# WASHINGTON COUNTY
# OREGON

September 13, 2013

To: Citizen Participation Organizations and Interested Parties

From: Andy Back, Manager
Planning and Development Services

Subject: **PROPOSED A-ENGROSSED ORDINANCE NO. 768**

On May 15, 2013 you were notified about initial public hearings for proposed Ordinance No. 768 before the Planning Commission on June 19, 2013, and the Board of County Commissioners (Board) on August 6, 2013. On August 6, 2013, the Board ordered substantive amendments to this ordinance. These changes have been incorporated into proposed **A-Engrossed Ordinance No. 768** and are summarized below.

## Ordinance Purpose and Summary

A-Engrossed Ordinance No. 768 proposes to amend and update the 2020 Transportation Plan. Changes in the ordinance include amending and clarifying the text, adding and amending several strategies and adding a number of terms to the glossary. These changes are intended to clarify and clean up the writing to better reflect community aspirations.

## Who Is Affected

A-Engrossed Ordinance No. 768 affects residents and businesses within Washington County, as well as those who use and depend upon the transportation system in Washington County.

## What Land is Affected

This ordinance affects all lands in the county, in that all land uses are dependent upon the existence and operation of a transportation system for travel and access. This includes lands within the cities to the extent that they are served or affected by the transportation system under county jurisdiction.

## Originally-filed Ordinance No. 768 Provisions

As originally filed, **Ordinance No. 768** proposed to amend and update the Washington County 2020 Transportation Plan (TSP) to:

- Respond to changes in transportation planning direction, policy and practices.
- Comply with the updated policy framework of Metro's Regional Transportation Plan adopted in June 2010.
- Address State Transportation Planning Rule requirements.
- Identify transportation-related goals, objectives, and strategies for implementing and monitoring the TSP over time.

Ordinance No. 768:

- Makes significant changes to the existing TSP, including:
  - Modifications to all transportation policies and strategies, including the reorganization of the policies into goals, objectives, and strategies.
  - Updates to the goals, objectives, and strategies to reflect current and accepted practice.

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**Long Range Planning**
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- Amends and updates the guiding principles of the TSP to reflect the vision of the Department of Land Use & Transportation for safety, economic vitality, livability, and natural environment - providing goals, objectives, and strategies to direct the development and operation of the transportation system.

- Amends and updates the system design elements of the TSP to reflect the key attributes of the transportation system including mobility, accessibility, connectivity and active transportation (pedestrian, bicycle and transit) and provides goals, objectives, and strategies on how these are intended to operate together.

- Modifies and updates the implementation elements of the TSP including coordination, funding and maintenance – providing goals, objectives, and strategies to direct plan implementation over time.

- Applies to county facilities within cities. While the county's regulatory responsibilities most often are limited to the unincorporated area, the county has jurisdiction over many transportation facilities that traverse and serve cities.

- Is expected to be the first of two ordinances to amend the TSP, with an additional TSP update ordinance to be considered in 2014. The 2014 ordinance is anticipated to update the maps including roadway designations, freight routes, transit, and preferred bicycle and pedestrian networks in conjunction with the framework established by Ordinance No. 768. Ordinance No. 768 will not become effective until the effective date of the corresponding map update, which is anticipated as December 1, 2014.

## Proposed A-Engrossed Ordinance No. 768 Provisions

Proposed **A-Engrossed Ordinance No. 768** retains all the provisions described above. Engrossment changes include:

- Amending and clarifying language to better reflect community aspirations.
- Adding and amending several strategies.
- Adding a number of terms to the glossary.

## Public Hearings - Time and Place

### Board of County Commissioners

| September 24, 2013 | October 1, 2013 |
|---|---|
| 6:30 pm | 10:00 am |

Hearings will be held in the Shirley Huffman Auditorium in the Charles D. Cameron Public Services Building, 155 N. First Avenue, Hillsboro, Oregon.

On October 1, 2013 the Board may choose to adopt the ordinance, make changes to it, continue the hearing to a future date, or reject the ordinance. If it is adopted on October 1, the ordinance would become effective on December 1, 2014.

**2020 Transportation Plan Policies Amended**

- All TSP policies and strategies

**How to Submit Comments**

Submit oral or written testimony to the Board at one of the public hearings. Written testimony may be mailed or faxed to the Board in advance of the public hearings in care of Long Range Planning. **We are unable to accept e-mail as public testimony.**

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**Proposed Ordinance is available at the following locations:**

- Washington County, Department of Land Use & Transportation
  Planning and Development Services, Long Range Planning
  155 N. First Ave., Hillsboro, OR 97124-3072
  Telephone: 503-846-3519
- **www.co.washington.or.us/LUT/Divisions/LongRangePlanning/2013-land-use-ordinances.cfm**
- Cedar Mill Community Library and Tigard Public Library
- Citizen Participation Organizations (CPOs) Call 503-821-1128 for a directory of CPOs.

