Metropolitan Transportation Plan for Clark County

2011 Update, Unabridged

Southwest Washington Regional Transportation Council

RTC

Metropolitan Transportation Plan for Clark County

Clark County
Skamania County
Klickitat County
City of Vancouver
City of Camas
City of Washougal
City of Battle Ground
City of Ridgefield
City of La Center
Town of Yacolt
City of Stevenson
City of North Bonneville
City of White Salmon
City of Bingen
City of Goldendale
C-TRAN
Washington DOT
Port of Vancouver
Port of Camas-Washougal
Port of Ridgefield
Port of Skamania County
Port of Klickitat
Metro
Oregon DOT
15th Legislative District
17th Legislative District
18th Legislative District
49th Legislative District

RTC

Unabridged for State and Federal Submittal

Adopted: December 6, 2011
RTC Board Resolution 12-11-23

Southwest Washington Regional Transportation Council

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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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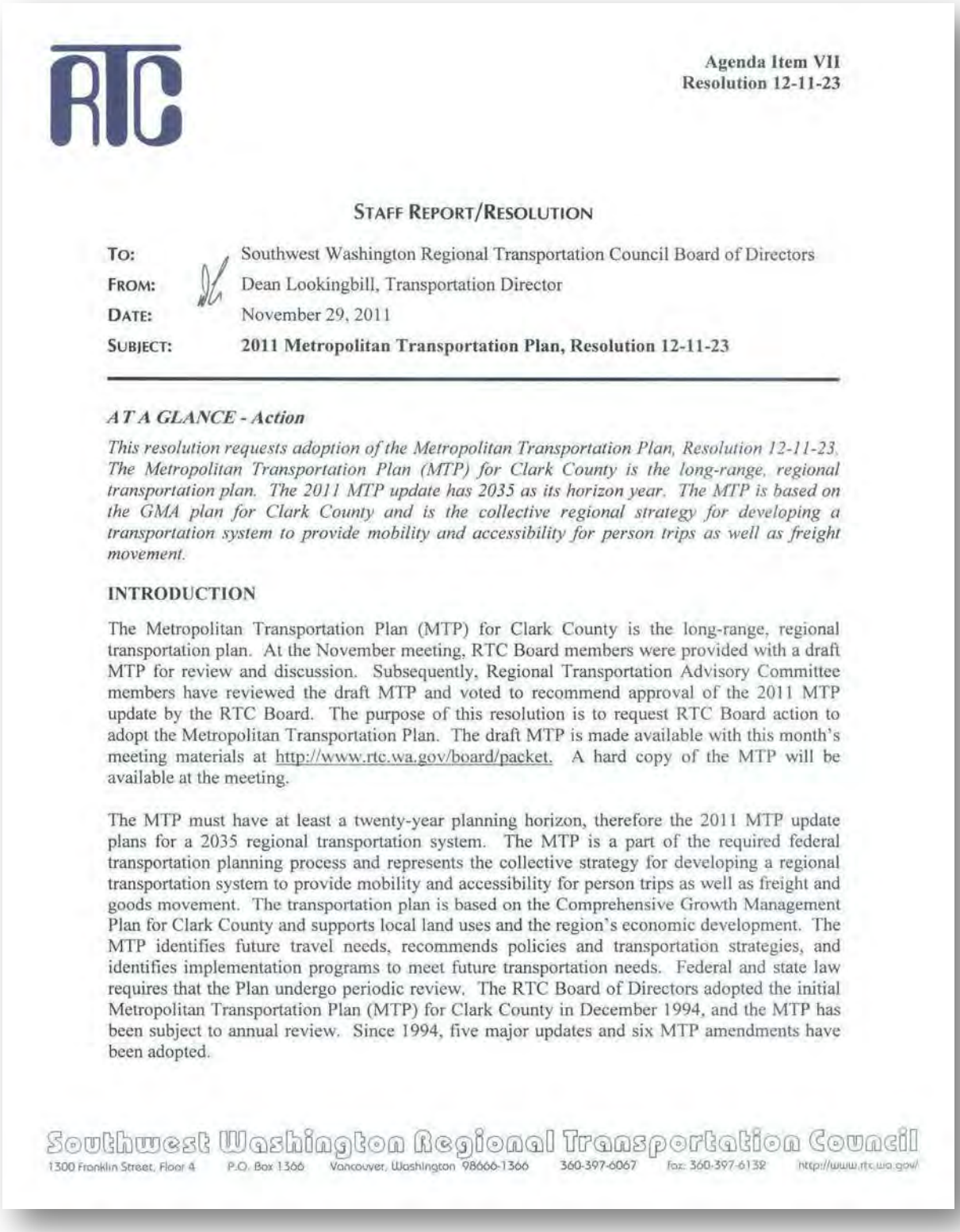

RTC

Agenda Item VII
Resolution 12-11-23

STAFF REPORT/RESOLUTION

TO: Southwest Washington Regional Transportation Council Board of Directors
FROM: Dean Lookingbill, Transportation Director
DATE: November 29, 2011
SUBJECT: **2011 Metropolitan Transportation Plan, Resolution 12-11-23**

AT A GLANCE - Action

This resolution requests adoption of the Metropolitan Transportation Plan, Resolution 12-11-23. The Metropolitan Transportation Plan (MTP) for Clark County is the long-range, regional transportation plan. The 2011 MTP update has 2035 as its horizon year. The MTP is based on the GMA plan for Clark County and is the collective regional strategy for developing a transportation system to provide mobility and accessibility for person trips as well as freight movement.

INTRODUCTION

The Metropolitan Transportation Plan (MTP) for Clark County is the long-range, regional transportation plan. At the November meeting, RTC Board members were provided with a draft MTP for review and discussion. Subsequently, Regional Transportation Advisory Committee members have reviewed the draft MTP and voted to recommend approval of the 2011 MTP update by the RTC Board. The purpose of this resolution is to request RTC Board action to adopt the Metropolitan Transportation Plan. The draft MTP is made available with this month's meeting materials at http://www.rtc.wa.gov/board/packet. A hard copy of the MTP will be available at the meeting.

The MTP must have at least a twenty-year planning horizon, therefore the 2011 MTP update plans for a 2035 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 and transportation 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, five major updates and six MTP amendments have been adopted.

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Elements of the MTP update have been presented to the RTC Board for review and discussion during the course of the past year. The 2011 MTP update focuses on continuing compliance with the current federal transportation act, SAFETEA-LU. It also focuses on consistency between state, regional, and local plans with projects from state and local plans incorporated into the MTP.

Key elements of the MTP that have been reviewed during 2011 are listed below:

- MTP Framework, Purpose and Goals (Chapter 1)
- 2035 Horizon Year and Demographic Forecast (Chapter 2)
- 2035 Travel Demand Forecast (Chapter 3)
- Designated Regional Transportation System (Chapter 3)
- Regional Transportation System Needs, Projects & Strategies (Chapters 3, 5 and Appendix B)
- Financial Plan (Chapter 4)
- Safety Assessment (Chapter 5)
- Modal Elements, including freight, transit, pedestrian and bicycle (Chapter 5)
- Determination of Conformity with Air Quality State Implementation Plan (SIP) (Appendix C)

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. The Regional Transportation Advisory Committee (RTAC) reviewed the draft 2011 Metropolitan Transportation Plan update at its November 18, 2011 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.

Throughout the MTP update process, opportunities for public participation were available. Public participation in regional transportation planning builds from local efforts. During 2011, public participation has included transportation meetings hosted by C-TRAN, the Columbia River Crossing project and by WSDOT on specific projects such as the SR-14 and SR-500 corridor projects. Local jurisdictions have included meetings on transportation concurrency and on Aging Readiness.

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 2011. MTP information and RTC Board materials on the MTP were made available through RTC's website at www.rtc.wa.gov. The public was also able to provide MTP

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comments to RTC via e-mail, phone or mail. RTC staff sent regular updates on the MTP's development to Clark County and Vancouver neighborhood coordinators and kept small cities informed through their Regional Transportation Advisory Committee representatives. Public participation opportunities included five open houses held throughout the year and a November 16 public meeting held at the Vancouver Community Library.

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).

Air quality policies and laws require consultation between RTC and resource agencies as the MTP is developed. On November 8, 2011, 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. 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 needs to include a determination of air quality conformity with the State's Air Quality State Implementation Plan (SIP). This air quality conformity determination is documented in Chapter 5 of the MTP and in more detail in Appendix C. Action by the RTC Board to adopt the MTP affirms the air quality conformity determination.

In turn, the Metropolitan Transportation Improvement Program (MTIP) must be based on an air quality conforming Metropolitan Transportation Plan, therefore action to adopt the 2011 MTP update also re-adopts the 2012-2015 MTIP to ensure the MTIP is based on this conforming MTP update. The 2012-2015 MTIP was originally adopted by the RTC Board in October 2011.

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 close 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.

MTP development is anticipated in 2012 with focus on transportation system monitoring, on 10-year transportation system priorities and on modal elements of the MTP.

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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. Year of expenditure is addressed in Appendix E. Based on analysis of forecast revenues and cost estimates for operations, maintenance, projects, and strategies, the 2011 MTP update appears to meet the federal requirement for "fiscal constraint".

ACTION REQUESTED

Adoption of Resolution 12-11-23, "2011 Metropolitan Transportation Plan and re-adoption of 2012-2015 Metropolitan Transportation Improvement Program MTIP Update."

ADOPTED this 6th day of December 2011, by the Southwest Washington Regional Transportation Council.

SOUTHWEST WASHINGTON
REGIONAL TRANSPORTATION COUNCIL

Jack Burkman
Chair of the Board

ATTEST:

Dean Lookingbill
Transportation Director

Attachment

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Chapter 1: Introduction – MTP Vision, Purpose and Goals

2035 is the horizon year for the 2011 MTP update.

The Metropolitan Transportation Plan (MTP) for Clark County is the region's principal transportation planning document. It represents a coordinated planning process between local jurisdictions 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 to comply with the requirements of the federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 was adopted in December 1994. Since then, the MTP has been updated regularly.

The 2011 update to the MTP has 2035 as the Plan's 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) of 2005. The MTP update continues to support 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 "fiscally constrained" MTP's scope are included in the Strategic MTP section in Appendix I.

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-plus years. This introductory chapter presents the basis for the MTP; its vision, purpose, and goals. A brief overview of the MTP's scope, statutory requirements and decision-making process is also provided.

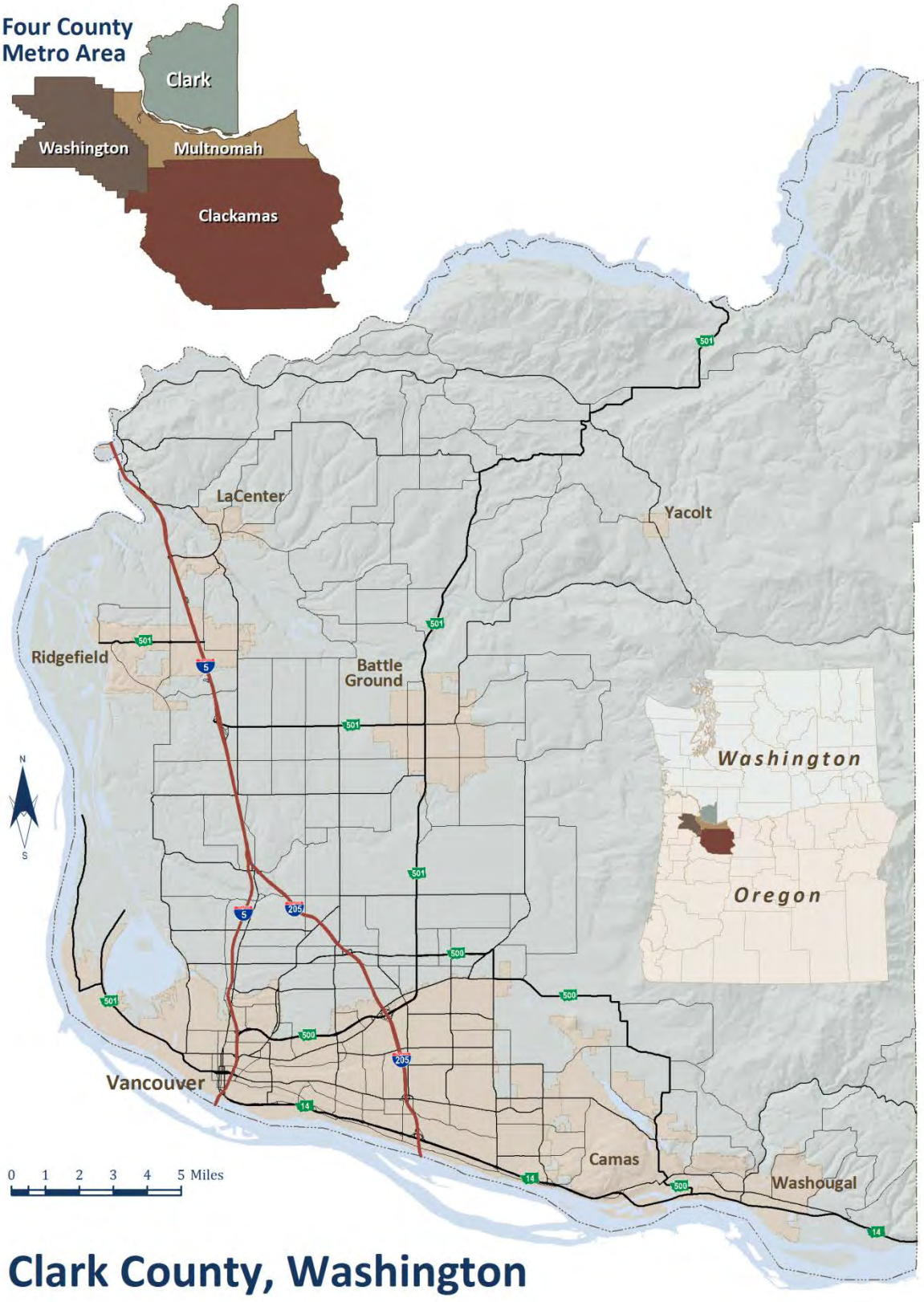
MTP 2011 Update: An Overview

The Metropolitan Transportation Plan for Clark County covers the Metropolitan Planning Organization (MPO) region served by Southwest Washington Regional Transportation Council (RTC).

The MTP is based upon past, current and emerging trends. The 2011 MTP update has been developed in a time of transition and economic uncertainty resulting in what is likely to be a new and unprecedented set of transportation challenges for our region. This time of transition and challenges influences the tone of the 2011 MTP update. On the whole, the 2011 MTP update does not diverge too greatly from the 2007 Plan and its subsequent amendments. It continues an optimistic growth forecast over the 20-plus years of the Plan and is developed to support locally-adopted comprehensive plans. However, emerging demographic and economic trends are identified in this MTP update that will need to be tracked and revisited as these trends become clearer. Where the Plan can identify these uncertainties and emerging issues, these will be tracked over time and any necessary changes incorporated into an MTP amendment or into the subsequent MTP update due within four years. Examples of these new challenges include the following:

- How transit service and Transportation System Management and Operations strategies can address needs in transportation corridors that are built-out;
- How to improve access to transit;
- How to connect missing links in the pedestrian and bicycle system;
- How to fund critical links in the region's transportation system, especially where bottlenecks exist; and
- How to fund transportation system programs, projects and missing links.

Figure 1-1: Clark County, Washington, location map



Key MTP policy themes include:

Economy

Safety and Security

Accessibility and Mobility

Management and Operations

Environment

Vision and Values

Finance

Preservation

MTP Vision and Goals

One of the first considerations in developing a transportation plan is to decide on an overall vision for the Plan. The Vision Statement provides a concise look forward to the important outcomes the MTP's implementation should lead us toward. The MTP Goals then guide the region toward development of the Plan and attainment of the Vision. These Vision and Goals are outlined below.

MTP Vision Statement

In 2035, the Clark County region is a vibrant community with centers of commerce, business and industrial activity and safe neighborhoods that promotes livability and helps to achieve broad community goals for its residents. The region is served by an integrated transportation system that balances modal needs while providing mobility and access to support the region's growing prosperity and protecting the environment. The transportation system is funded with sustainable levels of revenue.

MTP Goals

There needs to be consistency between federal, state, regional and local transportation plans so they are not at odds. The consistency requirement also applies to goals and policies. In determining policy goals for the MTP update, a review of key themes and issues in federal, state, regional and local laws, codes and plans was carried out. The basic transportation policy framework at all four levels of governance (federal, state, region and local) focuses on these key policy themes: Economy, Safety and Security, Accessibility and Mobility, Environment, Efficiencies, Management and Operations, Preservation, Finance, Vision and Values. These key policy themes are reflected in the Goals established for this region's MTP (see below).

Economy (outcome)

Support economic development and community vitality.

Safety and Security (outcome)

Ensure safety and security of the transportation system.

Accessibility and Mobility (outcome)

Provide reliable mobility for personal travel and freight movement as well as access to locations throughout the region and integrity of neighborhoods accomplished through development of an efficient, balanced, multi-modal regional transportation system.

Management and Operations (strategy)

Maximize efficient management and operation of the transportation system through transportation demand management and transportation system management strategies.

Environment (outcome)

Protect environmental quality and natural resources and promote energy efficiency

Vision and Values (outcome)

Ensure the MTP reflects community values to help build and sustain a healthy, livable, and prosperous community

Finance (strategy)

Provide a financially-viable and sustainable transportation system

Preservation (strategy)

Maintain and preserve the regional transportation system to ensure system investments are protected

MTP Framework

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 access 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 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.

People and goods move throughout the region without consideration for city, county, and state boundaries.

Scope

The MTP for Clark County takes year 2035 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 1-1). 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-Hillsboro, OR-WA 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.

Transportation Issues Highlighted in the 2011 MTP Update

- Year 2035 demographic and travel demand forecast
- Changing demographics and lifestyles
- System preservation
- Safety of the transportation system
- Transportation system management and operations
- Active transportation
- Freight mobility
- Greenhouse gas reduction
- Transportation system needs, projects and strategies
- Financial plan

Federal regulations require that a designated MPO be the forum for cooperative decision-making.

Statutory Requirements

The following section briefly describes federal and Washington state statutory requirements that direct 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 and has been extended several times post-2009. SAFETEA-LU revised 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. 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. SAFETEA-LU requires that eight planning factors are addressed as part of the metropolitan planning process. The growing importance of operating and managing the transportation system is recognized as a focal point for transportation planning. There is also an increased recognition of the importance of security of the transportation system. The eight 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

Within Washington State, Metropolitan Transportation Plans are expected to be consistent with the policy framework and objectives described in the transportation plan for Washington State. The most recent Washington Transportation Plan WTP 2030 was developed by the Washington Transportation Commission and adopted in December 2010.

The WTP is based on the following five transportation policy goals established by the Legislature:

- **Economic Vitality:** To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- **Preservation**: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- **Safety**: To provide for and improve the safety and security of transportation customers and the transportation system;
- **Mobility**: To improve the predictable movement of goods and people throughout Washington state;
- **Environment**: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- **Stewardship**: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

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 periodically 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, and identifies the highway system needs, strategies and performance measurements associated with the guidelines.

HSP Preservation

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 projects 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

Identification of highly-productive freight 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

Projects to remove culverts to restore fish passage, reduce highway noise, treat storm water, reduce flooding, provide pedestrian crossings and bicycle connections.

Recent WSDOT plans are documented on WSDOT's Planning section website. Recent plans include WSDOT Strategic Highway Safety Plan: Target Zero (SHSP, revised 2010) 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's State Rail and Marine Office completed the Washington State 2010-2030 Freight Rail Plan to meet both federal requirements (Public Law 110-432, Division B) and the state requirements of RCW 47.76.220 in December 31, 2009. The WSDOT Aviation Division completed the latest update to the 20-Year Aviation System Plan in 2009 as part of its long-term air transportation study (LATS) for generation aviation and commercial airports statewide.

Washington State's Regional Transportation Planning Program: RTPOs

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.

Duties of an RTPO

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.

RTPO: Transportation Planning Process

The regional transportation planning process will 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.
- 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.

Regional Transportation Plan: Required Elements

To comply with Washington 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,
- 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

The RTC Board provides the forum for guiding future transportation system investment decisions.

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).

MTP Decision-Making Process

The MTP needs to identify solutions to transportation issues and problems that jurisdictions agree with and can successfully implement. To enable the regional transportation planning process, 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. These Committees include the RTC Board of Directors, the Clark County Regional Transportation Advisory Committee (RTAC), the Skamania County Transportation Policy Committee and the Klickitat County Transportation Policy Committee. 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* (last amended November 2010) and *Interlocal Agreement for Establishment of the Southwest Washington Regional Transportation Council*.

RTC Board of Directors

Consistent with the 1990 GMA legislation, a three-county RTC Board of Directors is established and meets monthly to serve the RTPO region. 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, Washington State Department of Transportation, bi-state representation from Oregon Department of Transportation and Metro as well as state legislators of the 15th, 17th, 18th and 49th districts. The RTC Board is the governing body that takes action to adopt the MTP.

Regional Transportation Advisory Committee (Clark County)

For Clark County, the Regional Transportation Advisory Committee (RTAC) provides technical advice to the RTC Board of Directors.

Emerging Issues to Track

The Metropolitan Transportation Plan must comply with federal and state laws and must maintain consistency between federal, state and local plans. Relating to the MTP's development, including its vision, purpose and goals, RTC should be prepared to respond to changing laws and guidance including:

- Readiness to respond to an updated Federal Transportation Act when enacted.
- Washington State's Department of Commerce provides a guide to local communities regarding implementation of the state's Growth Management Act. The Department of Commerce is currently updating Your Community's Transportation System: A Transportation Element Guide (first published, 1993). Once the guide update is complete, it can be used as guidance for update of local transportation elements as well as resource for subsequent MTP updates.

Chapter 2: Transportation – It's all about Land Uses and People

Transportation planning is about meeting the travel demands of people and goods. The transportation system must connect people to jobs and services and connect freight and goods to markets and consumers. This chapter describes trends in Clark County demographics and land uses and the transportation challenges posed by these trends. 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 travel demand increases as a result of anticipated growth in population and employment. At the same time, the transportation system has to be affordable and avoid environmental impacts to maintain the quality of life enjoyed in the Clark County region.

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, the impacts of the growth must be addressed which includes ensuring that needed infrastructure and services are provided to serve the community. If transportation infrastructure and services do not keep pace with the growth, then worsening levels of traffic congestion, decline in air quality, and overall degradation of the quality of life may result.

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.

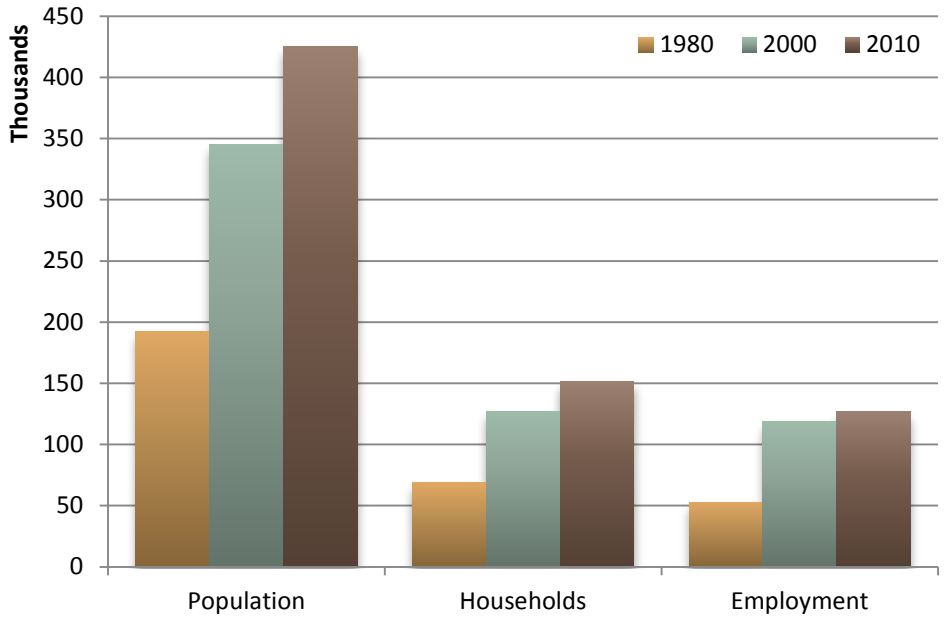
Growth in Clark County

Clark County has seen significant rates of growth in the last three decades. Between 1980 and 2010 the population of the county increased by 121% from 192,227 in 1980 to 425,363 in 2010 while the number of households increased by 120% from

The rapid growth seen in the County over the last three decades has increased demands on the regional transportation system.

68,750 in 1980 to 151,300 in 2010 (see Figure 2-1). Employment[1] in Clark County increased by 124% between 1980 and 2000, from 52,870 in 1980 to 118,310 in 2000 but following the economic downturn beginning in 2009, jobs growth has lagged with 2010 Clark County employment reported at around 126,500. Washington State's Office of Financial Management (OFM) estimates Clark County's 2011 population at 428,000. The rapid growth seen in the County in the last three decades has increased demands on the regional transportation system.

Figure 2-1: Growth in Clark County, 1980 to 2000 and 2010



From 1980 to 2010: Population grew 121%, Households grew 120%, Employment grew 139%.
Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, Washington State Office of Financial Management (OFM)

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.

[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.*

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.

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 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).

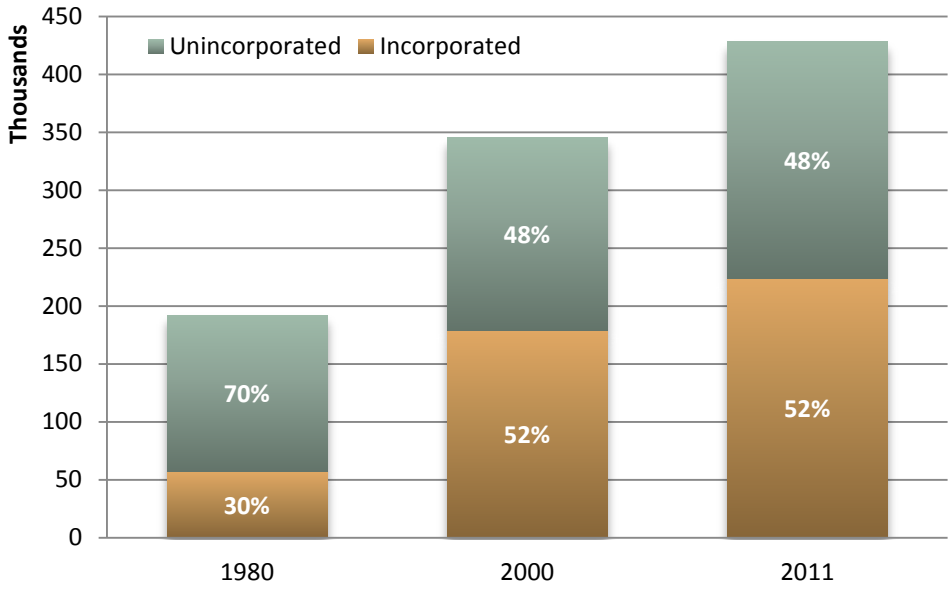
Clark County's location on the northern periphery of the Portland metropolitan area has contributed to the significant growth in residential development and employment activities within the county. The nationwide trend toward development of the suburbs of metropolitan areas for residential developments,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

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 high technology industries the region has been successful in diversifying its economic base. Today, Clark County's major employers include service sector and high tech industry; the local school districts, PeaceHealth Southwest Medical Center, 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, Clark College, Washington State University, Columbia Machine, Frito-Lay, Electric Lightwave and Holland-Burgerville.

In Clark County the past three decades has seen population growth in both the incorporated and unincorporated areas. Between 1980 and 2011 the incorporated areas saw a growth in population of 290% (57,248 population in 1980 to 223,390 in 2011) while the growth in the unincorporated areas was 52% (from 134,979 population in 1980 to 204,610 in 2011). The proportion of the population living in the unincorporated areas decreased from 70% in 1980 to 48% in 2011 while the proportion living in the incorporated areas increased from 30% in 1980 to 52% in

2011 (see Figure 2-2). 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 2011 it is estimated at 162,300.

Figure 2-2: Population of Clark County: 1980, 2000 and 2011 Incorporated and Unincorporated Areas



From 1980 to 2011, population grew 290% in incorporated areas, and 52% in unincorporated areas. During the same period, the overall percentage of population within incorporated areas increased from 30% to 52%.

Source: 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 significant 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 indicate 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 1980s and 1990s by offering increased accessibility to the two areas.

The area around Vancouver Mall was relatively isolated, undeveloped and unincorporated when construction began in 1977.

The City of Vancouver saw relatively small growth in its population in the 1970s and 1980s. However, several significant annexations of land into the City boosted its population from 65,360 in 1995 to 127,900 in 1997. In 2011, Vancouver's population is estimated at 162,300. In the late 1970s and early 1980s, 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 2000s, downtown Vancouver saw 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 has developed in east Vancouver and Hazel Dell Town Center is open for business 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 1990s 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. More recent commercial developments have included Mill Plain Town Center, anchored by Target, at Mill Plain and 164th Avenue, Columbia Tech Center shops and commercial development in the 192nd Avenue corridor. Business center developments include Columbia Tech Center and Stonemill Business Park.

Over the past twenty years, there has been significant growth in the smaller cities of Clark County (see Table 2-1) and this trend is continuing. While the County's population grew by 80% between 1990 and 2011, Camas grew by 189%, Battle Ground by 373%, Washougal by 198% and Ridgefield's population grew by 273%. Growth of the smaller cities of Clark County leads to a need to improve 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 2011

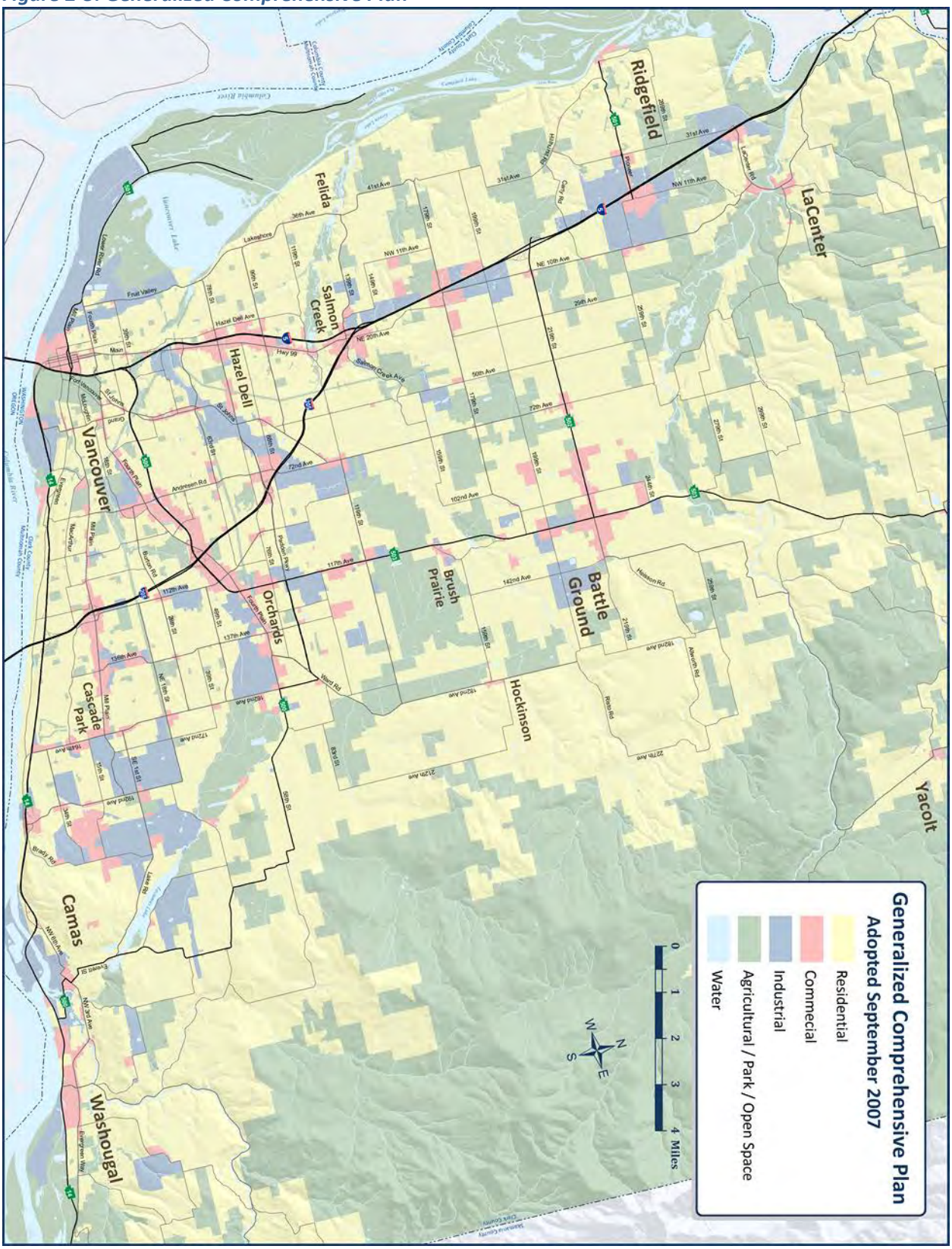
	1980	1990	2000	2011	% Increase 1990-2011	2011 % of Total
Clark County	192,227	238,053	345,238	428,000	80%	100.0%
Unincorporated	134,979	173,844	166,279	204,610	18%	47.8%
Incorporated	57,248	64,209	178,959	223,390	248%	52.2%
Battle Ground	2,774	3,758	9,322	17,780	373%	4.2%
Camas	5,681	6,798	12,534	19,620	189%	4.6%
La Center	439	483	1,654	2,835	487%	0.7%
Ridgefield	1,062	1,332	2,147	4,975	273%	1.2%
Vancouver	42,834	46,380	143,560	162,300	250%	37.9%
Washougal	3,834	4,764	9,595	14,210	198%	3.3%
Woodland *(partial)*	80	94	92	85	-10%	0.0%
Yacolt	544	600	1,055	1,585	164%	0.4%

The Comprehensive Growth Management Plan: Land Use 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. A generalized map showing Comprehensive Plan land uses is displayed in Figure 2-3.

Local land use plans drive transportation needs by directing future growth and development.

Figure 2-3: Generalized Comprehensive Plan



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, 2004, and 2007. 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 584,310 as the population forecast for 2024 and 230,000[2] jobs as the employment forecast.

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 the adopted land use plans of local jurisdictions. The MTP's horizon year is 2035 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 2035 horizon year was selected for this 2011 update to the MTP for Clark County. 2035 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 a further eleven years to the MTP's 2035 horizon. The 2035 demographic projections and land use allocations were developed by local jurisdictions working in partnership with RTC.

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

Population will grow 51%, according to the 2035 forecast, while employment grows 102%.

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 November 2007, OFM released the GMA County projections to 2030. For Clark County, the OFM-projected 2030 population falls within a range from a low of 493,383 to a high of 673,980 with a mid-range projection of 579,768. 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.

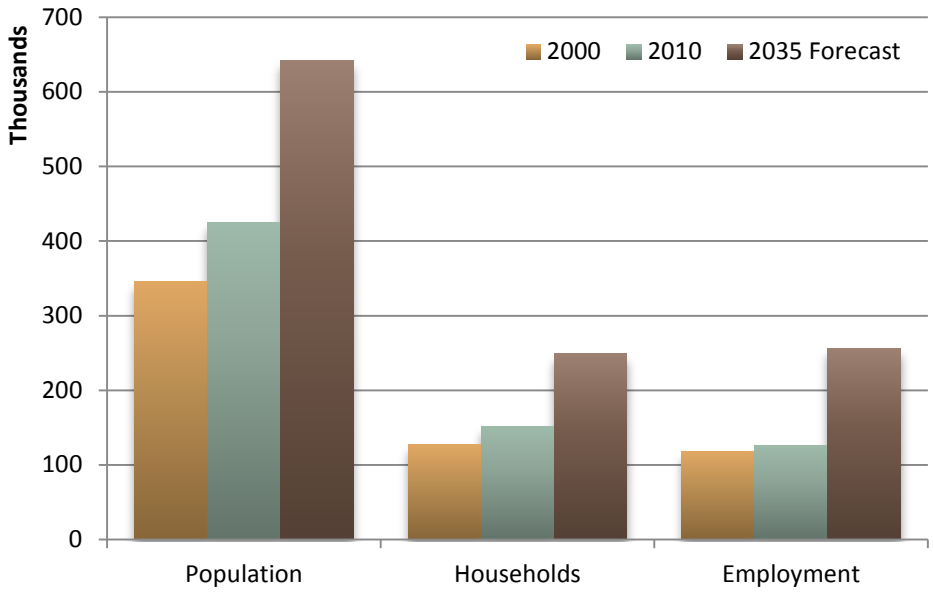
For MTP regional transportation planning purposes, a 2035 population forecast of 641,800 is used, with 2035 household numbers forecast at 248,750 and 2035 employment forecast at 256,200. From 2010, these forecasts represent an 51% increase in population (from 425,363 to 641,800), a 64% increase in households (from 151,312 to 248,750) and a 102% increase in employment[3] (from 126,500 to 256,200). The 2035 growth forecast remains optimistic despite the economic setbacks experienced from 2008 onward. Planners will continue to track trends to determine whether longer-range growth forecasts should be scaled back and these trends will be reported in the next MTP update.

In the regional transportation planning process the forecast growth in housing and employment for the year 2035 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 665 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 2035 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.

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

While population grew 104% from 1980 to 2005, the number of registered passenger cars increased by 127%.

Figure 2-4: Growth in Clark County – 2000, 2010 and Forecast 2035



2010 to 2035 forecasts indicate Population will grow 86% and Employment will grow 102%, during that period.
Sources: U.S. Census Bureau, U.S. Bureau of Labor Statistics, WA State Office of Financial Management (OFM), and Clark County

Where will future growth locate?

The population of Clark County is forecast to grow by 216,437 people during the planning period from 2010 to 2035 and employment is set to grow by 129,700. 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 and expanded urban boundaries as they become the focus for growth outside of the core urban area of Vancouver.

The smaller cities of Clark County are planning for denser development and expanded urban boundaries.

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.

Multi-family housing is becoming more common as the average household size shrinks.

Household Size and Type

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 1990s 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. By 2010, indications are that household size has slightly increased in Clark County with 2.72 persons per household.

Employment Trends

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. This design has catered to auto-commuters and is not as easily served by transit service.

Growth in Vehicle Numbers

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. From 1980 to 2010 there was a 148% increase in passenger cars (from 106,889 in 1980 to 264,685 in 2010) and a 143% increase in total vehicles registered in the County (from 171,474 in 1980 to 415,849 in 2010). Passenger

cars represent 62.6% of total registered vehicles in 2010.

Special Needs Populations

Table 2-2 provides information that compares 1990, 2000 and 2005-2009 (ACS) census demographic data of relevance in the metropolitan regional transportation planning process. This table reports on demographic data of particular relevance in considering environmental justice and special services transportation needs.

Table 2-2: Summary of Clark County Demographics

		1990	Percent	2000	Percent	2005-2009	Percent
Population		238,053	100%	345,238	100%	416,205	100%
Age	Under 65	212,686	89.3%	312,430	90.5%	372,099	89.4%
	65 and Over	25,367	10.7%	32,808	9.5%	44,106	10.6%
Race	White	225,192	94.6%	306,648	88.8%	364,383	87.5%
	Black or African American	2,976	1.3%	5,813	1.7%	7,038	1.7%
	American Indian, Alaska Native	2,296	1.0%	2,910	0.8%	3,012	0.7%
	Asian*	5,670	2.4%	11,095	3.2%	15,676	3.8%
	Native Hawaiian, Other Pacific Islander	see above		1,274	0.4%	1,747	0.4%
	Other*	1,919	0.8%	17,498	5.1%	24,349	5.9%
Origin	Non-Hispanic / Non-Latino	232,181	97.5%	328,990	95.3%	388,725	93.4%
	Hispanic / Latino	5,872	2.5%	16,248	4.7%	27,480	6.6%
Language at Home	Population over 5 years	219,563	100%	318,152	100%	386,539	100%
	Speak English Only	207,291	94.4%	281,613	88.5%	334,790	86.6%
	Language other than English	12,272	5.6%	36,539	11.5%	51,749	13.4%
	Speak English less than "Very Well"	4,556	2.1%	17,638	5.5%	22,811	5.9%
Disability Status	*(reported for population 5 years and over)*			55,601	17.6%	n/a	n/a
Poverty	*Total Population for whom poverty status is determined*	212,660	100%	341,464	100%	n/a	
	Poverty Status (as defined by U.S. Census Bureau)	21,910	10.3%	31,027	9.1%	n/a	10.5%

* 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 of more races.

Increase in the Aged Population

According to the 2010 US Census and the Washington State Office of Financial Management's (OFM's) October 2007 forecast, Clark County's population is forecast to grow by 36% over the next 20 years from 425,363 in 2010 to 579,768 in 2030. However, the population aged over 65 is forecast to grow by 136%, from 46,217 in 2010 to 109,179 in 2030. The senior age group's share of population is forecast to grow from 10.6% in 2010 to 18.8% in 2030. This will have a significant impact on transportation services required with a likely growing demand for C-TRAN paratransit service.

Transportation Modal Trends: Journey to Work

Tables 2-3 provide information that compares 1990, 2000 and 2005-2009 (ACS) census data showing mode used to get to work. Most notable is the increase in numbers working from home as well as the increase in carpool and transit.

Table 2-3: Clark County Journey to Work

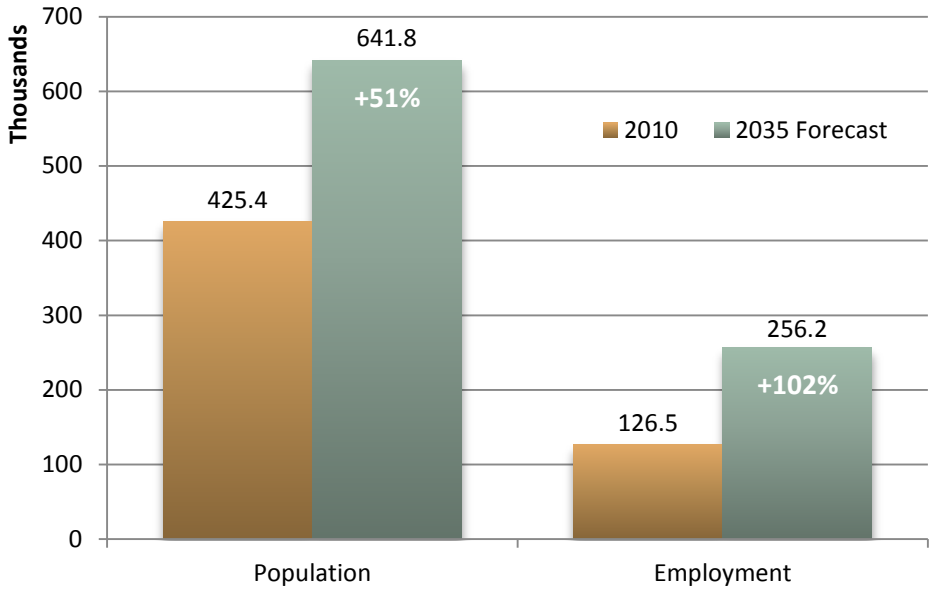
	1990	Percent	**2000**	Percent	**2005-2009**	Percent
Commuters	108,945		161,471		189,117	
Drive Alone	87,748	80.5%	128,014	79.3%	147,559	78.0%
Carpool	12,017	11.0%	18,089	11.2%	20,155	10.7%
Transit	2,275	2.1%	4,228	2.6%	4,699	2.5%
Walked	2,091	1.9%	2,211	1.4%	2,978	1.6%
Other	1,224	1.1%	1,788	1.1%	3,109	1.6%
Worked at Home	3,590	3.3%	7,141	4.4%	10,617	5.6%
Mean Travel Time to Work (those that work outside home)	21.2 min.		24.7 min.		24.9 min.	

