark County MapsOnline
CLARK COUNTY Washington
Current Map: Land Detail
MapsOnline
Layers Legend Find Parcel Find Location Index Map Bookmarks Create PDF Legal Home Exit Sign In
View crime statistics for the last 12 weeks
Current Use Program
Current and historic current use application areas
Environmental Public Health
Recorded septic documents
Maintenance Management
Bridges, signals, county parks, county campus, street sweeping, workzones, and worksites
Points Of Interest
Schools, parks, transit centers, post offices, historic sites; sheriff, police, and fire stations
Recent Property Sales
Current residential and commercial sales history
Service District Areas
Fire, school, water, sewer, and cemetery districts; solid waste collection days
Siteplans and Permits
Building, development, and utility permits; siteplan review, and TIR; archaeological predictability
Slopes and Geologic Hazards
Contours, slope characteristics, liquefaction, NEHRP classes, and erosion areas
Soils and Wetlands Inventory
Soil types, wetlands, floodplains, hydric soils, wells, and groundwater protection areas
Surveyor's Office Records and Plats
GPS points and control, benchmarks, land corners, sections, and townships
Traffic Analysis
Concurrency studies, right-of-way and road establishment notes
Transportation Systems
Arterial atlas, bike paths, truck routes, limited access highways, road projects, and surface overlays
Water Resource Programs
County and City Stormwater treatment facilities, and Clean Water Program
Watersheds, Habitats and Species
Watersheds, fish distribution, priority habitat and species
Zoning and Comprehensive Plan
Zoning designations, Comprehensive Plan designations, and Vacant Lands Model
Map center: 1125754, 175820
Scale: 1: 235,321 go Quick View: Select a location Map Tool: Zoom In Active Layer: Parcels
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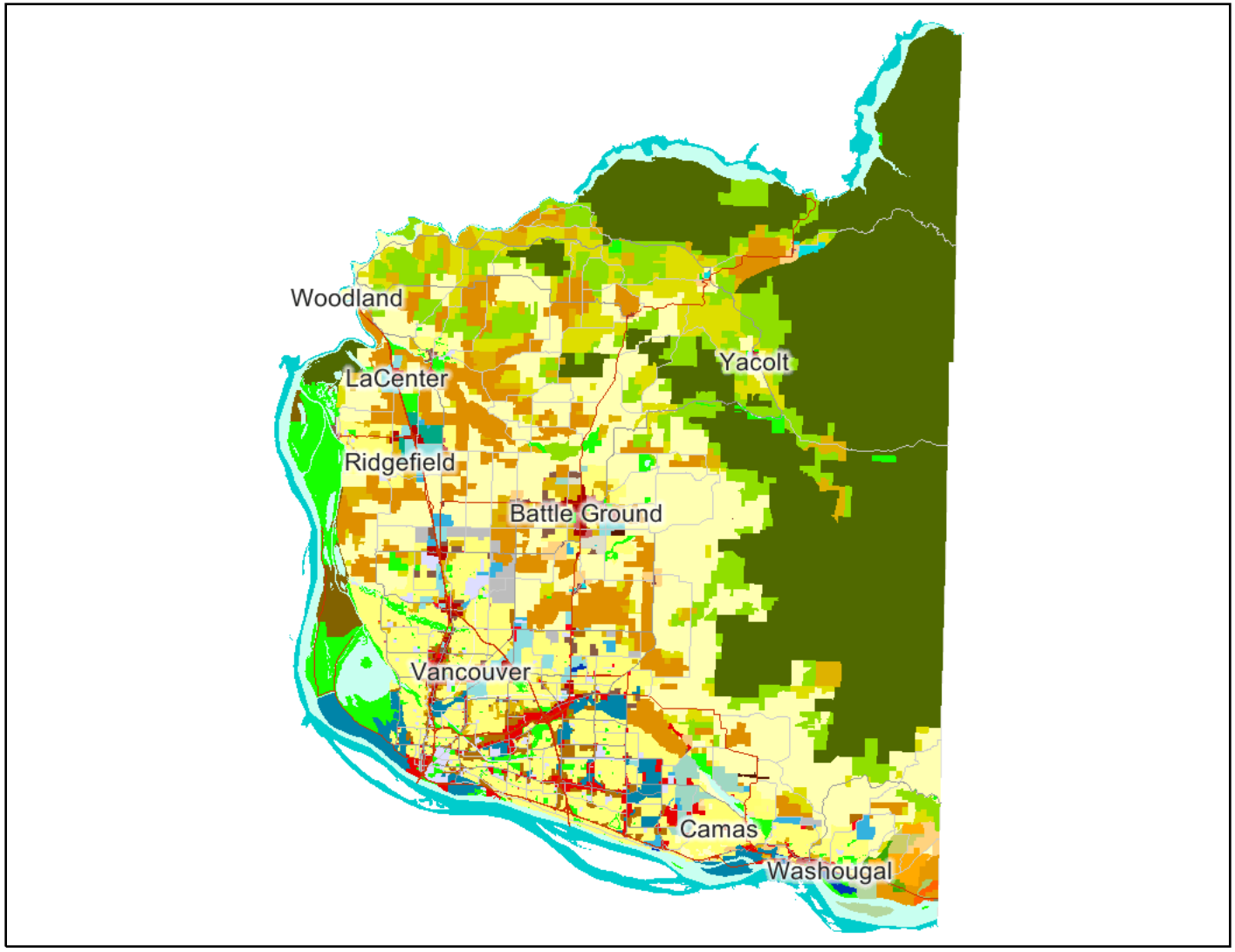
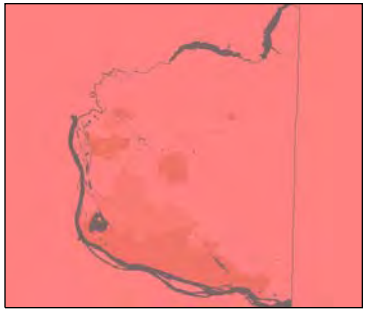
Geocortex IMF Viewer
Internet Mapping Framework

Clark County Comprehensive Plan





Legend

Major Roads

- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate

Comprehensive Plan Designations

- Urban Low Density Residential
- Urban Medium Density Residential
- Urban High Density Residential
- Neighborhood Commercial
- Community Commercial
- General Commercial
- City Center
- Rural Commercial
- Light Industrial
- Heavy Industrial
- Rural Industrial
- Office Park/Business Park
- Mixed Use
- Public Facility
- Parks/Open Space
- Urban Reserve
- Mining Lands
- Rural-5
- Forest Tier 1
- Forest Tier 2
- Agriculture
- Agri-Wildlife
- Water
- Bonneville Power Administration
- Railroad Industrial
- Employment Center
- Regional Center