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BEFORE THE BOARD OF COUNTY COMMISSIONERS

FOR WASHINGTON COUNTY, OREGON

A-ENGROSSED ORDINANCE 768

An Ordinance Amending the Transportation Plan Element of the Comprehensive Plan

The Board of County Commissioners of Washington County, Oregon ("Board") ordains as follows:

SECTION 1

A. The Board recognizes that the Transportation Plan Element of the Comprehensive Plan (Volume XV) was adopted on October 25, 1988, by way of Ordinance Nos. 332 and 333, and subsequently amended by Ordinance Nos. 343, 382, 409, 419, 426, 432, 450, 463, 470, 471, 473, 474, 480, 483-485, 493, 494, 503, 515, 526, 537, 542, 546, 552, 556, 588, 601, 609, 611, 626, 627, 631, 642, 649, 663, 674, 683, 712, 713, 717, 718, 730, 739, 744, 749, 750, 760, and 767.

B. As part of its ongoing planning efforts including review of current policy and plan, existing conditions, and possible future expansions, Washington County has determined there is a need to update the Transportation Plan to provide direction, identify needs, and address transportation-related issues. The Board takes note that such changes are for the health, welfare, and benefit of the residents of Washington County, Oregon.

C. Under the provisions of Washington County Charter Chapter X, the Department of Land Use and Transportation has carried out its responsibilities, including preparation of notices, and the County Planning Commission has conducted one or more public hearings on the proposed amendments and has submitted its recommendations to the Board. The Board finds that this



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Ordinance is based on those recommendations and any modifications made by the Board are a result of the public hearings process;

D. The Board finds and takes public notice that it is in receipt of all matters and information necessary to consider this Ordinance in an adequate manner, and finds that this Ordinance complies with the Statewide Planning Goals, the standards for legislative plan adoption as set forth in Chapters 197 and 215 of the Oregon Revised Statutes, the Washington County Charter, the Washington County Community Development Code, and the Washington County Comprehensive Plan.

SECTION 2

The following Exhibits, attached and incorporated herein by reference, are hereby adopted as amendments to the following documents:

Exhibit 1 (68 pages) – Amending General Policies;

Exhibit 2 (6 pages) – Amending Introduction;

Exhibit 3 (6 pages) – Amending Background;

Exhibit 4 (1 pages) – Amending Guiding Principles;

Exhibit 5 (4 pages) – Amending Goal 1: Safety;

Exhibit 6 (5 pages) – Amending Goal 2: Economic Vitality;

Exhibit 7 (4 pages) – Amending Goal 3: Livability;

Exhibit 8 (4 pages) – Amending Goal 4: Natural Environment;

Exhibit 9 (1 page) – Amending System Design;

Exhibit 10 (14 pages) – Amending Goal 5: Mobility;

Exhibit 11 (2 pages) – Amending Goal 6: Accessibility;



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Exhibit 12 (3 pages) – Amending Goal 7: Connectivity;

Exhibit 13 (6 pages) – Amending Goal 8: Active Transportation;

Exhibit 14 (3 pages) – Amending Implementation;

Exhibit 15 (4 pages) – Amending Goal 9: Coordination;

Exhibit 16 (5 pages) – Amending Goal 10: Funding;

Exhibit 17 (6 pages) – Amending Goal 11: Maintenance; and

Exhibit 18 (14 pages) – Amending Glossary.

SECTION 3

All other Comprehensive Plan provisions that have been adopted by prior ordinance, which are not expressly amended or repealed herein, shall remain in full force and effect.

SECTION 4

All applications received prior to the effective date shall be processed in accordance with ORS 215.427.

SECTION 5

If any portion of this Ordinance, including the exhibits, shall for any reason be held invalid or unconstitutional by a body of competent jurisdiction, the remainder shall not be affected thereby and shall remain in full force and effect.

SECTION 6

The Office of County Counsel and Department of Land Use and Transportation are authorized to prepare planning documents to reflect the changes adopted under Section 2 of this Ordinance, including deleting and adding textual material and maps, renumbering pages or sections,



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and making any technical changes not affecting the substance of these amendments as necessary to conform to the Washington County Comprehensive Plan format.

SECTION 7

This Ordinance shall take effect on December 1, 2014.

ENACTED this _____ day of _____, 2013, being the _____ reading and _____ public hearing before the Board of County Commissioners of Washington County, Oregon.