Source: U.S. Census Bureau (including 2005-2009 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 slow 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.

Figure 2-5: Clark County MTP Growth Forecast 2010 to 2035



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

Emerging Issues to Track

When considering demographics, land use and transportation, the following issues and trends should be tracked:

- Analyze 2010 census data as it becomes available.
- Economic trends – will the subdued economy continue and will this have an effect on longer-term growth forecasts for this region?
- Washington Office of Financial Management (OFM) updates to demographic forecasts, including updates to forecast of the growing senior population.
- The work of local jurisdictions on updates to comprehensive plan elements.

New economic trends and changing demographics will impact future transportation decisions.

Chapter 3: The Regional Transportation System; Existing System and Future Performance

The MTP focuses on the regional transportation system. First, this regional transportation system must be designated. As an introduction to planning for the future development of a regional transportation system, an overview 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. The chapter ends with a section on future transportation performance.

Defining the Regional Transportation System

The designated regional transportation system is the focus for transportation planning in the MTP. Consistent with the state's Regional Transportation Planning Program Planning Standards, the designated MTP regional transportation system (see Figures 3-1 and 3-2, or download a high-resolution map) includes:

- All state transportation facilities and services (including highways, state-owned park-and-ride lots, etc.).
  - In Clark County these highway facilities are I-5, I-205, SR-14, SR-500, SR-501, SR-502 and SR-503 and a park and ride lot at I-5/Ridgefield Junction. (see Table 3-1)
- 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).
  - These include principal arterials, such as Mill Plain Blvd, Fourth Plain Blvd, N.E. 78th Street, Padden Parkway, N.E. 112th Avenue, SE/NE164th/162nd Avenues and segments of St. John's Blvd and Andresen Road.
- 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. Also included is the Fourth Plain Transit Corridor currently under study. The HCT System Study (RTC, 2008) is a plan for future HCT in Clark County. See the MTP's Strategic Plan in Appendix I for further information on planning for HCT in the Clark County region.

- 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.

  - This includes the C-TRAN public transit 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.

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

Table 3-1: State Route Mileage in Clark County (2010)

Facility	Begins	Ends	Miles
I-5	Oregon State Line, Interstate Bridge	Cowlitz Co. Line	20.78
I-205	Oregon State Line, Glenn Jackson Br.	I-5 Interchange	10.57
SR-14	Interchange with I-5, Vancouver	Skamania Co. Line	21.77
SR-500	Interchange with I-5	SR-14 Intersection, Camas	22.18
SR-501, south	Interchange with I-5	Terminus of S. segment	10.99
SR-501, couplet	Interchange with I-5	Franklin St., Vancouver	0.55
SR-501, north	City of Ridgefield	Interchange, I-5 at Pioneer	2.97
SR-502	Intersection with I-5 at N.E. 219 St.	Intersection with SR-503	6.12
SR-503	Intersection with SR-500	Cowlitz Co. line	27.87

Note: Miles column represents the centerline length of facility.
Source: WSDOT State Highway Log

Figure 3-1: Designated Regional Transportation System

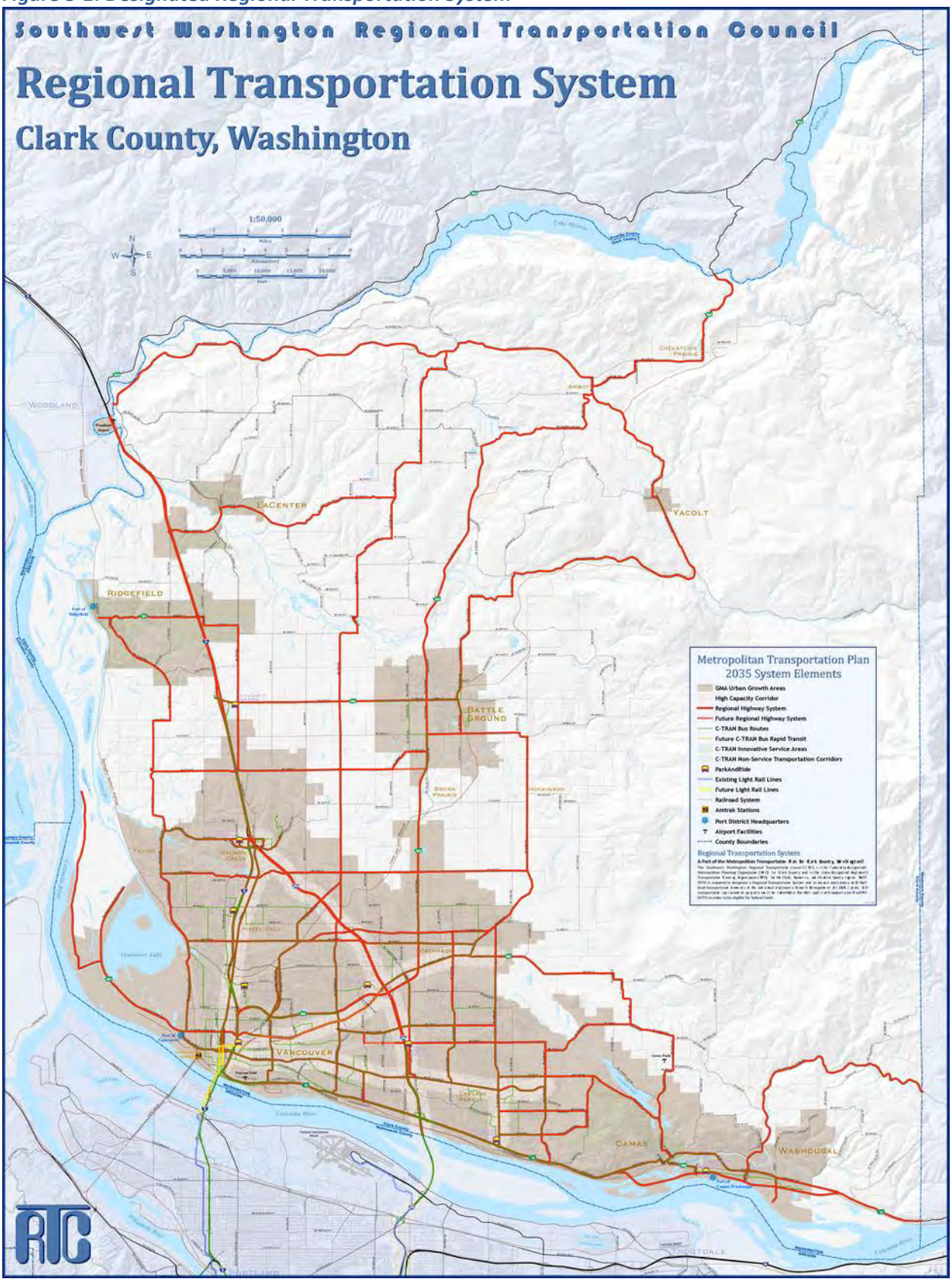


Figure 3-2: Designated Regional Transportation System, Showing Downtown Vancouver Detail

High-resolution map (36"x48" 4.0Mb PDF) also available for download.

Highway System Segments: Interstates and State Routes

I-5

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 county line.

I-205

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 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 north to its terminus as a two lane facility in each direction.

SR-14

SR-14 provides the main east-west highway 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. It has two lanes in each direction up to milepost 12 and one lane in each direction thereafter.

SR-500

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

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 join 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

SR-502 extends from the I-5/N.E. 219 Street interchange to Battle Ground.

SR-503

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.

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 3-2 have been designated as NHS facilities.

Table 3-2: 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.

Federal Functional Classification of the Regional Highway System

Functional classes describe roadway characteristics based on overall traffic volumes, typical trip lengths, and sorts of lands accessed.

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. Collector facilities generally provide equal emphasis upon mobility and land use accessibility. Local facilities emphasize access to land uses.

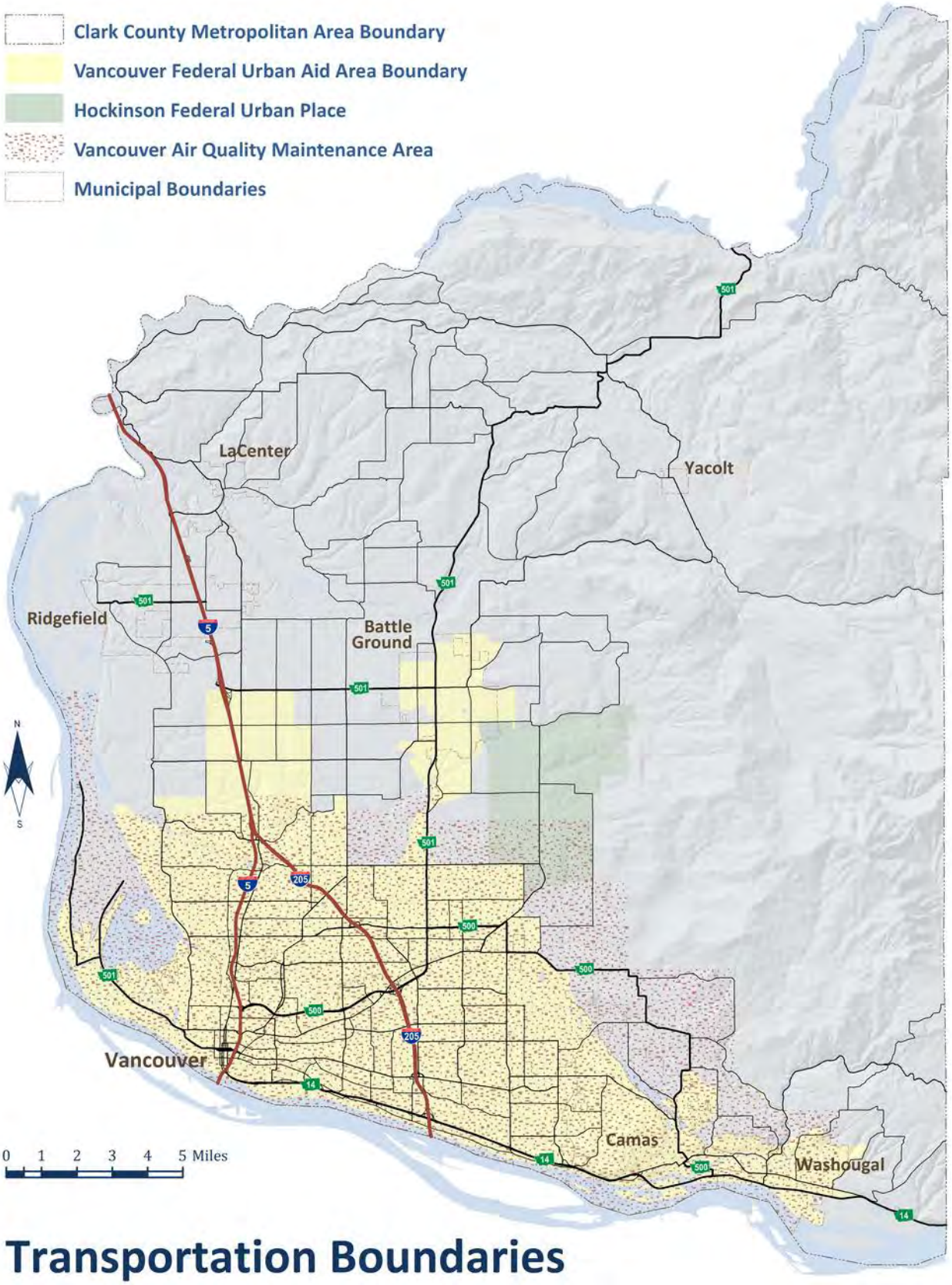
Federal Transportation Boundaries

As a pre-requisite to the federal functional classification of roads, an Urban Area Boundary must be defined (refer to Figure 3-3; 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 distinction between urban and rural is important because 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.

The federal transportation Urban Area Boundary is not to be confused with Urban Growth Areas established under the Washington State Growth Management Act (GMA). 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, urbanized areas of unincorporated Clark County, Camas, Washougal and Battle Ground and, with a population of over 5,000, the Hockinson Census Designated Place.

ISTEA also called for MPO's to establish a Metropolitan Area Boundary marking the area to be covered by MPO regional transportation planning activities. At a minimum it must 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; the Vancouver Air Quality Maintenance Area. The Metropolitan Area Boundary established for the Clark County region includes the whole of Clark county (refer to Figure 3-3; 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 process, first adopted by the RTC Board in May 1995 and updated annually. The MPO has authority to select, in consultation with the state, projects to receive federal funds (see Chapter 4 for further details).

Figure 3-3: Transportation Boundaries



Functional Classification

Federal

The Federal Functional Classification system for Clark County 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. This usually occurs about three years following the decennial census. Further information on the functional classification of roads can be found on WSDOT's website. A statewide map of the federal functional classification is available, allowing for zooming in to Clark County and city detail.

A description of the federal functional classification urban 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.

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**

Local Functional Classification

A local classification system also exists. 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 which shows arterial and local street cross-sections anticipated for roads in Clark County within the next twenty years. The Arterial Atlas is approved by the Board of County Commissioners. Efforts are made to try to be as consistent as possible between the federal functional classification system and the local classification. Local cities also maintain a local classification system as part of their comprehensive plans.

Public Transportation Options

C-TRAN Public Transit System

Clark County Public Transportation Benefit Authority (C-TRAN) provides public transit service in Clark County. C-TRAN's service area is shown on Figure 3-4. All C-TRAN's system and facilities are included as part of the designated regional transportation system. In addition to C-TRAN's fixed route service that provided 6.3 million rides in 2010 and C-VAN paratransit service that provided 218,104 rides in 2010, there are opportunities to connect with TriMet for fixed route transit to Portland, Oregon, connection with Skamania County with service provided by Skamania County Senior Services and connection with Cowlitz County with service provided by Lower Columbia Community Action Council's CAP. All C-TRAN routes use lift-equipped buses, making them easily accessible to people with disabilities.

C-TRAN's system includes three transit centers at 1) Fisher's Landing, 2) 99th Street at Stockford Village and 3) Vancouver Mall as well as nine park and ride lots. Some are operated under a site use agreement. The nine C-TRAN park and ride facilities provide more than 2,200 parking spaces at 1) Andresen, 2) BPA Ross complex, 3) Camas/Washougal, 4) Evergreen, 5) Fisher's Landing Transit Center, 6) La Center, 7) 99th Street Transit Center at Stockford Village, 8) Ridgefield, and 9) Salmon Creek.

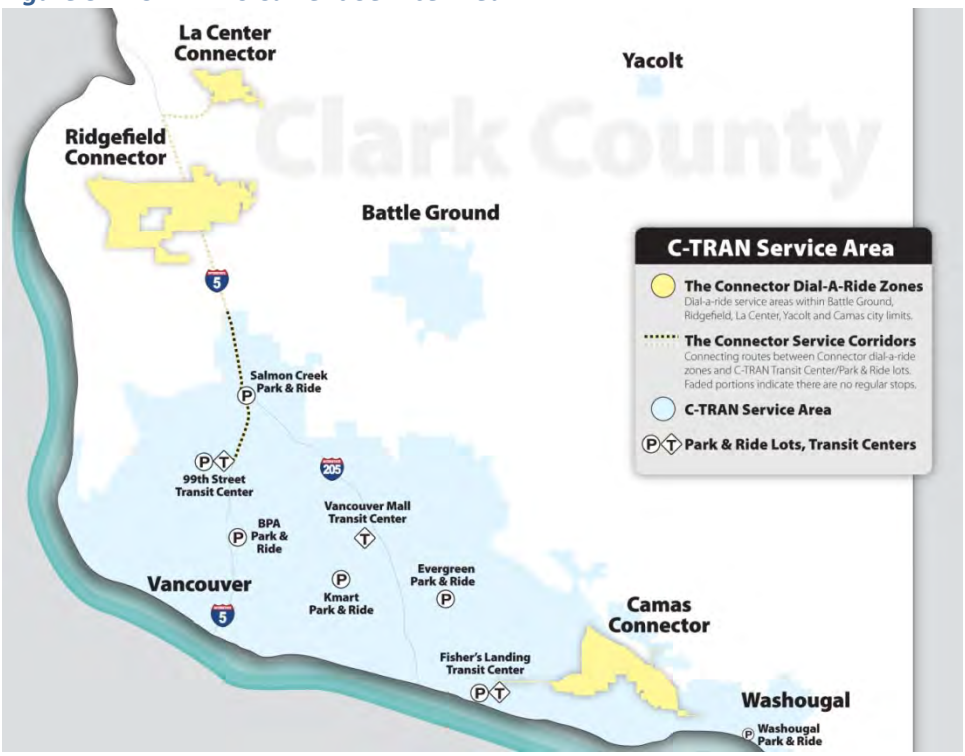
C-TRAN maintains approximately 218 passenger shelters and benches throughout the fixed route system. C-TRAN installed solar-powered shelter flashers and transit stops, which provide passenger-activated illumination for safety and to more easily read posted schedule information, at bus stops along key transit corridors. C-TRAN has also installed Simme seats, providing durable seating at bus stops that do not have enough ridership to merit a shelter. All C-TRAN buses are also equipped with a bicycle rack that holds two bicycles. C-TRAN provides instruction and assistance to

bicyclists who plan to use transit for part of their trip. Bike lockers are provided at most of C-TRAN's transit centers and park and ride lots.

C-TRAN publishes a yearly Transit Development Plan (TDP) that documents its service and plans for service within the next six years. The latest TDP, C-TRAN 2011-2016 Transit Development Plan, was published in May 2011.

C-TRAN's plans for future transit service are documented in C-TRAN 2030. However, Plan implementation is contingent on funding being available (see details in MTP's financial plan in Chapter 4).

Figure 3-4: C-TRAN's Current Service Area



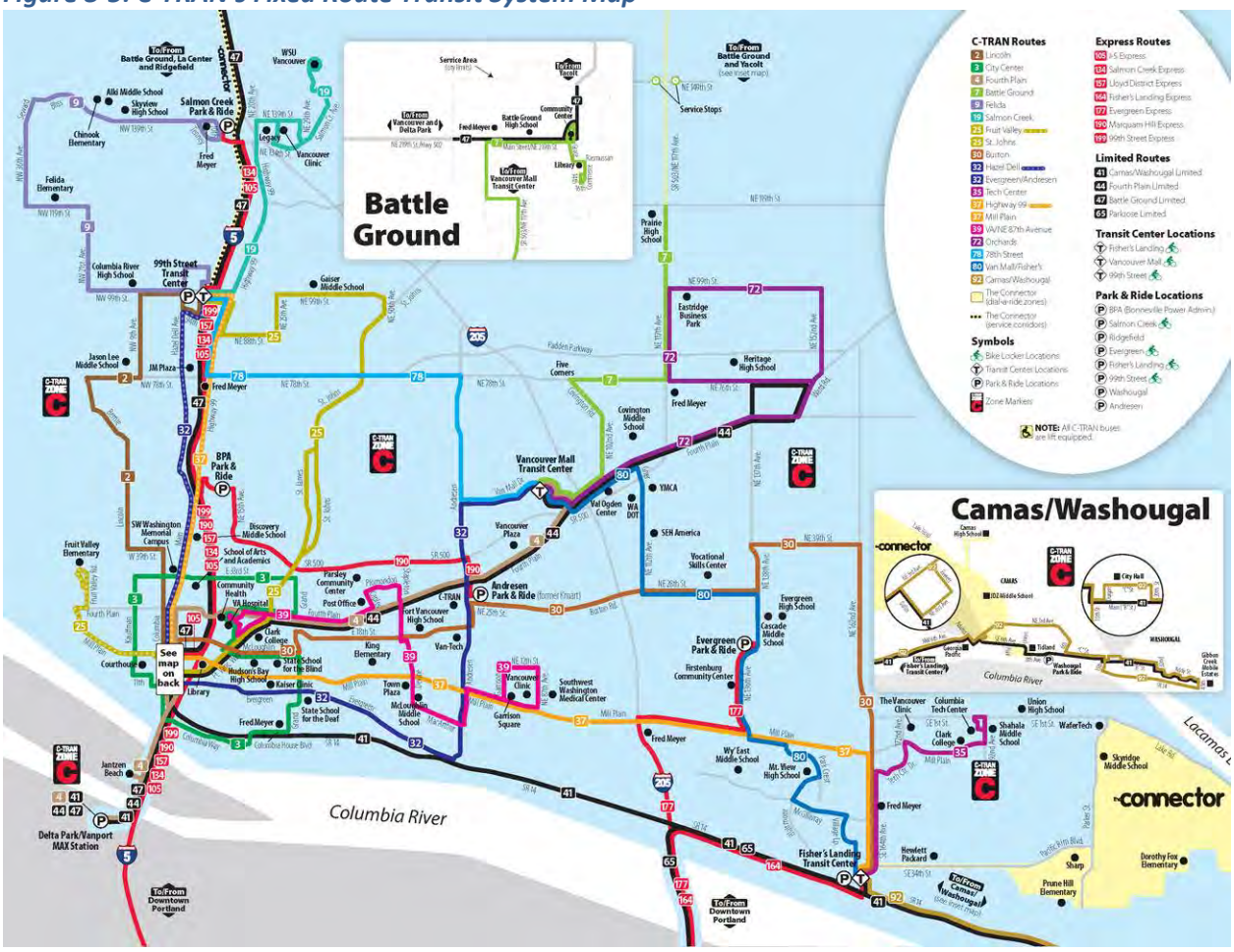
C-TRAN Fixed Route Service

C-TRAN operates a fixed route bus system with urban and suburban routes, express commuter service to destinations in Portland, limited routes that connect with light rail in Portland, and a vanpool program. Figure 3-4 maps C-TRAN's fixed route system. C-TRAN also provides general purpose dial-a-ride/deviated fixed route, Connector service, and Americans with Disabilities Act (ADA)-compliant paratransit service.

C-TRAN currently operates 16 local urban, 4 limited, and 7 premium commuter express routes (see Figure 3-5 for a map of the routes). Operating hours are generally 4:30 a.m. to 9:30 p.m. on weekdays (with key urban routes operating until midnight), 7:00 a.m. to 8:00 p.m. on Saturdays, and 8:00 a.m. to 7:00 p.m. on Sundays/holidays. C-TRAN provided 279,432 total vehicle hours and 256,428 revenue hours of fixed route service in 2010, with ridership totaling 6,317,040 in

2010 up from 6,201, 190 in 2009. C-TRAN service levels are dependent on sustaining funding sources, with local sales tax being a significant revenue source for system operations (see Chapter 4 for additional information on transportation revenues).

Figure 3-5: C-TRAN's Fixed Route Transit System Map



C-VAN Paratransit Service

C-TRAN provides an ADA-compliant paratransit service, known as C-VAN. Paratransit service is provided inside the Vancouver urban growth boundary (UGB) and within three-quarters of a mile of all C-TRAN fixed routes operating outside Vancouver's UGB. C-TRAN attained full compliance with the ADA by January 1997. Connections with TriMet's LIFT service, operating in the Portland, Oregon metropolitan region, are made at the Gateway and Jantzen Beach transit centers. Figure 3-6 provides a map showing C-VAN coverage and Table 3-3 provides a summary of paratransit service hours and ridership between 1996 and 2010.

While C-VAN carries 3% of C-TRAN system ridership, it accounts for approximately 24% of C TRAN's operating budget.

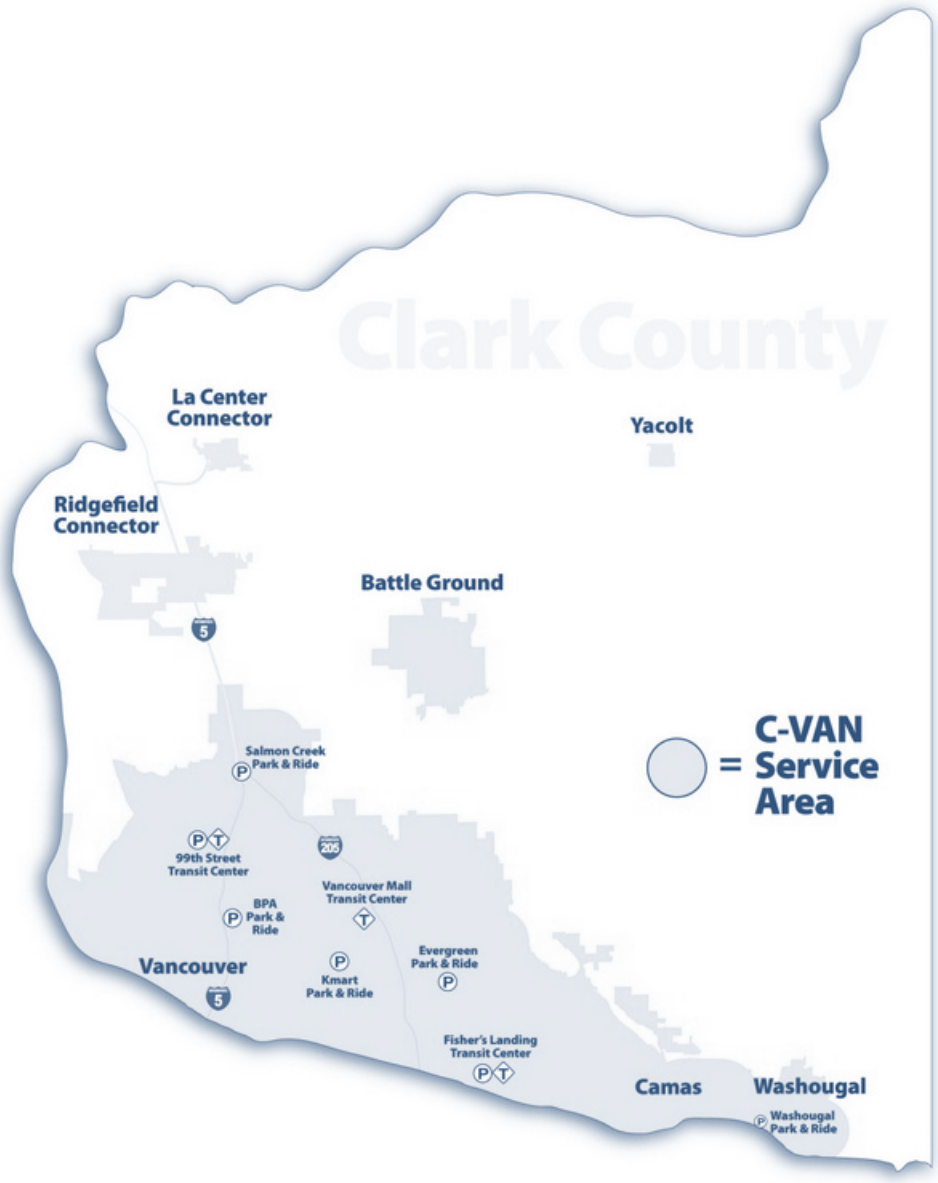
C-TRAN continues to use a functional assessment process to determine eligibility for paratransit services. Additionally, C-TRAN offers a Travel Training program that provides customized training to seniors and individuals with disabilities so they become comfortable riding the bus. Participants learn the skills necessary to plan trips and travel across the C-TRAN system. Additionally, travel trainers offer the Blue Strap program, providing a blue securement strap to individuals using mobility devices who ride fixed route buses. The blue strap helps ensure mobility devices can be quickly and safely secured. The Travel Training program is provided using New Freedom formula funding.

Table 3-3: C-TRAN; C-VAN Paratransit Service

Year	Trips	Revenue Hours
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	179,774	67,629
2006	211,818	77,010
2007	230,409	81,773
2008	245,684	88,258
2009	215,357	81,064
2010	218,104	80,555

While C-VAN carries 3% of C-TRAN system ridership, it accounts for approximately 24% of C-TRAN's operating budget. With forecasts of significant growth in demand for paratransit service in the coming years with the increase in percent of aged population in Clark County, managing the costs of this service is a challenge for C-TRAN.

Figure 3-6: C-VAN Service Area



Connector Service

C-TRAN operates other innovative transit services including Connectors and the shopping shuttle. 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 was replaced by an extension of Route #47.

Connector services are equally accessible and available to the general public. These routes take standing reservations, same day reservations as available, and also pick customers up at identified stop locations. Connector trip numbers are documented in Table 3-4.

The Camas Connector operates in the Camas area, with a connection to the Fisher's Landing Transit Center. This service operates 5:30 a.m. to 9:15 a.m. and 2:00 p.m. to 7:30 p.m., Monday – Friday.

Table 3-4: C-TRAN Connector Service, Dial-a-Ride/Deviated Fixed Route

Year	Connector Trips	Revenue Hours
2003	10,381	2,592
2004	21,436	4,845
2005	16,214	4,343
2006	19,766	4,599
2007	21,678	4,627
2008	20,316	4,853
2009	14,853	4,583

Connector service also operates in the cities of Ridgefield and La Center. These Connectors each have two components: 1) a deviated fixed route within each city's limits and 2) a feeder service connection to the local urban fixed route system at the 99th Street Transit Center.

Shopping Shuttle

The shopping shuttle was established at the recommendation of C-TRAN's ADA Task Force. It provides direct transit service between select areas and shopping destinations on a fixed schedule. This new service carried 312 passenger trips during the six month demonstration project. The redesigned shopping shuttle service began in May 2010 with schedule shown in Table 3-5.

Table 3-5: Shopping Shuttle

New Connectors	Weekday Deviated Fixed Route Hours
Smith Tower / Lewis & Clark Apartments	9:00 a.m. – 11:30 a.m. First and Third Tuesdays
Columbia House	9:00 a.m. – 11:30 a.m. First and Third Tuesdays

C-TRAN, Security

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, part of its paratransit fleet, and park and rides are equipped with digital video cameras.

Human Services Council: Transportation Brokerage

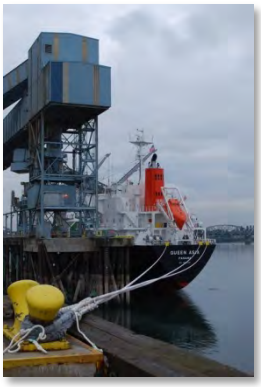
The Human Services Council Transportation Brokerage arranges rides for elderly, low income and people with medical needs and disabilities through contracts and arrangements with a variety of transportation providers. This service is highly valued in the community by people that have no access to C-TRAN or C-VAN services or for people for whom regular transit service does not work. Between January 1, 2010 and June 30, 2010 HSC brokered over 35,500 employment transportation trips and served 960 unique individuals. Continuation of the Brokerage services is dependent on grant funding.

Inter-City Bus

Inter-city bus service to cities throughout the northwest and nation-wide, provided by Greyhound Bus Lines, is no longer available from Vancouver. The Greyhound bus service stop in Vancouver, Washington closed on January 1, 2009. Vancouver residents now have to travel to Portland, Oregon to access this service. Connection with Skamania County is provided through Skamania Senior Services and connection with Cowlitz County provided by CAP managed by Lower Columbia Community Council. Connections to both Skamania and Cowlitz counties are subject to continued grant funding.

Marine Transportation

The Columbia River provides a navigable waterway for the Clark County region as part of the Columbia/Snake River system. Barge traffic operates from the Portland-Vancouver metropolitan area to eastern Washington and Oregon. Ocean-going ships use the Port of Vancouver, USA. Clark County has three port districts; the Port of Vancouver, the Port of Camas-Washougal and the Port of Ridgefield.



Port of Vancouver USA

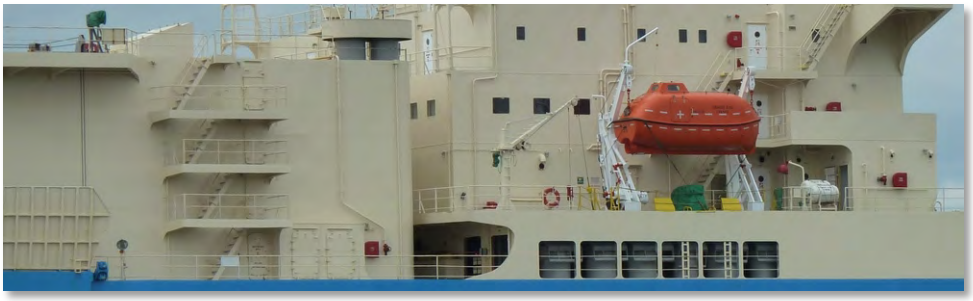
The Port of Vancouver USA is situated at the terminus of the Columbia River's deep draft channel and forms a natural gateway to the river-barge ports of eastern Oregon/Washington and northern Idaho. The Port operates international cargo docks. It is the third-largest port in the state of Washington. It has five marine terminals, provides 13 deep-draft vessel berths and is the only port in North America with two 140-metric ton mobile harbor cranes.

The Port is served by numerous river and ocean-going barge lines. Annually, the port handles nearly 500 ocean-going vessels, as well as river barges with a total

cargo volume of approximately five million metric tons. 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. In recent years, the Port had become a leader in import of wind energy components. The Port has dockside warehousing for general cargo and bulk storage warehouses.

The Port of Vancouver supported implementation of the Columbia River Channel Improvement Project to deepen the Columbia River channel from a 40-foot navigation channel to 43 feet to facilitate deep-draft transportation of goods for years into the future and to help 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 800 acres of developed industrial and marine property with over 50 industrial tenants. Over 2,300 people are directly employed by these businesses and more than 15,500 jobs are connected to port activities. The Port has over 600 additional acres of land 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. The Port is implementing the West Vancouver Freight Access Project in phases which is included in the MTP's list of projects.



Port of Ridgefield

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. The Port adopted the Port of Ridgefield Comprehensive Plan in 2008. 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 800 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 site on Lake River, 3 miles from I-5.

Port of Camas/Washougal

The Port of Camas/Washougal provides facilities and services for land, air, water-based commerce and to enhance employment and recreational opportunities, contributing to the quality of life in the community. The 430-acre industrial park, located south of SR-14 by Index and 27th to 32nd Streets, was created in 1966 when the U.S. Army Corps of Engineers created a 5.5-mile levee along the Columbia River. It is home to an average of 48 businesses with approximately 1000 employees, and an annual payroll exceeding $30 million. Steigerwald Commerce Center, the 120+ acres east of the Industrial Park, is the site of future development.

The marina has moorage to accommodate 350-plus boats and a 4-lane launch ramp. The Port district also operates Grove Field Airport (described in a later section).

Rail

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 1990s 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

Freight dependent businesses represent 44% of the state's jobs.

94,061 trips. By 2011, service has grown to four daily Amtrak Cascades roundtrips operating between Seattle and Portland, with two extending to Eugene and Vancouver BC, Canada. Between 1993 and 2010, ridership increased by 793% from 94,061 annual riders in 1993 to 840,000 riders in 2010. Total passengers boarding and de-boarding at the Vancouver Amtrak station continues to increase with 75,303 total passengers in 2010.

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 has been upgraded as part of the Eugene to Vancouver B.C. passenger rail service improvements. There is also a project underway to improve rail in the vicinity of the Vancouver Yard. The project is adding new rail bypass track by 2013 and a grade-separated crossing of the rail lines for vehicles using west 39th Street in Vancouver was opened in 2010. 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.

Companies move $37 million worth of freight hourly on Washington's roadways.

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

Public and private freight railroads in Washington move 103 million tons of freight annually.

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. Clark County will continue to pursue state and federal grants 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 Comprehensive Growth Plan (Clark County, 2007), 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.

Air Transportation

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, Continental, Delta, Frontier, Hawaiian, Horizon, Jet Blue, Sea Port Airlines, Southwest Airlines, Spirit Airlines, United and United Express, and US Airways. There are nonstop international flights to Vancouver, Toronto, and Calgary in Canada; Amsterdam in The Netherlands; and Tokyo in Japan. In addition, air freight carriers that serve Portland currently include Aeroflight, Ameriflight, Asiana Cargo, Schenker, CHL, Empire, FedEx, UPS and Western Air ExpressPIA saw rapid growth in passenger numbers and freight in the

1990s and now consistently serves over 1 million passengers per month. In 1998, passenger numbers surpassed 13 million for the first time. In 2010, Portland International Airport served 13.2 million passengers and handled nearly 197,000 tons of air freight. 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 meets 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. The WSDOT Aviation Division completed the latest update to the 20-Year Aviation System Plan in 2009 as part of its long-term air transportation study (LATS) for generation aviation and commercial airports statewide.

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 1980s 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

A significant step in developing the MTP is the analysis of transportation system performance.

Traffic Counts

Traffic counts are a way to track highway system performance. RTC has had a traffic counting program in place for over 20 years. Data is compiled and made available on RTC's website.

Change in Traffic Volumes

As a result of socio-economic and demographic changes described in Chapter 2 Clark County has seen significant changes in traffic volumes over the last 25 years. Traffic volumes are also affected by where capacity is constrained or additional capacity has been added to the transportation network. The MPO compiles traffic count data from local jurisdictions and other sources, and makes the compiled data available on RTC's website. 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 3-6, with comparisons

between the traffic count in 1985 and the most recent traffic counts available. The economic downturn since 2008 appears to have had an effect on traffic counts with some count locations reporting slightly lower counts years 2008 and 2009 compared with 2006 and 2007 counts.

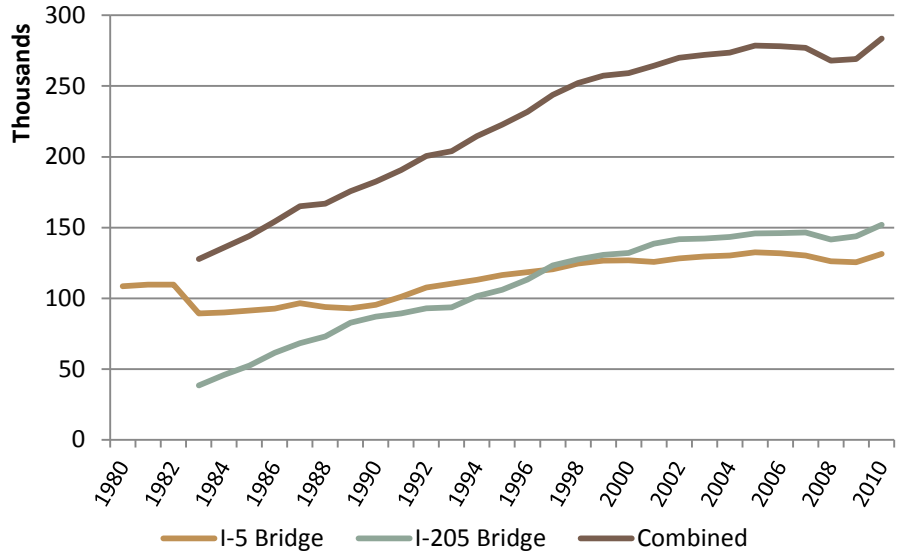
Table 3-6: Traffic Volumes; 1985 to Current Years

Location	Volumes	Current Volumes	Last Counted	Increase	Annual Increase
I-5 Bridge	92,301	131,499	2010	42%	1.7%
I-5, South of SR-500	54,400	130,992	2007	141%	6.4%
I-5, South of NE 78th St	52,784	94,982	2007	80%	3.6%
I-5, South of Woodland	33,748	61,586	2008	82%	3.6%
Hwy 99, south of NE 99th St	19,653	16,124	2006	-18%	-0.7%
I-205 Bridge	52,568	152,018	2010	189%	7.6%
I-205, south of SR-500	40,440	122,292	2010	202%	8.1%
164th Ave, south of SE 34th St	7,052	38,316	2010	443%	17.7%
192nd Ave, south of SE 34th St	*not open*	16,434	2010	*n/a*	*n/a*
SR-14, west of SE 164th Ave	22,600	80,771	2007	257%	11.7%
SR-14, west of NW 6th Ave	17,600	41,791	2008	137%	6.0%
Mill Plain, east of NE Andresen	21,021	20,016	2008	-5%	-0.2%
Mill Plain, east of NE Chkalov	18,220	45,916	2011	152%	5.8%
NE 18th Street, east of 138th Ave	7,557	15,443	2008	104%	4.5%
Fourth Plain, west of NE Andresen	16,060	23,780	2009	48%	2.0%
Fourth Plain, west of 137th Ave	14,671	27,453	2011	87%	3.4%
SR-500, west of NE Andresen	20,054	53,386	2009	166%	6.9%
Padden Parkway, west of NE 94th Ave	3,952	27,678	2007	600%	27.3%
78th St, west of Hwy 99	23,646	33,791	2008	43%	1.9%
139th St, west of NE 10th Ave	11,218	20,816	2010	86%	3.4%
SR-503, south of NE 76th St	17,460	35,269	2009	102%	4.2%
SR-503, south of SR-502	7,360	24,217	2008	229%	10.0%

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

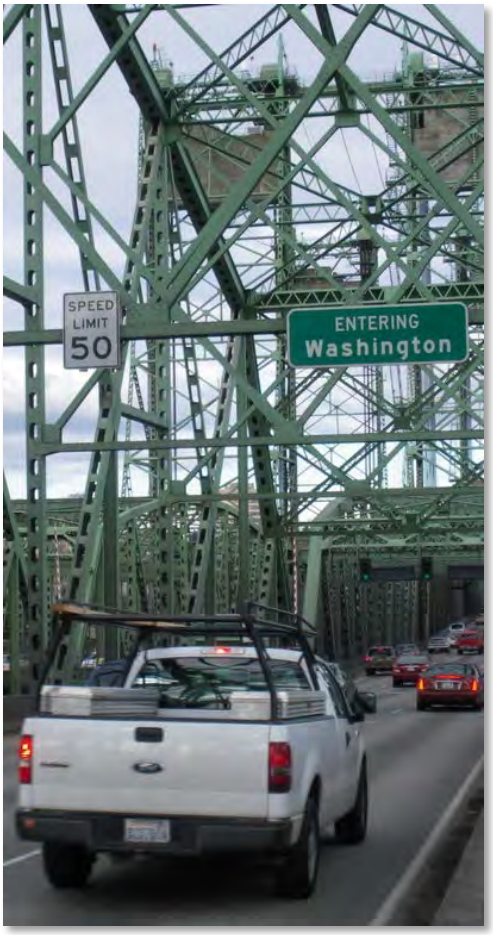
Permanent traffic recorders are in place on the I-5 and on the I-205 bridges. RTC compiles the Columbia crossing traffic counts provided by Oregon Department of Transportation from these recorders or estimates provided by ODOT. In March 1995 RTC published the *Columbia River Bridge Traffic, 1961 - 1994* report. Figure 3-7 shows the average weekday traffic volumes crossing the Columbia River bridges, 1980 to 2009. In 2010 the estimated average weekday traffic (AWDT) volumes on the I-5 Interstate Bridge were 131,499 and on the I-205 Glenn Jackson Bridge were 152,018. In 2010, the average northbound weekday evening peak hour crossings of the I-5 Interstate Bridge were 4,821 and 7,447 on the I-205 Glenn Jackson Bridge. In the southbound direction, average weekday morning peak hour crossings were 5,094 on the I-5 Interstate Bridge and were 7,466 on the I-205 Glenn Jackson Bridge.

Figure 3-7: Average Weekday Columbia River Bridge Crossings, 1980-2010



Source: Oregon Department of Transportation

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 number of crossings recorded was on Friday July 27, 2007 with 170,711 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 27, 2004 when 325,095 trips crossed the Columbia river on the I-5 Interstate and I-205 Glenn Jackson bridges.

Regional transportation system intersections with the highest traffic volumes, measured in terms of number of vehicles entering intersection, are listed in Table 3-7.