N

Scale: 1:419,193

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

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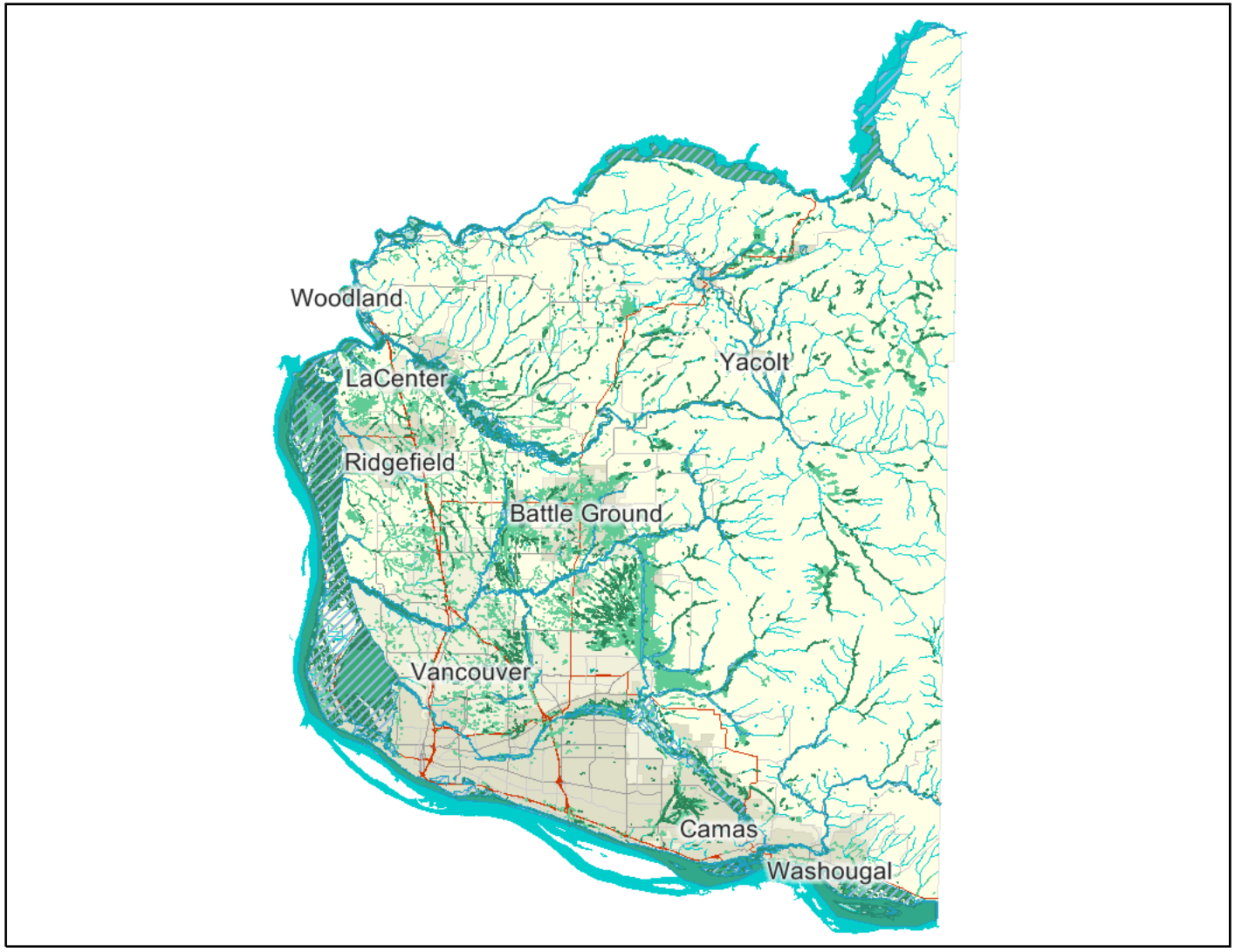
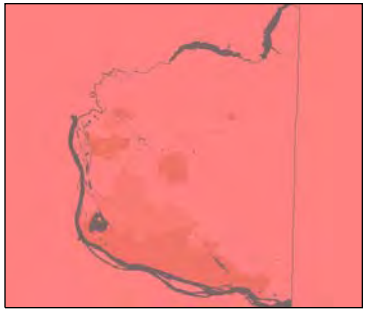
Geocortex IMF Viewer
Internet Mapping Framework

Clark County Floodplains and Wetlands





Legend

Floodplains
- Floodway Fringe
- Floodway

NWI Mapped Wetland
- NWI Mapped Wetland

County Wetland Inventory

Major Roads
- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate

Stream Channels

Waterbodies

Rural Centers

City Boundaries

Urban Growth Boundaries

County Boundary

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

Scale: 1:419,193

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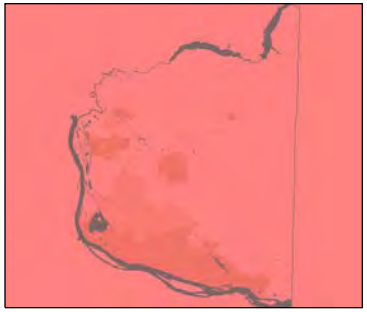
Geocortex IMF Viewer
Internet Mapping Framework

Clark County Watersheds



Legend

- Watershed
- Major Roads
- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate
- Stream Channels
- Waterbodies
- Rural Centers
- City Boundaries
- Urban Growth Boundaries
- County Boundary

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

Scale: 1:419,193

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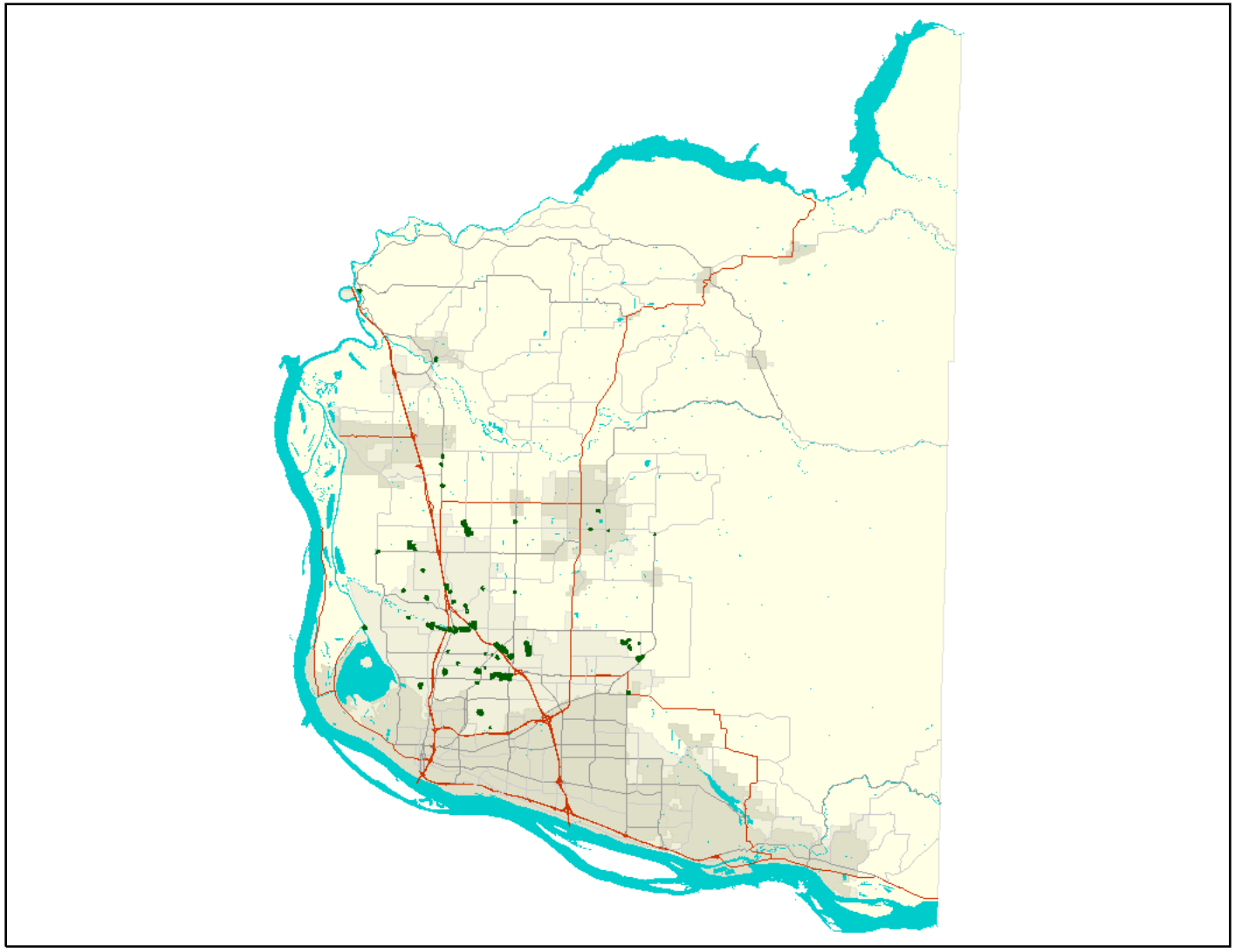
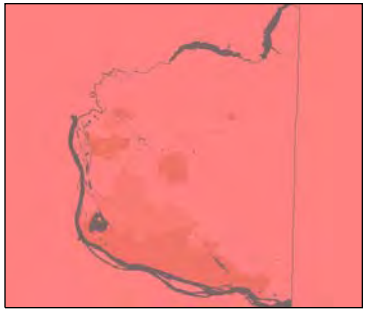
Geocortex IMF Viewer
Internet Mapping Framework