BOARD OF COUNTY COMMISSIONERS
FOR WASHINGTON COUNTY, OREGON

_____
CHAIRMAN

_____
RECORDING SECRETARY

| READING | PUBLIC HEARING |
|---|---|
| First _____ | First _____ |
| Second _____ | Second _____ |
| Third _____ | Third _____ |
| Fourth _____ | Fourth _____ |
| Fifth _____ | Fifth _____ |
| VOTE: *Aye:* _____ | *Nay:* _____ |
| Recording Secretary: _____ | Date: _____ |



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## ~~*General Policies*~~

### ~~*Introduction*~~

~~The broad policy objectives established in the General Policy section provide the framework within which the transportation systems, programs and strategies described in this Plan will be developed and implemented through the year 2020. The policies provide direction, identify values and define basic system characteristics required to adequately serve existing and future travel needs and to carry out the County's Comprehensive Plan. The General Policies have been shaped by statewide planning goals, the Regional Transportation Plan, city transportation plans and discussions with the Citizen Advisory Committee, the Interagency Coordinating Committee and county residents.~~

~~These General Policies apply to all aspects of the Plan, while policies in later sections establish direction for specific elements of the transportation system and for system financing and implementation. Every policy in the Plan contains one or more strategies that more specifically define how the policy will be implemented.~~

~~All decisions relating to amendment of this Plan are required to address applicable policies and strategies in the plan.~~

~~Policies and strategies in this Plan which relate to the use and development of land for transportation facilities and improvements are implemented in the Community Development Code, and no person requesting a development permit or filing an application to divide a lot or parcel shall be required to address, consider, or implement any policy or strategy contained in the Transportation Plan unless required by the Community Development Code.~~

~~In addition to the implementing standards in the Community Development Code, public transportation facilities are subject to other regulations that are not land use regulations and other practices and procedures that do not involve land use decision-making. While this Plan acknowledges those regulations, practices, and procedures, it is not the intent of this Plan to convert them into land use criteria or proceedings. Rather, they are mentioned to inform the public that the transportation processes involve actions that extend beyond land use decision-making. These regulations, procedures and practices include the following:~~

~~A. Uniform road improvement design standards and other uniformly accepted engineering design standards and practices that are applied during project development~~

~~B. Procedures and standards for right-of-way acquisition as set forth in Oregon Revised Statutes.~~

~~C. Public involvement guidelines and practices for involving the public during the project development phase of a public transportation improvement, as approved by the Washington County Board of Commissioners.~~

~~D. Interagency coordination, including coordination among affected departments and divisions within Washington County, and coordination with cities, TriMet, special districts, state and federal agencies, public utilities, and other service providers.~~

E. Compliance with applicable local, state, or federal rules and regulations outside of the Community Development Code, unless such compliance is provided for in the Code.

## *Travel Needs Background*

Continuing growth and urbanization help shape both the degree and definition of travel needs in Washington County. Generally, this section calls for development of a multi-modal system that people can use with reasonable ease, a system that enables users to take care of their daily business, and a system that is open and useful to all County residents, including people who have traditionally been underserved.

## 1.0 TRAVEL NEEDS POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO PROVIDE A MULTI-MODAL TRANSPORTATION SYSTEM THAT ACCOMMODATES THE DIVERSE TRAVEL NEEDS OF WASHINGTON COUNTY RESIDENTS AND BUSINESSES.

## *Strategies:*

1.1 Provide a multi-modal transportation system that supports the land uses delineated in the County's and other applicable comprehensive plans, minimizes reliance on any single travel mode, and makes progress toward achieving mode share targets identified in Strategy 5.3 of this Plan.

1.2 Provide a transportation system that meets the mobility and accessibility needs of Washington County residents and businesses, including movement of goods and services, as defined by performance standards identified in Table 5 of this Plan.

1.3 Provide an interconnected transportation network that effectively links subareas of the County and the regional system, encourages non-auto travel and minimizes out-of-direction travel through appropriate sizing and spacing of its major elements, and which, when properly managed in conjunction with other strategies in the Plan, reduces growth in vehicular miles traveled per capita.

1.4 Provide a transportation system with facilities that are accessible to all people, complying in the process with applicable provisions of the Americans With Disabilities Act (ADA).

1.5 Encourage and support transportation services that meet the needs of the transportation disadvantaged, including children, elderly and low-income area residents as provided for in the Regional Transportation Plan.

1.6 Ensure that progress toward meeting travel needs in Washington County is financially, environmentally, geographically and modally balanced as defined by Plan implementation and management priorities.