Table 3-7: Highest Volume Intersections in Clark County, 2010

Rank	East-West	North/South	Approx. Volume	Count Year
1	Mill Plain Blvd.	Chkalov Drive	80,000	2008
2	State Route 500/Fourth Plain	State Route 503	71,000	2009
3	State Route 500	St. Johns Road	67,000	2010
4	State Route 500	NE 54th Avenue	63,000	2009
5	Padden Parkway	State Route 503	58,000	2009
6	State Route 500	NE 42nd Avenue	58,000	2009
7	Mill Plain Blvd.	136th Avenue	57,000	2009
8	Padden Parkway	Andresen Road	54,000	2008
9	Fourth Plain Blvd.	Andresen Road	52,000	2009
10	NE 134th Street	20th Avenue/Highway 99	50,000	2010
11	NE 78th Street	Highway 99	49,000	2008
12	Mill Plain Blvd.	SE 164th Ave.	48,000	2010
13	Mill Plain Blvd.	123rd / 124th Avenue	48,000	2010
14	State Route 502	State Route 503	47,000	2008
15	NE 76th Street	State Route 503	46,000	2009

Notes: Volumes are based on the total number of vehicles entering an intersection on an average weekday, and are approximate due to the annual variability. Freeway ramp intersections with streets were not considered for this table.
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 is used as a tool to analyze existing and future transportation system performance. It is specifically 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 2035 travel demand forecast model being the underlying forecast 2035 land uses. The travel model process involves trip generation, trip distribution, mode split and trip assignment to the regional transportation system.

In the modeling process, a base year of 2005 was used with forecasting to the year 2035. As described in Chapter 2, the MTP update must be based on adopted land use plans of local jurisdictions. 2035 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 out to the MTP's 2035 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 2035 land use allocation to 665 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

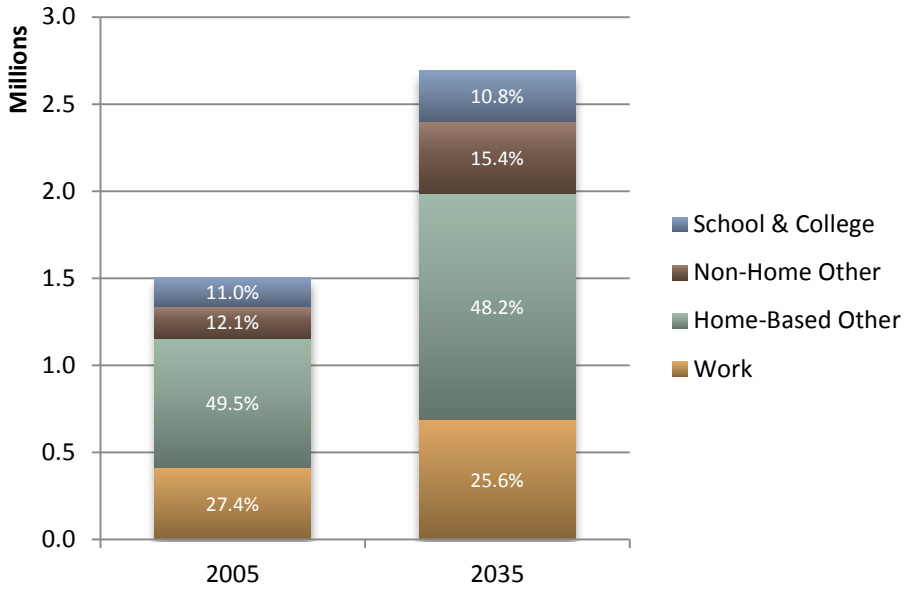
travel forecast model. After trip generation, trip distribution, mode split and trip assignment onto the assumed regional transportation network, output from the regional travel forecast model is used as a tool to identify specific transportation system needs and future transportation solutions.

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 several categories including Home-Based Work, Home-Based Shopping, Home-Based Other, Home-Based Recreation, Non-Home-Based Work, Non-Home-Based Other, and School and College trips. Figure 3-8 summarizes this information to show the proportion of trips in four categories for average weekday Clark County-produced person trips.

Figure 3-8 shows that in the 2005 base year the largest proportion of trips during a 24-hour period are home-based-other trips (50%). 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 and non-home-based work trips (27%). Non-home-based-other trips make up 12% 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 11% of trips made on a daily basis The proportions for the year 2035 are forecast to be 48% home-based-other trips, 26% home-based and non-home-based work trips, 15% non-home-based-other trips, and 11% school/college trips.

From 2005 to 2035 there is forecast to be an 80% increase in all-day person trips from around 1.5 million trips per day in 2005 to nearly 2.7 million trips in 2035.

Figure 3-8: Average Weekday Person Trips by Trip Purpose for Clark County

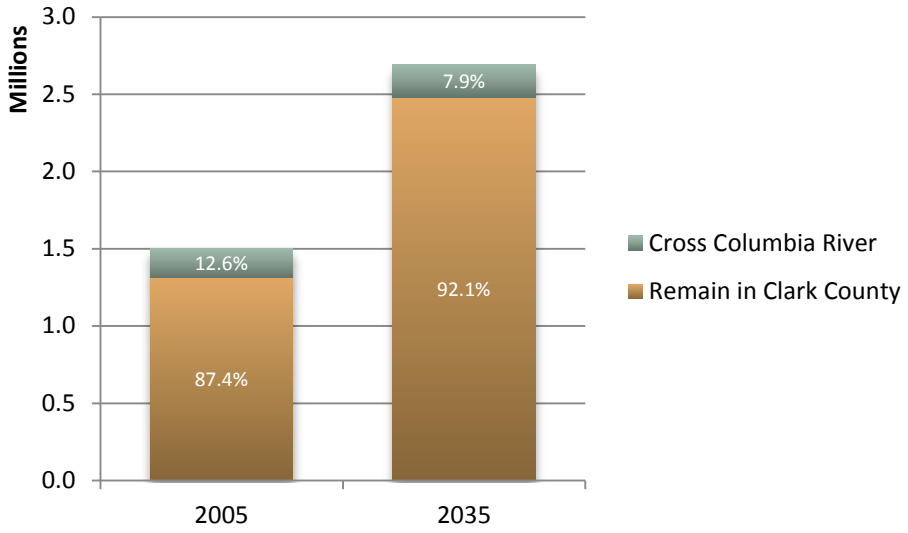


Source: RTC Regional Travel Forecast Model

The Regional Travel Forecasting Model for the Clark County region is used as a tool to analyze existing and future transportation system performance.

Trips can also be categorized according to where the trips begin and end. Figure 3-9 shows the proportions of trips that use the Clark County highway system; trips that remain in Clark County (87% of trips in 2005, 92% in 2035) and trips that cross the Columbia River (13% in 2005, 8% in 2035).

Figure 3-9: Distribution of Average Weekday Person Trips for Clark County



Source: RTC Regional Travel Forecast Model

Needs analysis was then carried out to determine what impact the 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

2005 traffic volumes on 2035 highway network.

Committed System

Forecast 2035 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).

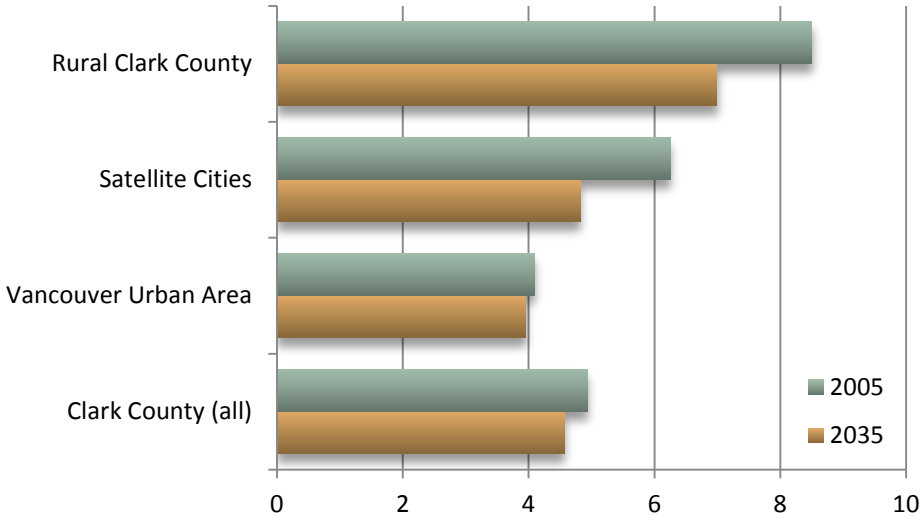
MTP, Year 2035

Forecast 2035 traffic volumes on 2035 highway network with MTP improvements listed in Appendix B. MTP improvements are projects for which funds are already programmed and committed in the current Metropolitan Transportation Improvement Program, together with projects for which there is an identified regional need, regional support, and a reasonable expectation that funds will be available within the twenty-plus year horizon to construct and/or implement them.

Regional Travel Forecasting Model Analysis

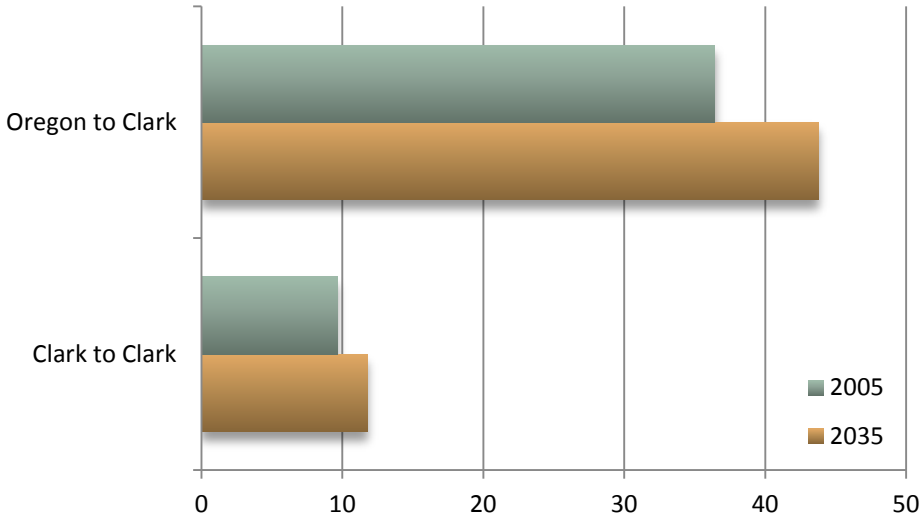
Analysis of the Regional Travel Forecasting Model can yield data for forecast speed on a transportation facility, vehicle miles traveled, lane miles of congestion and vehicle hours of delay. RTC staff uses this information to inform the project identification process. A series of graphics (Figures 3-10 through 3-12) shows some of the forecast results.

Figure 3-10: Average Auto Travel Distance (miles) – All Trips



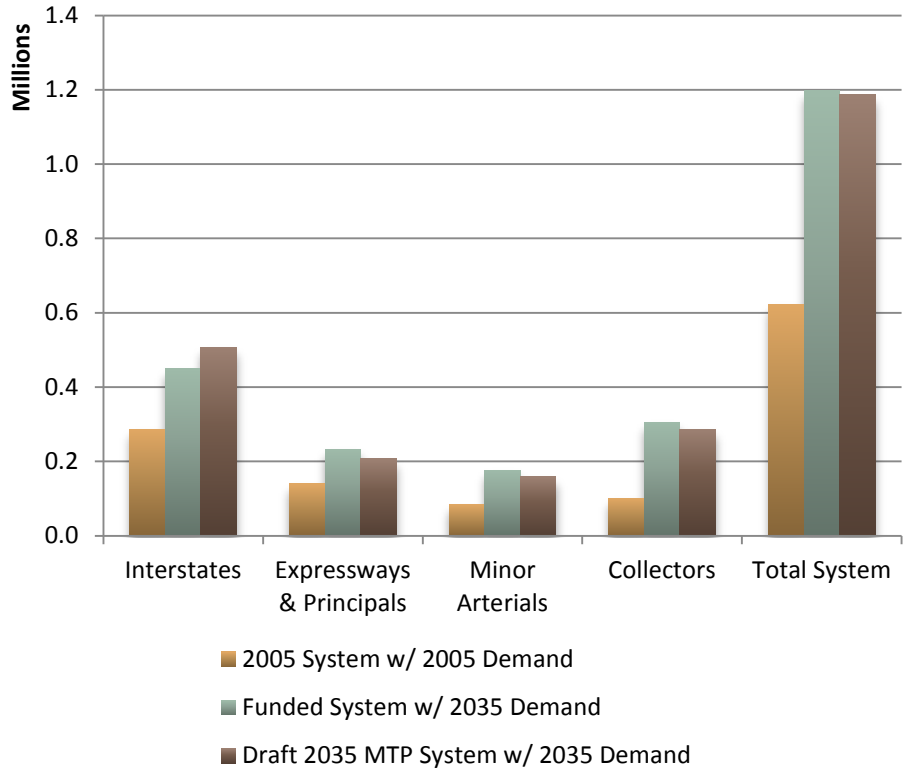
Note: Each group of bars represents trips generated by households located within the corresponding area. Satellite cities include Camas, Washougal, Ridgefield, and Battle Ground.

Figure 3-11: Average Auto Travel Time (minutes) in the P.M. Peak Hour



Note: Compares average number of minutes for trips originating in Oregon and ending in Clark County, to those that are entirely within Clark County.

Figure 3-12: P.M. Peak Hour Vehicle Miles Traveled



Note: Clark County modeled network.

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).

The GMA requires local jurisdictions to set levels of service standards for transportation facilities.

For uninterrupted flow conditions (such as freeways and long sections of roadways between stop signs or signalized intersections), the following definitions[4] apply:

Level of Service A

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

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

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 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.

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

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 3-8, 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 3-8: Level of Service Definitions (HCM)

LOS Class	A	B	C	D	E	F
Type I Urban Arterials Roadway Segment: Average Travel Speed (mph)	≥ 42	≥ 32	≥ 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 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.

Initially, Vancouver adopted a corridor-based concurrency ordinance in March 1998 and has made subsequent amendments to the City of Vancouver's concurrency program and methodology. In fall 2011, Vancouver is in the process of updating its concurrency ordinance, codified in Vancouver Municipal Code Chapter 11.95.

The Board of Clark County Commissioners has an adopted Transportation Concurrency Ordinance and related levels of service. Clark County's website has an explanation of the County's implementation of Concurrency. The County's code 40.350.020 provides details of the Clark County Concurrency Program, concurrency corridors and travel speed standards.

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. These indicators include load factor, headways, bus stop spacing, accessibility, span of service, land use densities, and other supporting factors.

Highway System Capacity Analysis

The Regional Travel Forecasting Model is used to analyze highway capacity needs for the Clark County region. Appendix B lists projects identified in the *MTP* as needed to meet future forecast capacity deficiencies determined by assigning forecast 2035 trips to an assumed transportation network. The lists of projects contained in Appendix B are those projects incorporated into the 2035 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, bicycling, walking and transit use. Other alternatives have to be considered before highway capacity expansion is identified as the solution. Such strategies are described in more detail in Chapter 5. 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.

Emerging Issues to Track

There are several emerging issues which will need to be tracked in the short-term. These include:

- Update to the Urban Area Boundary resulting from 2010 decennial U.S. Census results.
- Requested updates to the federal functional classification system resulting from the updated Urban Area Boundary and requests from local jurisdictions to better align the federal and local functional classifications.
- Any changes in forecast funding and the potential deferral and/or cancellation of projects and transit service will have impacts on transportation system performance. The Regional Travel Forecasting Model should be used to analyze the transportation system impacts of any changes.

Chapter 4: Transportation Finance Plan – Investing in the Future

The financial element of the Metropolitan Transportation Plan is a required component of the federal transportation planning process. The MTP's financial plan element includes (1) financial assumptions, (2) revenue sources and projections, and (3) cost estimates for transportation projects and transportation system maintenance and operations. The MTP Finance Plan addresses federal, state and local revenue sources. The focus of the MTP Finance Plan is on forecast revenues and cost estimates for improvements that are part of the MTP Designated Regional Transportation System. Federal fiscally constraint provisions require that the MTP must be "fiscally constrained" meaning that "revenues are reasonably expected to be available" to provide for the list of projects identified in the twenty four year timeframe of the MTP. The revenue assumptions for the Columbia River Crossing Project are described in a separate section of this chapter. Its funding strategy and status is addressed as a project of national significance and is supported by its own financial plan.

Achievements and Challenges

The 2011 MTP faces considerable challenges for funding transportation into the future. Over the last several years the economic downturn has had a negative impact on the amount of revenue available to transportation. Sales tax revenue, gas tax and other transportation fees are lower because of decreased purchasing power, a slowdown in residential development and less travel.

Electric, hybrid and more fuel efficient vehicles generate a smaller share of federal and state gas revenue compared to their miles driven.

It is still unclear when the economic vitality of the region will recover or if the rate of employment and residential growth will return to the vigorous levels of the past. The financial assumptions in this MTP update are a reflection of the comprehensive plans of the local jurisdictions which target levels of population and employment growth based on a return to a healthy economy over the time frame of the MTP. In addition, the future of the fuel tax as the primary road finance strategy is limited. Continual advances in vehicle technology and constant erosion of purchasing power from inflation may indicate the need to find more innovative ways to pay for transportation investments. Under the current transportation funding model, electric, hybrid, and more fuel efficient vehicles generate a smaller share of transportation revenue compared to the miles they drive on the roadway. This makes it even more important that transportation planners and policy makers

discuss transportation financing strategies and the benefits of how transportation is paid for.

The Metropolitan Transportation Plan has traditionally focused on transportation system capacity expansion. Since adoption of the last MTP update in December 2007, several significant regional transportation system capital improvement projects have been completed amounting to over $390 million in project costs. Many of the major regional transportation projects are receiving funding through the state's "Nickel" and Partnership packages. Significant projects completed since 2007 include: the I-5/SR-502 Interchange; the first phase of the I-5/SR-501/Pioneer Street Interchange, and the I-205/Mill Plain/112th Avenue Ramp.

This trend is continuing with recently initiated transportation capacity investments that include: the Salmon Creek Interchange Project, the SR-500/St. John's Interchange Project, and the SR-14 Camas-Washougal Widening and Interchange Project. In addition, other capacity projects to be completed over the next five years include the south half of the I-205/18th Street Interchange and widening of SR-502 from I-5 to Battle Ground. These projects and others are now fully funded and amount to another $471 million in improvements.

The last four years has also seen the opening of the 99th Street Park and Ride facility and the relocation and opening of the Salmon Creek Park and Ride in preparation for the Salmon Creek Interchange Project construction.

The region is seeing more than $860 million of investment in transportation infrastructure over a ten year period from 2007 to 2017. However, compared to the last MTP update in 2007, future funding for major capacity improvements is limited. While the 2011 MTP contains significant mainline capacity expansion projects, many of the projects contained in this MTP update consist of modernizing interchanges, adding new ones, or upgrading arterial roadways to urban standards.

The Clark County region is investing more than $860 million in transportation infrastructure over a 10 year period.

As the region looks to future needs, the costs of providing new transportation capacity continue to increase and the effectiveness of that capacity is often quickly compromised by growing traffic.

In addition, as the region grows and matures, so do its transportation assets as well as the cost of preserving and maintaining them. This expanded infrastructure and the ageing of existing infrastructure requires regular and predictable investments in

Federal gas tax, unchanged at 18.4 cents per gallon since 1993, makes up 1/3 of the total gas tax paid by residents of Washington.

maintenance, preservation, and operations. Much of the region's infrastructure was built many decades ago and over the next three decades will require significant preservation efforts or will need major rehabilitation. Deferring maintenance of transportation facilities can further increase the cost of conserving critical transportation assets.

Revenues

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. A full description of current and potential revenue sources and funding programs available for transportation uses is available in Appendix D of the MTP. This section will provide an overview of the current revenue sources available to fund the transportation system.

Current Transportation Revenue Sources

At the federal level, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was passed in August 2005. Since the passage of Intermodal Surface Transportation Efficiency Act (ISTEA) in 1992, Federal funding programs have allowed 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 current federal transportation act, SAFETEA-LU, continues to be funded through revenues from the Highway Trust Fund and General Fund as well as ethanol tax reforms. Current federal gas tax is 18.4 cents which has been unchanged since 1993.

The State gas tax is the major state revenue source for highway maintenance and arterial construction funding. The base gas tax is 23 cents, however, the State Legislature enacted fuel tax increases in 2003 (the Nickel Package) and 2005 (the Partnership Package at 9.5 cents) which were paired with a fixed list of projects to be constructed over the next 10 to 15 years. After 2017, the set of projects funded by nickel and partnership funds will be completed and future revenue generated by these funds will be dedicated to debt service and will not be available to new projects. Other state funding sources include licenses, permits, and fees as well as a vehicle sales tax. 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.

Local revenue comes from a variety of sources such as property tax for road projects and sales tax for transit projects and operations. Other revenues include moneys from street use permits, gas tax, utility permits, and impact fees. In addition, local governments have authority for a variety of transportation taxing options. Most of these alternatives require voter approval to enact. Local options for transportation funding consist of vehicle license fees, sales tax, and taxes on gas and commercial parking. Some cities in the Puget Sound region have enacted commercial parking taxes. Except for C-TRAN's use of sales tax for transit funding, there are no jurisdictions in the Clark County region that have exercised local funding options.

Transit systems are also funded by fare box proceeds, federal funds and other local funds. Federal revenue sources described above are intended exclusively for highway investment, but also have the flexibility to be used for transit funding.

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, voters approved 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. C-TRAN's 2030 Plan, adopted by the C-TRAN Board in June 2010, identifies an overall sales tax implementation strategy to maintain its core bus and paratransit service and expanded transit service into the future. The initial step in this strategy was in November 2011 when Clark County voters approved an additional 0.2 percent sales tax increase to preserve core bus service and paratransit service. The implementation strategy calls for a total of 0.9 percent sales tax by 2030 to provide service for bus rapid transit, new facilities and additional service to meet demands of a growing population. The cost of light rail transit operations associated with the Columbia River Crossing Project could be an additional 0.1 percent in the sales tax rate.

C-TRAN provided over 300,000 hours of fixed route service in 2010. The 2030 Plan calls for a 35% increase to 408,000 hours.

C-VAN service hours will more than double, increasing from 87,000 in 2010 to 201,000 hours in 2030.

Revenue Assumptions for the MTP

The Finance Plan addresses a twenty-four year period from 2012 to 2035. The estimate of revenues available to fund MTP projects was extrapolated from historical and forecast revenue information for Clark County from the Washington State Department of Transportation Strategic Planning and Finance Division. The Finance Division provided data on state and federal transportation revenues generated in the Clark County region and also made available historic local transportation revenue and expenditure data for Clark County and cities within the County. This information was used to provide a basis for determining federal, state

Transportation expenditures made up 18% of total 2005 household expenditures.

and local revenues likely to be generated for future transportation needs. The adopted C-TRAN 2030 Plan was the basis for determining transit revenue and expenditures out to 2035. This section outlines the assumptions and methodology used for the revenue forecast.

Federal and State Revenues

- The WSDOT Finance Division provided historical and forecast data for federal and state transportation revenues generated by and distributed to Clark County. Historical financial data from 2004 to 2009 and projected revenues out to 2017 were used to estimate future revenue. Variables affecting revenue such as population growth, debt service, fuel costs and improved fuel efficiency of vehicles are factored into the WSDOT forecast methodology.
- Total federal and preexisting state revenue was estimated for a 24-year period from today to 2035. The following approach was applied: 1) calculate total revenue generated by Clark County from 2004 to 2017; 2) determine average annual revenue; 3) multiply by 24-years to estimate total revenue generated by Clark County by 2035.
- While federal and preexisting state gas tax went to 2035, the revenue generated by the Nickel Package (5 cents/gallon) and the Partnership Package (9.5 cents/gallon) were only continued to 2017. After 2017, it was assumed that revenue generated by Nickel and Partnership funds would go to debt service and would not be available for new projects.
- The state revenue gas tax forecast assumes the equivalent of a new ten cent/gallon gas tax implemented over a six year period beginning in 2015. The increase would start with a five cent gas tax in 2015 and one penny per year after that for the next five years.
- The federal revenue forecast assumes continuation of the federal authorization (SAFETEA-LU) at current levels.
- The total estimated costs for system preservation and maintenance was subtracted from the total revenue available for construction. Historical system preservation and maintenance cost was provided by WSDOT's Finance Division and the Southwest WSDOT Region.
- The revenue estimate also accounted for the total revenue generated in Clark County versus the amount of revenue received. Recent trends have shown that Clark County has received from 81% to 88% of the state and federal transportation revenues generated. Given this fact, a return on investment factor of 85% was applied to total revenue to estimate federal and state revenue available to Clark County.
- The last step in estimating total available revenue was to account for projects in the MTP that are not yet built but that have funds already programmed for their construction. These projects would likely be constructed over the next

seven years and amount to $471 million in costs, therefore this same amount was subtracted from future revenues available to the MTP.

Local Revenue

- The WSDOT Finance Division provided 2001 to 2009 historical transportation revenue data for Clark County and the cities in Clark County. Revenue categories include property and sales tax, general fund dollars, special assessments, and other state funds. The local revenue data from WSDOT also includes historical expenditures that account for debt service, preservation and maintenance, and construction.
- Future local revenue is estimated following a similar methodology as used to estimate the federal and state revenues. Once the annual average revenue is estimated, it is multiplied by 24 to reach a local revenue total out to 2035. Debt service, preservation and maintenance, and traffic policing costs are subtracted from the total to reach the amount of local revenue available for MTP projects.

Transit Revenue and Costs

This section addresses both revenue and costs for transit that were derived from C-TRAN's adopted 2030 Plan.

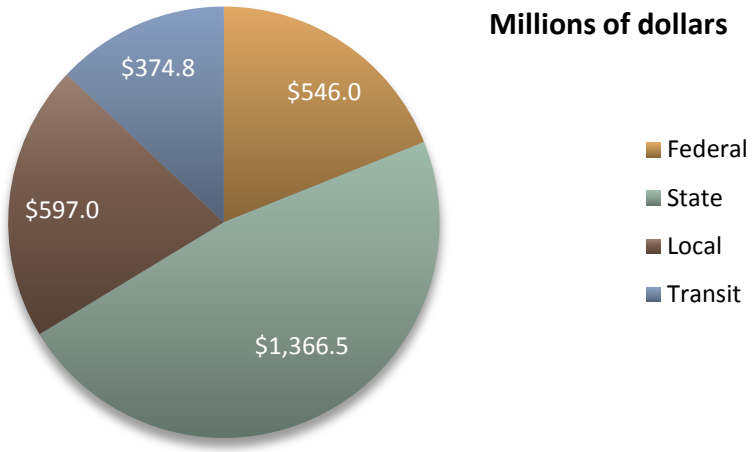
- Transit revenue and cost estimates were based on C-TRAN's adopted 2030 Plan. Costs and revenues were expanded to 2035 to reflect five more years of revenue and additional bus replacement, capital maintenance and other capital repair and replacement costs. Transit capital costs include all C-TRAN capital projects except for the CRC project. The key capital projects include Fourth Plain Bus Rapid Transit, Fisher's Landing expansion, new park and ride facilities at 18th Street in the I-205 corridor and at 219th Street in the I-5 corridor, bus replacement, and a new maintenance facility.
- As required by the 2030 plan, transit revenues have been matched to capital expenditures. C-TRAN's revenue estimate assumes that over half of the capital revenue is from federal sources while the rest is from local sales tax.
- Total revenue available for capital expenditures is $374,768,000.
- The full 2030 Plan calls for an additional two-tenths of one percent over current levels or nine-tenths of one percent.

The annual cost to own a vehicle in 2007 was $8,400. Of that amount, 80% was for payments, finance charges and insurance. Only 4% was for federal, state gas tax and other transportation fees.

MTP Revenue Estimate

Based on the assumptions described above, the following chart presents a summary of potential transportation revenues that could be available for projects on the designated regional system through 2035.

Figure 4-1: Potential Transportation Revenues through 2035



A total of $2.9 billion is projected from federal, state, local and transit revenue sources over the next 24 years.

As noted earlier, not all the revenue generated in Clark County is returned to the County. Revenue generated compared to revenue received is referred to as return on investment (ROI). This forecast assumed an ROI of 85%, however, the previous MTP showed an ROI of 81%. An ROI of 81%, for example, would reduce the federal and state revenue to Clark County by $123 million to $2.76 billion.

Cost Assumptions for the MTP

The costs of improvements on the designated regional transportation system are the focus of this section. Capacity and roadway improvement costs and capital costs for the transit system are addressed in the Finance Plan. Costs for pedestrian and bicycle projects as well as costs for Intelligent Transportation System, Transportation System Management improvements and Transportation Demand Management are also included. 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.

The cost of a gallon of gas:

9% distribution and marketing

19% refining

19% taxes

53% crude oil

- MTP project cost estimates were taken from WSDOT's *2007-2026 Highway System Plan* and local agencies' and jurisdictions' Comprehensive Growth Management Capital Facilities Plans and from Transportation Improvement Programs and development plans for Clark County and the cities in the County.

- A variety of adopted reports were used to compile the costs for the following modal elements: Bicycle and Pedestrian, *Clark County Bicycle and Pedestrian Master Plan*; Transportation Demand Management, *Clark County Commute Trip Reduction Plan*; and Transportation Systems Management and Operations (TSMO), *Regional TSMO Plan for Southwest Washington*.

Full MTP System Cost

The full project list for the MTP includes the projects that are on the designated regional transportation system as well as local arterial projects that are not on the designated system. The table below provides a cost estimate for all of the modal elements of the MTP system (both regionally-designated and local). The subtotal line of the table sums the total capital costs for the MTP's regional system while the total cost line adds in local roadway projects that are not already accounted for on the designated regional system. These local roadway projects make up more than 30% of total costs for all roadway projects and more than 25% if all modes are considered. (The full list of projects for both designated regional transportation system projects and local projects is shown in Appendix B.)

Table 4-1: Full MTP system costs

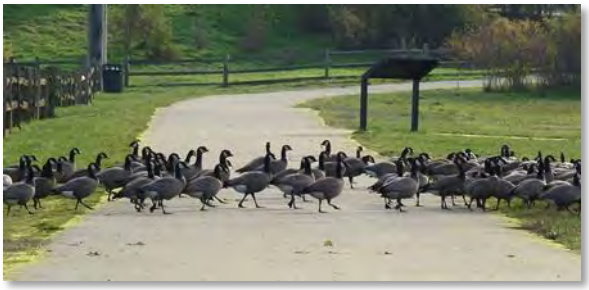
Roadway	$2,282,649,200
Transit	$374,768,000
Bike/Pedestrian	$92,400,000
TDM	$48,000,000
TSMO	$45,800,000
Subtotal (Designated MTP System)	**$2,843,617,200**
Local Roads	$1,073,703,930
Total	**$3,917,321,130**

The MTP includes more than $3.9 billion in improvements for all transportation modes and facilities. More than $1 billion dollars of that cost is for local roadways.

MTP Designated System Costs

While the previous table shows the total cost of all the projects in the MTP the "fiscal constraint" test focuses only on those projects on the regionally designated transportation system. "Fiscally constrained" test means that there should be a reasonable expectation revenues will be available to provide for the list of projects.

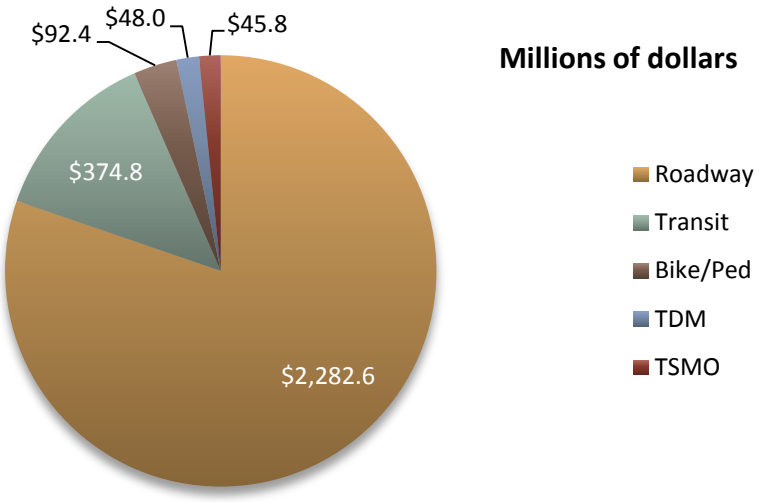
Capital costs of proposed improvements to the designated regional transportation system are addressed in this section. In a rapidly growing region such as Clark County, there is large demand for system expansion. The total cost of projects on the designated regional system is $2.85 billion over a 24-year period. This cost includes highway system expansion, transit capital and other modal elements. It does not include $471 million in funding already secured for committed projects in the



MTP. The MTP Financial Plan needs to assure that $2.85 billion in revenue can be reasonably assumed to be available to implement these projects and strategies on the regionally designated transportation system.

The following chart summarizes, by mode, capital cost for the regionally designated system.

Figure 4-2: Capital costs by mode

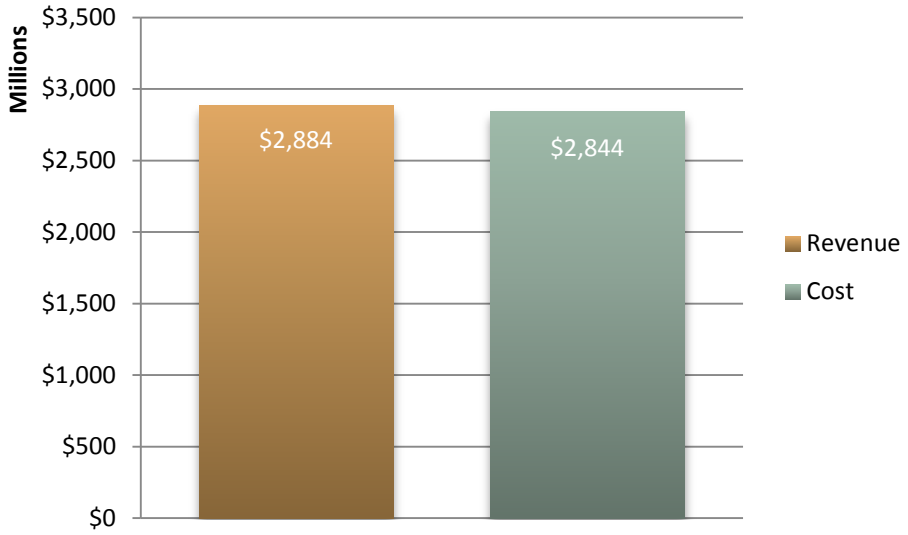


Project costs for all transportation improvement categories are $2.85 billion out to 2035, including transportation demand management and transportation system management and operations.

Balancing Revenues and Costs

The "fiscally constrained" test focuses on assuring that there is a reasonable expectation revenues will be available to provide for the list of projects identified on the designated regional transportation system. Regional projects include all state transportation facilities, principal arterials and some minor arterials. Local projects (the remainder of the minor arterial system, collectors and local roads) are not included in the MTP fiscal analysis. Based on the revenue assumptions described in this chapter, the MTP revenue forecast is proportionate with project costs identified on the designed system. In comparing revenues available to Clark County to the estimated cost of regional transportation system improvements, it appears that the MTP is fiscally constrained. There are sufficient funds to fulfill the identified regional transportation system elements.

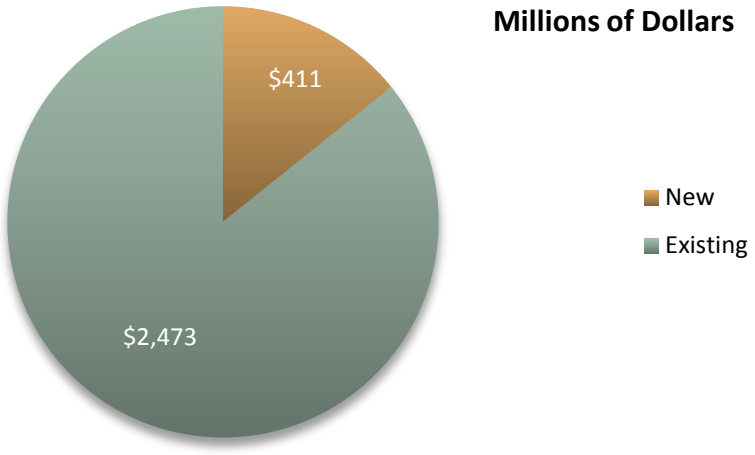
Figure 4-3: Potential revenues and estimated costs



A summary comparing potential transportation revenues and capital costs for the regional transportation system over the next 24 years

This forecast recognizes the need for new transportation revenue to fund projects in the MTP. New revenue consists of the equivalent to a 10 cent gas tax. This funding scenario would begin with a nickel in 2015 with a penny per year increase over the next five years to the full 10 cent tax forecast out to 2035. The new revenue equivalent could be manifested through several different funding strategies. The WSDOT Finance Division is analyzing a wide array of potential options being considered for new state transportation revenue including a new gas tax, gas tax linked to inflation, sales tax on gas, mileage based fees, and tolls.

Figure 4-4: Projected Revenues



Projected transportation revenues over the next 24 years showing both existing and new revenue needed to fund the regionally designated transportation system.

However, it should be pointed out that financial analysis for transportation needs over twenty-plus years into the future is challenging. Total transportation revenues for the region need to fund both the regional transportation system that is the focus of this chapter as well as fund the local transportation system. Another uncertainty is the inflation factor. 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. Year of expenditure costs are also considered in the metropolitan transportation planning process and are documented in Appendix E.

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.

System Maintenance and Preservation

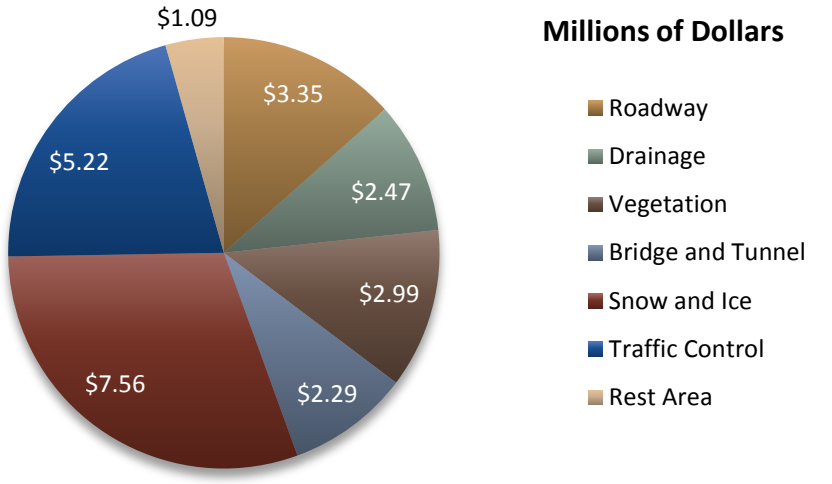
Maintenance and preservation costs for state and local agencies are being estimated based on historical data from the WSDOT Finance Division and the Southwest Region.

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, $39.4 million annually to maintain and operate the roadway system in Clark County.

In 2007, WSDOT reported on maintenance costs for the state highway system. The WSDOT analysis showed that in 2007 State highway maintenance costs about $27.97 per registered vehicle per year.

The following chart shows the maintenance costs by category.

Figure 4-5: Maintenance costs by category



In 2007, the cost to maintain the state highway system was $24.97 per registered vehicle. More than half that cost (52%) was for traffic control and snow and ice removal.

Over the last 10 years, Clark County and the cities in the region have spent more than 35% of their local transportation revenue on preservation and maintenance. Much of the region's infrastructure was built many decades ago and will require significant efforts in preservation, or will need to be replaced over the next three decades. As the transportation system ages and grows over the 24-year period, transportation agencies anticipate that maintenance and preservation needs may require a greater share of transportation revenues in the future due to expanded road miles to maintain as well as the costs of deferred maintenance. Consequently, the proportion of transportation dollars needed to preserve and maintain infrastructure may increase and could require tradeoffs between making capital investment and preserving system integrity.

The estimated annual cost of operating C-TRAN's existing service is about $42.3m which is expected to rise as C-TRAN increases the size of bus fleet and expands its transit facilities in the future. C-TRAN's 2030 Plan, adopted by the C-TRAN Board of Directors in June 2010, preserves existing bus service and looks to future needs by: adding new bus routes; adding frequency on existing bus routes; constructing bus rapid transit in the Fourth Plain Corridor; and expanding paratransit service to meet growing demand. Fixed route service hours are projected to increase by 35% to 408,000 hours. Additionally, as the Clark County population ages, the demand for paratransit service will increase, resulting in a greater portion of available resources

Maintenance can cost 4 to 8 times more when deferred.

supporting this service. Paratransit service hours, for example, are projected to more than double, increasing from 87,000 annual service hours in 2010 to 201,000 hours in 2030.

The following table summarizes preservation and maintenance costs for local and state facilities based on historical expenditures over the last 10 years. Annual transit information is from C-TRAN's 2010 Annual Financial Report. 24-year data is from C-TRAN's 2030 Plan.

Table 4-2: Estimated Preservation and Maintenance Costs

Agency	Annual	MTP 24-years
WSDOT	$9,920,808	$238,099,399
Clark County and Cities	$29,571,880	$709,725,111
Total Roadway	**$39,492,688**	**$947,824,510**
Transit Operations	$42,294,515	$2,244,346,000

Source: WSDOT, C-TRAN

Cost of deferred maintenance

Transportation agencies are responsible for keeping the street, road, and highway system in a state of good repair through regular maintenance. These activities include sealing cracks, repairing pavement, cleaning and repairing drains, fixing signals, and sweeping streets. Major repair, rehabilitation, and reconstruction activities include repaving, reconstructing subgrade and drainage.

Agencies monitor roadway conditions and identify roadway maintenance needs through their regular pavement management systems. The timely preservation of roadway infrastructure can help assure maximizing pavement life and minimizing preservation and maintenance costs. WSDOT has estimated the cost of deferred maintenance drives up long term cost, shortens the life cycle for rehabilitation, and can cost 4 to 8 times more if delayed until pavement is in poor condition.

The Sacramento Council of Governments (SACOG) has estimated that the cost of routine maintenance, if done on a regular basis, can cost up to $20,000 per mile. Regular heavy maintenance, such as a slurry or chip seal coat can range between $50,000 and $80,000 per mile if done on a regular seven year cycle.

CRC will replace the Interstate Bridge, improve five miles of I-5, extend light rail into downtown Vancouver, and improve bicycle and pedestrian facilities.

Similarly, SACOG has also estimated that pavement rehabilitation for well-maintained roads can cost $300,000 to $400,000 per mile, while reconstruction of poorly-maintained roads can cost as much as $2 million per mile.

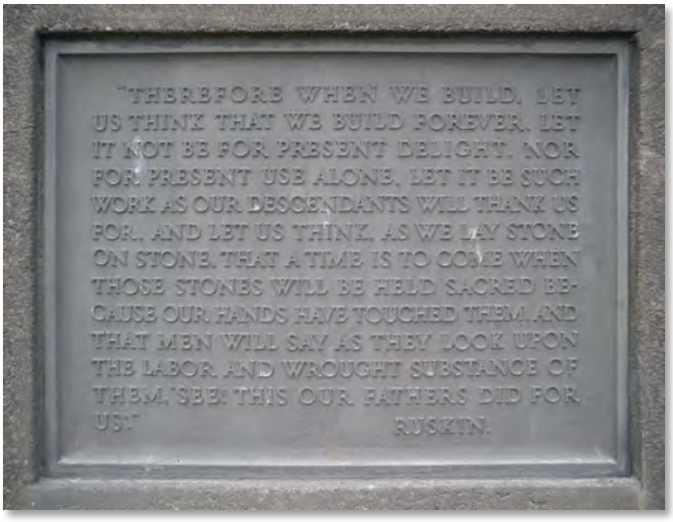
Consistency between MTP and State and Local Plans

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 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) 2012-2015* are used as the basis for the MTP's financial plan. Both state and local transportation planning processes are required to exercise fiscal responsibility in preparing transportation finance plans. The state's Growth Management Act requires that local jurisdictions prepare a Capital Facilities Plan (CFP) element that includes transportation projects.