Completed Mitigation Projects (wetland & habitat sites)





Legend

Major Roads

- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate
- Mitigation Project
- Waterbodies
- Rural Centers
- City Boundaries
- Urban Growth Boundaries
- County Boundary

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

N

Scale: 1:419,193

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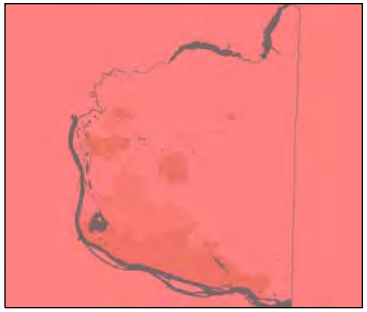
Geocortex IMF Viewer
Internet Mapping Framework

Clark County Slope



Legend

- 200 Foot Contours
- Major Roads
- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate
- Stream Channels
- Waterbodies
- Rural Centers
- City Boundaries
- Urban Growth Boundaries
- County Boundary

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

Scale: 1:419,193

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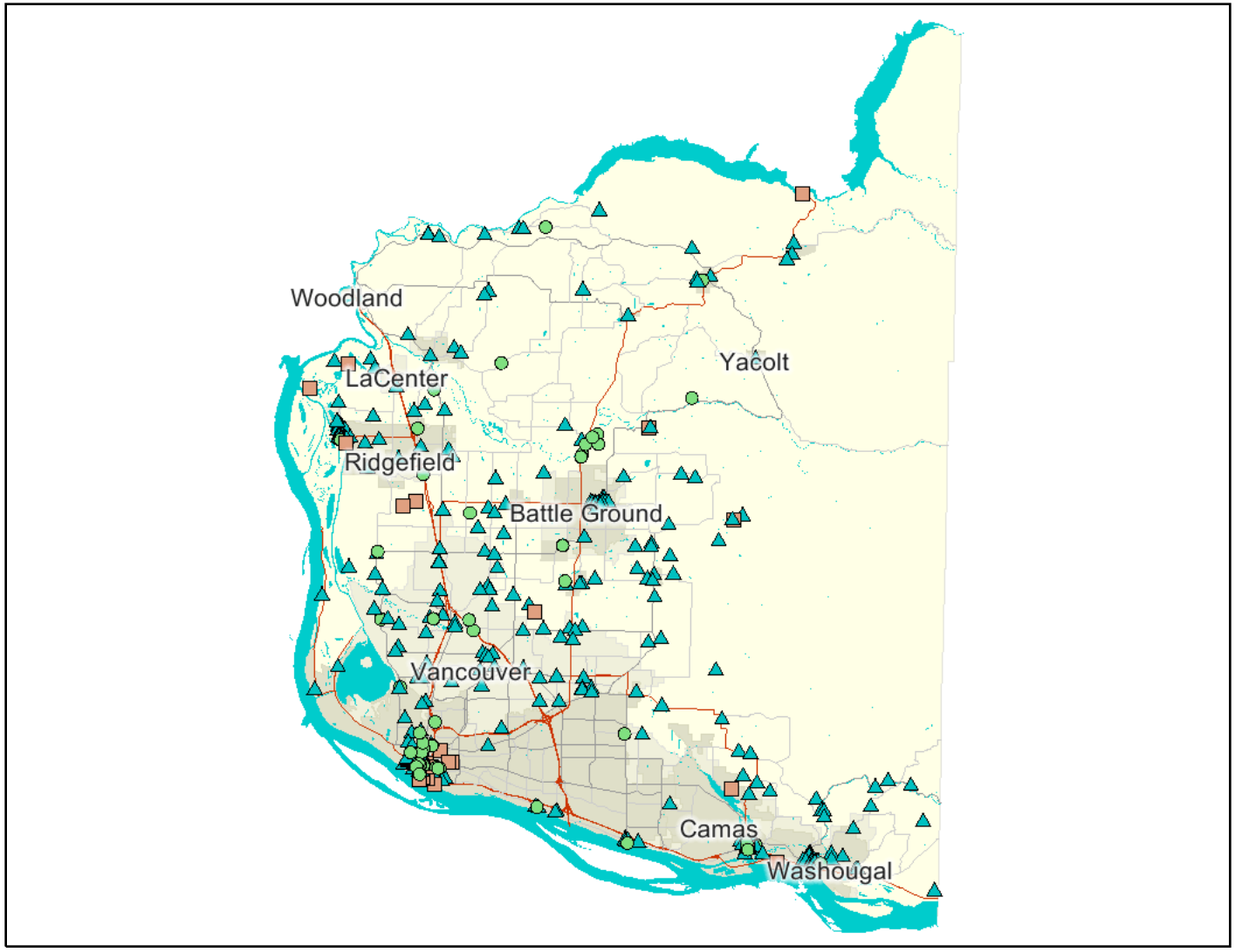
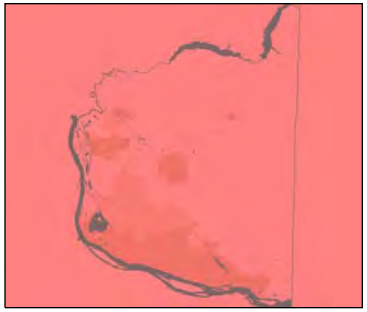
Geocortex IMF Viewer
Internet Mapping Framework

Clark County Historic Sites





Legend

Local and National Historic Sites
- Clark County Heritage Register
- Clark County Historic Resource Inventory
- National Register Historic Places

Major Roads
- State Route
- Interstate
- Minor Collector
- Major Collector
- State Route
- Interstate

Waterbodies

Rural Centers

City Boundaries

Urban Growth Boundaries

County Boundary

0 7.5 15 22.5 mi.

Map center: 1125754, 175819

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Scale: 1:419,193

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MTP APPENDIX F

RTC

RTC: Year of Expenditure (YOE) Methodology and Fiscal Constraint Determination

MTP APPENDIX F

Technical Appendix: YOE

December 2008

RTC: Year of Expenditure Methodology and Fiscal Constraint Determination

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RTC: Year of Expenditure Methodology and Fiscal Constraint Determination

INTRODUCTION

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, 2005) established new requirements for the preparation of Metropolitan Transportation Plans (MTPs). One of the new requirements is that revenue and cost estimates that support the Metropolitan Transportation Plan must use inflation rates to reflect "year of expenditure" dollars.