## *System Safety Background*

Safety is paramount. This section calls for ensuring our transportation system is structurally and operationally safe. It calls for utilizing standards that ensure safe design, adequate monitoring of the

~~system for safety problems and ensuring maintenance and preservation activities necessary to maintain system safety are carried out.~~

## ~~2.0 SYSTEM SAFETY POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO PROVIDE A TRANSPORTATION SYSTEM THAT IS SAFE.~~

## ~~*Strategies:*~~

~~2.1 Ensure systems supporting motor vehicle, bus, bicycle and pedestrian travel are structurally and operationally safe.~~

~~2.2 Periodically conduct the review necessary to identify and correct transportation facility and system design and operation problems.~~

~~2.3 Identify solutions for safety problems utilizing design standards that provide or preserve the intended multi-modal function of system facilities as defined in the Transportation Plan.~~

~~2.4 Identify and prioritize transportation system safety capital improvement projects through the Washington County Transportation Capital Improvement Program.~~

~~2.5 Program transportation system maintenance expenditures through the annual Washington County Road Maintenance Program to ensure that systems supporting all modes of travel are maintained in a safe condition.~~

~~2.6 Work with other agencies and organizations to provide educational programs that improve public understanding of safe and efficient use of the transportation system.~~

## ~~*Built and Natural Environment Impacts Background*~~

~~Defining the balance between meeting transportation needs and maintaining Washington County's natural and built environments is a major and continuing challenge. As long as growth occurs -- as long as the system must be modified or expanded to accommodate growth and our changing needs -- there will be impacts. How to manage and balance them is the question. This section calls for ensuring applicable regulations are adhered to and that impacts on natural resource and developed areas are identified, understood and either avoided, limited or mitigated as construction and maintenance work is undertaken. This section also calls for developing and managing the system to keep regional or long-distance traffic from detouring through neighborhoods.~~

## ~~3.0 BUILT AND NATURAL ENVIRONMENT IMPACTS POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO AVOID, LIMIT AND/OR MITIGATE ADVERSE IMPACTS TO THE BUILT AND NATURAL ENVIRONMENT THAT ARE~~

~~ASSOCIATED WITH THE TRANSPORTATION SYSTEM AND ITS IMPROVEMENT, OPERATION AND MAINTENANCE.~~

## ~~*Strategies:*~~

~~3.1 Ensure that the Transportation Plan is consistent with statewide planning goals and federal, state and regional requirements, and supports land uses in applicable comprehensive plans.~~

~~3.2 Apprise appropriate agencies of proposed transportation projects in a timely manner to ensure coordination, identify project-related environmental issues and address applicable federal, state and regional air, water, wetland and noise regulations, standards and design guidelines.~~

~~3.3 Utilize the project development process to identify, then avoid, limit and/or mitigate potential adverse impacts to the natural and built environments.~~

~~3.4 Use system design guidelines and criteria outlined in this Plan and the Community Development Code to promote conservation and efficient use of energy, complement planned adjacent land uses and mitigate adverse impacts to the built and natural environments.~~

~~3.5 Address potential impacts of long-distance trips on neighborhoods or communities by 1) ensuring that the major elements of the transportation system are designed to adequately accommodate these trips and 2) designing and managing local systems to accommodate local trips and to discourage long-distance trips.~~

~~3.6 Provide flexibility at the plan and project development levels to respond to location-specific considerations, consistent with environmental, community and transportation system objectives and safety.~~

## ~~*System Funding Background*~~

~~Determining how to adequately fund transportation systems and services necessary to achieve the types and levels of service we want is a major challenge, but determining how to do it equitably is just as important. Like its predecessors, this Plan seeks to establish links between those who create needs or utilize facilities and services and the responsibility to pay for those services. Because much of the local funding for transportation system improvements is developed jointly by the County and fourteen cities in the county, this policy also addresses the need for consistency and coordination among local governments. This section lays out the basic funding policy framework, which is then more fully developed in the Plan's System Funding and Financing Element.~~

## ~~4.0 SYSTEM FUNDING POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO AGGRESSIVELY SEEK ADEQUATE AND RELIABLE FUNDING FOR TRANSPORTATION FACILITIES AND SERVICES, AND TO ENSURE THAT FUNDING IS EQUITABLY RAISED AND ALLOCATED.~~

## *Strategies:*

4.1 Develop funding mechanisms adequate to support the Transportation Plan, that provide resources in a manner that is consistent with Plan policies, and in cases where improvements are jointly funded, consistent with the priorities and policies of other involved jurisdictions.

4.2 Address transportation system maintenance and operations needs through financing mechanisms that recognize the primary responsibility of system users, distinguishing between countywide and local responsibilities.

4.3 Recognize that addressing transportation system needs on local government facilities is primarily the financial responsibility of Washington County residents, businesses and system users who create those needs.

4.4 Provide a transportation system improvement funding structure in which the benefits from tax- and fee-funded improvements and services accrue to those who pay for them.