Columbia River Crossing Project 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. Each of these sponsoring agencies is responsible for approving all or part of the project to be built. WSDOT and ODOT are leading the preliminary highway design and project management. TriMet and C-TRAN are leading the preliminary transit design and would operate the transit elements of the project. Metro and RTC are the Metropolitan Planning Organizations (MPOs) for the region and maintain the regional and metropolitan transportation plans that include the LPA for the CRC project. The Cities of Portland and Vancouver



Inscription on plaque at north end of original 1917 Columbia River (now Interstate) bridge.

have specific permitting authority over some elements of the project

The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) are the lead federal agencies for this study. Both agencies must ensure that the National Environmental Policy Act (NEPA) process is properly conducted and completed, including the publication of this Final Environmental Impact Statement (FEIS), before they provide funding or approval to construct the project. After the NEPA process is complete, FTA and FHWA will sign a Record of Decision (ROD) that will identify the selected alternative and will describe all measures needed to mitigate unavoidable environmental effects, as well as a monitoring and enforcement program to ensure that these measures are carried out effectively.

The CRC project responds to six key problems identified in the project purpose and need: growing travel demand and congestion; impaired freight movement; limited public transportation operation, connectivity, and reliability; safety and vulnerability to incidents; substandard bicycle and pedestrian facilities; and seismic vulnerability.

The LPA includes a variety of transportation improvements throughout the 5-mile project corridor including: a new river crossing over the Columbia River and I-5 highway improvements with reconstruction of seven interchanges, and extension of light rail from the Expo Center in Portland to Clark College in Vancouver. Associated transit improvements, include transit stations, park and rides, bus route changes, and expansion of a light rail transit maintenance facility and bicycle and pedestrian improvements throughout the project corridor.

The proposed funding sources and their assumed contributions to the finance plan represent the starting point for an action plan to secure funding for the project. The CRC project has been identified as a Project of National and Regional Significance (PNRS) and anticipates discretionary highway funds from the PNRS Program or other discretionary highway funds.

The finance plan also anticipates securing FTA Section 5309

New Starts funds to pay for the final design and construction costs of the light rail element of the CRC project. In addition, *Section 173 of the 2010 Consolidated Appropriations Act* requires that USDOT take into account the entire funding plan, including local highway revenues, in rating the light rail transit component of the CRC project for New Starts funding. This means that the local match requirement for New Starts funds can be met by the entirety of local funding included in the integrated finance plan. The CRC project will be submitting an application to the FTA for entry into Final Design and eventually for a full funding grant agreement. Through this ratings process, the high capacity component of the CRC project has received a medium-high rating from the FTA which awards transit capital construction grants on a competitive basis.

WSDOT and ODOT collectively committed about $147 million in state funds to the CRC project to pay for preliminary engineering and subsequent project development activities. The funding plan seeks additional funds from ODOT and WSDOT. The actual package of formula federal funds, taxes, fees, and/or other revenue sources that may be used to provide the additional ODOT/WSDOT funds must be developed through future state legislative processes and/or allocations of existing funds. Furthermore, 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.

Tolling is another unique source of funding and is a necessary tool to help finance the CRC project. The toll rate would vary by time of day according to a set schedule. In addition to tolls as a funding source for construction, toll rate has a dual purpose in that it will also help manage congestion through the use of variable pricing which offers a lower toll for drivers who travel during non-peak, less busy hours of the day. The exact cost of the toll will be determined based on the cost of the approved project, the amount of revenue provided by other sources, and the type of activities funded by the toll. Actual toll amounts will be set by the Oregon and Washington transportation commissions and legislatures.

The CRC financial analysis in the FEIS includes cost and revenue forecasts for the LPA and LPA with highway phasing project option. The LPA with Highway Phasing option would build most of the LPA in the first phase, but defers the Marine Drive flyover ramp and braided ramps at Victory Boulevard. Estimated costs and revenues for the LPA with Highway Phasing are shown on the following tables.

Table 4-3: CRC Cost Estimate, LPA with Highway Phasing

	Medium [a]	High [b]
Transit [c]	$856.3	$944.0
Highway	$2,301.0	$2,563.8
Total	**$3,157.3**	**$3,507.8**

In Year of Expenditure, Millions

Source: Columbia River Crossing CEVP Final Report, August 2011.

[a] Medium cost estimate assumes the 60% confidence cost estimate.

[b] High cost estimate assumes the 90% confidence cost estimate.

[c] The transit elements of the LPA and LPA with highway phasing include interim borrowing cost based on the assumed availability of New Starts Funds.

Table 4-4: CRC Finance Plan, LPA with Highway Phasing

Revenue Source	Medium	High
Federal Discretionary Highway	$400.0	$400.0
ODOT/WSDOT: Existing	$147.3	$147.3
ODOT/WSDOT: Additional	$900.0	$900.0
Toll Bond and Loan Proceeds [a]	$901.3	$962.4 to $1,458.4
Section 5309 New Starts Funds [b]	$808.7	$850.0
Total Revenues	**$3,157.3**	**$3,507.8**

In Year of Expenditure, Millions

[a] Revenue assumptions for the high cost estimate include post-completion toll bond proceeds, residual toll revenues, and pre-completion toll revenues. All finance plan scenarios are based the Low forecast of toll revenues.

[b] The assumed amount of New Starts funding and target dates scheduled are not guaranteed by FTA; funding amount and schedule will be negotiated as part of preparing the FFGA.

Emerging Issues to Track

Implementation of projects contained in the 2011 MTP relies on maintaining historical revenue amounts and meeting the new revenue expectations of the financial strategy. Success on this front requires addressing an array of underlying issues facing future transportation finance. These emerging issues in transportation finance include the following:

- As stated previously, the MTP cost and revenue forecast indicates that the equivalent of a 10 cent/gallon gas tax is needed for the MTP to meet the federally-required fiscal constraint test. While it meets the "reasonable" test of federal fiscal constraint provisions to anticipate these additional revenues, needless to say there are many factors that make long range revenue forecast uncertain.
- The MTP's federal transportation revenue forecast is based on the current funding levels authorized under SAFETEA-LU being continued into the future.

However, the current debate in Congress points to reduced federal funding levels in the next 6-year federal Transportation Authorization Act.

- The amount of federal and state revenues available to Clark County is affected by the return on investment of revenue generated. Recent trends have seen a return on investment from 81% to 88%.
- Gas tax revenue has been, and is expected to be, the main revenue source for future transportation system improvements. However, there are a host of factors that affect the amount of gas tax revenues produced. For example, the gas tax is a flat tax that does not keep pace with inflation. More fuel efficient vehicles reduce the amount of gas tax revenues generated. The MTP revenue forecast accounts for the current federal fuel efficiency standard of 27.5 mpg; it does not account for the recent announcement by the Obama Administration that would increase the fleet fuel efficiency standard to 54.5 mpg by 2025.
- In light of this, alternate approaches to collecting user fees merit consideration. In addition to the regular per gallon gas tax, other revenue concepts for examination include: gas tax linked to inflation, sales tax on gas, mileage based fees, and tolls. Technical advances have revolutionized road user fee collection approaches and may offer a future replacement alternative for fuel taxes.
- Capturing future value in order to make investments today is a significant issue in transportation planning and investment. Historically, transportation systems in the U.S. have been financed on a pay-as-you-go basis, however, funding infrastructure with bonds also limits future flexibility to respond to changing conditions by obligating future transportation revenue for debt service.
- Project preservation and maintenance costs are based on historical data however, transportation agencies anticipate that maintenance and preservation needs may require a greater share of transportation revenues in the future due to expanded road miles to maintain and deferred maintenance.

Chapter 5: Regional Programs and Projects

Development of a Balanced Regional Transportation System

The transportation solutions include both projects and programs that will collectively support the land use goals established in local Comprehensive Growth Management Plans.

After setting a vision for this region's transportation future and assessing forecast future travel demands and transportation system performance, this chapter summarizes the range of transportation programs and transportation projects needed to meet the transportation needs of people and freight in the twenty-plus year future.

Integration of land use and transportation is recognized. The transportation solutions include both projects and programs that will collectively support the land use goals established in local Comprehensive Growth Management Plans in this Clark County region. The mix of transportation programs and projects are also identified to reflect the MTP's transportation goals; Economy, Safety and Security, Accessibility and Mobility, Management and Operations, Environment, Vision and Values, Finance and Preservation (refer to Chapter 1).

There are transportation strategy solutions 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. There are solutions requiring construction of capital projects 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, plans to make for a safer regional transportation system for mobility of people and freight. All transportation modes are to be addressed with transportation options and choices made available to our diverse community's residents and businesses.

This Chapter considers project and programs as well as the decision-making processes that combine to achieve the MTP's vision.

Maintenance and Preservation is important to protect the heavy investments already made in the transportation system.

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 maintenance being given high priority in the programming of transportation funds and reports on funding of these needs in the MTP's Financial Plan chapter 4. The *MTP* supports the routine, regularly-scheduled and necessary maintenance work identified by local jurisdictions. At the statewide level, maintenance, preservation and safety are primary policy considerations in the Washington Transportation Plan, WTP 2030 (Washington State Transportation Commission, December 2010. The issues of maintenance and preservation are also addressed in WSDOT's Highway System Plan.

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. System maintenance and preservation is addressed in Chapter 4 of this Plan; the Finance Plan chapter.

Bridges

With the many rivers and streams in the region, bridge crossings are a vital part of the transportation infrastructure. Bridge maintenance and preservation needs are identified through the Washington State Bridge Inventory System (WSBIS) kept current by WSDOT's Bridge and Structures Office. WSDOT's Highway System Plan, 2007-2026, address bridges and structure and has a specific chapter on Bridge Preservation. 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 North Fork of the 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. The I-5 bridge crossing the East Fork of the Lewis River is currently on the list of structurally-deficient bridges. This bridge has a weight restriction that affects heavy trucks. Clark County maintains a list of bridges with height and weight restrictions in the County and periodically publishes a Bridge Report.

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. The WSDOT "Strategic Highway Safety Plan: Target Zero" (SHSP; updated August 2010) 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. RTC completed a Safety Management Assessment for Clark County in April 2011 as a tool to help identify the safety needs for the region. This report introduces the general purpose and requirements for safety planning, identifies priority factors involved in traffic fatalities, and identifies high collision intersection locations and planned improvements.

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.

Approximately 55 tons of freight per person was moved in the USA in 2010

Economic Development and Freight Transportation

Economic development is linked to prevailing market conditions as well as policies that can spur economic development, such as provision of infrastructure to support new businesses. 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

criterion for prioritizing MTP projects. Economic development is also a significant focus of the updated Comprehensive Growth Management Plan for Clark County (September 2007) and the Board continues its commitment to have transportation system development be supportive of economic development in the region.

Freight Transportation

Approximately 55 tons of freight per person was moved in the USA in 2010 emphasizing the importance of freight transportation. At the statewide level, freight transportation is recognized as a vital component for Washington's economic health. The WSDOT Freight Systems Division supports Washington's freight systems by providing strategic planning for all state freight investments and directly managing the state's rail programs. Washington's Transportation Plan or WTP (Washington State Transportation Commission; December 2010) addresses freight transportation needs. As a trade-dependent state, Washington relies heavily on an efficient freight transportation network. Forty-six percent of Washington jobs are in freight-dependent industries. Goods are shipped into, out of, and around Washington by truck, rail, air, pipeline, and water.

The WTP addresses 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 every day. 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.

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, the Clark County Freight Mobility Study was carried out in 2009/2010. The Clark County Freight Mobility Study was initiated to provide an understanding of the key elements of freight movement and to explain why freight and goods movement is important to Clark County's economy and employment. The Study was viewed as a first effort to describe and define the regional freight transportation system with significance for supporting industrial lands and jobs in the County. Information and data was collected, inventoried and analyzed and a good foundation laid for continuing our consideration of freight transportation as part of the metropolitan transportation planning process required of RTC as part of the local comprehensive planning process and as part of planning efforts of local Port districts. Work included preparation of a series of task reports to evaluate freight traffic movement, identify transportation system deficiencies related to freight and to point the way to identify future infrastructure needs as well as policy issues to support freight mobility in Clark County. The Clark County Freight Mobility Study resulted in a series of task reports:

- Global Trade and Transportation Trends
- Current and Expected Economic Conditions and Economic Impact of Freight Delay
- Outreach to Shippers and Documentation of Representative Supply Chains: Interview Summary
- Existing and Future Truck Movements
- Existing and Future Rail Movements
- Vehicle Classification Counts – Best Practices

- Characteristics of Truck Movements
- Summary of Existing Design Guidelines Relating to Truck Mobility
- Basic Principles of Truck Mobility
- Future Actions Items and Priority Freight Projects
- Clark County Freight Mobility Study Summary Report

The Clark County Freight Mobility Study Summary Report provides an overview of the work conducted for the Study and its key recommendations as outlined in Table 5-1.

Table 5-1: Summary of Clark County Freight Mobility Study Strategies and Future Action Items

Process	Strategies to Support Freight Transportation
Regional Freight System and Economic Development	Invest in freight mobility to support industrial development goals and job creation
Identify Needs and Projects	Support road improvements that benefit freight mobility Support rail improvements
Design	Develop model design guidelines for complete streets and freight Plan and design for local truck access to Clark County business sectors
Land Use and Transportation Integration	Land use and transportation coordination: protect viability of industrial lands and livability of residents Manage access to industrial areas
Funding	Position projects for funding

Figures 5-1 and 5-2 are maps showing industrial and commercial lands in Clark County and the transportation system that connects these lands to their markets. Figure 5-1 shows the MTP's Designated Regional Transportation System with Comprehensive Plan designated industrial and commercial lands in the County. These are lands which need to be served by freight transportation. Figure 5-2 shows WSDOT's Freight and Goods Transportation System (FGTS) with the Clark County designated industrial and commercial lands.

Freight data will continue to be addressed as part of RTC's Transportation System Management and Operations and Congestion Management Processes as well as through local traffic management efforts.

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 participate in Bi-state regional freight transportation planning efforts such as the Regional Freight and Goods Movement Task Force convened by Metro to address regional freight transportation system needs. Metro published its Regional Freight Plan 2035 in June 2010 as part of the most recent Regional Transportation Plan update. Clark County's economy is integrally linked with that of the larger Vancouver/Portland metropolitan area.

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.

Figure 5-1: MTP's Designation Transportation System and Clark County Commercial and Industrial Lands

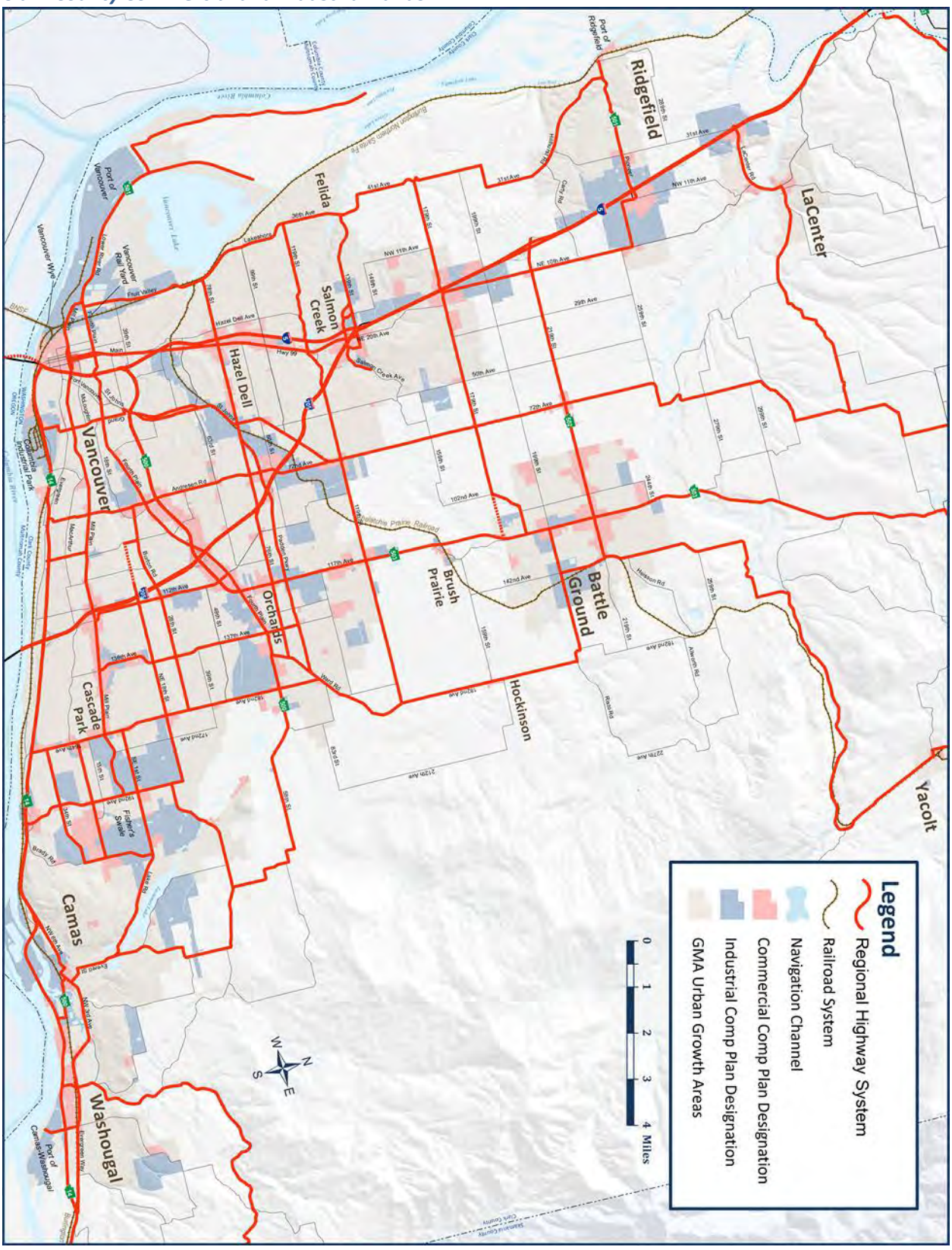
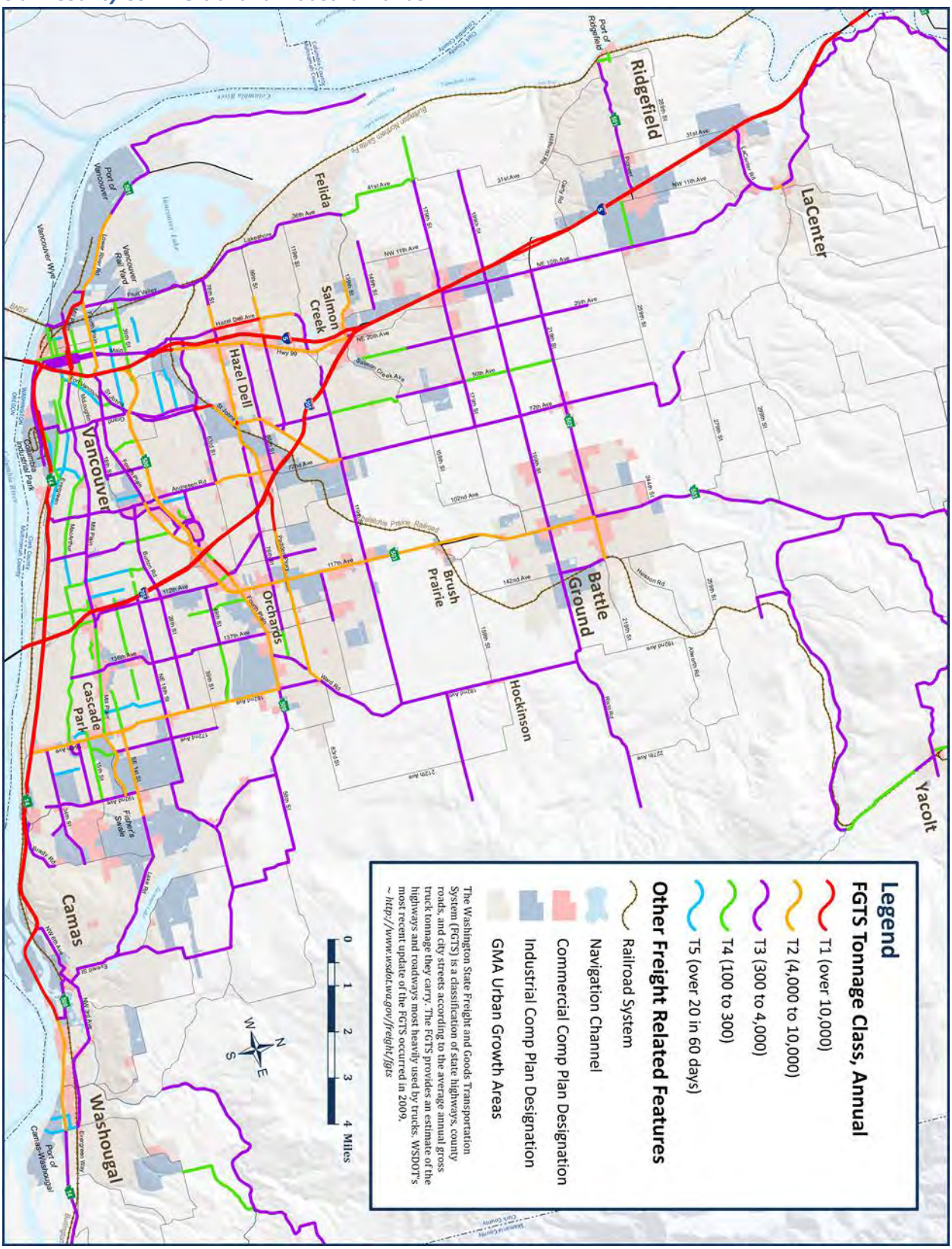


Figure 5-2: WSDOT Freight & Goods Transportation System and Clark County Commercial and Industrial Lands



The total freight tonnage moved by the rail system in Washington State is expected to increase by about 2 to 3 % annually over the next 20 years.

As reported in Chapter 3, 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 are addressed in Washington State Department of Transportation's (WSDOT's) Washington State 2010-2030 Freight Rail Plan (WSDOT State Rail and Marine Office, December 2009). The Plan meets both federal requirements (Public Law 110-432, Division B) and the state requirements of RCW 47.76.220 and serves as a blueprint for investment in the rail system. The Study notes that Washington State requires a robust rail system that will provide effective and efficient transportation critical to maintaining our economy, environment and quality of life. The Plan is designed to support Washington's economic competitiveness and economic viability, preserve the ability of the state's freight rail system to efficiently serve the needs of its customers, facilitate freight system capacity increases to improve mobility and reduce congestion and take advantage of freight rail's modal energy efficiency to reduce the negative environmental impact of freight movement in Washington.

The total freight tonnage moved by the rail system in Washington State is expected to increase by about 2 to 3 % annually over the next 20 years which will mean many more rail lines operating at or above their practical capacity.

The "Portland and Vancouver International and Domestic Trade Capacity Analysis" (Port of Portland et al; 2006) also 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 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 require further study to fully identify. The Vancouver Rail Project, to add new Vancouver Yard rail bypass tracks, funded as one of the state "nickel package" projects, is scheduled for completion in 2013 and the 39th Street Bridge over the rail tracks is complete. 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 continues to plan for and implement the West Vancouver Freight Access Project to support the Port's development, improve freight rail access to the Port and open up the Port's Gateway area. 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, 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 so that sizeable ocean-going vessels are not precluded from use of the Port. In November 2010, the final portion of the 110 mile lower Columbia River navigation channel from the Port of Vancouver to the mouth of the Columbia River was deepened to 43 feet. This deeper channel allows larger ships to import and export cargo more efficiently that benefits trade in the region. 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, the Clark County region relies on access to the Portland International Airport in Oregon for air freight needs.

Active Transportation: Non-Motorized Modes

Walking and cycling are healthy transportation modes.

The Metropolitan Transportation Plan supports the development of pedestrian and bikeway facilities to both access the transit system and for use as healthy, alternative transportation modes. Local jurisdictions program projects to provide for better connectivity in the pedestrian and bicycling facilities throughout Clark County. Local transportation elements of the Comprehensive Plans for the County and each of the cities include recommendations for active transportation modes.

Reduced reliance on automobiles is dependent on this region developing adequate sidewalks and bikeways to access activity centers and to allow people to easily get to the C-TRAN transit system. The development of non-motorized transportation modes is a strategy that can maximize the capacity of the existing transportation system. 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.

Sidewalk and bicycle path/lane projects are most appropriately identified at the local level. Pedestrian and bicycling needs are identified through state and local planning programs including recommendations from the Clark Communities Bicycle and Pedestrian 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. If pedestrian and bicycle projects are forwarded to compete for regional funding, such as federal Surface Transportation Program Enhancement funds, 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 transportation system balance. There is additional description of walking and bicycling modes in Appendix B of the MTP.

In 2005, the Washington State legislature enacted amendments to the Growth Management Act to require new elements in local comprehensive plans. The 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.

Washington State Department of Transportation addresses state interest in bicycle and pedestrian walkways in Washington's Bicycle and Pedestrian Plan (WSDOT, 2007). The State's goal is to increase bicycling and walking while increasing safety for cyclists and pedestrians.

Clark County Bicycle and Pedestrian Master Plan

In November 2010, the Board of Clark County Commissioners approved the Clark County Bicycle and Pedestrian Master Plan to make it safer and more convenient for people to get to major destinations in our region on foot or by bicycle. The plan identifies ways to improve the transportation network by integrating existing

sidewalks, bike lanes and trails. The Plan points out this will require design standards that work well with Clark County's transportation network for motor vehicles. The Plan's Executive Summary outlines this 20-year vision and implementation strategy that seeks to increase the number of people walking and bicycling while improving safety throughout the County. The Plan points out that:

- Bicycling and walking are good for the economy
- Walkable, bike able neighborhoods are more livable and attractive
- Walking and bicycling increase spending on local goods and services
- Walking and bicycling are good for public health
- More people walking and bicycling increases safety for others

However, there are challenges in implementing the Bicycle and Pedestrian Master Plan because of interstate freeway barriers, discontinuous networks, topography and funding. A list of priority pedestrian and cycling infrastructure projects are identified in the Bicycle and Pedestrian Master Plan.

Clark Communities Bicycle and Pedestrian Advisory Committee

The Clark Communities Bicycle and Pedestrian Advisory Committee was formed to continue planning for bicycle and pedestrian system improvements.

Regional Trail and Bikeway System Plan

The Clark County Regional Trail & Bikeway Systems Plan was approved in 2006 and is intended to guide development and design of an interconnected trail and bikeway system within Cark County. The Plan provides recommended improvement to the existing and proposed regional trail corridors. The 2006 Plan encompasses 16 regional trails. 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: Lewis & Clark Discovery Greenway, Chelatchie Prairie Railroad, Lake to Lake, Salmon Creek Greenway, Padden Parkway, I-5 Corridor, I-205 Corridor, East Fork of the Lewis River, Battle Ground/Fisher's Landing, Washougal River Corridor, North Fork of the Lewis River Greenway, Whipple Creek Greenway, North/South Powerline, East Powerline, Livingston Mountain Dole Valley, Camp Bonneville and Lower Columbia River Water

Walking or cycling to school is an option when the route is safe.

Trail. The Plan seeks to develop a seamless trail and bikeway system throughout the region. As such, the developed and planned trail and bikeway facilities were reviewed 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.

The Intertwine works on bi-state planning for regional trails. Intertwine publishes the Portland-Vancouver Bi-State Regional Trails System Plan.

Access to Transit by Walking and Bicycling

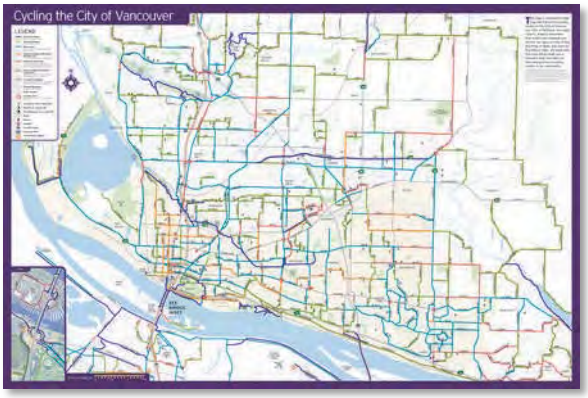
Also of regional significance is improvement of pedestrian and bicycle facilities that will improve access to transit facilities. There are many areas where coordinated efforts to improve pedestrian facilities will improve access to transit. Bike racks are already provided on C-TRAN fixed-route buses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

Bicycle and Pedestrian System Design Standards

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

Safe Routes to School

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.



Bicycle and Pedestrian System: Information

Links to bicycling maps are available through the City of Vancouver's website. The Clark County Geographic Information System (GIS) section includes an information layer for bicycling on its "Clark County Maps Online."

In October of 2005, the City of Vancouver was awarded a Bronze level Bicycle Friendly Community designation by the League of American Bicyclists.

Transportation Demand Management (TDM)

TDM is about reducing auto trips, shortening some, eliminating others and making our transportation system more efficient. 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. There are numerous TDM strategies that can be put into place to increase transportation system efficiencies. These strategies include:

- Education to ensure transport agencies, professionals and the public consider and understand TDM
- Marketing to provide public information and encouragement programs
- Employee commute trip reduction programs, such as Commute Trip Reduction
- Transportation Management Associations (TMAs) to provide trip reduction services in commercial or employment centers
- Special transport services for efficient transportation to special events
- Financial planning to recognize TDM competes with capacity expansion in terms of cost-effectiveness
- Transportation allowance for commuters rather than free parking
- Maximize efficiency and effectiveness of transit services
- Park and Rides at urban-fringe transit stops
- Vanpool programs
- Rideshare marketing and rideshare matching
- High Occupancy Vehicle lane preference for transit and rideshare vehicles
- Free transit zones in commercial centers
- Bicycle improvements, both planning and facilities
- Bike lockers at transit stops, bike racks on transit vehicles
- Telecommuting from home to avoid commute trips
- Alternative work hours either through flex time or alternative work weeks (such as 4, 10-hour days)
- Guaranteed ride home programs to provide a limited number of free rides home for transit and rideshare commuters

- Address security concerns of rideshare, transit, cycle and pedestrian commuters
- Parking pricing for users
- Pricing reforms, such as full cost pricing, to encourage efficient transport
- Road pricing such as road tolls and congestion pricing
- Mileage fees per mile, such as charges for road use and/or distance-based vehicle insurance and registration fees
- Fuel tax increase
- Vehicle restrictions in specific areas
- Cash out parking, the cash equivalent of parking subsidies, provided to employees who do not drive
- Reduce parking requirements in zoning laws
- Preferential parking for rideshare vehicles
- Vehicle rentals to encourage car-share cooperatives and neighborhood vehicle rentals
- Land use reforms such as higher densities, mixed use, and growth management
- Neotraditional neighborhoods that encourage walking, bicycling and transit use
- Traffic calming to reduce vehicle traffic speeds when appropriate
- Monitor TDM program effectiveness by performing surveys

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.

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.

Commute Trip Reduction

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 Washington State 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)

The Clark County Smart Commuter website provides access to information for people interested in CTR, in finding alternative transportation solutions and in ride matching solutions. Also, within the Portland/Vancouver Metropolitan area, Drive Less Connect provides additional information.

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. 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. Local jurisdictions must update ordinances to reflect their CTR plans and local comprehensive Plan updates are expected to reflect the requirements of the CTR program and to support its successful implementation.

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 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.

RTPOs with a regional CTR plan have to submit an annual progress report to the CTR Board. The report includes description of progress toward achieving the regional CTR goals and targets.

Currently, there are fifty-eight CTR affected worksites in Clark County. Another seven worksites participate voluntarily in the CTR program. The Clark County Commute Trip Reduction report card for 2005 to 2007 indicated the CTR program resulted 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. 2009 to 2011 report card data will be available shortly.

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.

The I-5 Partnership in 2002 concluded that Transportation Demand Management (TDM) and Transportation System Management (TSM) are essential strategies for improving our mobility. The Columbia River Crossing project (CRC) also developed a bi-state TDM program as part of the cross-Columbia travel strategies.

Transportation System Management and Operations (TSMO)

Transportation System Management and Operations are also strategies to maximize the efficiency of the existing transportation system. In June 2011, the RTC Board adopted RTC's first Transportation System Management and Operations Plan.

The long range Transportation System Management and Operations plan formulates the first ever set of transportation system management goals and objectives, strategies, and performance measures for the Clark County region. The TSMO Plan itself builds upon the long and successful track record of the Vancouver Area Smart Trek program by updating the VAST Intelligent Transportation System Strategic Plan, and the ITS architecture. The adopted plan establishes a set of system operation strategies to promote an efficient and cost-effective use of existing transportation facilities. The plan seeks to increase the coordination of investment decisions across transportation system investments such as: capacity expansion, transportation demand management, and access management. The plan also establishes a transportation data archive to make transportation data easily accessible and provide information to support performance measurement, monitoring of system operations, and analysis of improvement strategies.

The purpose of the TSMO Plan is to enhance the active management and operations of the existing regional transportation system. TSMO goals include the following: improve travel time reliability, reduce crashes, and improve transit on-time performance. By reducing travel delay, fuel consumption and air pollution are also improved. TSMO strategies focus on lower cost operational and multimodal projects that are regionally coordinated and which better utilize existing transportation facilities. These strategies can include a wide range of projects such as: traveler information, freeway management, arterial management, coordinated incident management, and transit signal priority.

The Plan identifies a set of TSMO corridors where the application of operational strategies can be effective tools to improve reliability and performance. An important part of the TSMO Plan is to monitor the effectiveness of TSMO strategies and other improvements through the use of performance measures. A Clark County transportation data warehouse is established to provide the transportation data needed to monitor TSMO improvements and system performance.

The adopted TSMO Plan establishes a set of system operation strategies to promote an efficient and cost-effective use of existing transportation facilities.

In summary, the Regional Transportation System Management and Operations Plan for Southwest Washington addresses the following:

- TSMO as it applies to southwest Washington
- Assesses current and future operational needs
- Identifies TSMO strategies for the region
- Defines performance measures and data needs
- Describes how TSMO fits into the planning process

10-Year TSMO Implementation Plan

The Regional TSMO Implementation Plan provides the connecting bridge in the TSMO planning process between plan and project implementation (see Implementation Plan cost summary tables on TSMO Plan report pages 95, 96). The TSMO corridors and associated operational strategies are identified to achieve the TSMO Vision. The Implementation Plan is linked to the TSMO corridors and strategies by identifying the technology and equipment needed to implement the operational strategies, and therefore, guides the deployment of projects necessary to carry out the region's TSMO vision. Figure 5-3 is a map of the TSMO Corridors. The map also shows "corridor readiness" which indicates how much infrastructure is already in place or programmed and how much additional is needed to implement the 10-year Plan.

Based on the recommended TSMO strategies and current corridors' signal controllers and ITS equipment, the Implementation Plan (Table 5-2) provides a planning-level of costs for the ITS-related capital investment needed in each corridor to achieve the regional TSMO vision. The total cost for the ITS investment is $15.9 million over the next ten-year period. The annual operating and maintenance cost for the full build out of the Implementation Plan is $3.4 million. These are accounted for in the MTP's chapter 4, financial plan.

The Metropolitan Transportation Plan has, to date, primarily focused on system capacity improvements so the TSMO Plan adds a regional management and operations element to the MTP. The TSMO Plan identifies a set of transportation corridors where the application of operational strategies can be effective tools to improve reliability and performance. Incorporated into the TSMO Plan is a data collection and monitoring element to measure the effectiveness of TSMO improvements.

Figure 5-3: TSMO Corridors

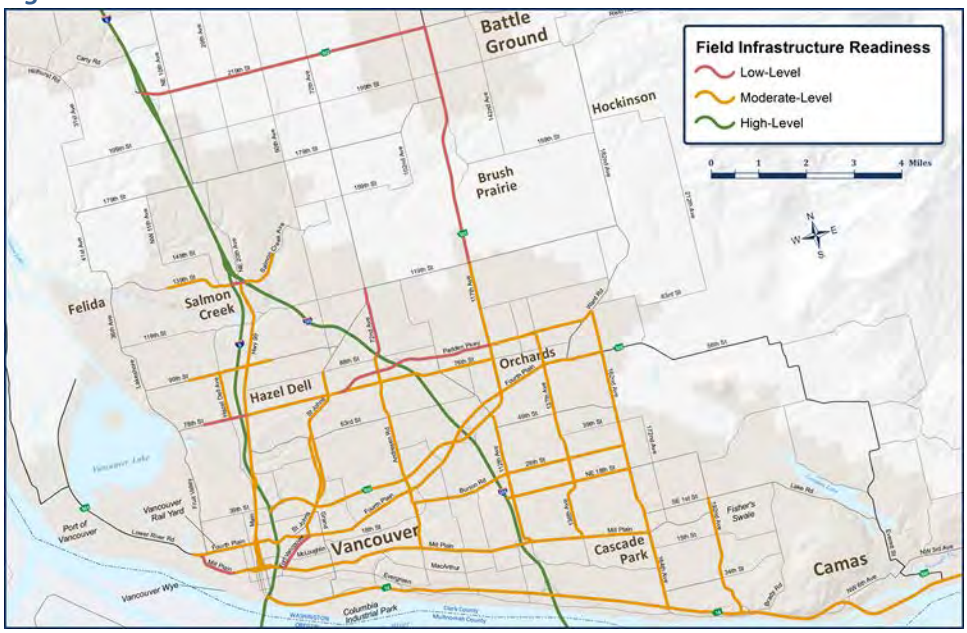


Table 5-2: TMSO Strategies by Corridor (10-year Implementation Plan)

Facility	Start	End	Cost	ITS Infrastructure Readiness	Communications Backbone	Transit Signal Priority	Truck Signal Priority	Video Surveillance-CCTV	Ramp Meters	Data Collection	Signal Technology Upgrades	Variable Message Sign
I-205	Columbia River	Mill Plain		H								
I-205	Mill Plain	Padden Parkway		H								
I-205	Padden Parkway	I-5	$65,000	H			*	*				
I-5	Columbia River	SR-500	$1,300,000	H					*			
I-5	SR-500	134th St.		H								
I-5	134th St.	179th St.		H								
I-5	179th St.	219th St.		H								
I-5	219th St.	SR-501/Pioneer St.		H								*
SR-14	I-5	I-205	$215,000	M				*				*
SR-14	I-205	192nd Av.	$546,000	M	*			*		*		*
SR-14	192nd Av.	NW 6th Av.	$166,500	M	*							
SR-14	NW 6th Av.	32nd St.	$215,000	M	*			*		*	*	
SR-500	I-5	Falk	$240,000	M				*		*		*
SR-500	Falk	54th	$215,000	M				*				*
SR-500	54th	Fourth Plain/SR-503	$180,000	M				*		*		
112th Av.	Mill Plain	28th St.	$140,000	M		*		*		*		
112th Av.	28th St.	SR-500	$140,000	M		*		*		*		
134th St.	Fred Meyer	I-205 NB Off-Ramp	$126,750	L	*			*		*		
139th/134th	NW 11th Ave	NE 10th Ave	$252,000	M	*					*	*	
139th/134th	I-205	WSU Entrance	$203,500	M	*					*	*	
164th Av.	SR-14	SE 1st St.	$575,000	M		*		*		*	*	
162nd Ave	SE 1st	Padden Parkway	$405,000	M		*		*		*	*	
192nd Ave	SR-14	18th St.	$485,750	M	*			*		*	*	
78th St.	Hazel Dell	Hwy 99	$60,000	L				*		*		
Andresen	Mill Plain	18th St.	$85,000	M		*				*		
Andresen	18th St.	63rd St.	$140,000	M		*		*		*		
Andresen	63rd	Padden Parkway	$60,000	M				*		*		
Andresen	Padden Parkway	I-205	$60,000	M				*		*		
72nd Ave	I-205	St. John's	$146,250	L	*			*		*		
72nd Ave	St. John's	119th	$151,750	L	*			*		*	*	
Fourth Plain	NW 26th Av.	Columbia	$443,000	M	*	*	*	*		*	*	
Fourth Plain	Columbia	I-5	$335,000	M		*		*		*	*	
Fourth Plain	I-5	Falk	$370,000	M		*		*		*	*	
Fourth Plain	Falk	Andresen	$445,000	M		*		*		*	*	
Fourth Plain	Andresen	SR-503	$610,000	M		*		*		*	*	
Fourth Plain	SR-503	162nd Ave.	$335,000	M		*		*		*	*	
Highway 99	I-5	78th St.	$105,000	M		*				*		
Highway 99	78th St.	99th St.	$80,000	M		*		*		*		
Highway 99	99th St.	117th St.	$120,000	M		*		*		*		
Highway 99	117th St.	134th St.	$245,000	M		*				*	*	
Main	Mill Plain	Fourth Plain	$358,500	M	*	*		*		*	*	

Facility	Start	End	Cost	ITS Infrastructure Readiness	Communications Backbone	Transit Signal Priority	Truck Signal Priority	Video Surveillance-CCTV	Ramp Meters	Data Collection	Signal Technology Upgrades	Variable Message Sign
Main	Fourth Plain	I-5	$502,500	M	*	*		*		*	*	
Mill Plain	Fourth Plain	Columbia	$360,000	L			*	*		*	*	
Mill Plain	Columbia	I-5	$300,000	M		*				*	*	
Mill Plain	I-5	Lieser	$535,000	M		*		*		*	*	
Mill Plain	Lieser	Chkalov	$305,000	M				*		*	*	
Mill Plain	Chkalov	136th Av.	$60,000	M				*		*		
Mill Plain	136th Av.	164th Av.	$130,000	M				*		*		
Padden Parkway	78th St.	I-205	$191,000	L	*			*		*		
Padden Parkway	I-205	SR-503/SR-500	$210,750	L	*			*		*		
SR-502	I-5	SR-503	$220,000	L				*		*		
SR-503	Fourth Plain	119th St.	$140,000	M		*				*		
SR-503	119th St.	199th St.	$100,000	L						*		
SR-503	199th St.	219th St.	$25,000	L						*		
SR-503	219th St.	244th St.	$153,750	L	*			*		*		
St. Johns	Fourth Plain	SR-500	$190,750	L	*					*	*	
99th Street	Hazel Dell	Hwy 99	$65,000	M		*				*		
99th Street	NW 11th Ave	Hazel Dell	$73,000	M	*					*		
99th Street	Hwy 99	25th Ave	$25,000	M						*		
18th Ave	112th Ave	162nd Ave	$290,000	M	*					*	*	
SR-500/ Padden Pkwy	SR-503	Ward Rd	$370,250	M	*			*		*	*	
78th/76th	NW 10th Ave	Hazel Dell	$172,000	L	*			*		*	*	
78th/76th	Hwy 99	SR-503	$60,000	M				*		*		
136/137/138th Ave.	Mill Plain	Padden Parkway	$260,000	M		*		*		*	*	
Burton/28th	Andresen Rd	162nd/164th Ave	$200,000	M						*	*	
Ft Vancouver Way	Mill Plain	Fourth Plain	$142,250	L	*					*	*	
St. Johns	SR-500	NE 88th Street	$532,250	M	*			*		*	*	
Hazel Dell	78th/76th	99th Street	$369,250	M	*	*				*	*	
Total Costs:			$15,687,750									

H/M/L refers to "high", "moderate", and "low" levels of infrastructure readiness.