SAFETEA-LU REQUIREMENTS REGARDING YOE

The federal transportation act, SAFETEA-LU, described the YOE requirements in 23 CFR 450.322 (f) (10) (iv). The wording of the Act is provided below:

> **23 CFR 450450.322(f)(10)(iv)**
>
> (iv) In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation. ….
> …. revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect "year of expenditure dollars," based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s).

WHY WAS THE LAW CHANGED?

The rationale for the YOE requirement is to have metropolitan transportation plans account for reasonable inflation factors. Use of YOE requires MPOs to account for cost escalation and consideration that revenues may not be growing at the same rate as costs as part of the fiscal constraint determination. Converting all costs and revenues to YOE dollars will theoretically present a more accurate picture of costs, revenues, and potential deficits associated with the long range transportation plan.

REVENUES: ASSUMPTIONS

Revenue sources for transportation uses are fully described in Chapter 4; the MTP's finance plan. Forecast revenue assumptions were derived by looking back at previous trends and taking into consideration future trends. Clark County has experienced rapid growth in the past 10 years which has had implications for transportation revenues. As population and the retail sector has expanded over the past decade, so too have transportation revenues. Transportation revenues available for highway construction, preservation and maintenance in Clark County grew, on average, by 5.02% per year over the past decade[1]. This trend is unlikely to continue into the future for a variety of reasons discussed in Chapter 4; a major reason being the flat gas tax that does not keep pace with inflation. For MTP purposes, a future average growth rate of 1.25% per year is assumed for highway maintenance, preservation, highway capital projects and transit capital projects. Table E-1 provides revenue assumptions, by year, with total assumed revenues of $5,277,653,442 for federal, state, local and transit capital projects and equipment from 2007 to 2030.

[1] Source: Washington State Auditors Office (SAO), Local Government Reporting System and WSDOT Economics Branch

Table E-1, Revenue Assumptions (in Year of Expenditure)

Year of Expenditure Calculations	
Year	**Revenues (for Federal, State, Local and Transit Capital Projects and Equipment)**
2007	$ 192,212,657
2008	$ 192,212,657
2009	$ 194,615,315
2010	$ 197,048,006
2011	$ 199,511,106
2012	$ 202,004,995
2013	$ 204,530,058
2014	$ 207,086,683
2015	$ 209,675,267
2016	$ 212,296,208
2017	$ 214,949,910
2018	$ 217,636,784
2019	$ 220,357,244
2020	$ 223,111,709
2021	$ 225,900,606
2022	$ 228,724,363
2023	$ 231,583,418
2024	$ 234,478,211
2025	$ 237,409,188
2026	$ 240,376,803
2027	$ 243,381,513
2028	$ 246,423,782
2029	$ 249,504,079
2030	$ 252,622,880
TOTAL	**$ 5,277,653,442**

As reported in Chapter 4, C-TRAN has provided 2008 to 2030 (YOE) revenue assumptions for sales tax, fare box recovery, interest, operating grants and other for public transportation purposes. C-TRAN assumes revenues of $1,772,886,139 between 2008 and 2030 as described in Chapter 4.

COST ASSUMPTIONS

Following FHWA guidance, RTC uses the default 4% annual inflation rate in inflating estimated project costs in the MTP. Transportation system component costs include transportation system maintenance and preservation, transportation (including highway and transit) capital costs, transportation demand management, transportation system management, pedestrian and bicycle

projects. Table E-2 provides inflated costs for transportation system components including: maintenance and preservation, demand management, system management, pedestrian and bicycle projects. Table E-3 provides a detailed look at inflation of cost estimates for transit and highway capital projects. Combined YOE totals for these categories of costs total $4,745,441,309; over $4.7 billion in costs for the MTP years 2007 to 2030.

Table E-2, Transportation System Costs (in Year of Expenditure)

Cost Assumptions of Transportation System Components in Year of Expenditure						
Year	**Maintenance and Preservation**	**Demand Management**	**System Management**	**Pedestrian and Bicycle Projects**	**Transit and Highway Capital Costs**	**YOE Total Cost Estimates**
2007	$ 30,200,000	$ 2,000,000	$ 2,000,000	$ 4,000,000	*See Table Below*	$ 38,200,000
2008	$ 30,200,000	$ 2,000,000	$ 2,000,000	$ 4,000,000		$ 38,200,000
2009	$ 31,408,000	$ 2,080,000	$ 2,080,000	$ 4,160,000		$ 39,728,000
2010	$ 32,664,320	$ 2,163,200	$ 2,163,200	$ 4,326,400		$ 41,317,120
2011	$ 33,970,893	$ 2,249,728	$ 2,249,728	$ 4,499,456		$ 42,969,805
2012	$ 35,329,729	$ 2,339,717	$ 2,339,717	$ 4,679,434		$ 44,688,597
2013	$ 36,742,918	$ 2,433,306	$ 2,433,306	$ 4,866,612		$ 46,476,141
2014	$ 38,212,634	$ 2,530,638	$ 2,530,638	$ 5,061,276		$ 48,335,187
2015	$ 39,741,140	$ 2,631,864	$ 2,631,864	$ 5,263,727		$50,268,594
2016	$ 41,330,785	$ 2,737,138	$ 2,737,138	$ 5,474,276		$52,279,338
2017	$ 42,984,017	$ 2,846,624	$ 2,846,624	$ 5,693,247		$54,370,511
2018	$ 44,703,377	$ 2,960,489	$ 2,960,489	$ 5,920,977		$56,545,332
2019	$ 46,491,513	$ 3,078,908	$ 3,078,908	$ 6,157,816		$58,807,145
2020	$ 48,351,173	$ 3,202,064	$ 3,202,064	$ 6,404,129		$61,159,431
2021	$ 50,285,220	$ 3,330,147	$ 3,330,147	$ 6,660,294		$63,605,808
2022	$ 52,296,629	$ 3,463,353	$ 3,463,353	$ 6,926,706		$66,150,040
2023	$ 54,388,494	$ 3,601,887	$ 3,601,887	$ 7,203,774		$68,796,042
2024	$ 56,564,034	$ 3,745,962	$ 3,745,962	$ 7,491,925		$71,547,884
2025	$ 58,826,595	$ 3,895,801	$ 3,895,801	$ 7,791,602		$74,409,799
2026	$ 61,179,659	$ 4,051,633	$ 4,051,633	$ 8,103,266		$77,386,191
2027	$ 63,626,845	$ 4,213,698	$ 4,213,698	$ 8,427,397		$80,481,639
2028	$ 66,171,919	$ 4,382,246	$ 4,382,246	$ 8,764,493		$83,700,904
2029	$ 68,818,796	$ 4,557,536	$ 4,557,536	$ 9,115,072		$87,048,940
2030	$ 71,571,548	$ 4,739,838	$ 4,739,838	$ 9,479,675		$90,530,898
TOTAL	**$1,136,060,235**	**$ 75,235,777**	**$ 75,235,777**	**$ 150,471,554**	**$ 3,330,962,189**	**$4,767,965,533**

In Table E-3, projects were tiered and an inflation factor of 4% per year applied to cost estimates in 2007 $ to arrived at a YOE cost estimate. Projects in years 2008 to 2011 are within the years of the MTIP and so costs of these projects are already in YOE. There is a lot of uncertainty as to the timing of projects in outer years of the MTP, therefore when ranges of years are provided for a project, a mid-point within the year range is assumed and the appropriate inflation factor is applied for that mid point

year. Total capital project cost estimates in 2007 $ totals $2,407,681,866 whereas YOE cost estimates for the same list amounts to $3,330,962,189; an average 38.3% increase.