## *System Implementation and Plan Management Background*

How plan provisions are carried out is at least as important as what is in the Plan itself. Among it's most important provisions, it stresses the need for efficient management of the system over time; it calls for formalized capital improvement project and maintenance prioritization processes that ensure we get to the most important things first; and it establishes mechanisms and criteria for modifying or amending the Plan incrementally over time. This section also generally lays out Washington County's responsibility to develop local strategies that will support progress toward achieving common system objectives laid out in the Regional Transportation Plan. Again, this section lays out the basics, which are further developed in the Plan Implementation and Monitoring Element.

# 5.0 SYSTEM IMPLEMENTATION AND PLAN MANAGEMENT POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO EFFICIENTLY IMPLEMENT THE TRANSPORTATION PLAN AND TO EFFICIENTLY MANAGE THE TRANSPORTATION SYSTEM

## *Strategies:*

5.1 Provide a transportation system that accommodates travel demand consistent with applicable performance standards for all modes of travel, recognizing a need to minimize or mitigate impacts on existing neighborhoods.

5.2 Efficiently manage the allocation of County resources for capital projects through the Washington County Transportation Capital Improvements Program.

5.3 Implement plan strategies that are necessary to make progress toward achieving the 2040 Regional Non-Single Occupant Vehicle mode share targets prescribed in the Regional Transportation Plan,

~~these being 45-55 percent in Regional Centers, Town Centers, Main Streets, Light Rail Station Areas and Corridors; and 40-45 percent in Industrial and Employment areas, Inner and Outer neighborhoods and for Intermodal facilities.[1]~~

~~5.4 Efficiently manage County resources for transportation system maintenance and preservation through the Washington County Road Operations and Maintenance Program.~~

~~5.5 Develop a long-term financial strategy that supports cost-effective and timely implementation of transportation system capital improvement and operations and maintenance programs.~~

~~5.6 Communicate and coordinate with other jurisdictions and transportation agencies to ensure orderly and efficient development and operation of the system as a whole and that applicable federal, state and regional planning directives are met.~~

~~5.7 Develop, emphasize and support plan transportation demand management and demand reduction strategies as mechanisms for reducing vehicle trips and shifting travel to off-peak travel periods.~~

~~5.8 Develop, emphasize and support transportation system management strategies as mechanisms for maximizing transportation system operating efficiency.~~

~~5.9 Research, develop and implement new technologies that improve transportation services.~~

~~5.10 Encourage the identification of issues in the plan monitoring process that may not be adequately addressed during plan implementation, and address these issues through plan amendments or the next plan update.~~

~~[1] The targets apply to trips *to* and *within* each 2040 Design Type. The targets reflect conditions appropriate for the year 2040 and are needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single occupancy vehicles.~~

## ~~*Roadway Element*~~

## ~~*Roadway System Background*~~

~~The Roadway System section contains policy and strategy provisions that call for developing system capacity, connectivity and design attributes that support all modes of travel. It also establishes a number of important roadway system priorities, including the need for efficient roadway system operation, roadway design attributes and standards, and concerns about the performance and management of local and neighborhood streets.~~

~~The Plan must demonstrate that it defines a transportation system that adequately serves planned land uses. The Plan considers roadway system design and connectivity as the most influential variables for determining the level of support for bicycle and pedestrian travel. The Plan considers roadway system capacity as the most influential variable in determining the level of support for motor vehicle travel. The motor vehicle performance measures defined in Table 5 serve as a basis for the determination of whether sufficient capacity exists.~~

~~The Plan calls for system management techniques to be emphasized in preference to expanded motor vehicle capacity where appropriate. It also recognizes that there are many types of motor vehicle trips including personal errands, commuting, commerce and recreation.~~

~~Streets where Regional Street Design standards will be considered are shown on the Regional Street Design Overlay Map. The intent of this map is to identify those Arterial and Collector streets where certain design treatments may be used to enhance pedestrian, bicycle and transit functions while also seeking to provide adequate motor vehicle capacity resulting in safer, modally balanced streets. The Regional Street Design Overlay Map identifies Boulevards, Boulevard Intersections and Streets, the designs for which are discussed below.~~

~~Boulevards may have three or more lanes and may include landscaped medians, on-street parking, landscape buffered sidewalks and enhanced pedestrian crossings. These roadways also include bicycle lanes and wide sidewalks that can accommodate transit enhancements such as benches or bus shelters. Boulevard Intersections may include broad sidewalks up to 12 feet in width as well as special lighting and crossing features to improve pedestrian, bicycle and transit safety and accessibility.~~

~~Streets may range from two to more than four travel lanes and may include continuous two-way left turn lanes or median treatments, with landscaping where possible, bike lanes, and landscape buffered sidewalks of six or more feet. Streets include pedestrian crossings at all intersections and may include special crossing amenities at major intersections. Specific treatments/designs for those streets designated on the Regional Street Design Overlay Map shall be determined via the project development and/or land development review process.~~