Intelligent Transportation System (ITS)

Like TSMO, ITS is a part of the transportation tool kit to better manage the transportation system. The key difference is that 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. ITS includes:

1. Communications infrastructure,
2. Traveler information such as websites, variable message signs, kiosks, television, radio, phone, and highway advisory radio using both static and real-time information,
3. Incident management with early incident detection and a coordinated effort to respond to and clear roadway incidents able to greatly reduce their impact on congestion and delay,
4. Transportation management including the operation of all functions, devices and systems installed or developed for managing freeways and arterials such as transportation management centers for the freeway and arterial network for the coordinated management of the transportation system,
5. Transit Priority providing priority for buses at traffic signals under certain conditions to make transit more efficient and attractive to travelers,
6. Transit Operation and Management including transit traveler information systems delivering real-time bus arrival information to transit patrons using changeable message signs, the internet and other communication devices and transit agency operations and management.

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.

Transit

Transit system improvements are supported in the MTP. The transit transportation mode supports the land use goals established in local Comprehensive Plans developed under the Growth Management Act; plans that envision denser, transit-oriented developments in growth centers and in primary transportation corridors. Transit service expands transportation corridor capacity by providing more person throughput, helping the transportation 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 using transit for their commute and other local trips.

C-TRAN provides mobility options to connect people to jobs, education, healthcare, shopping and entertainment.

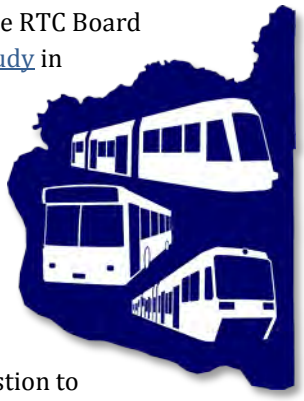
"Public Transit Takes Us There!"

C-TRAN adopted a 20-Year Transit Development Plan, C-TRAN 2030, in June 2010. C-TRAN 2030 provides the framework on which to build public transportation to

support the future transportation needs of Clark County. It sets in place a plan to preserve existing service levels with improvements that include two new bus routes in east Vancouver, increased frequencies on many existing bus routes, meeting the growing demand for paratransit service for people with disabilities (C-VAN), two new park and rides (one at I-205/18th Street vicinity and one at I-5/219th Street vicinity) with increased commuter service to downtown Vancouver and Portland, C-TRAN's first bus rapid transit line with service along Fourth Plain Boulevard, and operations and maintenance costs of light rail in downtown Vancouver as part of the Columbia River Crossing Project. The 20-Year TDP includes transit routes, platform hours, and assumed capital and operating costs. The assumed improvements are now incorporated into the MTP's regional transportation system map and into the Regional Travel Forecasting Model. C-TRAN service improvements are described in MTP Chapter 4, Financial Plan.

Adoption of C-TRAN 2030 in June 2010 concluded a multi-year planning process and extensive public outreach that considered several alternatives before arriving at a preferred plan. C-TRAN riders, citizens, neighborhood associations and community organizations all helped to shape the Plan.

High Capacity Transit (HCT)



Prior to adoption of C-TRAN 2030 (C-TRAN, June 2010), the RTC Board adopted the Clark County High Capacity Transit System Study in December 2008 following a two-year planning process. The HCT Plan provides a blueprint for C-TRAN and the Clark County region to move High Capacity Transit improvements forward in identified HCT corridors. The HCT System Study is based on the assumption that traffic volumes will increase as planned growth and economic development continues. The constrained ability to expand highway capacity in a number of key regional transportation corridors is expected to cause traffic congestion to worsen thus increasing the need to develop a transportation alternative. The HCT System Study's Executive Summary is incorporated into C-TRAN 2030 as outlined in the Transit section above and is available as part of the C-TRAN 2030 Plan.

The HCT System includes a set of the most promising HCT corridors now included in the MTP's Regional Transportation System map as a framework element. One of the study's underlying findings is that while design of a good HCT system is critical, it is not enough to ensure successful HCT project implementation. A well designed set of HCT facilities needs to be complemented by policies that address:

1. Transit supportive land use strategies,
2. Collaboration among public agencies,
3. Commitment to the project at both political and staff levels,
4. Continued public engagement and support, and

5. Actions by public agencies to amend and implement HCT policies.

Listed below are overall HCT policies that apply across the HCT system:

Overall HCT Policies

- HCT needs to maximize ridership by serving both intra-county and bi-state transit trips
- HCT system needs to move transit vehicles through corridors faster than conventional bus
- Maximize access to the HCT system by locating stations within walking distance of major activity centers and park and rides
- Balance the trade-offs between ridership and cost

HCT Land Use Policies

- Transit supportive densities
- A mix of land use
- Transit-oriented pedestrian environment
- Parking management strategies
- Transit-oriented urban design

The HCT System Plan provides a long-term framework for C-TRAN and the Clark County region to move forward to implement transportation improvements in identified HCT Corridors. However, before any HCT project can move forward, final mode and alignment issues would be determined through the defined Federal Transit Administration's New Starts process which includes alternatives analysis as part of the process. The HCT project element now included in the fiscally-constrained MTP is alternatives analysis planning for the Fourth Plain Transit Improvement Project, from downtown Vancouver to Vancouver Mall vicinity. The MTP also 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 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.

Coordinated Human Services Transportation Plan (HSTP)

SAFETEA-LU-required that a Human Services Transportation Plan be developed to expand on the existing Job Access and Reverse Commute (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 first HSTP for the region in January 2007 (RTC Board Resolution 01-07-02) and updated the Human Services Transportation Plan for Clark, Skamania and Klickitat Counties Plan in December 2010 (RTC Board Resolution 12-10-25).

The Human Services Transportation Plan provides a framework for identifying the transportation needs of the aged, people with disabilities and low income workers.

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. Having a Human Services Transportation Plan in place and implementation of identified strategies can help the region cope with an every-growing aged population (see Chapter 2).

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. The diverse group of stakeholders meeting to identify human service transportation needs in Clark County is documented in the HSTP.

The human service transportation needs and strategies identified in Clark County include the need to maintain and preserve existing transportation services, such as the Human Service Council's transportation brokerage services. Fixed route transit cannot accommodate all individual needs and there is a growing need for curb to curb transportation for medical and seniors' transportation including rides to life sustaining medical treatments and preventative medical appointments, rides for seniors to nutrition programs, to adult day care and extension of paratransit to rural areas because C-VAN is not available in rural areas of Clark County. There is need for improved coordination of veterans' transportation service and need for homeless student transportation.

Jobs transportation needs includes longer fixed route transit service hours to accommodate work schedules, 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.

Priority strategies to help special needs transportation in Clark County include maintaining the transportation brokerage program, continuation of the C-TRAN Connector service and C-TRAN's Travel Trainer program. There is also a need for recruitment, organization and training of volunteer drivers or transportation assistants as an efficient and cost effective way to help meet curb to curb transportation needs for elderly, people with disabilities and those needing medical transportation. Volunteers could also provide curb to curb transportation for those outside of the C-VAN service area. The Human Services Council's Reserve-a-Ride program could be expanded and Cowlitz Tribe Transit Service to medical appointments in Clark County accommodated.

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. There is also a need to continually monitor emergency preparedness measures as they relate to special needs transportation. There is large demand for youth transportation but little service.

Other Strategies include continued coordination with neighbors: Tri-Met (Portland), CAP (Cowlitz), Skamania Senior Services, changes to building codes for more efficient transportation, further explore the shared use of vehicles, use of technology-based solutions to increase efficiencies, sustain and expand volunteer driver program to help meet curb to curb transportation needs, initiate a community vanpool program, initiate a community-based rather than employer-based carpooling program and use neighborhood-based solutions with neighbors helping neighbors. Obstacles to implementing strategies include liability and risk management, costs and lack of revenue sources. Meeting the funding needs for special transportation services and the costs to clients, especially those with low incomes, seniors and those with disabilities is challenging. Also, transportation eligibility is an issue for those ineligible for Medicaid to get to preventative medical appointments, and people needing transportation to mental health appointments.

Aging Readiness

With the growing numbers of population aged over 65 in Clark County, the County took a pro-active step to plan for a future with this changing demographic. Clark County is anticipating rapid growth in our aging residents. By 2025, one in four residents will be 60 or better and people older than 85 will increase by 50 percent. Ideas gleaned from workshops, surveys, and best practices from other communities were used to develop a Draft Aging Readiness Plan. The plan assesses the county's readiness to serve as a home for an aging population and identifies necessary resources and services not in place at this time.

The Clark County Aging Readiness task force hosted five workshops from September 2010 through May 2011, to assess the community's current situation and seek public ideas and professional expertise on future needs. The results of the workshops helped the task force develop the Aging Readiness Plan to prepare Clark County for the aging boom and keep our community livable for residents of all ages. The workshops focused on:

1. Housing (September 2010),
2. Transportation and Mobility (November 2010),

3. Healthy Communities (January 2011),
4. Supportive services (March 2011), and
5. Community engagement (May 2011).

During development of the Aging Readiness Plan, there was recognition that across the nation, people are working to create communities that are good places to live, work, grow up, and grow old. Affordable and appropriate housing, supportive community features and services, and transportation options help create places where everyone has the opportunity to live independently and participate in civic and social life as they age.

The Task Force reported back to the community with a presentation of their recommendations on October 27, 2011 and the Draft Aging Readiness Plan was issued.

Commuter Rail / Rail Capacity Issues

RTC completed a 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 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 2010, RTC issued its eleventh annual Congestion Monitoring Report which continues the collection and reporting of baseline transportation data.

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.

Transportation Management Areas (TMAs)

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, MPOs 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)

SAFETEA-LU requires development of a Congestion Management Process. RTC's Congestion Management Process was first 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 September 2011, the RTC Board endorsed the *2010 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 2010 Congestion Monitoring Report

Mobile emissions are a significant source of air pollution.

is the eleventh year for publication and continues the collection and reporting of baseline data.

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, "Protect environmental quality and natural resources and promote energy efficiency." 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, curbing urban 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 G of this document. Included in Appendix G is an overview of how environmental elements are addressed in the Clark County region as well as mapped data that can be used in the integration of 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 flex-time work, 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 not 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; one for Carbon Monoxide (CO), and another 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).

Current Air Quality Status

Under the 1997 8-hour federal Ozone standard, the Vancouver/Portland Air Quality Maintenance Area (AQMA) was reclassified from "maintenance" to "unclassifiable/attainment" for Ozone and no longer needs to demonstrate regional air quality conformity for Ozone. The implementation plan currently in effect for ozone is the 2006 Ozone Maintenance Plan for Vancouver, Washington. The plan demonstrates compliance with the 8-hour ozone standard through 2015 and contains an ozone contingency plan to prevent or correct any measured violation of the 8-hour ozone standard.

The Vancouver AQMA is currently designated as a Carbon Monoxide maintenance area. The 2007 second 10-Year Limited Maintenance Plan for Carbon Monoxide is approved by the EPA (73 FR 36439; June 27, 2008). On November 19, 2007, EPA published a Federal Register notice of the CO Maintenance Plan's adequacy for transportation conformity purposes. 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.

While areas with approved maintenance plans are not subject to the budget test, they are subject to meeting other transportation conformity requirements of 40 CFR part 93, subpart A, which include timely implementation of SIP transportation control measures, transportation plans and projects that comply with the fiscal constraint requirement, interagency consultation and that conformity determinations should be made at least every four years. Projects are still subject to air quality conformity analysis to ensure they do not cause or contribute to any new localized carbon monoxide violations.

The SIP for Washington State includes an enhanced I/M vehicle emissions testing program for the Vancouver portion of the Portland-Vancouver Air Quality Maintenance Area. 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. The program will continue through the end of the 20-Year CO Maintenance period unless it is removed from the SIP.

The Limited Maintenance Plan does not include mobile source Transportation Control Measures (TCMs) for the Vancouver 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.

As described in Appendix C, 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.

Although regional air quality conformity analysis is no longer required, 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.

Air Quality Conformity Determination

It is determined that the 2011 update to the Metropolitan Transportation Plan (MTP) for Clark County does not contribute to violations of ozone or carbon monoxide emission standards.

Given the region's air quality status, regional conformity is presumed. Both the MTP and MTIP include statements describing the current conformity status and requirements for the Vancouver AQMA. A statement of conformity of the Metropolitan Transportation Plan with the federal Clean Air Act, as amended in 1990, and the Washington Clean Air Act, is included in Appendix C of this document. Conformity with the Clean Air Act is also addressed in the Metropolitan Transportation Improvement Program for the Clark County region.

Water Quality

Transportation projects must address 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.

The transportation system and environmental coordination is addressed in more detail in Appendix G to this MTP.

Greenhouse Gases (GHG) and Climate Change

Executive Order 09-05, Sections 2(a) and 2(b):

On May 21, 2009, Governor Gregoire signed Executive Order 09-05: Washington's Leadership on Climate Change. Sections 2(a) and 2(b) related to RTC as one of the four largest Regional Transportation Planning Organizations in the state. RTC has been an active participant in both the process for developing the Section 2(a) report submitted on December 29, 2010, and in the Section 2(b) process which will be completed with a report delivered to the Governor by December 1, 2011.

WSDOT established an Executive Order Working Group to work collaboratively with the four largest RTPO's as well as the Departments of Ecology and Commerce. The working group was charged with the following:

1. Estimate current and future statewide levels of VMT,
2. Evaluate changes to the VMT benchmarks, RCW 47.01.440, as needed to address the emergence of low or no-emission vehicles, and
3. Develop additional strategies to reduce greenhouse gas emissions from the transportation sector.

RTC was an active member of the working group.

Greenhouse gas reduction strategies from the transportation sector fit into four broad categories:

- Operating the system more efficiently
- Advancing vehicle technology
- Improving fuels
- Reducing VMT

WSDOT's analysis suggests that there is no silver bullet and major contributions from each of the strategies will be needed to reduce GHG emissions.

The Executive Order 09-05 Section 2(a) report, submitted on December 29, 2010, included the following recommendations.

- WSDOT estimated that the annual statewide vehicle miles traveled in 2009 was 56 billion or 8,400 VMT per capita. WSDOT developed a methodology using the Highway Performance Monitoring System and determined it was an appropriate tool to monitor statewide VMT but the HPMS data may not be the best tool for monitoring VMT at a regional and local level.

- The statutory VMT benchmarks (RCW 47.01.440) used a baseline of 75 billion VMT for 2020. The new WSDOT forecast developed in June of 2010 forecast a statewide VMT in 2020 to be 66 billion. WSDOT's recommendation was that the legislature should use historical, measured VMT (e.g. 2000, 2005, or 2010 levels) rather than forecasted VMT to set the VMT baseline.

- WSDOT recommended that because of reasonable slow market penetration, the VMT benchmarks should not be changed at this time to address low or no-emission vehicles.

- In terms of additional strategies to reduce emissions from the transportation sector, WSDOT recommends that the state consider ways to reduce GHG emissions across all sectors. Further, WSDOT should continue to work with the four largest RTPO's, as identified in Executive Order Section 2(b), to develop additional approaches for reducing GHG emissions.

Throughout 2011 WSDOT continued to collaborate with the four largest RTPO's to apply the information developed in the Executive Order Section 2(a) report to "cooperatively develop and adopt regional transportation plans that will, when implemented, provide people with additional transportation alternatives and choices, reduce GHG and achieve the statutory benchmarks to reduce annual per capita vehicle miles traveled in those counties with populations greater than 245,000."

The development of the 2011 MTP Update has addressed the section 2(b) requirements. The focus has been on identifying which strategies in the MTP will help to reduce statewide GHG emissions and help to meet statewide VMT reduction benchmarks. It is important to clarify that the Executive Order calls for a voluntary effort on the part of the RTPO's. The RCW's for both GHG emission reductions and VMT reduction benchmarks are charged to the state, not to any region. The report to the Governor is directed toward what strategies the regional transportation plans have and/or are developing regarding GHG reduction and which strategies have the greatest potential to help the state achieve the VMT benchmarks. RTC's MTP update does not nor is it required to include any specific GHG emissions or VMT reductions. However, consistent with local, regional, state and national transportation policies, the plan does include strategies and project recommendations that support GHG and VMT reductions. Examples of these strategies and projects in RTC's MTP update include the following:

- Transit expansion, both fixed bus and high capacity transit

- Transportation demand management strategies

- Commute trip reduction program

- Congestion management process

- Transportation system management/operations and intelligent transportation system strategies

In addition to the listing of GHG and VMT reduction strategies, the final report on EO Section 2(b) will address which strategies appear to have the greatest potential to achieve the VMT benchmarks and which policy and funding issues need to be resolved before leading to possible implementation.

MTP Regional System Improvements

Figure 5-4 is a map showing identified capacity improvements on the regional transportation system. The map shows the location of transportation capital projects identified as needed through the metropolitan transportation planning process to address safety and/or level of service issues. This map locates projects listed in Tables 5-3 and 5-4. Table 5-3 includes identified projects on the MTP's designated regional transportation system (described in MTP Chapter 3) that are already funded but are not yet constructed which amount to over $448 million. Table 5-4 includes projects on the MTP's Designated Regional Transportation System which do not yet have a funding source but for which funds are likely to be available during the term of the MTP to year 2035; in other words, they are "fiscally-constrained" projects. These MTP projects amount to over $2.7 billion. Combined, MTP regional system projects in Tables 5-3 and 5.4 total to over $3.2 billion needed within Clark County in regional transportation infrastructure investment over the next 20-plus years.

In addition to projects on the MTP's designated regional transportation system, local transportation projects are also included in RTC's Regional Travel Forecasting Model so the model is reflective of the whole transportation system. Project lists provided in Appendix B correspond with the listings in Tables 5-3 and 5-4 and, in addition, include listings of identified local transportation project needs. The project lists focus on system expansion projects because these are the most readily incorporated into the regional travel forecasting model's highway network.

MTP Appendix B also outlines the wide array of transportation system programs and 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.

The MTP identifies the multi-modal capital projects to meet the region's 2035 needs.

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 having to increase 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-plus-year planning period.

RTC is the forum for discussion and analysis of project priorities for federal and state funding program considerations. With limited funding availability for transportation projects it is prudent to reach regional consensus on the highest transportation priorities. A prioritization process can help the region to make most effective use of limited transportation funding to meet transportation system improvement needs.

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

Figure 5-4: MTP Regional System Improvements

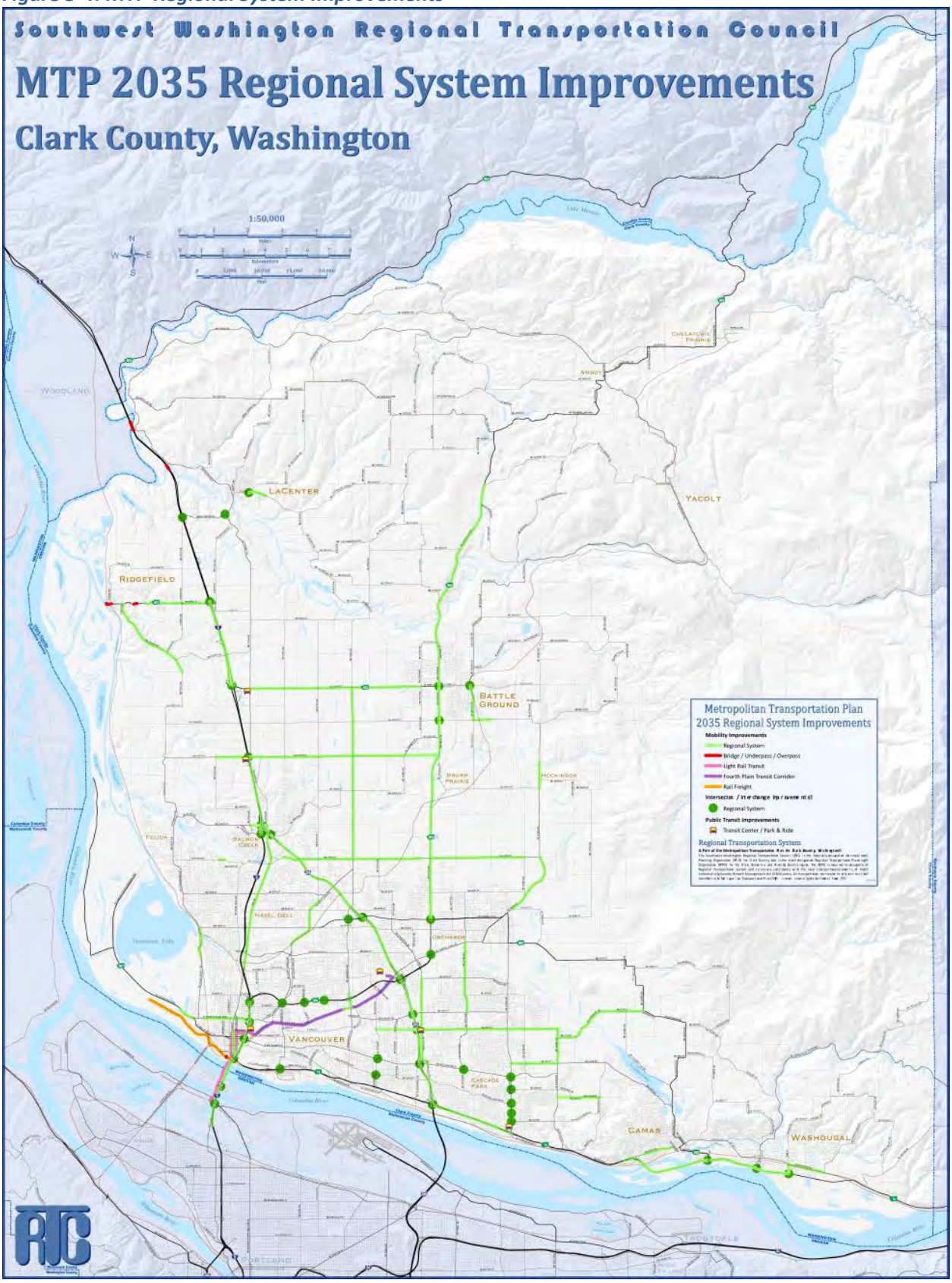


Table 5-3: Funded Projects, MTP Designated System

	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project 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. Auxiliary lanes I-205 to 179th St. NE 10th Ave. Improve NE 10th Ave. from 134th to 149th St. with turn lanes	Interchange	2014	WSDOT Clark Co	$111,000,000
I-205	Mill Plain to NE 18th St	18th St. Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th/28th	2016	WSDOT	$101,100,000
SR-14	NW 6th Av. to 6th St.	Widen to 2 lanes each direction with split diamond interchange at Union St. and 2nd St.	1 lane each direction	2013	WSDOT	$50,563,000
SR-500	St. Johns Interchange	New Interchange	Intersection	2013	WSDOT	$48,628,000
SR-500	at SR-503/Fourth Plain	Construct turn lanes	Intersection	2012	WSDOT	$807,000
SR-502	NE 10th Avenue to Battle Ground	2 lanes each direction	1 lane each direction	2015	WSDOT	$88,769,000
119th Street	72nd Avenue to 87th Av.	2 lanes ea. Direction	1 lane each direction	2014-2018	Clark County	$26,220,000
119th Street	NE 50th Avenue Intersection	1 lane ea. direction, w/turn lanes	1 lane each direction	2012	Clark County	$4,300,000
I-5/SR 501 Interchange Phase 2	56th Ave and 65th Ave	2-lane Roundabouts	N/A	2012	Ridgefield	$4,700,000
138th Avenue	28th Street to 49th Street	1 lane ea. direction, w CTL and access management	1 lane each direction	2012	Vancouver	$8,000,000
164th Avenue	SE 1st to SE 34th St	Reconstruct intersections to improve traffic flow	Unimproved intersections	2012	Vancouver	$4,500,000
Total						**$448,587,000**

Note: Table5-3 includes identified projects on the MTP's designated regional transportation system that are already funded but are not yet constructed.

Table 5-4: 2035 MTP Project List (for adoption in 2011), MTP Designated System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project 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	2018	WSDOT	$3.2 to $3.5 Billion
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	La Center Rd. Interchange	Rebuild Interchange	Interchange	2011-2015	WSDOT	$40,000,000
I-5	179th Street to SR-502	Auxiliary lane in each direction	3 lanes each direction	2016-2025	WSDOT	$22,000,000
I-5	179th Street Interchange	Reconstruct Interchange	Interchange	2016-2025	WSDOT	$40,000,000
I-5	SR 500	Build Direction Connection	Partial Interchange	2018-2025	WSDOT	$120,000,000
I-5	East Fork Lewis River Bridge	Replace Bridge Structure	Bridge	2020-2025	WSDOT	$72,000,000
I-5	North Fork Lewis River Bridge	Replace Bridge Structure	Bridge	2020-2025	WSDOT	$85,000,000
I-205	I-205/SR14 Interchange to Mill Plain	Rebuild Interchange and Construct Braided Ramps	Interchanges	2025-2035	WSDOT	$140,000,000
I-205	18th St to SR 500	Construct 28th St. Ramps and Connector Roads	Overpass/Underpass	2016-2025	WSDOT	$100,000,000
I-205	SR-500	WB SR-500 to SB I-205 Flyover	Interchange	2025-2035	WSDOT	$33,000,000
I-205	Padden Parkway Interchange	Rebuild interchange	2 lanes each direction	2020-2030	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	$58,000,000
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	$35,000,000
SR-14	West Camas Slough Bridge	Rebuild Bridge	1 lane each direction	2016-2025	WSDOT	$28,000,000
SR-14	2nd Street to 32nd Street	Add lanes and construct interchanges (for safety and capacity)	1 lane each direction with intersections	2016-2025	WSDOT	$100,000,000
SR-500	42nd and 54th Avenue	Construct Interchange and Grade-Separated Crossing	Intersection	2016-2025	WSDOT	$65,000,000
SR 500	Fourth Plain	Construct SR 500 Flyover	Intersection	2025-2035	WSDOT	$50,000,000
SR-503	at SR-502	Intersection improvement	Intersection	2011-2016	WSDOT/Battle Ground	$1,050,000
SR-503	at Padden Parkway	Add Interchange	Intersection	2020-2035	Clark County/ WSDOT	$32,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
SR-503	Padden to SR-502	Add Lanes, 3 lanes each direction	2 lanes each direction	2025-2035	WSDOT	$132,000,000
SR-503	SR-502 to Gabriel Road	Add Lanes, 2 lanes each direction	1 lane each direction	2020-2030	WSDOT	$34,000,000
Bus Stop Replacement	System Wide	Replace and upgrade signage	Follow replacement schedule, add vehicles as needed to provide service	2013	C-TRAN	$771,000
Transit Enhancements	System Wide	Improvements/amenities at bus stops, super stops, and transit centers - new and existing	Continuation of existing programs	Ongoing	C-TRAN	$42,440,000
Administration, Operations, and Maintenance Facility	65th Street & 18th Street	Expansion/redevelopment	Current facility is 20 years old and over capacity	2019-2020	C-TRAN	$22,725,000
Fisher's Landing Transit Center Expansion	164th Avenue & SR 14	Expansion of park & ride facility on property already owned by C-TRAN	Existing park and ride is approaching capacity	2015-2016	C-TRAN	$7,500,000
Bus Rapid Transit Improvements	Fourth Plain	Develop and construct BRT project	N/A	2014	C-TRAN	$78,000,000
18th Street Park & Ride	18th Street & I-205	Relocation of existing Evergreen Park & Ride	Current park and ride lacks visibility and easy access to I-205, relocation will support service improvements	2021-2022	C-TRAN	$14,600,000
219th Street Park & Ride	I-5 & SR-502	Park & Ride facility at new interchange	N/A	2020-2030	C-TRAN	$16,200,000
Fleet Replacement and Expansion	System Wide	Purchase replacement and expansion vehicles for fixed route, paratransit, and vanpool service	Continue ongoing program	Ongoing	C-TRAN	$135,588,000
ITS Deployment	System Wide	Deploy ITS Phase 2 and 3, including digital radio system and transit signal priority	Phase 1 complete	Ongoing	C-TRAN	$10,378,000
Facility Capital Maintenance				Ongoing	C-TRAN	$30,900,000
Miscellaneous Capital Repair & Replacement				Ongoing	C-TRAN	$15,666,000
119th Street	87th Avenue to 110th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$28,000,000
119th Street	Salmon Creek Av. to 72nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017	Clark County	$10,912,000
119th Street	NW 7th Av to NW 16th Av	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,655,000
179th Street	Delfel Rd to NE 15th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2014	Clark County	$25,000,000
179th Street	NE 15th to NE 29th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$25,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
179th Street	NE 29th Avenue to NE 72nd Av.	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$37,700,000
179th Street	NE 72nd Avenue to Cramer Road	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$20,358,000
179th Street	Cramer Road to NE 112th Av.	2 lanes ea. direction, w/turn lane	None	2017-2035	Clark County	$5,881,200
179th Street	Fairgrounds Entrance to NW 11th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$14,550,000
Andresen	Padden Parkway	Add Interchange	Intersection	2017-2035	Clark County	$52,000,000
Highway 99	NE 99th Street to NE 107th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2017 - 2020	Clark County	$13,936,000
Highway 99	NE 107nd Street to NE 117th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2017 - 2020	Clark County	$20,730,000
Highway 99	122nd to 129th Street	2 lanes each direction w/ turn lane	2 lanes each direction	2017-2035	Clark County	$11,310,000
Highway 99	South RR Bridge (Ross Street) to NE 63rd Street	2 lane ea. Direction w/ bike/ped facilities	2 lanes each direction	2017-2035	Clark County	$5,460,000
Highway 99 Amenity Incentives	Various locations			*2012-2035*	*Clark County*	$1,500,000
NE 119th Street	SR-503 to NE 172nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$19,113,000
NE 182nd Avenue	NE 159th to NE 174th St	Turn lanes at intersections	1 lane each direction	2017-2035	Clark County	$3,016,000
NE 72nd Avenue	NE 133rd to NE 219th St	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$55,159,000
NE Ward Rd.	NE 88th Street to NE 172nd Ave	2 lanes ea. direction	1 lane each direction	2017-2035	Clark County	$5,000,000
NE Ward Rd.	NE 172nd Avenue to Davis Rd	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$11,344,000
NE Ward Rd.	NE Davis Rd to NE 182nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$18,850,000
Padden Parkway	SR-503	Add Interchange	Intersection	2020-2035	WSDOT/Clark Co	See WSDOT section
St. John's Blvd.	NE 68th St to NE 50th Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	*2017-2035*	Clark County	$16,328,000
Grace Avenue	Grace Av/East Main St	Align S Grace and N Grace	Unaligned intersections	2017	Battle Ground	$3,239,000
SE Eaton Blvd	SE Grace to East City Limits	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2014-2018	Battle Ground	$1,425,000
SE Grace Avenue	SE Rasmussen Blvd to SE Eaton Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2012-2013	Battle Ground	$5,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
SE Grace Avenue	E Main St to SE Rasmussen Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2015	Battle Ground	$3,000,000
SR-502 and W 12th Avenue	Reconfigure roadway system and signal removal	1 lane ea. direction, w bicycle and pedestrian facilities	Signalized intersection	2014-2018	Battle Ground	$220,000
SR-503 and SW Eaton Blvd		Improve intersection - add turn lanes		2014-2018	Battle Ground	$525,000
SR-503 and SW Rasmussen Blvd		Add east legs of intersection and signalize	No intersection	2014-2018	Battle Ground	$815,000
SR-502 and W 15th Avenue	Reconfigure roadway system and add turn lanes	1 lane ea. direction, w bicycle and pedestrian facilities	Signalized intersection	2014-2018	Battle Ground	$450,000
SR-503	at SR-502	Add turn lanes to intersection	Intersection	2014-2018	Battle Ground/ WSDOT	$2,100,000
SR-503 and NW 5th Way		Add right-in/right-out intersection	None	2019-2028	Battle Ground	$250,000
NE 179th Street,	NE 112th Avenue to SR 503	Construct urban minor arterial with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,253,000
S Eaton Blvd	SW 20th Avenue	Signalize, add left turn lanes on all approaches	none	2014-2028	Battle Ground	$890,000
NW 38th Av/SE 20th St	192nd Av to Armstrong St	1 lane each direction w/ turn lane, bike and pedestrian	Partially 1 lane each direction, partially none	2013	Camas	$3,550,000
NE 18th St	Goodwin to 192nd Av	2 lanes each direction w/ turn lane, bike and pedestrian	None	2016-2022	Camas	$9,340,000
NE Goodwin Rd	18th St to 232nd Av	2 lanes each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$20,530,000
SR-500/ Everett Rd	Lake Rd to NE 4th St	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2023-2029	Camas	$12,710,000
NW 6th Av	Ivy to Division	Add turn lanes	2 lanes each direction	2016-2022	Camas	$1,200,000
E 4th Street	Stonecreek Drive	Brezee Creek Crossing Pedestrian/bicycle Improvements	Old Culvert, no bike lanes, 1 sidewalk	2016-2020	La Center	$3,248,000
E 4th Street	Highland to E. City Limits	Urban upgrade	Unimproved road segment	2016-2021	La Center	$1,635,000
La Center Road	at Timmen Road	Construct left turn lanes	Unimproved intersection	Partly complete in 2012. Rest in 2016-2021.	La Center	$1,450,000
E 4th Street	Cedar Avenue	Create downtown couplet.	urban road with sidewalks.	2014-2017	La Center	$101,500
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	

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
West Vancouver Freight Access	Southwest Vancouver	Construct new freight rail entrance to the Port from the BNSF Railway mainline, a grade separated entrance to T-5 and improves internal rail storage to accommodate unit trains	Hill track access from BNSF mainline, internal rail system. No service to Columbia Gateway	Phased, 2011-2017	Port of Vancouver	$150,000,000
Hillhurst Road	Sevier Rd to 229th extension	Upgrade to 5 lane principal arterial	1 lane each direction	2015	Ridgefield	$14,693,000
Hillhurst Road	SR-501 to Sevier Rd	1 lane each direction w/ turn lane	1 lane each direction	2013	Ridgefield	$5,414,000
I-5	219th St. to SR-501	NB auxiliary lane along I-5	None		Ridgefield/ WSDOT	$8,600,000
I-5	SR-501 to 219th St.	SB auxiliary lane along I-5	None		Ridgefield/ WSDOT	$7,900,000
Pioneer Street Bridge	over Gee Creek	Bridge Replacement	2 lane bridge	2020	Ridgefield	$2,671,500
Pioneer St (SR 501) at 9th Ave/Hillhurst Rd	N/A	Signalized Intersection improvement	Unsignalized Intersection	2015	Ridgefield	$345,000
Pioneer St (SR 501)	Reiman Road to 35th Ave Roundabout	Widen, 1 lane each direction w/ turn lane	1 lane each direction	2020	Ridgefield	$5,581,000
Pioneer St (SR 501) at 35th Ave	N/A	2-lane Roundabout	2-way stop-controlled intersection	2014	Ridgefield	$1,268,000
Pioneer St (SR 501)	35th Ave to 45th Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2015	Ridgefield	$3,530,000
Pioneer St (SR 501) at 51st Ave	N/A	2-lane Roundabout	N/A	2015	Ridgefield	$1,268,000
Pioneer St (SR 501)	45th Ave to 51st Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$2,194,000
Pioneer St (SR 501)	51st Ave to 56th Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$2,194,000
Extend Pioneer St (SR 501) to Port	Main Ave to Division St	Railroad Overcrossing, new road	N/A	2018	Ridgefield	$12,500,000
Hillhurst Road at S. Royle Road	N/A	Signalized Intersection improvement	N/A	2018	Ridgefield	$964,000
112th Avenue	Mill Plain to 49th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2020-2035	Vancouver	$7,000,000
137th Avenue	49th Street to Vancouver City Limits	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$8,000,000
18th Street	162nd Avenue to 192nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2020-2035	Vancouver	$12,000,000
18th Street	97th Avenue to NE 138th Avenue	2 lanes ea. direction, w/turn lane		2012-2025	Vancouver	$21,000,000
18th Street	138th Avenue to 162nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$15,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
18th Street	87th Avenue to 97th Avenue	Extend existing street 1 lane ea. direction, w/turn lane	No street	2015-2025	Vancouver	$9,000,000
192nd Avenue	SE 1st Street to NE 18th Street	2 lanes ea. direction, w/turn pockets	1 lane each direction	2015-2025	Vancouver	$7,000,000
E. Mill Plain	136th Ave. Intersection	Intersection improvement	Substandard	2011	Vancouver	$2,500,000
Fourth Plain	I-5 to Railroad Bridge	Corridor improvements with targeted widening for capacity	1 lane each direction with center turn lane	2020-2035	Vancouver	$15,000,000
Fourth Plain Boulevard/ Andresen	Intersection Influence Area	Reconstruct Fourth Plain in vicinity of 65th/66th Avenue to Andresen		2017-2025	Vancouver	$5,000,000
Fruit Valley Rd	Whitney to 78th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Vancouver	$28,000,000
Lieser Road/ NE 87th Avenue	Lieser to E 5th St	Intersection improvement	Offset intersection	2017-2035	Vancouver	$7,500,000
Main Street	5th Street to McLoughlin	Reconstruct from 5th to 16th	One-way street	2017-2030	Vancouver	$10,000,000
Main Street	5th Street to Columbia Way	Re-connect to waterfront S. of rail berm	No street	2016	Vancouver	$9,000,000
NE 28th Street	142nd Avenue to 162nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2025	Vancouver	$6,000,000
SE 1st Street	164th Avenue to 192nd Ave.	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$20,000,000
SE 20th Street	192nd Ave. to Camas City Limits	New urban minor arterial roadway	No Street	2012-2017	Vancouver	$1,750,000
SE 5th Street	*Blandford to East Reserve*	*Upgrade to 3-lane Modified Collector*	*1 lane each direction*	*2017-2035*	*Vancouver*	*$1,200,000*
Andresen Rd.	MacArthur Blvd Intersection	Intersection operational upgrade	4-way stop control	2017-2025	Vancouver	$1,000,000
Main Street	39th St. Intersection	Intersection capacity and operational upgrade	substandard lane width, inadequate storage, inadequate turn lanes	2017-2025	Vancouver	$3,500,000
Mill Plain Blvd	104th/105th Intersection	Intersection offset removal	offset intersection north/south of Mill Plain	2017-2035	Vancouver	$4,000,000
32nd Street	SR-14 to Evergreen Way	Widen to 3 lanes - striping only	Completed	2007	Washougal	
32nd Street	Evergreen Way to 34th Street	Widen to 3 lanes, plus bike lanes and sidewalk	1 lane each direction	2018-2024	Washougal	$5,476,000
Evergreen Way	32nd Street to Sunset View Rd	Widen to 3 lanes, plus bike lanes and sidewalk	1 lane in each direction	2018-2024	Washougal	$8,117,000
SR 14 Access & Interchanges	Washougal River Road to 32nd Street			2011-2017	(Washougal) (Port of Camas Washougal) (WSDOT)	$24,334,000
Evergreen @ 32nd Street	Intersection Influence Area	Intersection reconstruct including radius and turn lanes		2011-2017	Washougal	$840,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
Washougal River Road	Shepherd Road, 18th/O, 25th	Intersection improvements, bike ped. and trail crossing		2018-2024	Washougal	$2,482,000
Evergreen Way And Sunset View Road	Intersection Influence Area	Intersection improvement		2018-2024	Washougal	$1,963,000
Evergreen @ 39th intersection	*Evergreen and 39th St.*	*Evergreen @ 39th St. Signalization and intersection improvements*	*no signal*	*2025-2030*	*Washougal*	*$1,081,000*
County-wide	County Wide	Pedestrian & Bicycle Projects and Programs		Continuing	County-wide	$92,400,000
County-wide	County Wide	Demand Management		Continuing	County-wide	$48,000,000
Various	System Wide	Transportation System Management and Operations		Continuing	County-wide	$45,800,000
Total						**$2,843,617,200**

Note: Table 5-4 includes projects on the MTP's Designated Regional Transportation System which do not yet have a funding source but for which funds are likely to be available during the twenty-plus year term of the MTP (to year 2035). These projects are the MTP's "fiscally-constrained" projects.

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.

The Columbia River Crossing Final Environmental Impact Statement (EIS) was completed in 2011. It contains analyses of environmental and community effects—both positive and negative—of the project. It also describes how the project will improve safety and transit while relieving congestion on Interstate 5 between Portland and Vancouver. The Final EIS includes: analysis of the preferred alternative compared to the no-build and other Draft EIS alternatives, environmental impacts of the alternatives and mitigation measures for adverse impacts, a financial analysis with several funding scenarios and responses to more than 1,600 Draft EIS comments from agencies, tribes and the public. Each of the project's local sponsoring agencies endorsed publication of the final document, including WSDOT and ODOT. These agencies include TriMet, C-TRAN, Southwest Washington Regional Transportation Council and Metro. A 30-day review period for the Final EIS occurred September 23 through October 24, 2011. It is anticipated that the federal oversight agencies, Federal Highway Administration and Federal Transit Administration, will select an alternative and sign a record of decision in late 2011. The record of decision signals conclusion of the National Environmental Policy Act (NEPA) process.

Emerging Issues to Track

The following issues should be pursued following completion of the 2011 MTP update:

- Recognizing we are in a period of transition in Clark County, the focus should turn to transportation performance and plan monitoring with development of a 10-year project priorities strategy to reflect changes in financial and budgetary conditions.
- Update modal elements of the plan, as necessary.

Chapter 6: System Performance Monitoring, Plan Development and Implementation

Transportation system performance requires ongoing monitoring.

System Performance Monitoring

The transportation planning process requires that monitoring of system performance take place. The elements of system monitoring activities are described in this chapter.

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.

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, 1994 and a phased survey in year 2009 to 2011. The Clark County

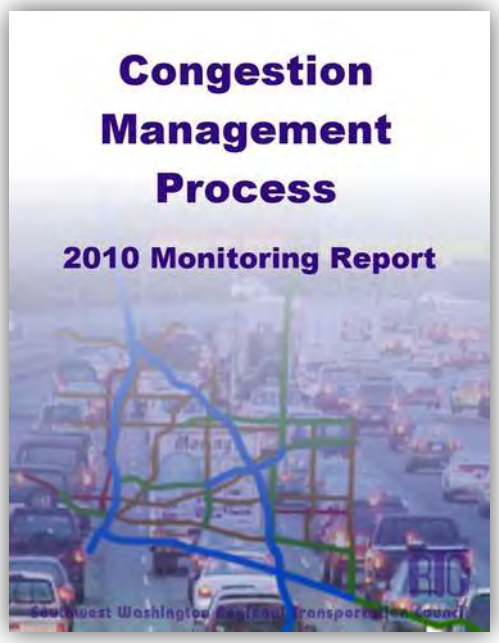
household travel survey was fielded between August and November 2009 and the Portland, Oregon part of the region was surveyed beginning in 2010 and continuing in 2011. Travel behavior and household activity surveys conducted in other regions can also provide useful information. The American Community 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 highway network. The CMS network is now comprised of 30 transportation corridors to be monitored and evaluated on an ongoing basis as part of the Congestion Management Process required by the federal transportation act, SAFETEA-LU (2005).

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 September 2011, the RTC Board endorsed the *2010 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 2011 Congestion Monitoring Report is the eleventh year for publication and continues the collection and reporting of baseline data.

Air Quality Monitoring

Mobile source emissions are a significant source of air pollution

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) reclassification 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, 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, use of the regional travel model data to provide data needed to develop mobile source emissions inventories and to determine a regional air quality determination.

Commute Trip Reduction Law Implementation

Monitoring of the success of the Commute Trip Reduction (CTR) 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.

Plan Development and Implementation

Public participation is an important part of the regional transportation decision-making process carried out by RTC.

Public Participation in Metropolitan Transportation Planning Process

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 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.