Table E-3, MTP List of "Fiscally Constrained" Projects 2007-2030 in 2007 $ and YOE

NOTE*: Project cost estimates provided in Table 4-3 are planning level cost estimates. Cost estimates are liable to change as more detailed pre-design and design work is initiated for each of the projects. Cost estimates are reviewed in detail at each MTP update.*
Projects cost estimates in 2007 $ are consistent with those identified in Washington State Highway Systems Plan and local Capital Facilities Plans. The right hand column provides Year of Expenditure, inflated, cost estimates.

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
I-5	Columbia River Crossing (CRC). SR-500 in Vancouver, Washington to Columbia Boulevard in Portland, Oregon	Replacement I-5 river crossing and reconstructed interchanges. Light Rail Transit with terminus in Clark College vicinity.	3 lanes each direction		WSDOT/ ODOT	See page 4-33 for bi-state CRC project funding assumptions (in YOE)	
I-5	SR-502/219th St. Interchange	New Interchange	None	2008	WSDOT	$56,130,000	$56,130,000
I-5	Pioneer Street (Ridgefield)/ SR-501 Interchange	Replace Interchange	Interchange	2009	WSDOT/ Ridgefield	$33,000,000	$33,000,000
I-5	The Salmon Creek Interchange Project (SCIP) at 134th/139th Street	Construct NE 139th St. from NE 20th Ave. to NE 10th Ave. Reconstruct interchange with ramps added at 139th St. NE 10th Ave. Improve NE 10th Ave. from 134th to 149th St. with turn lanes	Interchange	2010-2013	WSDOT/ Clark Co	$141,000,000	$141,000,000

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
I-5/I-205	Salmon Creek Interchange Phase II	Improve access to I-205 with flyover from 134th St to I-205 southbound		2013-2020	WSDOT	$35,000,000	$47,899,917
I-5	319th Street Interchange	Rebuild Interchange	Interchange	2011-2015	WSDOT	$40,000,000	$48,666,116
I-5	I-205 to 179th Street	Auxiliary lane in each direction	3 lanes each direction	2012-2013	WSDOT	$22,000,000	$25,736,888
I-5	179th Street to SR-502	Auxiliary lane in each direction	3 lanes each direction	2016-2025	WSDOT	See above	
I-5	179th Street Interchange	Reconstruct Interchange	Interchange	2016-2025	WSDOT	$40,000,000	$64,041,289
I-205	Mill Plain Exit (112th Avenue connector)	Build direct ramp to NE 112th Avenue	None	2007	WSDOT	$12,672,000	$12,672,000
I-205	Mill Plain to NE 18th St - Stage I	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th	2011	WSDOT	$11,088,000	$11,088,000
I-205	Mill Plain to NE 18th St - Stage II	Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th/28th	2016	WSDOT	$85,933,000	$117,605,244
I-205	Mill Plain to 28th Street	Ramps/Frontage Road between Mill Plain and 28th Streets	Overpass/ underpass	2020-2030	WSDOT	$20,000,000	$37,459,625
I-205	I-205/SR14 Interchange	Rebuild Interchange		2020-2030	WSDOT	$100,000,000	$187,298,125
I-205	SR-14 to Mill Plain	Ramp Separation	Interchanges	2016-2025	WSDOT	$40,000,000	$64,041,289
I-205	28th St to SR 500	North ramps	None	2016-2025	WSDOT	$40,000,000	$64,041,289
I-205	SR-500	WB SR-500 to SB I-205 Flyover	Interchange	2016-2025	WSDOT	$33,000,000	$52,834,063
I-205	Padden Parkway Interchange	Rebuild interchange	2 lanes each direction	2016-2025	WSDOT	$30,000,000	$48,030,967
I-205	SR-500 to Padden Parkway	3 general purpose and 1 auxiliary lanes each direction	2 lanes each direction	2016-2025	WSDOT	$100,000,000	$160,103,222
I-205	Padden Parkway to 134th Street	3 lanes each direction	2 lanes each direction	2016-2025	WSDOT	$90,000,000	$144,092,900

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
SR-14	I-205 to 164th Avenue	3 lanes ea. direction	2 lanes each direction	2016-2025	WSDOT	$25,500,000	$40,826,322
SR-14	NW 6th Av. to SR-500/Union	2 lanes ea. direction w. interchange	1 lane each direction with intersections	2012	WSDOT	$57,000,000	$66,681,938
SR-14	SE Union Street to 32nd Street	Add lanes and construct interchanges (for safety and capacity)	1 lane each direction with intersections	2016-2025	WSDOT	$119,000,000	$190,522,834
SR-500	at I-205	Extend westbound auxiliary lane	3 lanes each direction	2009	WSDOT	$981,000	$981,000
SR-500	St. Johns Interchange	New Interchange	Intersection	2011	WSDOT	$48,347,000	$48,347,000
SR-500	42nd Avenue	Grade Separation	Intersection	2016-2025	WSDOT	$51,000,000	$81,652,643
SR-500	54th Avenue	Interchange with collector-distributor connecting to Andresen	Intersection	2016-2025	WSDOT	See above	See above
SR-500	at SR-503/ Fourth Plain	Construct turn lanes	Intersection	2011-2016	WSDOT	$1,000,000	$1,216,653
SR-501, Port of Ridgefield Rail Crossing, vicinity of Pioneer Street, Ridgefield	Extend Pioneer St to Port of Ridgefield Rail Overcrossing to Port of Ridgefield	Grade separated crossing of mainline railway. Feasibility study and environmental impacts review	at-grade rail crossings	2010-2013	Port of Ridgefield/ WSDOT	$11,900,000	$17,614,907
SR-502	NE 10th Avenue to Battle Ground	2 lanes each direction	1 lane each direction	2013	WSDOT	$87,729,000	$106,735,742
SR-503	at SR-502	Intersection improvement		2011-2016	WSDOT	$2,100,000	$2,554,971
SR-503	at Padden Parkway	Add Interchange	None	2016-2025	Clark Co./ WSDOT	$32,000,000	$51,233,031
SR-503	Padden to SR-502	Add Lanes, 3 lanes each direction	2 lanes each direction	2025-2030	WSDOT	$132,000,000	$278,104,091
SR-503	SR-502 to Gabriel Road	Add Lanes, 2 lanes each direction	1 lane each direction		WSDOT	$34,000,000	$39,775,191
SR-503	East Fork Lewis River	Northbound and southtbound climbing lane	1 lane each direction	2011	WSDOT	$7,753,000	$7,753,000
Vancouver Rail and 39th Street	RR at 39th Street	Vancouver Rail Bypass and W. 39th Street	At-Grade Crossing	2010	WSDOT	$114,950,000	$114,950,000

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
Fleet Expansion and Replacement	System Wide	Fleet expansion and replacement for fixed route, demand response, and vanpool, including vehicles with alternative fuel technology	Follow replacement schedule, add vehicles as needed to provide service	Ongoing	C-TRAN	$5,000,000 per year average	
Transit Enhance-ments	System Wide	Improvements/ amenities at bus stops, super stops, and transit centers - new and existing	Continuation of existing programs	Ongoing	C-TRAN	$5,750,000	
Admini-stration, Operations, and Maintenance Facility	65th Street & 18th Street	Expansion/ redevelopment	Current facility is 20 years old and over capacity	2010-2015	C-TRAN	TBD	TBD
7th Street Passenger Service	7th Street & Washington	Redevelopment of C-TRAN property at 7th Street	Transit Center being decommissioned , only passenger service remains		C-TRAN	$500,000	$500,000
Central County Park & Ride	I-205 & Padden Parkway	Develop Park & Ride	C-TRAN owns property	2010-2015	C-TRAN	$10,000,000	$11,698,586
Evergreen Park & Ride	18th Street & 136th Avenue	Replacement or expansion of existing facility	Current park and ride lacks visibility and easy access to I-205	2014-2023	C-TRAN	$14,000,000	$18,423,045
219th Street Park & Ride	I-5 & SR-502	Park & Ride facility at new interchange	N/A	2020-2030	C-TRAN	$16,000,000	$29,967,700
Salmon Creek Park & Ride	I-5 & 134th/139th Streets	Relocate existing park & ride as part of interchange project	Existing park & ride needs to move for interchange improvements	2008-2010	C-TRAN	$1,000,000	$1,040,000
179th/ Fairgrounds Park & Ride	I-5 & NE 179th Street	Develop Park & Ride	N/A	2020-2030	C-TRAN	$5,000,000	$9,364,906