~~Many major street elements and intersections (see Background Report) already operate at or below the acceptable performance standards during the peak two-hour travel period. Analysis anticipating year 2020 level of travel demand points out the substantial challenge of modifying the system to accommodate this demand in the years ahead.~~

~~The Plan makes the presumption that building a system to accommodate all motor vehicle traffic at the acceptable standards during the two-hour PM peak travel period may not be practical. Where project(s)~~

~~necessary to provide acceptable peak-period motor vehicle performance would be extremely difficult to build for reasons of physical impacts and/or cost, the plan identifies areas or corridors where this two-hour peak travel period standard is not met as Deficiency Areas.~~

~~The Plan also establishes Study Areas – areas where a general need has been identified but a determination of how to meet that need is yet to be developed. Several of these study areas are also identified in the Regional Transportation Plan, and it is anticipated that in most cases, the additional study necessary to define specific solutions in these areas will occur at the regional level.~~

~~The Plan also identifies problems in the rural area, where many intersections have major traffic flows during peak periods. These peak weekday volumes frequently exceed the capacities provided by rural traffic controls, and major vehicle queues and delays can occur. Other rural area transportation issues include the direct driveway access to relatively high-speed roads; conflicts with rural agriculture, forestry, farming and resource activity; non-standard roadway designs and substandard condition; and, during certain parts of the day, commuter traffic.~~

## ~~6.0 ROADWAY SYSTEM POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ENSURE THAT THE ROADWAY SYSTEM IS DESIGNED IN A MANNER THAT ACCOMMODATES THE DIVERSE TRAVEL NEEDS OF ALL USERS OF THE TRANSPORTATION SYSTEM.~~

## ~~*Strategies:*~~

~~6.1 Provide a roadway system necessary to support travel demand associated with anticipated future development of land uses identified in the County's Comprehensive Plan at or better than the standards identified in Table 5 and consistent with policies identified in this plan.~~

~~6.2 Design and implement a roadway system with characteristics necessary to encourage and support non-auto travel and not negatively impact neighborhoods.~~

~~6.3 Identify and implement projects necessary to improve performance and reduce system design deficiencies in roadway corridors and segments that are operating or forecasted to operate at less than acceptable standards as identified in Table 5.~~

## TABLE 5: WASHINGTON COUNTY MOTOR VEHICLE PERFORMANCE MEASURES

Maximum Volume to Capacity (V/C) Ratio Standards, and Deficiency Areas

| *Location* [2] | AM/PM Peak Two-hour Period | | | |
|---|---|---|---|---|
| | Target [1] Performance Measures [3] | | Acceptable [1] Performance Measures [3] | |
| | First Hour [4] | Second Hour [4] | First Hour [4] | Second Hour [4] |
| *Regional Centers*<br>Town Centers<br>Main Streets<br>Station Communities | .99<br>(E) | .9<br>(D) | .99<br>(E) | .99<br>(E) |
| Other Urban Areas | .9<br>(D) | .9<br>(D) | .99<br>(E) | .9<br>(D) |
| Rural Areas | .9<br>(D) | .9<br>(D) | .9<br>(D) | .9<br>(D) |

**Deficiency Areas** are facilities, system elements or sub-areas of Washington County which are expected to exceed the acceptable performance measures defined above by 2020. Additional improvements and strategies to raise the motor vehicle performance in these areas, if any, will be approached on a case by case basis.

| Deficiency Area [5] | Description |
|---|---|
| Cornell – 25th to Arrington | Boulevard section – recent study indicated turning problems |
| Cornell – Dale to Cedar Hills | Limited capacity in the boulevard section in and near the Cedar Mill Town Center |
| Farmington – Kinnaman to Hocken | Limited link capacity, deferred until after TV HWY Corridor Study |
| Murray – Walker to Brockman | Excessive signalized intersection delay predicted during peak period |
| Walnut / Gaarde – Barrows to HWY 99W | Inadequate capacity on East/West connections |
| Beaverton Regional Center | Limited capacity in and near the Regional Center Area |
| Washington Square Regional Center | Limited capacity in and near the Regional Center Area |
| HWY 99W – I-5 to Durham Rd | Excessive signalized intersection delay predicted during peak period |
| Tualatin Town Center | Limited capacity in and near the town center area |

[1] For development review purposes, these performance standards will be used in assessing safety improvements. For plan amendment purposes, if a plan amendment is predicted to exceed the acceptable performance standard, the performance on applicable facilities will not be allowed to deteriorate further, and mitigation may be necessary. For project development purposes, these performance standards will be used to evaluate conditions beyond the transportation plan's planning horizon, as appropriate.