Public involvement efforts build from those carried out at the local level.

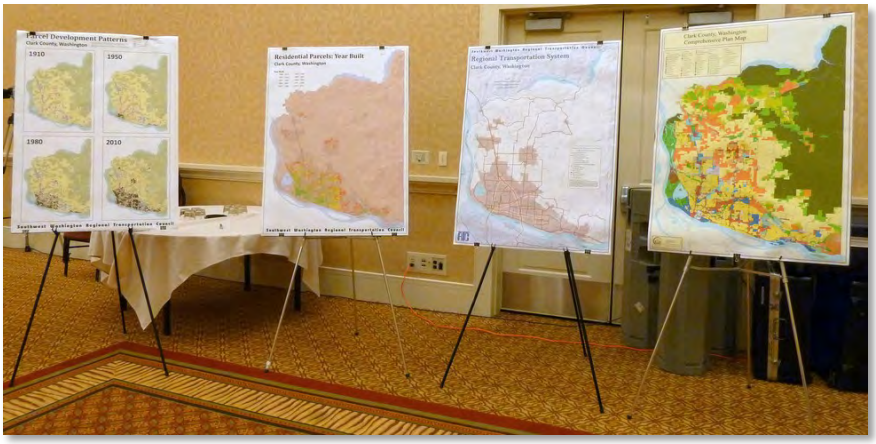
The latest update to RTC's Public Participation Plan was adopted by the RTC Board in 2007 (RTC Board Resolution 08-07-15). The current Plan meets federal requirements for metropolitan transportation planning. The Plan was adopted following release of a draft Plan for public comment on May 8, 2007. The 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 Regional Library system and at Camas library. The draft Plan was also posted on RTC's website.

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.

The public participation process is directed toward ensuring that the public's values and interests are reflected in regional transportation decisions.

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 2007, 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, public meetings held as part of the Clark County Comprehensive Growth Management planning process, Clark County Aging Readiness meetings, Fourth Plain Transit Improvement Project, open houses on the Salmon Creek Interchange Project, and WSDOT-hosted outreach meetings focused on development of state funded projects such as SR-502 widening, the SR-14 corridor projects in the Camas/Washougal area, and on traffic operations and preservation projects. RTC is sometimes asked 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 summer of each year.



RTC and local jurisdictions sometimes coordinate to staff a public information booth on regional transportation issues at the Clark County Fair. The Fair's attendance exceeds 220,000 people annually. RTC and jurisdictions' staff solicit

comments from Fair attendees and encourage the public to complete survey forms about the region's transportation system. Comments on the MTIP and the MTP are solicited. RTC and local jurisdictions also coordinate outreach events. RTC staff makes 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. 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 their consideration and adoption.

Metropolitan Transportation Planning Program: Implementation of Required Planning Factors

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 below:

RTC's Implementation of Federally-Required Planning Factors, Status Report

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.

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 a primary policy criterion for prioritizing MTP transportation projects. Project and transportation strategy priorities are reevaluated 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 (2000), and the Portland/Vancouver I-5 Transportation and Trade Partnership Study (2002), included a variety of corridor-wide improvements 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 an environmental assessment was completed for the corridor in 2007. WSDOT and RTC staffs continue to evaluate the corridor.

- Access to Ports/Industry: The Mill Plain Extension which enhanced access to West Vancouver industrial lands and to the Port of Vancouver was completed in 2000. Fruit Valley Road was also improved in the early 2000's. Access to Port of Ridgefield lands was enhanced with completion of the I-5/Ridgefield/Pioneer Street interchange in 2011. The Port of Vancouver continues to implement the West Vancouver Freight Access Project 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. The SR-14/Grand interchange project (completed 1996) provides improved access to Columbia Shores Business Park. The MTP recommends SR-14 improvements to improve access to the Port of Camas/Washougal.

- Airports: Clark County is served by Portland International Airport. The small, general aviation airfields in the County are being encroached upon by urban development. In the late 1980's, efforts to locate a new airport 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 the need for airfields in Clark County. Evergreen Airport (off Mill Plain) closed in the mid-2000s to make way for commercial development.

- Intermodal transportation facilities: freight, transit centers, park & rides.

- Freight distribution: The Clark County Freight Mobility Study (RTC, December 2010) documented the status of freight movement in Clark County and made recommendations for future freight planning. The Congestion Management Process monitors truck percentages on regionally significant corridors in Clark County. The Regional Freight Committee (Portland-Vancouver region) meets, as needed, to address freight issues including assessing regional freight data collection and study. The Port of Portland includes significant regional freight studies on its website. These include the "Portland and Vancouver International and Domestic Trade Capacity Analysis" (Port of Portland et al) 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 a 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". The 39th Street Bridge was completed in 2010 with rail yard work scheduled for completion in 2013.

- Ship and Barge: river transportation to Port of Vancouver. Barges are used for transportation of garbage from Clark County to a landfill in eastern Oregon.

- Pedestrian and Bicycle: The Clark County Bicycle and Pedestrian Plan was approved by the Board of County Commissioners in **November 2010**. Also, Clark County has a Regional Trail and Bikeway System Plan (1992, updated 2006). RTC hosted four Walkable Community Workshops in 2004 emphasizing the contribution a quality pedestrian and bicycle environment can make to the area's economy, quality of life and health. Safe Routes to School projects are also moving forward. RTC continues to participate in the statewide Active Community Environments program. The Intertwine works on bi-state planning for regional trails. Intertwine publishes the Portland-Vancouver Bi-State Regional Trails System Plan.

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.

Increase the safety of the transportation system for motorized and non-motorized users

- Safety is called out as a priority issue in the MTP. WSDOT publishes and updates the Strategic Highway Safety Plan: Target Zero (latest update, 2010) and RTC completed a Safety Management Assessment for Clark County in April 2011. Assessment of highway system safety needs is carried out by WSDOT for interstate and state facilities and by local jurisdictions for local arterials. 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.

Increase the security of the transportation system

- RTC developed a Technical Paper on "Transportation Security in the Vancouver/Clark County Region" (first incorporated into the 2007 MTP update).
- C-TRAN devotes a portion of its budget to transit security measures including surveillance cameras on buses and contract security personnel.

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

- Vehicle Miles Traveled, Vehicle Hours of Delay and other measures of performance of the regional transportation system are analyzed with each update to the MTP.
- 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 corridors is conducted annually using updated traffic counts and transportation system use analysis.

Intelligent Transportation System (ITS) and Transportation System Management and Operations (TSMO)

- Vancouver Area Smart Trek (VAST) deployment plan. Implementation of ITS solutions, Transportation System Management and Operations (TSMO) and Advanced Traveler Information System (ATIS) strategies to effect better management and more efficient use of the existing transportation system.

Transit Service

- C-TRAN publishes the *Transit Development Plan;* an outline for the transit system within the next six years.
- C-TRAN adopted a 20-Year Transit Development Plan in June 2010, consistent with its 50-Year Vision (2006). The 20-Year Transit Development Plan is known as *C-TRAN 2030*.
- 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 the MTP and MTIP.
- For bike and pedestrian projects, guidance for system development is provided by the Clark County Bicycle and Pedestrian Plan **(2010), the** Clark County Regional Trail and Bikeway System Plan (1992, updated 2006) and by the transportation elements of local Comprehensive Growth Management plans.
- Walkable Community Workshops were hosted by RTC in 2004.

Movement of Freight

- The Clark County Freight Mobility Study was completed in 2010.
- WSDOT Freight and Goods Transportation System (FGTS).
- Port access proposed improvements: West Vancouver Freight Access Project, SR-14 Camas/Washougal area.
- Chelatchie Prairie Railroad.

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" (first incorporated into the 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 carried out by Clark County as part of the Comprehensive Plan. RTC addresses air quality planning.

Energy Conservation

- Commute Trip Reduction program.
- Analysis of Vehicle Miles Traveled.
- Jobs/housing balance.
- Planning and construction of facilities for non-motorized modes.

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.

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.

Promote efficient system management and operation

- RTC's Congestion Management Process with annual reports including Annual Congestion Management Monitoring report process.
- RTC's Transportation System Management and Operations (TSMO) and Vancouver Area Smart Trek (VAST) 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.

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.
- Costs to maintain pavement and bridges is addressed in the MTP's financial plan chapter.

- I-5 Interstate Bridge (life expectancy, maintenance needs).
- Bridge needs are addressed in the MTP.

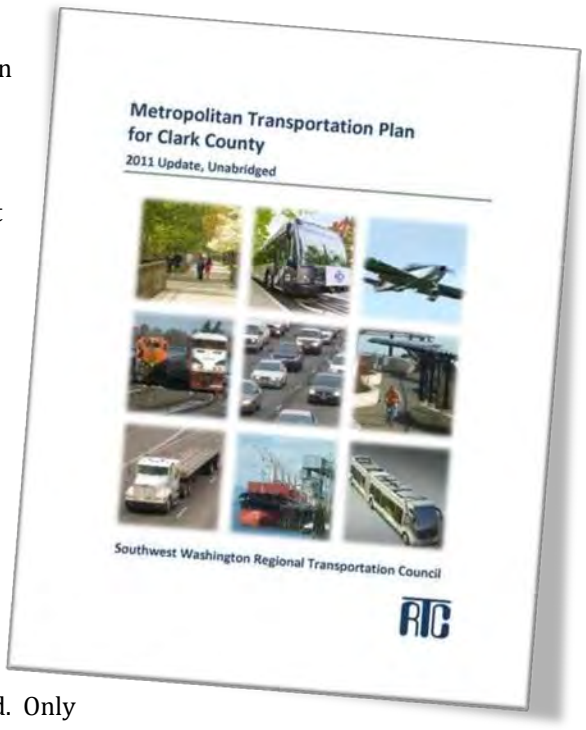
MTP Implementation

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 MTP must be updated at least every four years.

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, revised requirements with regional transportation plan update required at least every four 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 being met. A summary of Metropolitan Transportation Plan for Clark County adoption, update and amendment actions is provided in MTP Appendix J.



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 the Plan's appendices. Therefore the air quality conformity analysis carried out on the December 1997 version of the MTP (documented in the Plan's appendices) 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 focused 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. In July 2008, an amendment incorporated the I-5 Columbia River Crossing project's Locally Preferred Alternative and in December 2010 a further amendment incorporated C-TRAN's 20 Year Transportation Development Plan (June 2010) and the recommendations of the Clark County High Capacity Transit System Study (RTC, December 2008).

The 2011 MTP update is underway to meet federal requirements. Future results and recommendations from transportation studies currently underway will be incorporated into future MTP updates or amendments.

Emerging Issues to Track

When considering emerging system performance monitoring, plan development and implementation issues, the following issues and trends should be tracked:

- Continue to work with planning partners in local jurisdictions, U.S. and state Departments of Transportation, and transit agencies as plans for future transportation system developments are developed.
- Continue to monitor system performance through RTC's Congestion Management Process (CMP).
- Continue to develop and analyze Regional Travel Forecasting Model to support system needs identification.
- Consider updating the MTP once an updated federal transportation act is in place.
- Address transportation system priorities through a shorter-term, 10-year, planning effort beginning in 2012.

Appendix A: MTP Statutory Requirements

Introduction

Federal legislation (23 USC 134(d) and 49 USC 5303) requires the designation of a Metropolitan Planning Organization (MPO) for each urbanized area with a population of more than 50,000. Southwest Washington Regional Transportation Council is the designated Metropolitan Planning Organization for the Clark County portion of the Portland-Vancouver metropolitan area. As such, RTC has certain statutory requirements; both federal and state.

Federal

The metropolitan transportation planning process must meet, or substantially meet, the requirements of 23 CFR 450 Subpart B.

All Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) projects in the MPO urbanized area funded under Title 23, U.S.C. (Highways) or Chapter 53 of Title 49 U.S.C. (Transportation) must be selected from the Statewide Transportation Improvement Program (STIP) produced by the Washington Department of Transportation (WSDOT). In order for projects located within the metropolitan area to be included in the STIP, they must be consistent with the MPO's Metropolitan Transportation Plan (MTP) and be included in the MPO's Transportation Improvement Program (TIP). In TMAs, projects funded under the National Highway System (NHS) Bridge and Interstate Maintenance programs are selected for implementation from the TIP/STIP by the State, in consultation with the MPO and any affected transit operators. The majority of projects within the metropolitan area are selected by the MPO in consultation with the State and transit operator. In all cases, FHWA and FTA must jointly certify that the transportation planning process in a TMA meets or substantially meets Federal planning regulations before recognizing the MTP and TIP.

State

Regional Transportation Planning Organizations (RTPOs) were authorized as part of the 1990 Growth Management Act to ensure local and regional coordination of transportation plans. Southwest Washington Regional Transportation Council is the RTPO for the Clark, Skamania and Klickitat county region of southwest Washington.

The Regional Transportation Planning Program created a formal mechanism for local governments and the state to coordinate transportation planning for regional transportation facilities. RTPO planning must involve cities, counties, WSDOT, transit agencies, ports, and private employers. RTPOs are required to:

- Prepare a Regional Transportation Plan
- Certify that countywide planning policies and the transportation element of local comprehensive plans are consistent with the Regional Transportation Plan
- Develop and maintain a six-year Regional Transportation Improvement Program In 1994 further state legislation clarified the duties of the RTPO outlined in the GMA and further defined RTPO planning standards.

Appendix B: MTP Solutions, Projects, Strategies and Programs

Transportation System Solutions 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 transportation system deficiencies 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 if they also meet the test of "fiscal constraint"; there must be a reasonable expectation that revenues will be available to complete the identified project or strategy.

Between now and 2035, 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 project solutions on those links where projects are programmed in the Transportation Improvement Program. In addition, transportation 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.

Major transportation solutions which have been included in the 2035 MTP transportation network for Clark County are listed in Tables B-1 through B-6. These projects are identified through the MTP's needs analysis. Projects programmed for funding in the Metropolitan Transportation Improvement Program (MTIP) for Clark County should be identified in the MTP before they can be programmed for funding in the MTIP.

MTP Capital Project Solutions

Projects Completed Since the last MTP Update

Projects listed in tables B-1 and B-2 are projects that have been completed since the last major MTP update in December 2007. Projects on the MTP's Designated Regional Transportation System completed since 2007 amount to over $338 million (see Table B-1) and those on the local system amount to over $59 million (see Table B-2).

Projects Identified in the 2011 MTP Update

Projects listed in Tables B-3 through B-6 are transportation capital solutions identified through the regional and local transportation planning process as needed to support this region's development through 2035. These projects are assumed in RTC's Regional Travel Forecasting Model.

For projects that are on the MTP's Designated Regional Transportation System, Tables B-3 and B-5, the test for fiscal constraint has been proven through RTC's regional transportation planning process. Table B-3 lists projects that are funded but not yet constructed and amount to over $448 million. Table B-5 lists MTP Designated System regional transportation projects needed through 2035. The projects amount to over $2.7 billion in regional transportation needs within Clark County with an additional amount needed for the CRC project. Tables B-3 and B-5 together amount to over $3.2 billion needed in regional transportation infrastructure investment over the next 20-plus years.

Local projects, Tables B-4 and B-6, are identified through the Growth Management planning process conducted by local jurisdictions. Local projects are included in local Capital Facilities Plans and/or local Transportation Improvement Programs and are included in RTC's Regional Travel Forecasting Model. Table B-4 lists local projects that are funded but not yet constructed and amount to $28 million in infrastructure investment. Table B-6 lists local projects identified as needed through 2035. They amount to over $1.12 billion in transportation infrastructure needs. Tables B-4 and B-6 together amount to $1.15billion needed for local transportation infrastructure investment over the next 20-plus years.

Table B-1: Completed Projects Since 2007, MTP Designated System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
I-5	Salmon Creek to I-205	3 lanes each direction	2 lanes each direction	2006	WSDOT	$44,308,000
I-5	SR-502 Interchange	New Interchange	None	2008	WSDOT	$52,000,000
I-5	Pioneer Street (Ridgefield)/ SR-501 Interchange	Replace Interchange	Interchange	2011	WSDOT Ridgefield	$23,172,000
I-205	Mill Plain Exit (112th Avenue connector) with Mill Plain to NE 18th St - Stage I	Build direct ramp to NE 112th Ave. Partial ramps/ frontage road between Mill Plain and 18th St.	None	2010	WSDOT City of Vancouver	$26,000,000
SR-500	at I-205	Extend westbound auxiliary ramp lane	3 lanes each direction	2009	WSDOT	$981,000
SR-503	SR 502 to East Fork Lewis River	Northbound and southbound climbing lane	1 lane each direction	2010	WSDOT	$7,753,000
Vancouver Rail and 39th Street Bridge	RR at 39th Street	Vancouver Rail Bypass and W. 39th Street	At-Grade Crossing	2010/2011	WSDOT	$114,950,000
Salmon Creek Park & Ride	I-5 & 134th/139th Streets	Relocate existing park & ride as part of interchange project	Existing park & ride	2011	Clark Co. WSDOT C-TRAN	$6,000,000
Salmon Creek Interchange Project (SCIP)	I-5 & 134th/139th Streets	SCIP Phase 1B. 139th St./NE 10th and 20th Avenues	No 139th St.	2011	Clark County	$16,000,000
119th Street	110th Avenue to 117th Avenue	2 lanes each direction, w/turn lane	1 lane each direction	2009	Clark County	$2,800,000
72nd Avenue	N. of 88th Street to 110th St	2 lane ea. direction, w/turn lane	1 lane each direction	2009	Clark County	$8,740,000
St. John's Blvd.	NE 50th Avenue to 72nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2009	Clark County	$18,400,000
Ward/172nd Av.	S. 99th Street to 119th St.	Realignment	Curved	2010	Clark County	$11,117,000
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 St (SR 501) at 45th Ave	N/A	2-lane Roundabout	2-way stop-controlled intersection	Completed 2008	Ridgefield	$1,895,000
Total						**$338,354,000**

Note: Table B-1 includes MTP Designated Regional Transportation System projects constructed since the last major MTP update in December 2007.

Table B-2: Completed Projects Since 2007, Local System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
39th Street	At Railroad Tracks	Over-Crossing	At-Grade Crossing	2010	Vancouver	See WSDOT section
Grand Blvd.	Columbia House Wy Intersection	Intersection improvement	Substandard	2008	Vancouver	$1,250,000
63rd Street	Andresen Rd. to I-205 overcross	2 lanes ea. dir, w/turn lane	1 lane each direction	2008	Clark County	$8,300,000
NE 88th Street	St. Johns Road to Andresen Rd.	1 lane ea. dir., w/turn lane	l lane each direction	2009	Clark County	$8,900,000
NE 99th Street	NE 117th to 137th Av	1 lane ea. dir., w/turn lane	1 lane each direction	2008	Clark County	$5,800,000
N Parkway Ave	NE 5th St. to N Onsdorff Blvd	1 lane ea. direction, w/turn lane, median, bicycle and ped. facilities	1 lane each direction	2010	Battle Ground	$3,400,000
SE Rasmussen Blvd	SE Grace to Commerce Ave	New road with sidewalks	None	2007	Battle Ground	$357,500
Leadbetter Drive	Fremont to Parker	1 lane each direction w/ turn lane, bike & ped.	Same	Complete 2010	Camas	$1,400,000
Highland Street	E 4th Street	Realignment and improved intersection	Offset intersection, with poor sight visibility	2008	La Center	$1,742,090
S. 85th Ave/NE 10th Avenue	NE 259th Street to S 5th Street	Rebuild road w/ shoulder	1 lane each direction	Completed 2010	Ridgefield	$926,000
Union Ridge Parkway	S. 10th Street to S. 85th Ave	1 lane each direction w/ turn lane	Not continuous	Completed 2009	Ridgefield	$3,716,000
NE 147th Avenue	Ward Road/Fourth Plain to NE 59th Street	Construct new minor arterial, 1 lane each direction with turn lane	No street	2008	Vancouver	$4,250,000
NE 4th St	Western terminus to SE 1st	New street connection to urban standard	No street	2011	Vancouver	$1,268,000
Olympia Drive north extension	Mill Plain to 1st St.	New N/S roadway through (closed) Evergreen Airport	No Street	2011	Vancouver	$2,000,000
B Street, C Street, 17th Street	15th to 18th Streets	Downtown Streetscape Improvements	Completed	2008	Washougal	$5,534,829
Washougal SR-14 Pedestrian Tunnel	Pendleton Way to Columbia River	Ped. & bike tunnel under SR-14, linking downtown to riverfront	Completed	2010	Washougal	$2,300,000
E Street Improvement Project	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)	2011	Washougal	$8,013,739
Total						**$59,158,158**

Note: Table B-2 includes local transportation system projects constructed since the last major MTP update in December 2007.

Table B-3: Funded Projects, MTP Designated System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project 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. Auxiliary lanes I-205 to 179th St. NE 10th Ave. Improve NE 10th Ave. from 134th to 149th St. with turn lanes	Interchange	2014	WSDOT Clark Co	$111,000,000
I-205	Mill Plain to NE 18th St	18th St. Ramps/Frontage Road between Mill Plain and 18th Streets	No interchange at 18th/28th	2016	WSDOT	$101,100,000
SR-14	NW 6th Av. to 6th St.	Widen to 2 lanes each direction with split diamond interchange at Union St. and 2nd St.	1 lane each direction	2013	WSDOT	$50,563,000
SR-500	St. Johns Interchange	New Interchange	Intersection	2013	WSDOT	$48,628,000
SR-500	at SR-503/Fourth Plain	Construct turn lanes	Intersection	2012	WSDOT	$807,000
SR-502	NE 10th Avenue to Battle Ground	2 lanes each direction	1 lane each direction	2015	WSDOT	$88,769,000
119th Street	72nd Avenue to 87th Av.	2 lanes ea. Direction	1 lane each direction	2014-2018	Clark County	$26,220,000
119th Street	NE 50th Avenue Intersection	1 lane ea. direction, w/turn lanes	1 lane each direction	2012	Clark County	$4,300,000
I-5/SR 501 Interchange Phase 2	56th Ave and 65th Ave	2-lane Roundabouts	N/A	2012	Ridgefield	$4,700,000
138th Avenue	28th Street to 49th Street	1 lane ea. direction, w CTL and access management	1 lane each direction	2012	Vancouver	$8,000,000
164th Avenue	SE 1st to SE 34th St	Reconstruct intersections to improve traffic flow	Unimproved intersections	2012	Vancouver	$4,500,000
Total						**$448,587,000**

Note: Table B-3 (same as Table 5-3 in chapter 5) includes identified projects on the MTP's designated regional transportation system that are funded but not yet constructed.

Table B-4: Funded Projects, Local System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NE 88th Street	Highway 99 to St. Johns Road	1 lane ea. direction, w/turn lane	1 lane each direction	2013	Clark County	$17,524,000
SR-503 and SW Scotton Way		Add east and west intersection legs and signalize	Eastbound right-in/right-out	2012	Battle Ground	$500,000
Jefferson Street/Grant Street	8th St. to Railroad Ave.	Reconstruct and grade separate	1.5 lane each direction	2012	Vancouver	$10,000,000
Total						**$28,024,000**

Note: Table B-4 includes local transportation system projects that are funded but not yet constructed.

Table B-5: 2035 MTP Project List (for adoption in 2011), MTP Designated System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project 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	2018	WSDOT	$3.2 to $3.5 Billion
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	LaCenter Rd. Interchange	Rebuild Interchange	Interchange	2011-2015	WSDOT	$40,000,000
I-5	179th Street to SR-502	Auxiliary lane in each direction	3 lanes each direction	2016-2025	WSDOT	$22,000,000
I-5	179th Street Interchange	Reconstruct Interchange	Interchange	2016-2025	WSDOT	$40,000,000
I-5	SR 500	Build Direction Connection	Partial Interchange	2018-2025	WSDOT	$120,000,000
I-5	East Fork Lewis River Bridge	Replace Bridge Structure	Bridge	2020-2025	WSDOT	$72,000,000
I-5	North Fork Lewis River Bridge	Replace Bridge Structure	Bridge	2020-2025	WSDOT	$85,000,000
I-205	I-205/SR14 Interchange to Mill Plain	Rebuild Interchange and Construct Braided Ramps	Interchanges	2025-2035	WSDOT	$140,000,000
I-205	18th St to SR 500	Construct 28th St. Ramps and Connector Roads	Overpass/Underpass	2016-2025	WSDOT	$100,000,000
I-205	SR-500	WB SR-500 to SB I-205 Flyover	Interchange	2025-2035	WSDOT	$33,000,000
I-205	Padden Parkway Interchange	Rebuild interchange	2 lanes each direction	2020-2035	WSDOT	$30,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
I-205	SR-500 to Padden Parkway	3 general purpose and 1 auxiliary lanes each direction	2 lanes each direction	2016-2025	WSDOT	$58,000,000
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	$35,000,000
SR-14	West Camas Slough Bridge	Rebuild Bridge	1 lane each direction	2016-2025	WSDOT	$28,000,000
SR-14	2nd Street to 32nd Street	Add lanes and construct interchanges (for safety and capacity)	1 lane each direction with intersections	2016-2025	WSDOT	$100,000,000
SR-500	42nd and 54th Avenue	Construct Interchange and Grade-Separated Crossing	Intersection	2016-2025	WSDOT	$65,000,000
SR 500	Fourth Plain	Construct SR 500 Flyover	Intersection	2025-2035	WSDOT	$50,000,000
SR-503	at SR-502	Intersection improvement	Intersection	2011-2016	WSDOT/Battle Ground	$1,050,000
SR-503	at Padden Parkway	Add Interchange	Intersection	2020-2030	Clark County/ WSDOT	$32,000,000
SR-503	Padden to SR-502	Add Lanes, 3 lanes each direction	2 lanes each direction	2025-2035	WSDOT	$132,000,000
SR-503	SR-502 to Gabriel Road	Add Lanes, 2 lanes each direction	1 lane each direction	2020-2035	WSDOT	$34,000,000
Bus Stop Replacement	System Wide	Replace and upgrade signage	Follow replacement schedule, add vehicles as needed to provide service	2013	C-TRAN	$771,000
Transit Enhancements	System Wide	Improvements/amenities at bus stops, super stops, and transit centers - new and existing	Continuation of existing programs	Ongoing	C-TRAN	$42,440,000
Administration, Operations, and Maintenance Facility	65th Street & 18th Street	Expansion/redevelopment	Current facility is 20 years old and over capacity	2019-2020	C-TRAN	$22,725,000
Fisher's Landing Transit Center Expansion	164th Avenue & SR 14	Expansion of park & ride facility on property already owned by C-TRAN	Existing park and ride is approaching capacity	2015-2016	C-TRAN	$7,500,000
Bus Rapid Transit Improvements	Fourth Plain	Develop and construct BRT project	N/A	2014	C-TRAN	$78,000,000
18th Street Park & Ride	18th Street & I-205	Relocation of existing Evergreen Park & Ride	Current park and ride lacks visibility and easy access to I-205, relocation will support service improvements	2021-2022	C-TRAN	$14,600,000
219th Street Park & Ride	I-5 & SR-502	Park & Ride facility at new interchange	N/A	2020-2030	C-TRAN	$16,200,000
Fleet Replacement and Expansion	System Wide	Purchase replacement and expansion vehicles for fixed route, paratransit, and vanpool service	Continue ongoing program	Ongoing	C-TRAN	$135,588,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
ITS Deployment	System Wide	Deploy ITS Phase 2 and 3, including digital radio system and transit signal priority	Phase 1 complete	Ongoing	C-TRAN	$10,378,000
Facility Capital Maintenance				Ongoing	C-TRAN	$30,900,000
Miscellaneous Capital Repair & Replacement				Ongoing	C-TRAN	$15,666,000
119th Street	87th Avenue to 110th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$28,000,000
119th Street	Salmon Creek Av. to 72nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017	Clark County	$10,912,000
119th Street	NW 7th Av to NW 16th Av	1 lane ea. direction, w/turn lane	1 lane each direction	2013-2030	Clark County	$8,655,000
179th Street	Delfel Rd to NE 15th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2014	Clark County	$25,000,000
179th Street	NE 15th to NE 29th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$25,000,000
179th Street	NE 29th Avenue to NE 72nd Av.	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$37,700,000
179th Street	NE 72nd Avenue to Cramer Road	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$20,358,000
179th Street	Cramer Road to NE 112th Av.	2 lanes ea. direction, w/turn lane	None	2017-2035	Clark County	$5,881,200
179th Street	Fairgrounds Entrance to NW 11th Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$14,550,000
Andresen	Padden Parkway	Add Interchange	Intersection	2017-2035	Clark County	$52,000,000
Highway 99	NE 99th Street to NE 107th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2017 - 2020	Clark County	$13,936,000
Highway 99	NE 107nd Street to NE 117th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2017 - 2020	Clark County	$20,730,000
Highway 99	122nd to 129th Street	2 lanes each direction w/ turn lane	2 lanes each direction	2017-2035	Clark County	$11,310,000
Highway 99	South RR Bridge (Ross Street) to NE 63rd Street	2 lane ea. Direction w/ bike/ped facilities	2 lanes each direction	2017-2035	Clark County	$5,460,000
Highway 99 Amenity Incentives	Various locations			*2012-2035*	*Clark County*	$1,500,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NE 119th Street	SR-503 to NE 172nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$19,113,000
NE 182nd Avenue	NE 159th to NE 174th St	Turn lanes at intersections	1 lane each direction	2017-2035	Clark County	$3,016,000
NE 72nd Avenue	NE 133rd to NE 219th St	2 lanes ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$55,159,000
NE Ward Rd.	NE 88th Street to NE 172nd Ave	2 lanes ea. direction	1 lane each direction	2017-2035	Clark County	$5,000,000
NE Ward Rd.	NE 172nd Avenue to Davis Rd	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$11,344,000
NE Ward Rd.	NE Davis Rd to NE 182nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$18,850,000
Padden Parkway	SR-503	Add Interchange	Intersection	2020-2035	WSDOT/Clark Co	See WSDOT section
St. John's Blvd.	NE 68th St to NE 50th Av.	2 lanes ea. direction, w/turn lane	1 lane each direction	*2017-2035*	Clark County	$16,328,000
Grace Avenue	Grace Av/East Main St	Align S Grace and N Grace	Unaligned intersections	2017	Battle Ground	$3,239,000
SE Eaton Blvd	SE Grace to East City Limits	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2014-2018	Battle Ground	$1,425,000
SE Grace Avenue	SE Rasmussen Blvd to SE Eaton Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2012-2013	Battle Ground	$5,000,000
SE Grace Avenue	E Main St to SE Rasmussen Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2015	Battle Ground	$3,000,000
SR-502 and W 12th Avenue	Reconfigure roadway system and signal removal	1 lane ea. direction, w bicycle and pedestrian facilities	Signalized intersection	2014-2018	Battle Ground	$220,000
SR-503 and SW Eaton Blvd		Improve intersection - add turn lanes		2014-2018	Battle Ground	$525,000
SR-503 and SW Rasmussen Blvd		Add east legs of intersection and signalize	No intersection	2014-2018	Battle Ground	$815,000
SR-502 and W 15th Avenue	Reconfigure roadway system and add turn lanes	1 lane ea. direction, w bicycle and pedestrian facilities	Signalized intersection	2014-2018	Battle Ground	$450,000
SR-503	at SR-502	Add turn lanes to intersection	Intersection	2014-2018	Battle Ground/ WSDOT	$2,100,000
SR-503 and NW 5th Way		Add right-in/right-out intersection	None	2019-2028	Battle Ground	$250,000
NE 179th Street,	NE 112th Avenue to SR 503	Construct urban minor arterial with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,253,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
S Eaton Blvd	SW 20th Avenue	Signalize, add left turn lanes on all approaches	none	2014-2028	Battle Ground	$890,000
NW 38th Av/SE 20th St	192nd Av to Armstrong St	1 lane each direction w/ turn lane, bike and pedestrian	Partially 1 lane each direction, partially none	2013	Camas	$3,550,000
NE 18th St	Goodwin to 192nd Av	2 lanes each direction w/ turn lane, bike and pedestrian	None	2016-2022	Camas	$9,340,000
NE Goodwin Rd	18th St to 232nd Av	2 lanes each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$20,530,000
SR-500/ Everett Rd	Lake Rd to NE 4th St	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2023-2029	Camas	$12,710,000
NW 6th Av	Ivy to Division	Add turn lanes	2 lanes each direction	2016-2022	Camas	$1,200,000
E 4th Street	Stonecreek Drive	Brezee Creek Crossing Pedestrian/bicycle Improvements	Old Culvert, no bike lanes, 1 sidewalk	2016-2020	La Center	$3,248,000
E 4th Street	Highland to E. City Limits	Urban upgrade	Unimproved road segment	2016-2021	La Center	$1,635,000
La Center Road	at Timmen Road	Construct left turn lanes	Unimproved intersection	Partly complete in 2012. Rest in 2016-2021.	La Center	$1,450,000
E 4th Street	Cedar Avenue	Create downtown couplet.	urban road with sidewalks.	2014-2017	La Center	$101,500
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	Southwest Vancouver	Construct new freight rail entrance to the Port from the BNSF Railway mainline, a grade separated entrance to T-5 and improves internal rail storage to accommodate unit trains	Hill track access from BNSF mainline, internal rail system. No service to Columbia Gateway	Phased, 2011-2017	Port of Vancouver	$150,000,000
Hillhurst Road	Sevier Rd to 229th extension	Upgrade to 5 lane principal arterial	1 lane each direction	2015	Ridgefield	$14,693,000
Hillhurst Road	SR-501 to Sevier Rd	1 lane each direction w/ turn lane	1 lane each direction	2013	Ridgefield	$5,414,000
I-5	219th St. to SR-501	NB auxiliary lane along I-5	None		Ridgefield/ WSDOT	$8,600,000
I-5	SR-501 to 219th St.	SB auxiliary lane along I-5	None		Ridgefield/ WSDOT	$7,900,000
Pioneer Street Bridge	over Gee Creek	Bridge Replacement	2 lane bridge	2020	Ridgefield	$2,671,500
Pioneer St (SR 501) at 9th Ave/Hillhurst Rd	N/A	Signalized Intersection improvement	Unsignalized Intersection	2015	Ridgefield	$345,000
Pioneer St (SR 501)	Reiman Road to 35th Ave Roundabout	Widen, 1 lane each direction w/ turn lane	1 lane each direction	2020	Ridgefield	$5,581,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
Pioneer St (SR 501) at 35th Ave	N/A	2-lane Roundabout	2-way stop-controlled intersection	2014	Ridgefield	$1,268,000
Pioneer St (SR 501)	35th Ave to 45th Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2015	Ridgefield	$3,530,000
Pioneer St (SR 501) at 51st Ave	N/A	2-lane Roundabout	N/A	2015	Ridgefield	$1,268,000
Pioneer St (SR 501)	45th Ave to 51st Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$2,194,000
Pioneer St (SR 501)	51st Ave to 56th Ave	Widen, 2 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$2,194,000
Extend Pioneer St (SR 501) to Port	Main Ave to Division St	Railroad Overcrossing, new road	N/A	2018	Ridgefield	$12,500,000
Hillhurst Road at S. Royle Road	N/A	Signalized Intersection improvement	N/A	2018	Ridgefield	$964,000
112th Avenue	Mill Plain to 49th Street	2 lanes ea. direction, w/turn lane	2 lanes each direction	2020-2035	Vancouver	$7,000,000
137th Avenue	49th Street to Vancouver City Limits	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$8,000,000
18th Street	162nd Avenue to 192nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2020-2035	Vancouver	$12,000,000
18th Street	97th Avenue to NE 138th Avenue	2 lanes ea. direction, w/turn lane		2012-2025	Vancouver	$21,000,000
18th Street	138th Avenue to 162nd Avenue	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$15,000,000
18th Street	87th Avenue to 97th Avenue	Extend existing street 1 lane ea. direction, w/turn lane	No street	2015-2025	Vancouver	$9,000,000
192nd Avenue	SE 1st Street to NE 18th Street	2 lanes ea. direction, w/turn pockets	1 lane each direction	2015-2025	Vancouver	$7,000,000
E. Mill Plain	136th Ave. Intersection	Intersection improvement	Substandard	2011	Vancouver	$2,500,000
Fourth Plain	I-5 to Railroad Bridge	Corridor improvements with targeted widening for capacity	1 lane each direction with center turn lane	2020-2035	Vancouver	$15,000,000
Fourth Plain Boulevard/ Andresen	Intersection Influence Area	Reconstruct Fourth Plain in vicinity of 65th/66th Avenue to Andresen		2017-2025	Vancouver	$5,000,000
Fruit Valley Rd	Whitney to 78th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Vancouver	$28,000,000
Lieser Road/ NE 87th Avenue	Lieser to E 5th St	Intersection improvement	Offset intersection	2017-2035	Vancouver	$7,500,000
Main Street	5th Street to McLoughlin	Reconstruct from 5th to 16th	One-way street	2017-2030	Vancouver	$10,000,000
Main Street	5th Street to Columbia Way	Re-connect to waterfront S. of rail berm	No street	2016	Vancouver	$9,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NE 28th Street	142nd Avenue to 162nd Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2025	Vancouver	$6,000,000
SE 1st Street	164th Avenue to 192nd Ave.	2 lanes ea. direction, w/turn lane	1 lane each direction	2015-2025	Vancouver	$20,000,000
SE 20th Street	192nd Ave. to Camas City Limits	New urban minor arterial roadway	No Street	2012-2017	Vancouver	$1,750,000
SE 5th Street	*Blandford to East Reserve*	*Upgrade to 3-lane Modified Collector*	*1 lane each direction*	*2017-2035*	*Vancouver*	*$1,200,000*
Andresen Rd.	MacArthur Blvd Intersection	Intersection operational upgrade	4-way stop control	2017-2025	Vancouver	$1,000,000
Main Street	39th St. Intersection	Intersection capacity and operational upgrade	substandard lane width, inadequate storage, inadequate turn lanes	2017-2025	Vancouver	$3,500,000
Mill Plain Blvd	104th/105th Intersection	Intersection offset removal	offset intersection north/south of Mill Plain	2017-2035	Vancouver	$4,000,000
32nd Street	SR-14 to Evergreen Way	Widen to 3 lanes - striping only	Completed	2007	Washougal	
32nd Street	Evergreen Way to 34th Street	Widen to 3 lanes, plus bike lanes and sidewalk	1 lane each direction	2018-2024	Washougal	$5,476,000
Evergreen Way	32nd Street to Sunset View Rd	Widen to 3 lanes, plus bike lanes and sidewalk	1 lane in each direction	2018-2024	Washougal	$8,117,000
SR 14 Access & Interchanges	Washougal River Road to 32nd Street			2011-2017	(Washougal) (Port of Camas Washougal) (WSDOT)	$24,334,000
Evergreen @ 32nd Street	Intersection Influence Area	Intersection reconstruct including radius and turn lanes		2011-2017	Washougal	$840,000
Washougal River Road	Shepherd Road, 18th/O, 25th	Intersection improvements, bike ped. and trail crossing		2018-2024	Washougal	$2,482,000
Evergreen Way And Sunset View Road	Intersection Influence Area	Intersection improvement		2018-2024	Washougal	$1,963,000
Evergreen @ 39th intersection	Evergreen and 39th St.	Evergreen @ 39th St. Signalization and intersection improvements	no signal	2025-2030	Washougal	$1,081,000
County-wide	County Wide	Pedestrian & Bicycle Projects and Programs		Continuing	County-wide	$92,400,000
County-wide	County Wide	Demand Management		Continuing	County-wide	$48,000,000
Various	System Wide	Transportation System Management and Operations		Continuing	County-wide	$45,800,000
Total						**$2,843,617,200**

Note: Table B-5 (same as Table 5-4 in chapter 5) includes projects on the MTP's Designated Regional Transportation System which do not yet have a funding source but for which funds are likely to be available during the twenty-plus year term of the MTP (to year 2035). These projects are the MTP's "fiscally-constrained" projects.