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
Fisher's Landing Transit Center	SR-14 & 164th Avenue	Expansion of park & ride facility	Existing park & ride with land for phase 2 expansion	2014-2023	C-TRAN	$10,000,000	$13,159,318
Vancouver Mall Transit Center	SR-500 & Thurston Way	Upgrades/ improvements to transit center	Existing facility needs improvements/overhaul	2008-2010	C-TRAN	$1,250,000	$1,250,000
High Capacity Transit	TBD	Alternatives Analysis for recommended corridor(s) from HCT Study (New Starts and/or Small Starts)	Congested roadways with opportunities for HCT investment	2008-2009	C-TRAN	$6,000,000	$6,000,000
ITS Deployment	System Wide	Deploy ITS Phase 2 and 3, including digital radio system	Phase 1 complete	Ongoing	C-TRAN	$13,000,000	
119th Street	72nd Avenue to SR-503 (117th Av.)	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Clark County	$26,220,000	$30,673,691
119th Street	Salmon Creek Av. to 72nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2016	Clark County	$12,176,000	$16,663,697
119th Street	NW 7th Av to NW 16th Av	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$7,350,000	$12,238,290
179th Street	NE 10th to NE 29th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2010-2013	Clark County	$18,498,000	$20,807,734
179th Street	NE 29th Avenue to NE 72nd Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$29,000,000	$48,287,132
179th Street	NE 72nd Avenue to Cramer Road	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$15,660,000	$26,075,051
179th Street	Cramer Road to NE 112th Av.	1 lane ea. direction, w/turn lane	None	2013-2030	Clark County	$4,524,000	$7,532,793
179th Street	I-5 to NW 11th Avenue	2 lanes ea. direction, w/turn lane	I-5 to Delfel: 2 lanes each direction w/ turn lane Delfel to NW 5th: 2 lanes EB, 1 lane WB with Center Turn Lane	Completion will be by frontage improve-ments 2013 to 2030	Clark County	$14,550,000	$24,226,820

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
72nd Avenue	N. of 88th Street to 110th St	2 lane ea. direction, w/turn lane	1 lane each direction	2008	Clark County	$8,740,000	$8,740,000
Andresen	Padden Parkway	Add Interchange	Intersection	2013-2030	Clark County	$42,000,000	$69,933,087
Highway 99	NE 99th Street to NE 119th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016	Clark County	$21,622,000	$29,591,200
Highway 99	122nd to 129th Street	2 lanes each direction w/ turn lane	2 lanes each direction	2013-2030	Clark County	$8,700,000	$14,486,140
Highway 99	South RR Bridge (Ross Street) to NE 63rd Street	2 lane ea. direction, w/turn lane (rail bridge)	2 lanes each direction	2013-2030	Clark County	$4,200,000	$6,993,309
NE 119th Street	SR-503 to NE 172nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$14,703,000	$24,481,576
NE 182nd Avenue	NE 159th to NE 174th St	Intersection improvements	1 lane each direction	2013-2030	Clark County	$2,320,000	$3,862,971
NE 72nd Avenue	119th to 133rd Street	2 lanes each direction w/ turn lane	1 lane each direction	2023	Clark County	TBD	TBD
NE 72nd Avenue	NE 133rd to NE 219th St	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$42,430,000	$70,649,069
NE Ward Rd.	NE 88th Street to NE 172nd Ave	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$14,500,000	$24,143,566
NE Ward Rd.	NE 172nd Avenue to Davis Rd	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,699,000	$14,484,474
NE Ward Rd.	NE Davis Rd to NE 182nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,500,000	$14,153,125
Padden Parkway	SR-503	Add Interchange	Intersection	2013-2030	WSDOT/ Clark Co	See WSDOT section	See WSDOT section
St. John's Blvd.	NE 50th Avenue to 72nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2008	Clark County	$18,000,000	$18,000,000
St. John's Blvd.	NE 68th St to NE 50th Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	*2013-2020*	Clark County	$12,560,000	$17,189,227
Ward/172nd Av.	S. 99th Street to 119th St.	Realignment21		2009	Clark County	$11,117,000	$11,117,000
Grace Avenue	Grace Av/East Main St	Align S Grace and N Grace	Unaligned intersections	2009	Battle Ground	TBD	TBD

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
NE 199th Street	SE Grace to East City Limits	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2011-2015	Battle Ground	$2,000,000	$2,433,306
SE Grace Avenue	East Main St to NE 199th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facils.	1 lane each direction	2007-2010	Battle Ground	$1,700,000	$1,700,000
SR-502/12th Avenue	Reconfigure roadway system and signal removal	1 lane ea. direction, w bicycle and pedestrian facilities	None	2009	Battle Ground	TBD	TBD
SR-503 and NE 199th Street		Improve intersection - add turn lanes		2011-2015	Battle Ground	$215,000	$261,580
38th Avenue	Bybee Road to Astor	1 lane ea. direction, w/turn lane	1 lane each direction	2010-2016	Camas	$4,530,000	$5,511,438
NW 6th Av	Ivy to Division	1 lane ea. direction, w/turn lane	2 lanes each direction	2010-2016	Camas	$1,200,000	$1,459,983
E 4th Street	Highland to E. City Limits	Urban upgrade	Unimproved road segment	2007	La Center	$1,488,912	$1,488,912
E 4th Street		Culvert/bridge replacement		2010-2016	La Center	TBD	TBD
La Center Road	at Timmen Road	Construct left turn lanes	Unimproved intersection	2010-2016	La Center	$1,326,513	$1,613,906
SR-501 Deceleration Lane	SR-501 and NW 26th Street	Add deceleration lane on north side of SR-501	1 lane each direction	2009	Port of Vancouver	TBD	TBD
West Vancouver Freight Access	5 Schedules (stages) - Schedule 1 new acess to BNSF mainline/spurs to LaFarge and Albina Fuel; Schedules 2 - 4 internal rail improvments; Schedule 5 new access to Columbia Gateway	Cost estimates are in the range of $77 million to $100 million	Hill track access from BNSF mainline, internal rail system. No service to Columbia Gateway	Phased, 2007-2020	Port of Vancouver	$77,000,000	$93,682,273
Hillhurst Road	Royle to 229th extension	Upgrade to 5 lane principal arterial	1 lane each direction	2012	Ridgefield	$8,500,000	$9,943,798