[1] For location reference see 2040 Growth Concept Design Types Map.

~~[3] Vehicle performance shall be determined by using volume to capacity ratios. Volume to Capacity equivalencies to LOS are as follows: LOS C = V/C of 0.8 or lower; LOS D = V/C of 0.81 to 0.9; LOS E = V/C of 0.91 to 0.99. Further discussion of vehicle performance is provided in the Technical Appendix.~~

~~[4] First Hour is defined as the highest hour of the day. Second hour is defined as the hour following the first hour.~~

~~[5] For location reference see the Deficiency Area Map. Deficiency areas do not affect development review, but apply for planning purposes. Not all placeholder projects in study areas solved the predicted problems; it is anticipated that further study will address the issues~~

# ~~DEFICIENCY AREAS~~

~~Deficiency areas result from an evaluation of 2020 conditions based upon the projects identified in this plan being in place. Even with the planned projects certain facilities, system elements and sub-areas are expected to exceed the acceptable performance measures defined and no appropriate feasible solution has been identified. Additional strategies to raise the motor vehicle performance in these areas, if any, will be approached on a case by case basis.~~

**~~Cornell – 25th to Arrington:~~**
~~This 5-lane section of Cornell is to be considered for boulevard treatments. During the peak period, left hand turns (particularly from North-South streets and driveways on to Cornell) are very difficult to make. Future growth in Hillsboro is anticipated to exacerbate this problem. No solution is currently identified, and further study is needed.~~

**~~Cornell – Dale to Cedar Hills Blvd.:~~**
~~The section of Cornell from Dale to Cedar Hills Boulevard is currently being designed for a 3-lane boulevard improvement. The design of this section through the Cedar Mill Town Center has many trade-offs and many decisions about these were made as part of the Cedar Mill Town Center planning process. It is realized that construction to 3 lanes will not support future peak period traffic demand. Considering the overall transportation system, right-of-way impacts and the Town Center environment the decision was to limit the number of lanes. This provides an emphasis on the bicycle and pedestrian environment rather than motor vehicle mobility.~~

**~~Farmington – Kinnaman to Hocken:~~**
~~Future forecasts show this segment as being significantly congested even with 7 lanes. Decisions regarding the future needs of this facility are being deferred until after the results of the Tualatin Valley Highway corridor study.~~

**~~Murray – Walker to Brockman:~~**
~~Future forecasts show this segment as being significantly congested even with 7 lanes. Grade separation is being considered at the intersections with Farmington and Tualatin Valley Highway. Additional improvements have not been identified.~~

**~~Walnut/Gaarde – Barrows to Highway 99W:~~**
~~An East/West Arterial connection in the Tigard area is needed in the future. The neighborhood nature of the East/West routes precludes development of such a facility. The deficiency itself is a problem on both Walnut and Gaarde. Both are projected to marginally exceed standards, but the constrained nature of the existing land uses precludes any easy solution.~~

**~~Beaverton Regional Center:~~**
~~This area has been identified as an Area of Special Concern in the RTP. Beaverton has historically been defined as a crossroads of transportation, with both the advantages and limitations that heavy through traffic brings. While the level of access has helped make the Beaverton Regional Center a focus of commerce in Washington County, it also presents barriers to local circulation where congested through streets isolate some parts of the area. These congestion problems persist in the 2020 system analysis, despite strategies to improve connectivity in the Beaverton Regional Center.~~

**~~Washington Square Regional Center:~~**
~~Washington Square, while not being defined in the RTP as an Area of Special Concern, is predicted to have significant congestion in the future. Congestion related to highway interchanges and Arterials in the area is being addressed though ongoing planning activities. Currently proposed solutions may not achieve the acceptable performance standard.~~

**~~Highway 99W – I-5 to Durham Road:~~**
~~This area has been identified as an Area of Special Concern in the RTP. This area has been reviewed and studied extensively in several planning efforts. While minor improvements are anticipated, there are no improvements planned that will solve the congestion problem on the highway. For planning purposes a placeholder project of 7 total lanes was assumed from I-5 to Greenburg. Even with the placeholder many links along Highway 99W and intersecting with Highway 99W have greater demand than capacity. Many of these trips access the local businesses. Solutions have yet to be identified.~~

~~**Tualatin Town Center:**~~
~~The Tualatin Town Center has been identified as an Area of Special Concern in the RTP. New street connections and capacity improvements parallel to 99W and I-5 help improve local circulation and maintain adequate access to the industrial and employment areas in Tualatin. However analysis shows that several streets will continue to be congested in Tualatin despite the new routes provided.~~

~~6.4 Implement the roadway system in a manner that enhances accessibility by all modes by developing projects necessary to address access deficiencies.~~