Table B-6: 2035 MTP Project List (for adoption in 2011), Local System

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
Bridges and Misc. Projects	Various locations			2012-2035	Clark County	$15,527,000
Hazel Dell Av.	99th Street to 114th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$3,000,000
Intersection Improvements	Various locations			2012-2035	Clark County	$25,500,000
Misc. Road Improvements w/ regional benefit	Various locations			2012-2035	Clark County	$25,000,000
NE 10th Avenue	149th to 164th Street	1 lane ea. direction, w/ turn lane at intersections; bridge	1 lane each direction	2017-2035	Clark County	$29,372,000
NE 10th Avenue	NE 141st St.to NE 149th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$4,050,000
NE 10th Avenue	NE 164th St to Fairgrounds Ent.	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$4,524,000
NE 137th/ 142nd Av	NE 119th St to 173rd Circle	1 lane ea. direction, w/turn lane	None	2017-2035	Clark County	$33,930,000
NE 152nd Avenue	Ward Road to 99th St	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$11,310,000
NE 15th Avenue	179th Street to NE 10th Avenue	1 lane ea. direction, w/turn lane	None	2017-2035	Clark County	$6,559,800
NE 15th/20th Avenues	NE 154th to NE 15th Avenue	Street upgrade	1 lane each direction	2017-2035	Clark County	$8,655,000
NE 199th Street	NE 10th Av. To NE 72nd Av.	1 lane each direction w/ turn lane	1 lane each direction	2017-2035	Clark County	$31,668,000
NE 29th Avenue	NE 134th to NE 179th St	Complete pedestrian connections	Some sidewalk segments	2017-2035	Clark County	$4,000,000
NE 50th Avenue	LaLonde to 119th Street	1 lane each direction w/ turn lane	1 lane each direction	2017-2035	Clark County	$11,762,400
NE 50th Avenue	NE 119th to 179th St	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$33,930,000
NE 88th Street	Hazel Dell Avenue to Highway 99	1 lane ea. direction, w/turn lane; overpass	None	2017-2035	Clark County	$11,077,000
NE 94th Avenue	Padden Parkway to NE 119th Street	1 lane ea. direction, w/turn lane	1 lane/none	2017-2035	Clark County	$19,325,000
NE 99th Street	St. Johns Rd. to 72nd Av.	1 lane ea. direction, w/turn lane	None/1 lane	2017-2035	Clark County	$15,885,000
NE 99th Street	72nd to 94th Av.	1 lane ea. direction, w/turn lane	None/1 lane	2017-2035	Clark County	$11,210,000
NE 99th Street	94th to 117th Av.	1 lane ea. direction, w/turn lane	None/1 lane	2017-2035	Clark County	$9,222,000
NE 99th Street	NE 137th Av to 172nd	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$19,905,600

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NW 11th Ave.	NW 139th Street to 146th Street	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Clark County	$11,463,300
NW/NE 199th Street	NW 11th Av.to NE 10th Av.	1 lane each direction w/ turn lane	1 lane each direction	2017-2035	Clark County	$4,400,000
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	2019-2028	Battle Ground	$1,900,000
N Parkway Ave	Onsdorff to NE 244th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2014-2018	Battle Ground	$1,649,000
NE 112th Ave	NE 244th to NE 239th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2016-2025	Battle Ground	$395,000
NE 112th Ave	NE 199th to NE 189th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2016-2025	Battle Ground	$505,000
NE 132nd Ave	NE 199th to NE 179th St	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2016-2025	Battle Ground	$1,750,000
NE 189th Street	NE 12th Ave to SR-503	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2016-2025	Battle Ground	$650,000
SW Eaton Blvd	SW 20th Ave to SR-503	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2014-2018	Battle Ground	$900,000
NE 1st Street	N Parkway to Grace	Widen road lanes, w pedestrian facilities	1 lane each direction	2011-2015	Battle Ground	$500,000
NW 25th St	SR-503 to N Parkway Ave	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2014-2018	Battle Ground	$1,953,000
NE 25th St	N Parkway Ave to NE Grace Ave	New urban collector with bike lanes and sidewalks		2014-2018	Battle Ground	$1,875,000
NW 25th St	NE 112th Ave to SR-503	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2019-2028	Battle Ground	$887,000
NE Onsdorff Blvd	N Parkway Ave to NE Grace Ave	New urban collector with bike lanes and sidewalks		2014-2018	Battle Ground	$1,910,000
NW 20th Ave	SR-502 to Onsdorff	1 lane ea. direction, w bicycle and pedestrian facilities		2007-2010	Battle Ground	$1,000,000
NW 29th Av	NE 239th to NW 3rd St	New urban collector with bike lanes and sidewalks		2011-2015	Battle Ground	$1,855,000
NW Onsdorff Blvd	NE 239th St to NE 20th Av	New urban collector with bike lanes and sidewalks		2011-2015	Battle Ground	$1,008,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NW/SW 1st St	Frontages parallel to Main St	1 lane ea. Direction	None	2007-2010	Battle Ground	$850,000
S Parkway Avenue	S 10th St to S Eaton Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2013	Battle Ground	$3,400,000
SE 1st Street	S Parkway to Grace	Widen road lanes, w pedestrian facilities	1 lane each direction	2010	Battle Ground	$500,000
SE Scotton Way	East terminus to Grace	1 lane ea. direction, w bicycle and pedestrian facilities	None	2007-2010	Battle Ground	$500,000
SR-502 and W 29th Ave		Add south leg of intersection and signalize		2014-2018	Battle Ground	$790,000
SW 20th Ave	SW Rasmussen Blvd to SW Eaton Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities		2014-2018	Battle Ground	$1,110,000
SW 20th Ave	SR-502 to SW Rasmussen Blvd	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	1 lane each direction	2014-2018	Battle Ground	$93,000
SW 4th St	S Parkway to west terminus	Widen road lanes, w pedestrian facilities	1 lane each direction	2007-2010	Battle Ground	$500,000
SW 7th Av	Rasmussen to SW Scotton Way	1 lane ea. direction, w pedestrian facilities	None	2007-2010	Battle Ground	$1,750,000
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	$250,000
SW Rasmussen Blvd	SR-503 to SW 20th	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	None	2007-2010	Battle Ground	$1,500,000
SW Rasmussen Blvd	SR-503 to western terminus	1 lane ea. direction, w/turn lane, bicycle and pedestrian facilities	None	2014-2018	Battle Ground	$1,357,000
Traffic Signal Improvements		Replacement of electrical components at 5 intersections		2014-2018	Battle Ground	$400,000
NW 4th St,	east of NE 12 Ave to SR 503	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$440,000
NW 5th Street,	503 to N Parkway Avenue,	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$1,500,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NW 7th Avenue,	NW 9th Street to W Main Street	Construct new urban neighborhood collector with bike lanes and sidewalks bike lanes and sidewalks	none	2019-2028	Battle Ground	$1,560,000
NE 152nd Avenue,	SE Rasmussen Blvd to Eaton Blvd	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$2,391,000
NE 152nd Avenue	Eaton Blvd to NE 189th Street	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$1,714,000
NE 189th Street	NE 142nd Avenue to NE 152nd Avenue	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$2,235,000
NE 189th Street,	NE 132nd Avenue to NE 142nd Avenue	Construct new urban major collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,050,000
SE 5th Avenue,	NE 192nd Street to NE 179th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,670,000
NE 189th Street,	SR 503 to NE 132nd Avenue	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$1,875,000
SW 7th Avenue,	NE 189th Street to NE 179th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,109,000
NE 179th Street,	SR 503 to NE 142nd Avenue	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$3,939,000
SW 15th Avenue,	NE 189th Street to NE 179th Street	Construct new urban neighborhood collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$1,599,000
NE 112th Avenue,	NE 189th Street to NE 179th Street	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$3,094,000
NE 192nd Street,	SW 20th Avenue to SW 15th Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$1,594,000
NE 25th Street,	NE 142nd Avenue to NE 152nd Avenue	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$2,050,000
NW 35th Avenue,	NE 239th Street to NW 2nd Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$3,070,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NW 15th Street,	NE 92nd Avenue to NW 31st Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,310,000
NW 9th Street,	NE 92nd Avenue to western terminus	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$2,824,000
NE 92nd Avenue,	SR 502 to Eaton Blvd.	Construct new urban major collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$3,924,000
SW 34th Avenue,	SW 2nd Street to Eaton Blvd	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$3,768,000
SW 11th Street,	SW 34th Avenue to SW 24th Avenue	Construct new urban major collector with bike lanes and sidewalks.	none	2019-2028	Battle Ground	$994,000
SW 11th Street,	92nd Avenue to SW NE 34th Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$1,315,000
NW 2nd Street,	NE 92nd Avenue to NW 31st Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,057,000
SW 1st Street,	SW 34th Avenue to SW29th Ave	Construct new frontage road on south side of highway	none	2019-2028	Battle Ground	$1,350,000
SW 25th Avenue	SW 11th Street to Eaton Blvd	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$2,895,000
NE 112th Avenue,	NE 179th Street to NE 176th Street	Construct new urban major collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$888,000
SW 15th Avenue,	NE 179th Street to NE 176th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$750,000
Eaton Blvd,	NE 92nd Avenue to SW 2Oth/NE 112th Avenue	Improve to urban three-lane section with sidewalks and bike lanes	none	2019-2028	Battle Ground	$1,515,000
NE 92nd Avenue	NE 239th Street to SR 502	Improve to three-lane urban major collector with sidewalks and bike lanes	none	2019-2028	Battle Ground	$1,710,000
NE 239th Street,	NE 92nd Avenue to NW Onsdorff Blvd.	Improve to three-lane urban major collector with sidewalks and bike lanes	none	2019-2028	Battle Ground	$750,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
SW Scotton Way,	SW 25th Avenue to SW 20th Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$750,000
NE 25th Street,	NE 112th Avenue to SR 503	Improve to urban three-lane section with sidewalks and bike lanes	none	2019-2028	Battle Ground	$887,000
NE 239th St,	NW Onsdorff Blvd to NE 112th Avenue	Complete urban two-lane section with sidewalks and bike lanes	none	2019-2028	Battle Ground	$563,000
SW 24th Avenue	SR 502 to SW 6th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$850,000
NW 16th Avenue,	NE 25th Street to NW Onsdorff Boulevard	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$1,764,000
NW 15th Street,	NW 31st Avenue to NW 25th Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2019-2028	Battle Ground	$963,000
NE 19th Street,	N Parkway Avenue to NE Grace Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$1,584,000
NE 3rd Avenue	Onsdorff Blvd to NE 12th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$452,000
NE 9th Street,	NE 3rd Avenue to NE Grace Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$1,255,000
NW 31st Avenue	NE 239th Street to NW 29th Avenue	Construct new urban major collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$5,888,000
SW 15th Avenue	Eaton Blvd to NE 189th Street	Construct new urban neighborhood collector with -bike lanes and sidewalks	none	2014-2028	Battle Ground	$1,774,000
NE 192nd Street,	SW 7th Avenue to NE 142nd Avenue	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$2,925,000
SE 5th Avenue,	Eaton Blvd to NE192nd Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$955,000
SE Rasmussen Blvd	SE Commerce Avenue to NE 167th Avenue	Construct new urban major collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$3,778,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
S Parkway Avenue	Eaton Blvd to NE 179th Street	Improve to urban three-lane section with sidewalks and bike lanes	none	2014-2028	Battle Ground	$2,400,000
NW Onsdorff Blvd	N Parkway Avenue	Install all-way stop or modern roundabout	none	2014-2028	Battle Ground	$705,000
SW Rasmussen Blvd	SR 503 to western terminus	Complete project to construct new road, lighting, storm drainage, sidewalks, striping	none	2014-2028	Battle Ground	$1,357,000
NE 5th Avenue	NE 25th Street to NE Onsdorff Blvd	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2014-2028	Battle Ground	$2,386,000
SW 2nd Street	SW 29th Avenue to SW 20th Avenue	New construction completing frontage roads on south side of W. Main street	none	2009-2013	Battle Ground	$2,295,000
SW 1st Way	SW 15th Avenue to SW 12th Avenue (frontage)	New construction completing frontage roads on south side of W Main Street right of way acquisition	none	2009-2013	Battle Ground	$766,000
NW 15th Avenue	NW 9th Street to NW 4th Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2009-2013	Battle Ground	$595,000
SW 15th Avenue	SW 2nd Street to Rasmussen Street	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2009-2013	Battle Ground	$770,000
SW 15th Avenue	Rasmussen Street to Scotton Way	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2009-2013	Battle Ground	$1,310,000
SW 15th Avenue	Scotton Way to S Eaton Blvd	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2009-2013	Battle Ground	$1,130,000
SW Scotton Way	SW 20th Avenue to SR 503	Construct new urban neighborhood collector with bike lanes and sidewalks	none	2009-2013	Battle Ground	$2,700,000
NW 2nd Street	NW 15th Avenue to NW 12th Avenue	New construction completing frontage road on north side of W. Main Street, wetland mitigation	none	2009-2013	Battle Ground	$776,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
NW 1st Street	NW 15th Avenue to NW 12th Avenue	Improve existing street to accommodate traffic diverted to NW 15th Avenue after removal of traffic signal at SR 502/NW 12th Avenue (needs further analysis to determine optimal solution). Costs assume full lane added on 1st with 100 foot southbound right turn lane on NW 12th Avenue.	none	2009-2013	Battle Ground	$308,000
NW 2nd Street	NW 18th Avenue to NW 15th Avenue (frontage)	New construction completing frontage roads on north side of W. Main Street	none	2009-2013	Battle Ground	$226,000
Leadbetter Drive	Lake Road to Fremont Street	Add bike lanes, pedestrian	1 lane each direction	2016	Camas	$700,000
NW 38th Av	Armstrong to Astor	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$11,310,000
NE 43rd Av	SR-500 to Camas HS	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$1,950,000
SE 15th St/Nourse Rd	Camas HS to 283rd	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$3,000,000
NE Ingle Rd	Goodwin to North City Limits	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$5,000,000
NE 28th St	232nd Av to 242nd Av	2 lanes each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$6,890,000
NW Camas Meadows Dr	NE 18th St to Lake Rd	1 lane each direction w/ turn lane, bike and pedestrian	Partially 1lane each direction, partially none	2016-2022	Camas	$8,330,000
Woodburn Dr	SE 15th St to SE 283rd Av	1 lane each direction w/ bike and pedestrian	None	2016-2022	Camas	$10,040,000
SE 23rd St	Crown Rd & 283rd Av	Realign offset intersection	Offset intersection	2016-2022	Camas	$1,800,000
SE Crown Rd	SE 23rd St to NE 3rd Av	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2016-2022	Camas	$10,040,000
NE 232nd Av/ 9th St	28th St to 242nd Av	1 lane each direction w/ turn lane, bike and pedestrian	1 lane each direction	2023-2029	Camas	$10,340,000
NE 242nd Av	28th St to 14th St	1 lane each direction w/ turn lane, bike and pedestrian	None	2023-2029	Camas	$7,880,000
New East/West Arterial	242nd Av to 283rd Av	1 lane each direction w/ turn lane, bike and pedestrian	None	2023-2029	Camas	$40,630,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
North Dwyer Creek Master Plan: Street "A"	NW Lake Rd to Camas Meadows Dr	1 lane each direction	None	2016-2022	Camas	$2,750,000
North Dwyer Creek Master Plan: Street "B"	#NW Friberg to NW Larkspur	1 lane each direction	None	2016-2022	Camas	$4,450,000
NW 16th/Hood/18th	Klickitat to Astor	1 lane ea. direction, w/turn lane	1 lane each direction	2016-2022	Camas	$2,000,000
NW 18th Av	Whitman to Brady	1 lane ea. direction, w/turn lane	None	2016-2022	Camas	$1,640,000
NW 18th Av/SE Payne Rd	Whitman St to NW Pac Rim Blvd.	1 lane ea. direction, w/turn lane	1 lane each direction	2016-2022	Camas	$3,000,000
NW 38th Av	Astor to Sierra	1 lane each direction	None	2016-2022	Camas	$2,713,000
NW 43rd Av/ Astor St	Sierra to 38th	1 lane ea. direction, w/turn lane	1 lane each direction	2016-2022	Camas	$2,980,000
NW Astor St/ NW 11th Av	Forest Home Rd to McIntosh Rd	1 lane ea. direction, w/turn lane	1 lane each direction	2014	Camas	$1,830,000
NW Brady Rd	16th to 25th	1 lane ea. direction, w/turn lane	1 lane each direction	2014	Camas	$1,500,000
NW Friberg/ Strunk St	SE 1st St to Goodwin	1 lane ea. direction, w/turn lane	1 lane each direction	2016-2022	Camas	$2,589,500
NW McIntosh Rd	Brady to 11th	1 lane ea. direction, w/turn lane	1 lane each direction	2016-2022	Camas	$4,100,000
NW Payne St	NW Lake Rd to Camas Meadows Dr	1 lane each direction	Private Drive	2016-2022	Camas	$1,990,000
Collector roadway	NE 339th St. to E. 4th Street	New eastside collector roadway	None	2014-2030	La Center	$2,005,264
East Fork Bridge		Second bridge crossing	None	2014-2030	La Center/ Clark Co.	$15,950,000
Highland Street	High School to E City Limits	Urban upgrade	Unimproved road segment	2014-2030	La Center	
New Collector "A"				2014-2030	La Center/ Clark Co.	$5,200,000
New Collector "B"				2014-2030	La Center/ Clark Co.	$2,140,000
New Collector "C"				2014-2030	La Center	$1,340,000
5th Street	Aspen Avenue	Realignment of E. 5th Street, Bicycle and ped improvements.	Urban roads with misaligned intersection.	2013-2015	La Center	$850,000
Pacific Highway	5th Street	Create downtown couplet.	urban road with sidewalks.	2014-2017	La Center	$384,300
N. 20th Street (289th Street)	I-5 to 65th Ave/NW 11th	Upgrade to minor arterial	1 lane each direction	2016	Ridgefield	$2,438,000
N. 20th Street (289th Street)	I-5 Overcrossing	Upgrade to minor arterial	1 lane each direction	2020	Ridgefield	$10,384,000
6th Way	Timm Road to S 51st Avenue	1 lane each direction w/ turn lane	Not continuous	2014	Ridgefield	$775,000
Bertsinger Road	SR-501 to S 25th Place	Realign road	1 lane each direction	2014	Ridgefield	$9,230,000
Carty Road	Hillhurst to I-5	Upgrade to minor arterial	1 lane each direction	2025	Ridgefield	$13,024,000
N 10th Street	N 45th to N 51st Avenue	1 lane each direction w/ turn lane	Not continuous	2018	Ridgefield	$2,526,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
N 10th Street	N 35th Ave to N 45th Avenue	1 lane each direction w/ turn lane	Not continuous	2017	Ridgefield	$7,981,000
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	2014	Ridgefield	$1,248,000
N 35thAvenue	SR-501 to N 10th St	1 lane each direction	Not continuous	2017	Ridgefield	$2,790,000
S 51st Avenue	S 20th Way to Pioneer St (SR 501)	1 lane each direction w/ turn lane	Not continuous	2015	Ridgefield	$4,393,000
N 51st Avenue	Pioneer to N 10th Street	1 lane each direction w/ turn lane	Not continuous	2017	Ridgefield	$3,281,000
N 56th Avenue	SR-501 to N 5th Street	1 lane each direction w/ turn lane	Not continuous	2014	Ridgefield	$1,354,000
N 5th Street	N 45th Avenue to N 56th Place	1 lane each direction w/ turn lane	Not continuous	2016	Ridgefield	$3,158,000
N 65th Avenue/NW 11th	Pioneer to N 20th St/NW 289th Street	1 lane each direction w/ turn lane	1 lane each direction	2014	Ridgefield	$2,672,000
85th Ave/NE 10th Avenue	S 5th to N 10th St/NE 279th Street	1 lane each direction w/ turn lane	1 lane each direction	2020	Ridgefield	$3,608,000
105th Ave/NE 20th Ave.	N 10th St/NE 279th to S 10th St/NE 259th St	Upgrade to collector arterial	1 lane each direction	2025	Ridgefield	$6,011,000
S. 10th St/NE 259th St	85th Ave/NE 10th to 105th Ave/NE 20th Av.	Upgrade to collector arterial	1 lane each direction	2025	Ridgefield	$4,007,000
N.10th St/NE 279th Street	85th Ave/NE 10th to 105th Ave/NE 20th Av.	Upgrade to collector arterial	1 lane each direction	2025	Ridgefield	$4,007,000
65th Ave/NW 11th	Pioneer to S 5th Street	1 lane each direction w/ turn lane	1 lane each direction	2014	Ridgefield	$2,004,000
N 10th St/NW 279th Street Extension	65th Ave/NW 11th Avenue to 85th Ave/NE 10th Avenue	1 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$4,207,000
S 10th Way	S 35th Place to S 25th Place	Rebuild road	1 lane each direction	2015	Ridgefield	$3,079,000
S 15th Street	S 45th Avenue to S 35th Place	Rebuild road	1 lane each direction	2020	Ridgefield	$4,121,000
S 15th Street	Union Ridge Parkway to S 45th Avenue (not including bridge)	1 lane each direction w/ turn lane	Not continuous	2018	Ridgefield	$3,900,000
S 15th Street Overcrossing over I-5	Timm Road to Dolan Road	1 lane each direction w/ turn lane	Not continuous	2025	Ridgefield	$14,625,000
S. 35th Place	S 10th Way to S 15th St	New collector	None	2015	Ridgefield	$6,679,000
S 20th Way	Timm Road to S 51st Avenue	1 lane each direction w/ turn lane	1 lane each direction	2020	Ridgefield	$2,543,000
S 25th Place	S 10th to S 4th Way	Rebuild road	1 lane each direction	2015	Ridgefield	$872,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
S 35th Avenue	SR-501 to S 15th St	1 lane each direction	Not continuous	2025	Ridgefield	$1,658,000
S 45th Avenue	S 15th to N 10th Street	1 lane each direction w/ turn lane	1 lane each direction	2020	Ridgefield	$6,143,000
S 51st Avenue	S 20th Way to NW 219th St	1 lane each direction w/ turn lane	Not continuous	2020	Ridgefield	$14,904,200
S 5th Street	Union Ridge Parkway to 85th Ave/NE 10th Avenue	1 lane each direction w/ turn lane	1 lane each direction	2018	Ridgefield	$2,623,000
S 5th Street	65th Ave/NW 11th Street to Union Ridge Parkway	1 lane each direction w/ turn lane	1 lane each direction	2015	Ridgefield	$715,000
Timm Road	S 15th St to S 20th Way	Widen, 1 lane each direction	1 lane each direction	2020	Ridgefield	$1,988,000
Union Ridge Parkway	65th Ave to S 10th St	2 lane each direction w/ turn lane	N/A	2014	Ridgefield	$5,661,000
NW 219th St Extension	Hillhurst Road to I-5	Widen, 1-lane each direction w/ turn lane	1-lane each direction	2025	Ridgefield	$16,051,700
Main Ave	Depot St to City Limits	Widen	1-lane each direction	2025	Ridgefield	$385,000
Boschma Collectors	65th to 85th and S 5th St	New Collectors	N/A	2018	Ridgefield	$14,315,000
S. 5th St	S 45th Avenue to S 51st Ave	New Industrial Collector	N/A	2015	Ridgefield	$3,612,000
131st Avenue	Fourth Plain to 59th Street	1 lane ea. direction, w/turn lane	Intermittent roadway	2013-2030	Vancouver	$2,500,000
136th Ave.	SE 7th St. Intersection	Intersection improvement	Substandard	2015-2025	Vancouver	$750,000
152nd Avenue	Fourth Plain south to city limits	New arterial street	No street	2017-2035	Vancouver	$1,000,000
152nd Avenue	SE 1st to NE 7th ST.	Widen to 3 lanes	2 lanes/direction	2017-2035	Vancouver	$1,000,000
157th Avenue	Fourth Plain to 59th Street	1 lane ea. direction, w/turn lane	Intermittent roadway	2017-2035	Vancouver	$3,000,000
164th Avenue	SR-14 to Evergreen	Upgrade to urban standard	1 lane each direction	2020-2035	Vancouver	$2,500,000
26th Avenue	SR-501 to Fruit Valley Road	1 lane ea. direction, w/turn lane new minor industrial arterial	None	2025-2035	Vancouver	$12,550,000
39th Street	Columbia to Main St	Minor Widening	1 lane each direction	2017-2035	Vancouver	$2,000,000
49th Street	122nd to 137th Avenue	1 lane ea. direction, w/turn lane	1 lane each direction	2017-2035	Vancouver	$2,043,000
49th Street	15th Avenue to St James	Reconstruct, widen and upgrade to urban standards	1 lane each direction	2025-2035	Vancouver	$1,000,000
54th Street	18th Avenue to St James	Reconstruct, widen and upgrade to urban standards	1 lane each direction	2025-2035	Vancouver	$1,000,000
59th/56th Street	137th Avenue to 122nd Avenue	upgrade to urban minor arterial	Intermittent roadway	2017-2025	Vancouver	$8,000,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
82nd Av./Thurston Way	Van Mall Drive to NE 54th Street	Urban upgrade to standard	Substandard	2013-2030	Vancouver	$2,000,000
94th Avenue	Van Mall Drive to NE 54th Street	Urban upgrade	1 lane each direction	2013-2030	Vancouver	$1,200,000
9th Street	I-205 to NE 136th Avenue	Close gaps and complete corridor	Unconnected street system	2020-2035	Vancouver	$4,417,516
9th Street/11th Street	NE 136th to 162nd Av	Close gaps and complete corridor to 2 lane urban collector	Unconnected street system	2020-2035	Vancouver	$3,500,000
Brady Road West Extension	192nd Ave. interchange to 171st Ave.	New arterial roadway from 192nd interchange, west to existing neighborhoods	None	2017-2030	Vancouver	$5,000,000
Columbia Shores	S. of SR-14	Rail Trestle, Widen Portal	Under-Pass	2020-2035	Vancouver	$5,000,000
Ellsworth	SE 10th St to SR-14	Upgrade to minor arterial standard	Substandard	2020-2035	Vancouver	$3,104,203
Ellsworth	SE 10th St to Mill Plain	Upgrade to minor arterial standard	Substandard	2020-2035	Vancouver	$4,000,000
Esther Street	At RR Tracks	Railroad Undercrossing, new road	None	2014	Vancouver	$4,000,000
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	2012-2025	Vancouver	$7,500,000
Jefferson/ Kauffman St.	Mill Plain to 8th St.	Realign offset @ 13th & reconstruct to 3-lane standard	Substandard	2017-2025	Vancouver	$15,000,000
MacArthur Blvd.	Lieser Rd. Intersection	Intersection improvement	Substandard	2015-2025	Vancouver	$2,500,000
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	2017-2035	Vancouver	$4,000,000
NE 11th/NE 13th	172nd Avenue to 192nd Avenue	1 lane ea. direction, w/turn lane	none	2020-2035	Vancouver	$5,000,000
NE 122nd Avenue	NE 39th Street to NE 49th Street	1 lane ea. direction, w/turn lane (collector standards)	1 lane each direction	2017-2035	Vancouver	$1,000,000
NE 127th Avenue	Fourth Plain to NE 59th Street	Upgrade to urban standard	partial built	2017-2035	Vancouver	$2,500,000
NE 15th/18th Av	49th to 54th St	New 2 lane urban collector	No street	2017-2035	Vancouver	$2,000,000
NE 59th Street	137th to 162nd Avenue	Construct new minor arterial 1 lane each direction with turn lane	No street	2017-2035	Vancouver	$8,000,000
Parkway Dr Extension	72nd to 77th Av	Gap completion, urban collector	Unconnected street system	2017-2035	Vancouver	$1,541,706

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
Railroad Avenue	Columbia to new Lincoln Avenue grade separated facility	New waterfront east/west arterial	No street	2014-2025	Vancouver	$8,000,000
SE 10th Street	Ellsworth to 98th Av	Upgrade to collector arterial	1 lane each direction	2020-035	Vancouver	$1,500,000
SE 10th Street	Ellsworth to Chkalov	Upgrade to minor arterial	1 lane each direction	2020-035	Vancouver	$1,000,000
SE 15th Street	164th to 192nd Ave.	Upgrade to collector arterial		2017-2025	Vancouver	$3,843,441
SE 188th Ave	E Mill Plain to SE 1st St	New connector access	No street	2017-2025	Vancouver	$3,000,000
Vancouver Mall Dr. extension	Andresen Road to 66th Avenue	1 lane ea. direction, w/turn lane	None	2012-2020	Vancouver	$2,500,000
27th St Extension and RR overpass	Main Street to E Street	RR grade separated overpass, bike lanes and sidewalk	No Street	2011-2017	Washougal	$8,800,000
27th Street	Main Street to SR-14	Widen for turn lane, bike lanes and sidewalk	1 lane each direction	2011-2017	Washougal	$2,916,000
Lehr Road	34th to UGA	Widen to collector standard with sidewalks	1 lane each direction	2018-2024	Washougal	$2,711,000
6th Street	C Street to E Street	striping to 3 lanes, plus bike lanes and sidewalk		2011-2017	Washougal	
A Street/Addy Street Connection	20th to 27th Street	Street connection, traffic calming and bike/ped improvements		2018-2024	Washougal	$4,123,000
Addy Street	27th to 45th Street	Widen for turn lane, bike lanes and sidewalk		2018-2024	Washougal	$5,895,000
Crown Rd/283rd Ave	North Z Street to McKeever	Widen to 3 lane arterial (joint with Camas) plus bike lanes and sidewalks	Private Drive out of City limits	2018- 2024	Washougal Camas	$4,656,000
Miscellaneous west city collectors				2018-2024	Washougal	$4,014,000
Stiles Rd/34th Street	32nd Street to SE Lehr Road	Widen to 3 lanes, plus bike lanes and sidewalk and guard rail	1 lane each direction	2018-2024	Washougal	$5,550,000
Sunset View Road	Evergreen Way to UGA	2 lane collector with shoulders for bike and pedestrians	1 lane each direction	2018-2024	Washougal	$8,036,000
W Street	32nd to 49th St.	2 lane collector and extension across creek	No street	2018-2024	Washougal	$11,974,000
F Street	24th Street to 34th Street	Traffic calming/sidewalk and bike ped facilities		2018-2024	Washougal	$760,000
39th Street	W street to Evergreen Way	bike & ped sidewalks/traffic calming		2025-2030	Washougal	$2,628,000
34th Street	J Street to Evergreen Way	Ped improvements	No sidewalk	2011-2017	Washougal	$407,000

Facility	Cross Streets	Project Description	Existing Condition	Est. Year of Completion	Jurisdiction/ Agency	Project Cost Estimate
Shepherd Road	3rd Avenue to Washougal River Road	bike & ped facilities	partial sidewalk no bike lane	2018-2024	Washougal	$2,803,000
C Street & Main Street	Washougal River Road to 34th Street	bike lanes & sidewalks	no bike lane partial sidewalk	2025-2030	Washougal	$2,336,000
C Street	6th Street to Washougal River Road	bike lanes & sidewalks	no bike lane partial sidewalk	2025-2030	Washougal	$1,868,000
49th Street and J Street	32nd Street to W Street	bike ped sidewalks/traffic calming		2025-2030	Washougal	$4,279,000
9th Street	Shepherd Road to K Street	Washougal River bike/ped trail and crossing		2031-2035	Washougal	$1,401,000
North T Street	Crown Road/283rd Avenue to Woodburn Hill	Street connection, bike & ped facilities	private road	2025-2030	Washougal	$3,737,000
Total						**$1,073,703,930**

Transportation Strategies and Programs

In addition to the listed capital projects (see Tables B-1 to B-6), the MTP is supportive of any other project or transportation strategy 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 projects or strategies include maintenance, preservation, safety, pedestrian, bicycle, enhancement, Transportation System Management and Operations (TSMO), and Transportation Demand Management (TDM).

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), Pavement Management System (PMS) and Bridge Management System (BMS).

Safety

Safety needs are identified through the WSDOT "Strategic Highway Safety Plan: Target Zero" (SHSP, revised February 2007), the WSDOT Highway System Plan and local analysis. In 2011, RTC conducted a Safety Management Assessment for Clark County, Washington (RTC, April 2011).

Pedestrian and Bicycle Modes

Pedestrian and bicycle modes are addressed in Chapter 5 of the MTP. Needs are identified through state and local planning programs including the Clark County Bicycle and Pedestrian Master Plan (Clark County, November 2010), the Clark Communities Bicycle and Pedestrian Advisory Committee, the Comprehensive Growth Management Plans, local plans and the Regional Trails and Bikeway System Plan (2007).

Regional trails are described on the Vancouver-Clark Parks and Recreation website. 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.

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. Many of the schools within the region could benefit from improved walk and bike access including to Sarah J. Anderson Elementary School, Harmony Elementary and Pacific Middle Schools 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, Walnut Grove and Image Elementary Schools in the City of Vancouver as well as Daybreak Primary and Middles Schools in the Battle Ground School District.

The pedestrian and bicycle modes are promoted through the Active Community Environments program. In the early 2000s, these efforts were led by Community Choices' Walkability Policy Team and Walkability Awareness Team.

Transit

Transit transportation solutions are consistent with C-TRAN's service and financial planning process, including plans for future service outlined in C-TRAN's 20-Year Transportation Development Plan, C-TRAN 2030 (C-TRAN, June 2010). C-TRAN 2030 assumes an additional 0.5 percent sales tax to maintain service levels commensurate with population growth.

Fixed route annual service hours: 35% increase to 408,000 hours (2030).

Paratransit annual service hours: 87,000 (2010) to 201,000 hours (2030).

Capital equipment needs includes bus purchases to support service hours and replace older fleet.

High Capacity Transit Corridors

Frequent bi-state bus service is part of C-TRAN's service plans as well as connection to Portland's HCT system.

Potential High Capacity Transportation Corridors were studied in the Clark County High Capacity Transit System Study (RTC, December 2008).

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.

Transportation System Management and Operations

Potential System Management and Operations solutions are identified in RTC's 2011 Transportation System Management and Operations Plan (RTC, June 2011). At the state level, Washington State's Statewide Multimodal Transportation Plan, System Plan Component, as well as local Growth Management plans outline system management strategies. 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.

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:
  - Allow a reduction in the minimum/maximum number of required parking spaces if a development provides ride-share programs.
  - Encourage new development to incorporate supporting elements that will encourage the use of transit and ridesharing activities.
- Services and Facilities
  - Increase transit services as population in Clark County grows.
  - Expand the vanpool market and encourage employer participation.
  - Expand ridematching services through on-line programs.
  - Improve bicycle and pedestrian connections
- Marketing and Incentives
  - Encourage employers to offer alternative work schedules and telework programs to their employees.
  - Conduct area-wide promotional campaigns.
  - Offer transit pass discounts and incentive programs.
  - Implement parking management programs.
  - Encourage employers to offer carpool subsidies for carpool commuters
  - 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.

Regional Transportation Planning Studies

Transportation solutions are continuously being evaluated as with transportation studies completed between MTP update. Regional studies completed since the 2007 MTP include:

- New Transportation Corridors Visioning Study
  (RTC, 2008)
- Portland-Vancouver Bi-State Regional Trails System Plan
  (Intertwine, April 2010)
- The Clark County Bicycle and Pedestrian Master Plan
  (Clark County, November 2010)
- Clark County Freight Mobility Study Summary Report
  (RTC, December 2010)
- Human Services Transportation Plan
  (RTC, December 2010)
- Safety Management Assessment for Clark County, Washington
  (RTC, April 2011)
- Transportation System Management and Operations Plan
  (RTC, June 2011)
- Columbia River Crossing Project FEIS
  (CRC, October 2011)

Appendix C: Determination of Conformity with Air Quality State Implementation Plan

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 current federal Transportation Act (SAFETEA-LU), 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 (O3) 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; one for Carbon Monoxide (CO) and another for Ozone (O3). 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 1997 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) are 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.

While areas with approved maintenance plans are not subject to the budget tests, they are subject to meeting other transportation conformity requirements of 40 CFR part 93, subpart A, which include timely implementation of SIP transportation control measures, transportation plans and projects that comply with the fiscal constraint requirement, interagency consultation and that conformity determinations should be made at least every four years. Projects are still subject to air quality conformity analysis to ensure they do not cause or contribute to any new localized carbon monoxide violations.

Applicable State Implementation Plan

The implementation plans currently in effect for the Vancouver Air Quality Maintenance Area are the 2007 second 10-Year Maintenance Plan for Carbon Monoxide approved by the EPA (73 FR 36439; June 27, 2008) and the 2006 Ozone Maintenance Plan for Vancouver, Washington. The plan demonstrates compliance with the 8-hour ozone standard through 2015 and contains an ozone contingency plan to prevent or correct any measured violation of the 8-hour ozone standard. On November 19, 2007, EPA published a Federal Register notice of the CO Maintenance Plan's adequacy for transportation conformity purposes.

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. The Limited Maintenance Plan's forecast CO emissions for 2019 are almost half (52%) of the 2002 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 is forecast to increase at an annual rate of 1.66% to 641,800 in 2035. By comparison, the measured rate of population growth in Clark County was 0.62% per year from 2010 (425,363 population) to 2011 (428,000 population). 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 analysis. RTC regularly coordinates and cooperates with air quality consultation agencies (Washington State Department of Ecology, the Environmental Protection Agency, FHWA, FTA, WSDOT, and Southwest Clean Air Agency) on air quality technical analysis protocol and mobile emissions estimation procedures. The consultation process includes discussion and review of regulatory and technical requirements for plan, program and project conformity. RTC consults with the agencies in the review, update, testing, and use of the Motor Vehicle Emissions Simulator emissions model to ensure accuracy and validity of model inputs for the Clark County region and ensures consistency with state and federal guidance. RTC participates with partner air consultation agencies in an annual air quality conformity review process.

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 includes an enhanced I/M vehicle emissions testing program for the Vancouver portion of the Portland-Vancouver Air Quality Maintenance Area. 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. The program will continue through the end of the 20-Year CO Maintenance period unless it is removed from the SIP.

Although not required as TCM's, there are plans for improved public transit and transit facilities. Additional efforts that contribute to emissions reductions include implementation of the 2006 Commute Trip Reduction (CTR) Efficiency Act, a replacement for the 1991 CTR Act. 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 2011 update to the Metropolitan Transportation Plan (MTP) for Clark County does not contribute to violations of ozone or carbon monoxide emission standards.

Appendix D: Funding Programs

Introduction

This appendix documents the current and potential and revenue sources and funding programs available for transportation uses. It includes description of programs available for highway and transit funding from federal, state, and local sources.

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.

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 is 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 is 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 CMAQ 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. In addition, the Columbia River Crossing Project has been identified and would anticipate discretionary highway funds from the PNRS Program.

State Funding

The State gas tax is the major state revenue source for highway maintenance and arterial construction funding. The base gas tax is 23 cents, however, the State Legislature enacted fuel tax increases in 2003 (the Nickel Package) and 2005 (the Partnership Package at 9.5 cents) which were paired with a fixed list of projects to be constructed over the next 10 to 15 years. Many of the recent projects constructed with nickel and Partnership funds are described in Chapter 4.

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. There are separate program for cities more than and less than a population of 5,000.
- 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 Preservation Program (SCPP): 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 D-1 provides an overview of TIB funding provided to Clark County over thirteen years.

Table D-1: TIB Funding Provided to the Clark County Region, 2000 to 2012

TIB Funding Programs	TIB Program Funds
Urban Corridor Program (UCP, formerly TPP)	$44,379,950
Urban Arterial Program (UAP, formerly AIP)	$31,398,567
Small City Arterial Program (SCAP)	$1,253,305
Sidewalk Program (SCSP) formerly Pedestrian, Safety & Mobility Program (PSMP)	$1,710,786
Small City Preservation Program (SCPP)	$296,224
Federal SAFETEA/ISTEA/TEA-21 Local Match	$57,018
Total	**$79,095,850**

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 $1.94 per $1,000 of assessed value in 2010). 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. In November 2011 voters approved an additional 0.2 percent sales tax to preserve core bus service and paratransit service bringing the total C-TRAN sales tax rate to 0.7 percent. It is estimated that an additional 0.2 percent would be needed through 2035 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 2010, fixed route farebox recovery was just over 24%, a dramatic increase over the 16.4% achieved in 2000. The total amount of funding received through passenger fares for fixed route services was $6.6 million in 2009. 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 $4.1 million in federal capital funds from federal sources in 2009. 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.

Human Services Transportation Funding Programs

Several of the FTA funding programs (5310, 5311, 5316, and 5317) described below are generally directed at meeting special service transportation needs. In December 2010, RTC adopted the Coordinated Human Services Transportation Plan (RTC Board Resolution 12-10-25) 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 four Federal Transit Administration (FTA) programs described below as well as for state public transportation grants.

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.

FTA Section 5310, Elderly Persons and Persons with Disabilities

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.

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.

FTA Section 5316, Job Access and Reverse Commute (JARC)

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.

FTA Section 5317, New Freedom

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 WSDOT Office of Transit Mobility's Regional Mobility Grants program. C-TRAN was successful in obtaining grants over the last five years, totaling more than $1.7 million from 2006 to 2010. In addition, $2.9 million was awarded to Clark County for construction of the new C-TRAN Salmon Creek Park and Ride facility.

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 percent was approved by voters in 2005 and in 2009 C-TRAN received $21.6 million in sales tax revenue at the 0.5 percent rate. In November 2011, voters approved another 0.2 percent sales tax for a total of 0.7 percent. Under RCW 36.57 (Public Transportation Benefit Areas) C-TRAN has authority for as much as 0.9 percent for the operation, maintenance and capital needs of the transit system, subject to voter approval. In addition, C-TRAN has up to another 0.9 percent sales tax available for High Capacity Transit under RCW 81.104 upon 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.

Local Option Vehicle License Fee

RCW 82.20.020 authorizes an additional motor vehicle license fee of $15 per passenger car for transportation purposes.

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.

Appendix E: 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 the MTP must be financially constrained and that there must be a reasonable expectation that revenues will be available to provide for the list of projects identified in the Plan. Another key requirement is that the MTP must consider the effects of inflation in developing revenue and cost estimates. Under these rules, revenue and cost estimates for the Metropolitan Transportation Plan must use inflation rates to reflect "year of expenditure" dollars. The requirements regarding YOE are described in the next section.

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:

> *"(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, over time, the growth of revenues may not be proportional to costs as part of the fiscal constraint determination. Converting all revenues and costs 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

RTC selected a four percent annual inflation rate for the life of the MTP out to 2035. A flat four percent rate is the default inflationary rate recommended by the Federal Highway administration. Revenue sources for transportation uses are fully described in Chapter 4, the MTP finance plan, and includes new state revenue needed to meet the financial constraint test. All revenue forecasts contained in Chapter 4 are in current year (2011) dollars and are inflated 4 percent per year out to 2035 to calculate year of expenditure revenue. As noted in Chapter 4, a portion of the revenue estimate is dedicated to projects already programmed for construction and fully funded. This obligated revenue consisted of $471m in 2011 dollars. The obligated funds are inflated out to 2017 and are subtracted from YOE revenue totals. Table E-1 provides assumptions for each revenue source, by year, with total assumed revenues of $4,334,359,893 for federal, state, local and transit capital projects and equipment from 2012 to 2035.

Table E-1: Revenue Assumptions (in Year of Expenditure)

Year	Federal	State	Local	Transit
2012	$22,750,904	$76,601,189	$24,873,213	$15,615,333
2013	$23,660,940	$79,665,237	$25,868,142	$16,239,947
2014	$24,607,378	$82,851,846	$26,902,867	$16,889,545
2015	$25,591,673	$86,165,920	$27,978,982	$17,565,126
2016	$26,615,340	$89,612,557	$29,098,141	$18,267,731
2017	$27,679,953	$93,197,059	$30,262,067	$18,998,441
2018	$28,787,152	$96,924,941	$31,472,550	$19,758,378
2019	$29,938,638	$100,801,939	$32,731,452	$20,548,713
2020	$31,136,183	$104,834,016	$34,040,710	$21,370,662
2021	$32,381,630	$109,027,377	$35,402,338	$22,225,488
2022	$33,676,896	$113,388,472	$36,818,432	$23,114,508
2023	$35,023,971	$117,924,011	$38,291,169	$24,039,088
2024	$36,424,930	$122,640,972	$39,822,816	$25,000,652
2025	$37,881,928	$127,546,610	$41,415,728	$26,000,678
2026	$39,397,205	$132,648,475	$43,072,358	$27,040,705
2027	$40,973,093	$137,954,414	$44,795,252	$28,122,333

Year	Federal	State	Local	Transit
2028	$42,612,017	$143,472,590	$46,587,062	$29,247,226
2029	$44,316,497	$149,211,494	$48,450,544	$30,417,116
2030	$46,089,157	$155,179,954	$50,388,566	$31,633,800
2031	$47,932,723	$161,387,152	$52,404,109	$32,899,152
2032	$49,850,032	$167,842,638	$54,500,273	$34,215,118
2033	$51,844,034	$174,556,344	$56,680,284	$35,583,723
2034	$53,917,795	$181,538,597	$58,947,496	$37,007,072
2035	$56,074,507	$188,800,141	$61,305,395	$38,487,355
Subtotal	$889,164,574	$2,993,773,945	$972,109,947	$610,287,891
Total				**$4,855,048,467**
Obligated Revenue				$520,688,574
YOE Revenue				**$4,334,359,893**

As reported in Chapter 4, C-TRAN has provided 2012 to 2035 (YOE) operating revenue assumptions for sales tax, fare box recovery, interest, operating grants and other for public transportation purposes. C-TRAN assumes revenues of $2,425,524,000 between 2012 and 2035.

Cost Assumptions

Following FHWA guidance, the future annual average growth rate of 4% per year is also assumed for MTP costs. Transportation system component costs include highway and transit capital costs, transportation demand management, transportation system management, and pedestrian and bicycle projects. Table E-2 provides a detailed look at inflation of cost estimates for transit and highway capital projects as well as inflated costs for other transportation system components including: demand management, system management, pedestrian and bicycle projects. Combined YOE totals for these categories of costs total $4,357,701,227; over $4.3 billion in costs for the MTP years 2012 to 2035.

Projects scheduled for construction in years 2012 to 2015 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. Every project in the MTP has either a construction year or a range of years for project construction. When a project construction date is expressed in a range of years, the mid-point within the range is assumed and the appropriate inflation factor is applied for that mid-point year, otherwise the year of construction was assumed for the inflation rate. For comparison, total capital project cost estimates in 2011 $ totals $2,894,282,200 whereas YOE cost estimates for the same list amounts to $4,357,701,227; an average 50.6% increase. The MTP project list and capital costs, including year of construction, is in Appendix B.