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
Hillhurst Road	SR-501 to Royle Road	1 lane each direction w/ turn lane	1 lane each direction	2013	Ridgefield	$4,053,000	$4,931,094
Hillhurst Road	Realign and connect to 8th Ave.	Extend existing road	1 lane each direction	2015	Ridgefield	$2,375,000	$3,125,338
I-5	219th St. to SR-501	NB auxiliary lane along I-5	None		Ridgefield/ WSDOT)	$6,460,000	
I-5	SR-501 to 219th St.	SB auxiliary lane along I-5	None		Ridgefield/ WSDOT)	$5,911,000	
Pioneer Street Bridge	over Gee Creek	Bridge Replacement	2 lane bridge	2015	Ridgefield	$1,500,000	$1,973,898
Pioneer Street/SR-501	I-5 NB Ramps to S 10th Street	2 lanes each direction w/ turn lane	1 lane each direction	2008	Ridgefield	$4,238,000	$4,238,000
Pioneer Street/SR-501	.5 mile west of S 45th to I-5 NB ramps	2 lanes each direction w/ turn lane	1 lane each direction	2010	Ridgefield	$2,269,000	$2,269,000
Pioneer Street/SR-501	.5 miles west of S 45th to W of Reiman Road	Widen, 1-2 lanes each direction	1 lane each direction	2015	Ridgefield	$4,178,000	$5,497,963
112th Avenue	Mill Plain to 49th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2016-2025	Vancouver	$22,000,000	$35,222,709
137th Avenue	49th Street to Vancouver City Limits	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$6,150,000	$6,150,000
138th Avenue	28th Street to 39th Street	2 lanes ea. direction, w access management	1 lane each direction	2007-2012	Vancouver	$4,850,000	$4,850,000
164th Avenue	SE 1st to SE 34th St	Reconstruct intersections to improve traffic flow	Unimproved intersections	2007-2012	Vancouver	$4,500,000	$4,500,000
18th Street	162nd Avenue to 192nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2012	Vancouver	$9,500,000	$9,500,000
18th Street	97th Avenue to NE 138th Avenue	2 lanes ea. direction, w/turn lane		2007-2012	Vancouver	$28,858,000	$28,858,000
18th Street	138th Avenue to 162nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$13,232,000	$13,761,280
18th Street	87th Avenue to 97th Avenue	Extend existing street 1 lane ea. direction, w/turn lane	No street	2013-2030	Vancouver	$10,345,000	$14,157,847
192nd Avenue	SE 1st Street to NE 18th Street	2 lanes ea. direction, w/turn pockets	1 lane each direction	2010	Vancouver	$7,000,000	$7,000,000

Facility	Cross Streets	Project Description	Existing Condition	MTP 2007 Estimated Completion (Year or Range)	Juris-diction/ Agency	Cost Estimate (2007$)	Cost Estimate (YOE)
49th Street	122nd to 137th Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver	$2,043,000	$3,401,745
E. Mill Plain	136th Ave. Intersection	Intersection improvement	Substandard	2010	Vancouver	$2,500,000	$2,500,000
Fourth Plain	I-5 to Railroad Bridge	2 lanes each direction	1 lane each direction with center turn lane	2013-2030	Vancouver	$15,000,000	$24,976,103
Fourth Plain Boulevard/ Andresen	Intersection Influence Area	Reconstruct Fourth Plain in vicinity of 65th/66th Avenue to Andresen		2007-2013	Vancouver	$2,500,000	$2,704,000
Fruit Valley Rd	Whitney to 78th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2020	Vancouver	$12,000,000	$19,980,882
Grand Blvd.	Columbia House Way Intersection	Intersection improvement	Substandard	2008	Vancouver	$1,250,000	$1,250,000
MacArthur Blvd.	Lieser Rd. Intersection	Intersection improvement	Substandard	2012	Vancouver	$2,500,000	$2,924,646
Main Street	5th Street to McLoughlin	Convert to two-way street	One-way street	2008	Vancouver	$8,282,000	$8,282,000
Main Street	5th Street to Columbia Way	Re-connect to waterfront S. of rail berm	No street	2011	Vancouver	$9,000,000	$9,000,000
NE 28th Street	142nd Avenue to 162nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Vancouver	$3,997,000	$6,655,299
SE 15th Street	164th to 192nd Ave.	Upgrade to collector arterial		2013-2030	Vancouver	$3,843,441	$6,399,612
SE 1st Street	164th Avenue to 192nd Ave.	2 lanes ea. direction, w/turn lane	1 lane each direction	2007-2012	Vancouver	$2,385,000	$2,480,400
E Street/ D Street	West City Limits (Lechner/6th) to 32nd St	Boulevard Design Improvement (1 lane each direction with left turn, sidewalks and bike lanes)	2 lanes each direction (west of 39th St) 1 lane each direction (east of 39th St)	2009	Washougal	$3,350,000	$3,350,000
County-wide	County Wide	Walkway & Bicycle Programs		Continuing	County-wide	$20,000,000	
County-wide	County Wide	Demand Management		Continuing	County-wide	From CTR Plans	
Various	System Wide	Intelligent Transportation System (ITS) Additions	None	Continuing	County-wide	From VAST Plan	
TOTALS						$2,407,681,866	$3,330,962,189

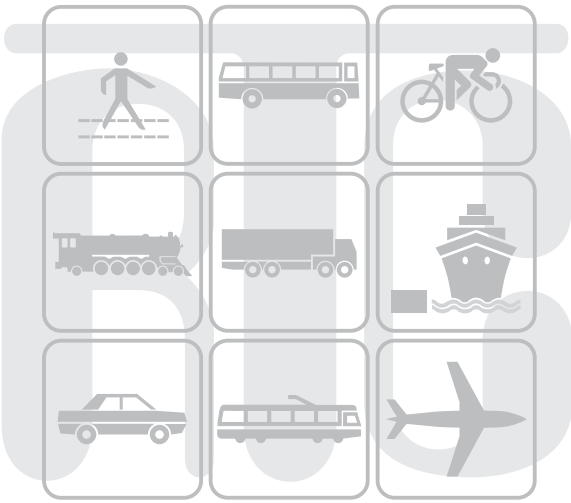
Transit system YOE cost estimates are calculated by C-TRAN to be $1,661,622,547 over the 2008 to 2030 MTP years. Bi-state project cost estimates for the Columbia River Crossing Project provided in Chapter 4 are already in Year of Expenditure.

MTP Fiscal Constraint: YOE

Given the YOE calculations for MTP assumed revenues and cost estimates provided above, it appears the MTP (adopted 2007, updated 2008) meets the test for fiscal constraint. Table E-4 provides a summary of the revenue and cost estimates in YOE. At the next MTP update, revenue projections and cost estimates will be updated to reflect new information and updated estimates for projects.

Table E-4, Regional Transportation System Summary Revenue Assumptions and Cost Estimates (YOE)

	YOE Revenue Assumptions 2007-2030	YOE Cost Estimates 2007-2030
Federal, State and Local for Maintenance and Preservation, Demand Management, System Management, Pedestrian and Bicycle Projects, Transit and Highway Capital Costs.	$5,277,653,442	$4,767,965,533
Transit (Operating)	$1,772,886,139	$1,661,622,547
Totals	$7,050,539,581	$6,429,588,080