Table E-2: Cost Assumptions (in Year of Expenditure)

Year	MTP Cost by Year (2011 $)	MTP Highway and Transit (YOE)	TSMO	TDM	Bike/Ped	Ongoing Transit Capital
2012		$0	$1,908,333	$2,000,000	$3,850,000	$9,790,500
2013	$70,825,000	$73,658,000	$1,984,667	$2,080,000	$4,004,000	$10,182,120
2014	$131,160,000	$141,862,656	$2,064,053	$2,163,200	$4,164,160	$10,589,405
2015	$174,586,000	$196,385,506	$2,146,615	$2,249,728	$4,330,726	$11,012,981
2016	$22,136,500	$25,896,574	$2,232,480	$2,339,717	$4,503,955	$11,453,500
2017	$57,806,000	$70,329,838	$2,321,779	$2,433,306	$4,684,114	$11,911,640
2018	$21,100,000	$26,698,231	$2,414,650	$2,530,638	$4,871,478	$12,388,106
2019	$89,821,000	$118,198,308	$2,511,236	$2,631,864	$5,066,337	$12,883,630
2020	$89,977,500	$123,140,422	$2,611,686	$2,737,138	$5,268,991	$13,398,975
2021	$571,538,000	$813,476,787	$2,716,153	$2,846,624	$5,479,750	$13,934,934
2022	$134,600,000	$199,240,881	$2,824,800	$2,960,489	$5,698,940	$14,492,332
2023	$157,000,000	$241,694,287	$2,937,791	$3,078,908	$5,926,898	$15,072,025
2024	$13,393,000	$21,442,625	$3,055,303	$3,202,064	$6,163,974	$15,674,906
2025	$112,200,000	$186,821,248	$3,177,515	$3,330,147	$6,410,533	$16,301,902
2026	$383,979,200	$664,927,737	$3,304,616	$3,463,353	$6,666,954	$16,953,978
2027	$0	$0	$3,436,801	$3,601,887	$6,933,632	$17,632,137
2028	$410,081,000	$768,074,022	$3,574,273	$3,745,962	$7,210,978	$18,337,423
2029		$0	$3,717,243	$3,895,801	$7,499,417	$19,070,920
2030		$0	$3,865,933	$4,051,633	$7,799,394	$19,833,757
2031		$0	$4,020,571	$4,213,698	$8,111,369	$20,627,107
2032		$0	$4,181,393	$4,382,246	$8,435,824	$21,452,191
2033		$0	$4,348,649	$4,557,536	$8,773,257	$22,310,279
2034		$0	$4,522,595	$4,739,838	$9,124,187	$23,202,690
2035		$0	$4,703,499	$4,929,431	$9,489,155	$24,130,798
Total		**$3,671,847,121**	**$74,582,636**	**$78,165,208**	**$150,468,026**	**$382,638,236**
YOE Cost						**$4,357,701,227**

Transit system YOE cost estimates for operations are calculated by C-TRAN to be $2,244,346,000 over the 2012 to 2035 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 2011 MTP meets the test for fiscal constraint. Table E-3 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-3: MTP System Summary Revenue Assumptions and Cost Estimates

	YOE Revenue Assumptions 2012-2035	YOE Cost Estimates 2012-2035
MTP Capital	$4,334,359,893	$4,357,701,227
Transit Operating	$2,425,524,000	$2,244,346,000
Preservation and Maintenance	$1,543,477,087	$1,543,477,087
Totals	**$8,303,360,980**	**$8,145,524,314**

Appendix F: Transportation Security in the Vancouver/Clark County Region

Introduction

The purpose of this Appendix is to fulfill the 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.

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.

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 non-motorized 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.

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.

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.

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 an identification system that will be used to identify employees in all modes of transportation.

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.

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 provided millions of 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.

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.

Existing Plans, Procedures, Policies, and Coordination Related to Washington Transportation Security

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.

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 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.

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.

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 (Table F-1) for the region and a Regional Emergency Management Plan.

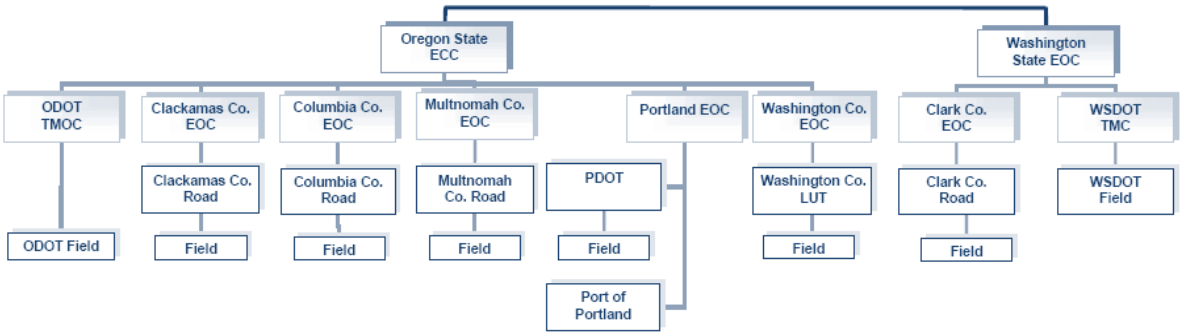
Table F-1: Emergency Transportation Route Chart Sample

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 Table F-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 F-1. This shows who is responsible for initiating utilization of the ETR system and sequence of information and notification distribution.

Figure F-1: Emergency Transportation Routes Information



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.

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.

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.

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.

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.

Other Existing 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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Appendix G: The Environment and 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.

Laws Relating to Environmental Mitigation in the Metropolitan Transportation Planning Process

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 on them in NEPA documents.

Washington State has its own environmental policy act, the State Environmental Policy Act (SEPA), that provides 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

The U.S. Department of Transportation's, Federal Highway Administration and Federal Transit Administration, website offers a wealth of information on transportation and the environment developed and compiled by the FHWA and its partners to assist in strengthening planning and environment linkages.

State Agencies: Support for Environmental Consideration and Mitigation

Washington State Department of Transportation 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
- WSDOT Environmental Services
- WSDOT Environmental Procedures Manual
- State Highway System Plan

Consultation with Tribes

SAFETEA-LU also requires consultation with tribal governments. Within the Clark County region, these tribal governments may include: the Chinook, Columbia River Inter-tribal Fish Commission, the Cowlitz, Nez Perce, Spokane and Yakama Nation. The Cowlitz receives regular RTC Board mailings and Regional Transportation Advisory Committee mailings. RTC and Cowlitz representatives consult and coordinate in developing the Human Services Transportation Plan.

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 (updated September 2007)
- Use of Clark County 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.

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, Department of Environmental Services

Clark County's Department of Environmental Services has programs for water resources and clean water, endangered species, garbage and recycling, sustainability, and vegetation management.

Water Resources and Clean Water Program

Clark County's Clean Water Program produces a Clean Water Program Summary Report and has recent updated the Clark County Stormwater Management Plan 2011.

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 and stormwater basin planning.

Endangered Species Act

Clark County addresses the Endangered Species Act. The Endangered Species Act (ESA) is a federal law designed to protect and recover fish, wildlife, and plants that are threatened with or are in danger of becoming extinct. It requires federal and state agencies to work in coordination with local jurisdictions to recover listed species. Under the ESA in Clark County, several species have been listed as threatened, including bull trout, chum, chinook, coho, and steelhead.

Clark County's Public Health Department

Clark County's Public Health, out of concern for the health of our community, partners with planning to assess how the physical environment impacts human health. The Department has published several reports including the 2010 Community Assessment, Planning, and Evaluation (CAPE) Report that has sections on environmental health with data on vehicle miles traveled per capita, single occupancy vehicle commute trips, water monitoring requirements, air quality, access to care, and physical activity.

A comprehensive health impact assessment (HIA) was published for Clark County's Bicycle and Pedestrian Master Plan (Clark County, 2010).

City of Vancouver

City of Vancouver Strategic Plan

The City's Strategic Plan addresses the environment.

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, to preserves and enhance 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 the Vancouver Lake Watershed.

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 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 can ensure consultation and information dissemination to both resource agencies and interested parties. RTC contacts resource agencies regarding MTP development through e-mail communication.

What Plan Products Could be Used in NEPA?

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):

- Geographic information system (GIS) overlays showing the past, current, or predicted future conditions of the natural and built environments;
- Environmental scans that identify environmental resources and environmentally sensitive areas;
- Descriptions of airsheds and watersheds;
- Demographic trends and forecasts;
- Projections of future land use, natural resource conservation areas, and development; and
- 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 are listed below.

Within Washington State there is a long history of collaboration. The original NEPA/404 Merger Agreement was adopted by its signatory agencies in 1995 and revised in 1996. Significant revisions to the 1996 Agreement were collaboratively developed by the Signatory Agency Committee (SAC) to improve the process and were formally adopted in 2002. In 2005, FHWA and FTA issued joint guidance following the passage of the SAFETEA-LU. Section 6002 of the bill, laid out a new process for involving the public and governmental agencies when developing an environmental impact statement (EIS). In 2006-2007, WSDOT worked with the Signatory Agency Committee to create the Statewide Advisory Group for Environmental Stewardship (SAGES). The SAGES continue to make use of the institutional knowledge and statewide view of the SAC and its members.

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 to consider planning for the I-5 interstate bridge area.

The Metropolitan Transportation Plan for Clark County and Environmental Mitigation

A summary overview of how the Metropolitan Transportation Plan for Clark County addresses environmental mitigation at the programmatic level is provided below. Following this summary 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 as it relates to consideration of the environment.

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 Used

- 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 G, Figures G-1 through G-6: (1) Comprehensive Plan Land Use Designations, (2) Floodplains and Wetlands, (3) Watersheds, (4) Completed Mitigation Projects (wetland and habitat sites), (5) Slope, and (6) Historic Sites.
- Allows consideration of the environment in the early planning phases at the programmatic, regional Metropolitan Transportation Plan level.

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:

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 1997 8-hour federal Ozone 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 the 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 are no longer required though other conformity requirements of 40 CFR part 93, subpart A must still be met. Projects are still subject to air quality conformity analysis to ensure they do not cause or contribute to any new localized carbon monoxide violations.

- Transportation Demand Management and System Management programs.
- Manage congestion to reduce idling.
- Encourage multimodal alternatives to single occupant automobile travel.
- Encourage mixed use development.
- Cleaner transportation fleets with reduced emissions.
  - RTC continues to monitor population growth and growth in Vehicle Miles Traveled (VMT).

- 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 (RTC adopted, June 2011)
- The region has designated funds for cleaner, hybrid vehicles in use by C-TRAN, the regional transit agency.

Earth

Forested and natural areas, fauna and flora (endangered and threatened species, wildlife habitat, sensitive habitat and wetland habitat) may all 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 and bicycling.
- Employ demand and system management.
- Integrate transportation and land use planning.
- Reduce VMT per capita.
  - Washington State's Growth Management law encourages the integration of land use and 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 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 may be consulted to enhance the MTP development process:

- Federal:
  - Advisory Council on Historic Preservation
  - 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

Figure G-1: Clark County Maps Online, Clark County Comprehensive Plan

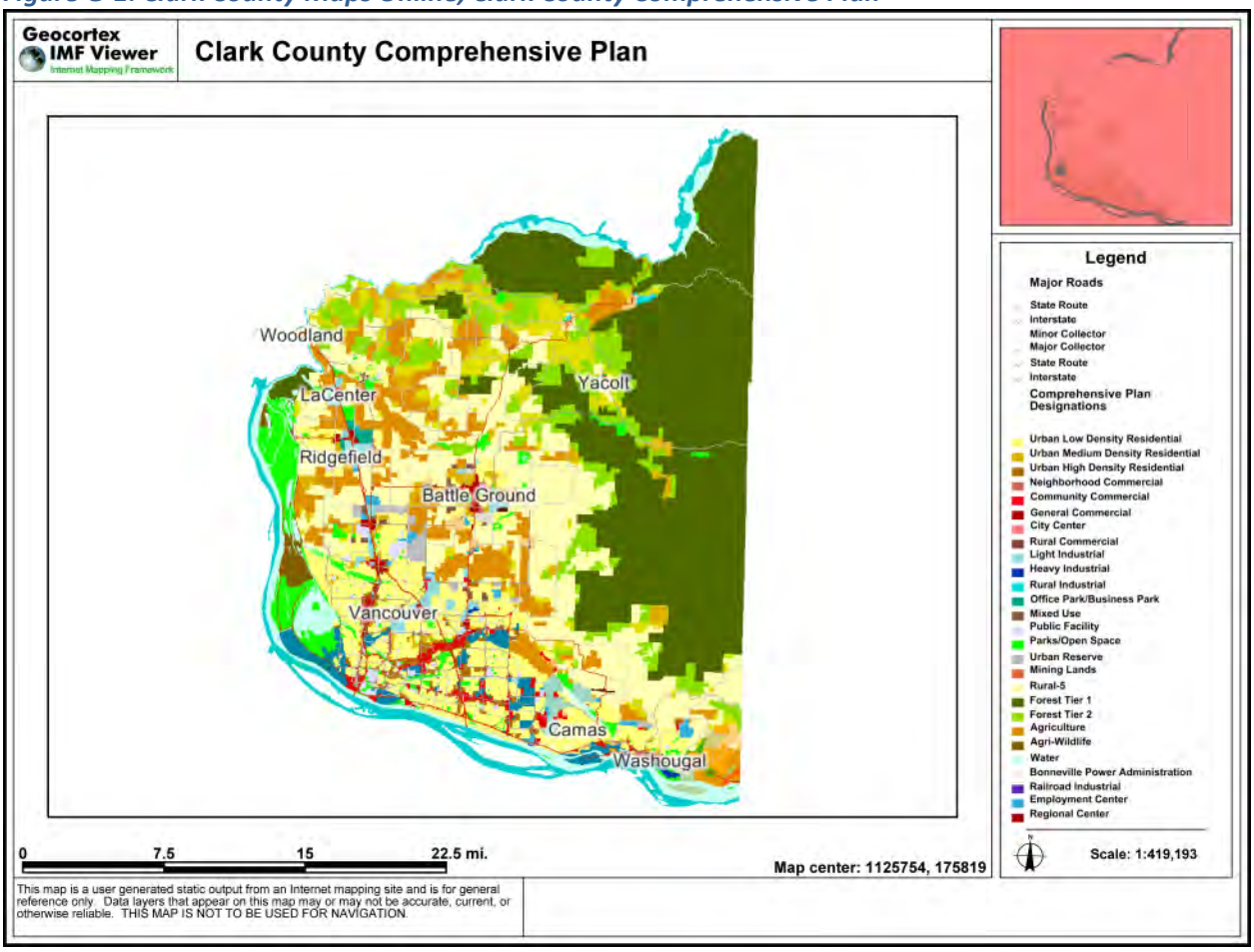


Figure G-2: Clark County Maps Online, Floodplains and Wetlands

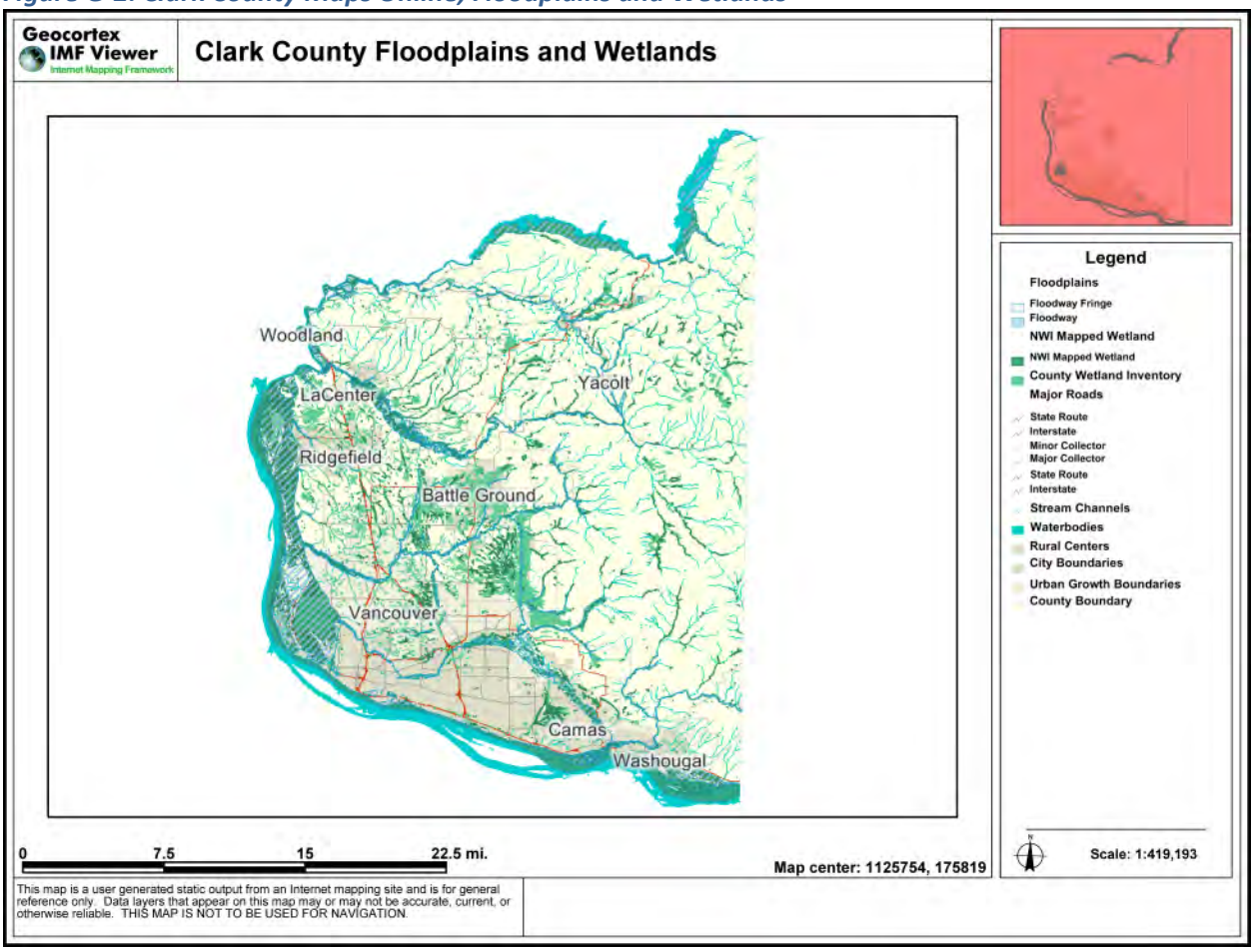


Figure G-3: Clark County Maps Online, Watersheds

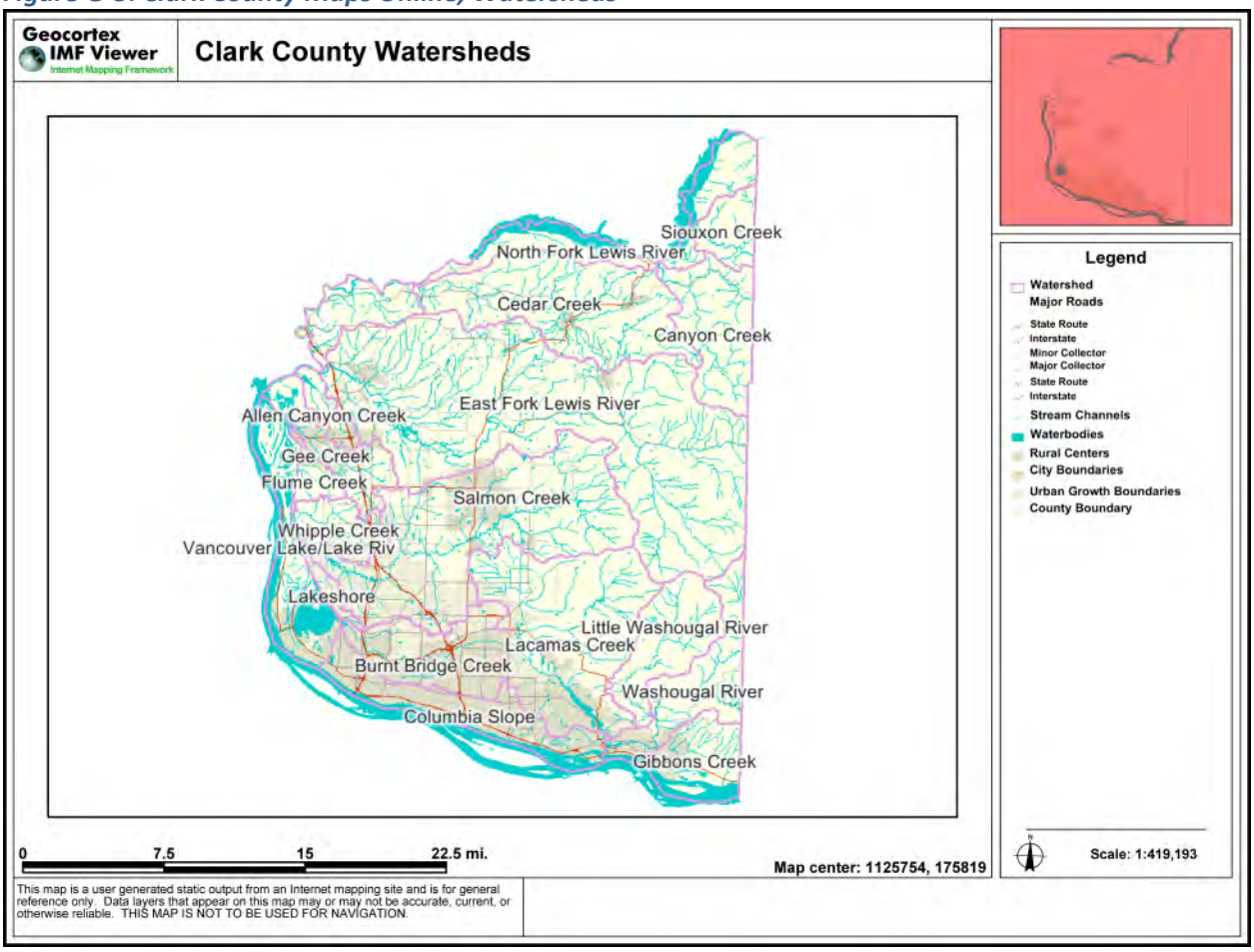


Figure G-4: Clark County Maps Online, Completed Mitigation Projects, wetland and habitat sites

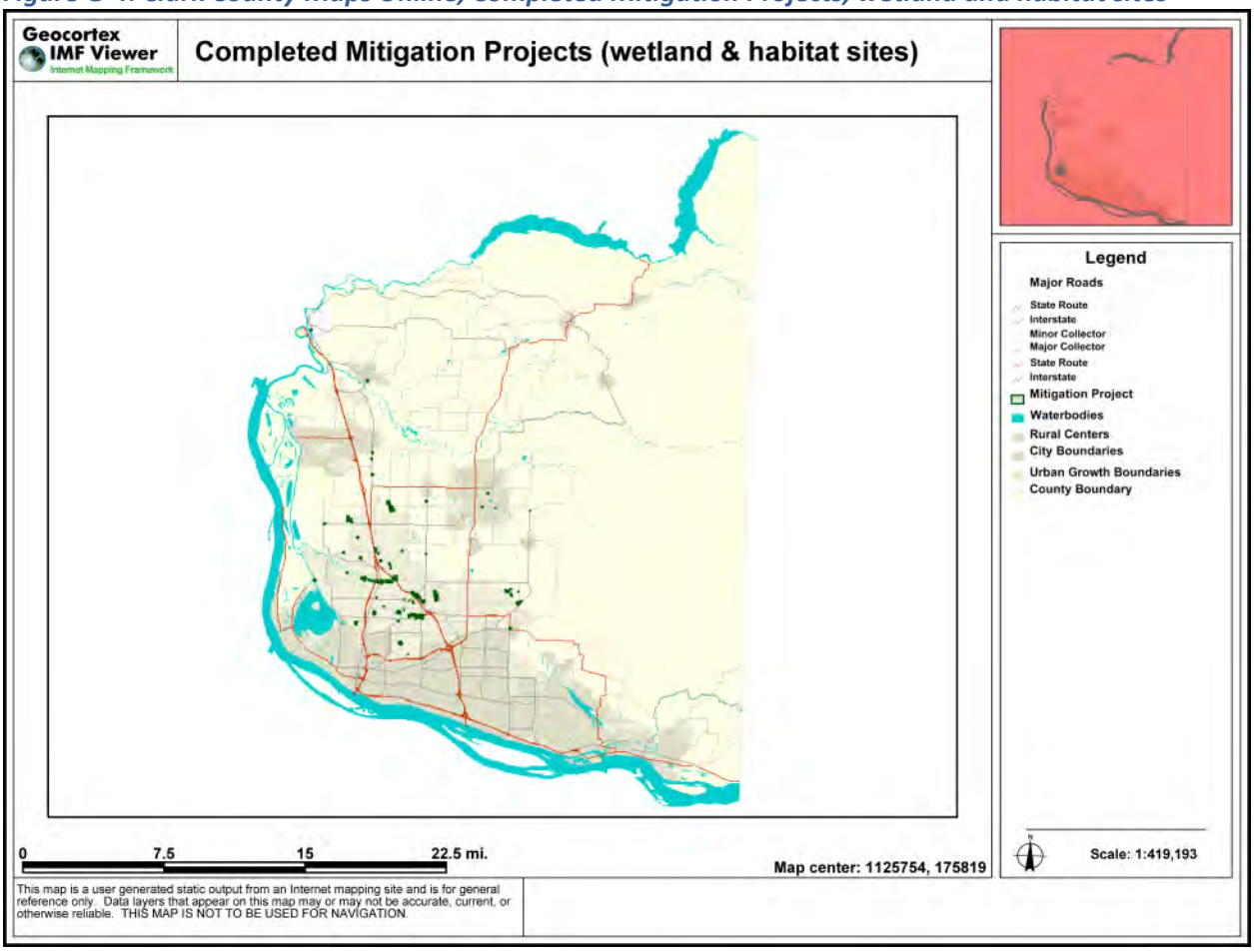


Figure G-5: Clark County Maps Online, Clark County Slope

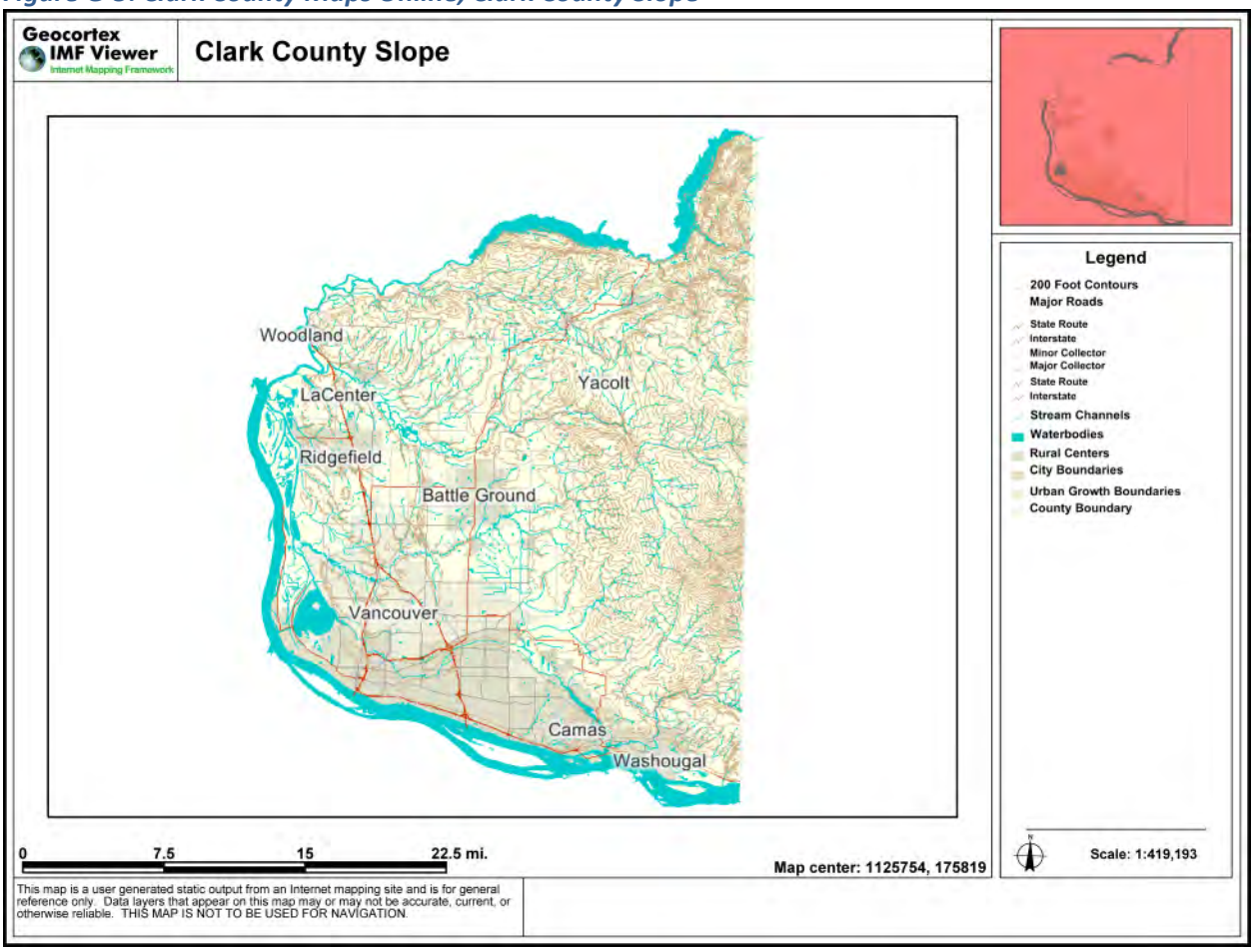
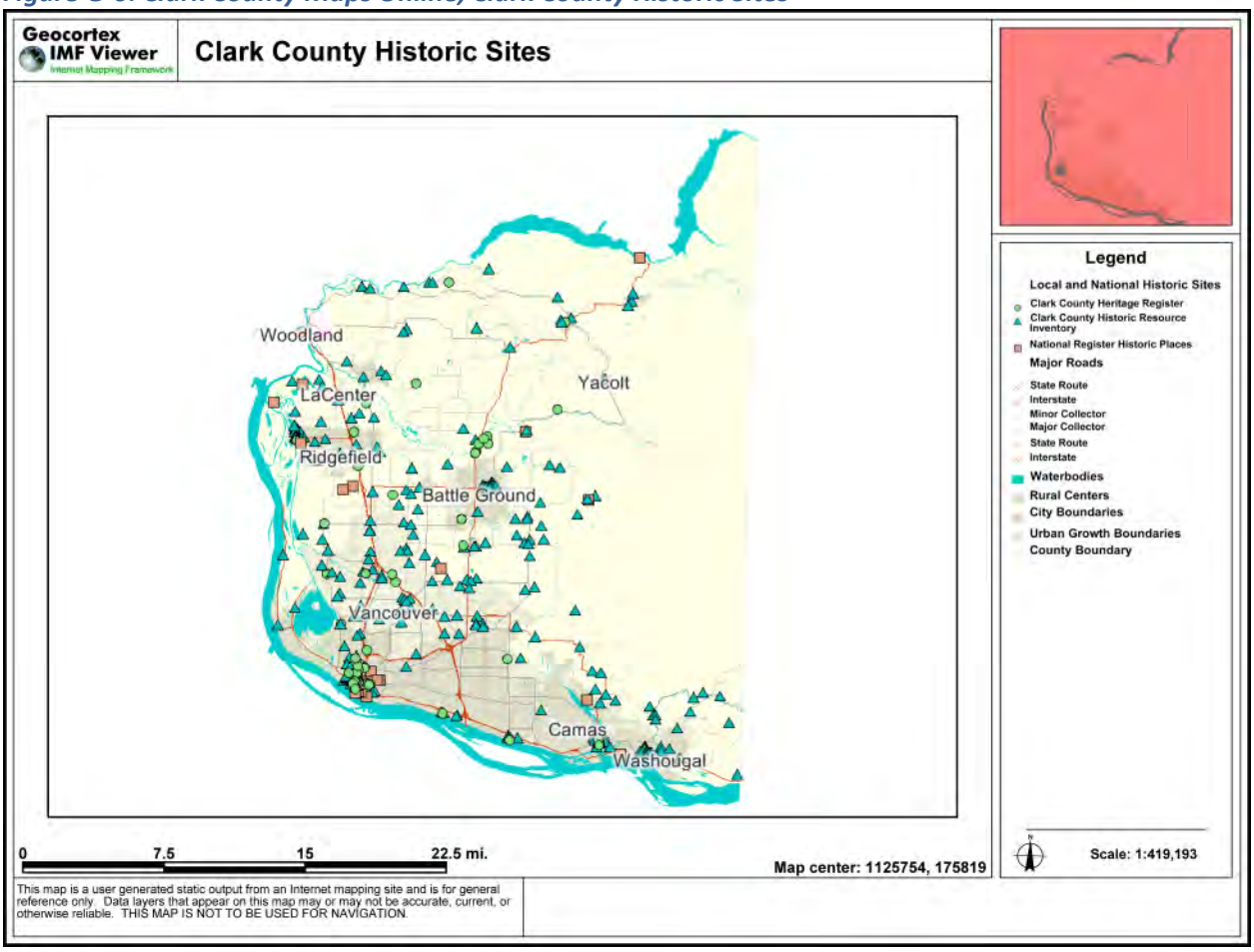


Figure G-6: Clark County Maps Online, Clark County Historic Sites



Appendix H: Clark County Community Framework Plan and County-wide Planning Policies

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.

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.

Appendix I: The Strategic Metropolitan Transportation Plan

Though the MTP is required to 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.

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.

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 concepts and potential projects 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

concepts and potential projects 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 these major regional projects and/or planning concepts. They are:

1. The Clark County High Capacity Transit System Study,
2. Future needs of the regional transportation system noted during development of the 2011 MTP update, and
3. The conceptual Transportation Corridor Visioning Study.

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. These identified projects and concepts will undergo a regionally coordinated, analytically sound, transportation planning process to investigate their 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

The RTC Board of Directors adopted the Clark County High Capacity Transit System Study in December 2008 (see MTP, Chapter 5, HCT section). The Study provides a blueprint for C-TRAN and the Clark County region to move HCT improvements forward in identified HCT corridors. The HCT System Study process included analysis of congested transportation corridors and adoption of a set of the most promising HCT corridors now included in the MTP as a framework element (see Chapter 3, MTP's Regional Transportation System Map).

The Regional Transportation System: Future Needs

- The 2035 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 2011 MTP update process, specific locations and corridors needing further analysis were identified as:
  - SR-500 to I-5 North connection (addressed 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 addressed 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.

New Transportation Corridor Visioning Study

- The Southwest Washington Regional Transportation Council Board of Directors acknowledged the need to plan for, and evaluate, future transportation and development beyond the 20-year timeframe of the MTP recognizing that new transportation corridors take a considerable time to plan for and construct. The Board therefore initiated a long-range visioning process to study the need for new transportation corridors in Clark County. The purpose of the Visioning Study, and its primary focus, was to answer the question "How will we get around within our own community in the longer-term future if Clark County reaches one million in population?" Options for future crossings of the Columbia River were considered in the Study as extensions to potential new eastside and westside Clark County transportation corridors.
- After an 18-month study process, the RTC Board endorsed the Transportation Corridor Visioning Study in April 2008 as a first step in addressing future transportation needs. The study focused on regional corridors; corridors connecting places and nodes of growth in Clark

County. Corridors on the 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 were all considered. The Study report is available on RTC's website at www.rtc.wa.gov. The Corridor Visioning Study is intended to be exploratory and informational rather than a prescriptive plan.

- The Corridor Visioning Study focuses on where new transportation corridors might be needed to connect places and nodes of growth in Clark County. Analysis of travel model results as part of the Visioning Study reveal a substantial demand for sub-regional trips in the potential new corridors rather than regional trips defined as longer than 8 miles in length. During the study process the importance of completing a grid system to enable route choice, particularly in the Discovery Corridor Subarea, was recognized. A map summarizing the new regional corridor candidates identified in the Transportation Corridors Visioning Study is provided in Figure I-1. This map should not be mistaken for an adopted plan or corridor alignments. All corridors will require further study before any are added to the fiscally-constrained MTP or local Comprehensive Plans. Until one or more corridors are adopted, right-of-way cannot be preserved for future corridor construction.

- The Visioning Study recognized that a further phase should include review of the impacts of these candidate corridors on future land use patterns within Clark County as well as in Oregon with potential new crossings of the Columbia River. Further study is also needed with regard to existing regional corridors and what improvements they may need in the future even if one or more new regional corridors were to be added to the MTP. Additionally, potential improvement to existing major creek and river crossings, all of which were identified in the travel demand model as being over capacity in the Visioning scenario, needs to be addressed. These include crossings over the East Fork of the Lewis River, Salmon Creek, Lacamas Creek, and Burnt Bridge Creek.

- Land use and transportation integration should be further developed. The land use assessment should include a visioning process of its own to identify desired policies to encourage land use patterns and densities supportive of multimodal corridors in the County.

Figure I-1: Corridors Visioning Study, Candidate New Regional Corridors Map

Appendix J: A History of MTP Update and Amendment

MTP History

Federal and state laws require regular update of the MTP. A summary history of Metropolitan Transportation Plan for Clark County adoption, update and amendment actions follows.

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 focused 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. In July 2008, an amendment incorporated the I-5 Columbia River Crossing project's Locally Preferred Alternative and in December 2010 a further amendment incorporated C-TRAN's 20 Year Transportation Development Plan (June 2010) and the recommendations of the Clark County High Capacity Transit System Study (RTC, December 2008).

The 2011 MTP update is developed to meet federal requirements. Results and recommendations from recent transportation studies are incorporated. Subsequent transportation planning effort will be incorporated into future MTP updates or amendments.

A Chronology of MTP Update and Amendment, 1994 to 2011

Note: 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

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 focused 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 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-5 AM peak period HOV lane project
- Base Year updated from 1996 to 1999
  C-TRAN service description updated (July, 2000)
- 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

December 2002, MTP Update, RTC Board Resolution 12-02-24

The update included the following elements:

- Base year updated to year 2000 and horizon year extended to 2023.
- Update to Chapter 4 Finance Plan.
- Updated list of MTP "fiscally-constrained" recommended improvements.
- 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:

- Add Port of Ridgefield Rail Overpass Project.
- Amend Strategic Plan Recommendations (Appendix B).
- Minor Amendments to Financial Plan to acknowledge funding of state "nickel package" projects.

December 2005, MTP Update, RTC Board Resolution 12-05-24

The update included the following elements:

- Review and update of MTP Goals and Policies.
- Horizon year extended to 2030.
- Update to the Designated Regional Transportation System Map.
- Update to Chapter 4 Finance Plan.
- Updated list of MTP "fiscally-constrained" recommended improvements.
- 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:

- Consistency with state and local plans
- Update to the Designated Regional Transportation System Map (transit system).
- Update to Chapter 4 Finance Plan.
- Updated list of MTP "fiscally-constrained" recommended improvements.
- Strategic Plan element update in Appendix B.
- 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:

- 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.

December 2008, MTP Technical Amendment, RTC Board Consent

Appendix F added to MTP to describe Year of Expenditure (YOE) Methodology; cost and revenues provided in YOE.

January 2010, MTP Technical Amendment, Appendix E, *"RTC Consideration of the Environment and Environmental Mitigation in the MTP Process"*, supplemented to include an overview matrix of regional environmental mitigation strategies at a programmatic level. Appendix E is cross-referenced in Chapter 5.

December 2010, MTP Amendment, RTC Board Resolution 12-10-24

The amendment includes the following elements:

- Add policy recommendations of the Clark County High Capacity Transit System Study (RTC, December 2008)
- Incorporate C-TRAN's 20 Year Transportation Development Program, *C-TRAN 2030*
- Delete reference to Washougal SR-14 roundabouts
- Update Appendix B, the MTP's Strategic Plan section, to add the New Transportation Corridors Visioning Study map.

December 2011, MTP Update, RTC Board Resolution 12-11-23

The 2011 MTP update is a comprehensive update to the Plan that highlights:

- Updated list of MTP "fiscally-constrained" recommended improvements.
- Safety assessment
- Freight planning.
- Pedestrian and bicycle plan.

Year	Population	Households	Employment
Base 2005	391,500	147,724	123,352
Forecast 2035	641,800	248,750	256,200

Appendix K: Abbreviations and Acronyms

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
ACE	Active Community Environments
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AIP	Urban Arterial Trust Account Improvement Program
APC	Automatic Passenger Counter
APTA	American Public Transportation Association
APTS	Advanced Public Transportation System
AQMA	Air Quality Maintenance Area
ARRA	American Recovery and Reinvestment Act of 2009
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
BLS	Bureau of Labor Statistics (federal)
BMS	Bridge Management System
BNSF	Burlington Northern Santa Fe
BRAC	Bridge Replacement Advisory Committee
BRT	Bus Rapid Transit
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
CETAS	Collaborative Environmental and Transportation Agreement for Streamlining (Oregon)
CEVP	Cost Estimating Validation Process
CFP	Capital Facilities Plan
CFP	Community Framework Plan
CHAP	City Hardship Assistance Program
CIC	Communications Infrastructure Committee
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
CRC	I-5 Columbia River Crossing Project
CREDC	Columbia River Economic Development Council
CRESA	Clark Regional Emergency Services Agency
CTPP	Census Transportation Planning Package
CTR	Commute Trip Reduction
C-TRAN	Clark County Public Transportation Benefit Area Authority
CVISN	Commercial Vehicle Information Systems and Networks
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 Highways 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
IM	Interstate Maintenance
I/M	Inspection/Maintenance
IMS	Intermodal Management System
InterCEP	Interstate Collaborative Environmental Process *(relates to Columbia River Crossing Project)*
IPG	Intermodal Planning Group
IRC	Intergovernmental Resource Center
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)
ITS	Intelligent Transportation System
IV/HS	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 *(relating to air quality)*
LOS	Level of Service
LPA	Locally Preferred Alternative
LPG	Long Range Planning Group

LRT	Light Rail Transit
M&O	Management and Operations
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
MST	Modeling Support Team
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
NHTS	National Household Travel Survey
NOX	Nitrogen Oxides
NSSG	New Starts Strategy Group
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
PDT	Project Development Team *(relates to Columbia River Crossing Project)*
PE	Preliminary Engineering
PE/DEIS	Preliminary Engineering/Draft Environmental Impact Statement
PEA	Planning Emphasis Area
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
PORTAL	Portland Transportation Archive Listing
PPP	Public Participation Plan
Pre-AA	Preliminary Alternatives Analysis
PSC	Project Sponsors Council *(relates to Columbia River Crossing Project)*

PSMP	Pedestrian, Safety & Mobility Program
PTBA	Public Transportation Benefit Area
PTMS	Public Transportation Management System
PTSP	Public Transportation Systems Program
PVMATS	Portland-Vancouver Metropolitan Area Transportation Study
PWTF	Public Works Trust Fund
RACMs	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
RPG	Regional Partners Group *(relates to the Columbia River Crossing Project)*
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
SAC	Signatory Agency Committee Agreement (Washington) *(superseded by SAGES)*
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
SAGES	Statewide Advisory Group for Environmental Stewardship
SASS	Sponsor Agency Senior Staff
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
SMTP	Statewide Multimodal Transportation Plan
SOV	Single Occupant Vehicle
SPG	Strategic Planning Group
SPUI	Single Point Urban Interchange
SR-	State Route
SSAC	Special Services Advisory Committee
STHB	Stacked Transit Highway Bridge
STIP	State Transportation Improvement Program
STP	Surface Transportation Program

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
TDP	Travel Delay Program (WSDOT)
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
TMIP	Transportation Model Improvement Program
TMS	Transportation Management Systems
TMUG	Transportation Model Users' Group
TMZ	Transportation Management Zone
TOD	Transit Oriented Development
TPA	Transportation Partnership Account *(Washington state funding program)*
TPAC	Transportation Policy Alternatives Committee
TPEAC	Transportation Permit Efficiency and Accountability Committee
TPMS	Transportation Performance Measurement System (WSDOT)
TPP	Transportation Partnership Program
TPR	Transportation Planning Rule (Oregon)
Transims	Transportation Simulations
TSMO	Transportation System Management and Operations
Tri-Met	Tri-county Metropolitan Transportation District
TRO	Traffic Relief Options
TSM	Transportation System Management
TSMO	Transportation System Management and Operations
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)*
VMS	Variable Message Signs
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VOT	Value of Time
VWG	Vancouver Working Group
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WTP	Washington Transportation Plan