MTP LIST OF ACRONYMS

METROPOLITAN TRANSPORTATION PLAN: LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
AA	Alternatives Analysis
AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
AAWDT	Annual Average Weekday Traffic
ACCT	Agency Council on Coordinated Transportation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AIP	Urban Arterial Trust Account Improvement Program
APC	Automatic Passenger Counter
APTA	American Public Transit Association
APTS	Advanced Public Transportation System
AQMA	Air Quality Maintenance Area
ATIS	Advanced Traveler Information System
ATMS	Advanced Transportation Management System
AVL	Automated Vehicle Location
AVO	Average Vehicle Occupancy
AWDT	Average Weekday Traffic
BEA	Bureau of Economic Analysis (federal)
BLS	Bureau of Labor Statistics (federal)
BMS	Bridge Management System
BNSF	Burlington Northern Santa Fe
BRAC	Bridge Replacement Advisory Committee
BRCT	Blue Ribbon Commission on Transportation
BRRP	Bridge Replacement and Rehabilitation Program
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAC	Citizens' Advisory Committee
CAPP	County Arterial Preservation Program
CBD	Central Business District
CBI	Coordinated Border Infrastructure Program
CCI	Corridor Congestion Index
CCP	City and County Congested Corridor Program
CCRI	Corridor Congestion Ratio Index
CCRP	Corridor Congestion Relief Program
CDBG	Community Development Block Grant
CDMP	Corridor Development and Management Plan
CE	Categorical Exclusion
CERB	Community Economic Revitalization Board
CFP	Community Framework Plan
CFP	Capital Facilities Plan
CHAP	City Hardship Assistance Program
CIT	Community Involvement Team
CM/AQ	Congestion Mitigation/Air Quality
CMM	Congestion Management Monitoring
CMP	Congestion Management Process
CMS	Congestion Management System
CO	Carbon Monoxide
CRAB	County Road Administration Board
CRAG	Columbia Regional Association of Governments
CREDC	Columbia River Economic Development Council
CTPP	Census Transportation Planning Package

METROPOLITAN TRANSPORTATION PLAN: LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
CTR	Commute Trip Reduction
C-TRAN	Clark County Public Transportation Benefit Area Authority
CVISN	Commercial Vehicle Information Systems and Networks
DCTED	Washington State Department of Community, Trade and Economic Development
DEIS	Draft Environmental Impact Statement
DEQ	Oregon State Department of Environmental Quality
DLCD	Oregon Department of Land Conservation and Development
DNS	Determination of Non-Significance
DOE	Washington State Department of Ecology
DOL	Washington State Department of Licensing
DOT	Department of Transportation
DS	Determination of Significance
DSHS	Washington Department of Social and Health Services
EA	Environmental Assessment
EAC	Enhancement Advisory Committee
ECO	Employee Commute Options
EIS	Environmental Impact Statement
EJ	Environmental Justice
EMME/2	EMME/2 is an interactive graphic transportation planning computer software package distributed by INRO Consultants, Montreal, Canada.
EPA	Environmental Protection Agency
ETC	Employer Transportation Coordinator
ETRP	Employer Trip Reduction Program
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
FMSIB	Freight Mobility Strategic Investment Board
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information System
GMA	Growth Management Act
GTF	Governors' Task Force
HB	House Bill
HC	Hydrocarbons
HCM	Highway Capacity Manual
HCT	High Capacity Transportation
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HSP	Highway System Plan
HSS	Highways of Statewide Significance
HSTP	Human Services Transportation Plan
HUD	Department of Housing and Urban Development
I/M	Inspection/Maintenance
IM	Interstate Maintenance
IMS	Intermodal Management System
IPG	Intermodal Planning Group
IRC	Intergovernmental Resource Center
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)

METROPOLITAN TRANSPORTATION PLAN: LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
ITS	Intelligent Transportation System
IVHS	Intelligent Vehicle/Highway System
JARC	Job Access and Reverse Commute
JPACT	Joint Policy Advisory Committee on Transportation
LAS	Labor Area Summary
LCDC	Oregon Land Conservation and Development Commission
LCP	Least Cost Planning
LMC	Lane Miles of Congestion
LMP	Limited Maintenance Plan
LOS	Level of Service
LPA	Locally Preferred Alternative
LPG	Long Range Planning Group
LRT	Light Rail Transit
MAB	Metropolitan Area Boundary
MDNS	Mitigated Determination of Non-Significance
MIA	Major Investment Analysis
MOU	Memorandum of Understanding
MP	Maintenance Plan (air quality)
MPO	Metropolitan Planning Organization
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
MUTCD	Manual on Uniform Traffic Control Devices
MVET	Motor Vehicle Excise Tax
NAAQS	National Ambient Air Quality Standards
NCPD	National Corridor Planning and Development Program
NEPA	National Environmental Policy Act
NHS	National Highway System
NOX	Nitrogen Oxides
O/D	Origin/Destination
ODOT	Oregon Department of Transportation
OFM	Washington Office of Financial Management
OTP	Oregon Transportation Plan
P&R	Park and Ride
PAG	Project Advisory Group
PCE	Passenger Car Equivalents
PE	Preliminary Engineering
PE/DEIS	Preliminary Engineering/Draft Environmental Impact Statement
PHF	Peak Hour Factor
PIA	Portland International Airport
PM10	Fine Particulates
PMG	Project Management Group
PMS	Pavement Management System
PMT	Project Management Team
POD	Pedestrian Oriented Development
Pre-AA	Preliminary Alternatives Analysis
PSMP	Pedestrian, Safety & Mobility Program
PPP	Public Participation Plan
PTBA	Public Transportation Benefit Area
PTMS	Public Transportation Management System
PTSP	Public Transportation Systems Program
PVMATS	Portland-Vancouver Metropolitan Area Transportation Study

METROPOLITAN TRANSPORTATION PLAN: LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
PWTF	Public Works Trust Fund
RACM's	Reasonable Available Control Measures
RACT	Reasonable Available Control Technology
RAP	Rural Arterial Program
RID	Road Improvement District
RJT	Route Jurisdiction Transfer
ROD	Record of Decision
ROW	Right of Way
RPC	Regional Planning Council
RTAC	Regional Transportation Advisory Committee
RTC	Southwest Washington Regional Transportation Council
RTFM	Regional Travel Forecasting Model
RTP	Regional Transportation Plan
RTPO	Regional Transportation Planning Organization
RUGGO	Regional Urban Growth Goals and Objectives
RW	Right of Way
SCP	Small City Program
SEIS	Supplemental Environmental Impact Statement
SEPA	State Environmental Policy Act
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SMS	Safety Management System
SOV	Single Occupant Vehicle
SPG	Strategic Planning Group
SR-	State Route
SSAC	Special Services Advisory Committee
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
SWAPCA	Southwest Washington Air Pollution Control Authority (now renamed SWCAA)
SWCAA	Southwest Clean Air Agency
TAZ	Transportation Analysis Zone
TC	Transit Center
TCM's	Transportation Control Measures
TCSP	Transportation and Community and System Preservation Pilot Program
TDM	Transportation Demand Management
TDP	Transit Development Program
TEA-21	Transportation Equity Act for the 21st Century
TIA	Transportation Improvement Account
TIB	Transportation Improvement Board
TIMACS	Transportation Information, Management, and Control System
TIP	Transportation Improvement Program
TIPIT	Transportation Improvement Program Involvement Team
TMA	Transportation Management Area
TMC	Traffic Management Center
TMS	Transportation Management Systems
TMUG	Transportation Model Users' Group
TMZ	Transportation Management Zone
TOD	Transit Oriented Development
TPAC	Transportation Policy Advisory Committee
TPP	Transportation Partnership Program
TPR	Transportation Planning Rule

METROPOLITAN TRANSPORTATION PLAN: LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
TriMet	Tri-county Metropolitan Transportation District
TRO	Traffic Relief Options
TSM	Transportation System Management
TSP	Transportation System Plan
UAB	Urban Area Boundary
UATA	Urban Arterial Trust Account
UGA	Urban Growth Area
UGB	Urban Growth Boundary
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
V/C	Volume to Capacity
VAST	Vancouver Area Smart Trek
VHD	Vehicle Hours of Delay
VISSIM	Traffic/Transit Simulation Software (a product of PTV AG of Karlsruhe, Germany)
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WTP	Washington's Transportation Plan