~~6.5 Implement the roadway system to provide access to choices for transportation disadvantaged people, including youth, elderly and disabled. Provide barrier free roadways and other transportation facilities that comply with the Americans with Disabilities Act of 1990. Identify and assess structural barriers for transportation disadvantaged populations in the current transportation system, and address these through a comprehensive program.~~

~~6.6 Design and manage the transportation system to minimize excessive traffic volumes and speeds on Neighborhood Routes and Local streets, while maintaining adequate neighborhood access.~~

~~6.7 Develop County Street Design standards, as appropriate, consistent with the Regional Transportation Plan and Metro's publication entitled 'Creating Livable Streets – Street Design Guidelines for 2040'.~~

~~6.8 Until the revisions contemplated in Strategy 6.7, above, are completed, consider the street design characteristics set forth in the Regional Transportation Plan and Metro's publication entitled 'Creating Livable Streets – Street Design Guidelines for 2040' during development review and project development, when construction or reconstruction is proposed on roadway segments and intersections identified on the Regional Street Design Overlay Map, either in association with private development or as part of a public project.~~

~~6.9 Identify and prioritize roadway capital improvements through the Transportation Capital Improvement Program.~~

~~6.10 Identify and mitigate potential impacts of roadway system improvement projects on the built and natural environments utilizing the transportation project development and development review processes.~~

~~6.11 Require new development or redevelopment projects to comply with local street connectivity, access management, parking and other applicable regulations in the Community Development Code, the Community Plans and the Rural/Natural Resource Plan.~~

~~6.12 There continues to be considerable discussion in the Washington County community about how best to define and address north-south circulation and capacity needs in the western urban areas – between Hillsboro and the Tualatin/Sherwood area. This Plan identifies these needs and the facilities, programs and services necessary to accommodate them in a manner that is consistent with State, Regional and other local government transportation plans. This approach includes planned construction of numerous large projects within the Urban Growth Boundary and requires acceptance of several "deficiency areas" throughout the County.~~

~~In recognition of the substantial debate over whether alternative ways to define and meet these north-south circulation needs have been adequately explored, the Board has determined that~~

~~additional attention should be given to this issue. This study should examine the effects of commuter rail and all other possible improvements along existing and proposed roads or corridors, including the possibility of a north-south circumferential highway. The Study should also consider, among other things, relevant land use laws, regulations, goals and objectives. If the Study recommends amendments to the Transportation Plan and identifies new projects not found in the 2002 version of the County's Transportation Plan, these issues should be addressed during a future appropriate ordinance period and in coordination with other affected planning agencies.~~

## ~~*Transportation System Management Background*~~

~~Programs that allow better use of the existing transportation system benefit all users. Transportation System Management (TSM) is a general term used to describe techniques for increasing the efficiency, safety, capacity and/or level of service of a transportation facility without major new capital improvements. This may include signal improvements, facility design treatments, access management, HOV lanes, ramp metering, incident response, targeted traffic enforcement and programs that smooth transit operations.~~

~~The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) initiated support for development of Intelligent Transportation System (ITS) technology to improve surface transportation. This initiative was retained in the Transportation Equity Act for the 21st Century (TEA-21). Intelligent traffic management techniques that use computer processing and communication technologies to optimize performance of multi-modal roadway and public transportation systems are called advanced traffic management systems (ATMS). A blueprint of the region's planned ATMS system is described in the ODOT / FHWA-sponsored Portland-area ATMS plan published in 1993. The ATMS plan recognizes the relationship between high-speed, limited-access through-routes and the parallel system of regional and local Arterials and Collectors, and how they interact with one another. Most important, the ATMS plan emphasizes the importance of fully integrating though-route and local system traffic management for optimum performance of the region's roadways. This section calls for development and management of an Arterial surface street management system and Traffic Management Center.~~

~~Access management, traffic calming, and facility design are important elements of managing the transportation system. Access management reduces conflicts between through movements and vehicles turning off and onto the roadway, as well as conflicts between motor vehicles and pedestrians or bicycles. Facility design addresses roadway safety and operations with striping, geometry, turn movement channelization, and other minor roadway reconstruction. Traffic calming devices may be applied to local streets and neighborhood routes. Traffic calming devices protect neighborhoods from intrusion of through-traffic seeking to avoid congestion, and help protect neighborhoods from speed violations. Traffic calming techniques include signage, speed bumps, curb extensions, traffic barriers, narrowed travel lanes, planted medians and other features.~~

## ~~7. 0 TRANSPORTATION SYSTEM MANAGEMENT (TSM) POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO EFFECTIVELY MANAGE THE URBAN ARTERIAL ROADWAYS WITHIN THE COUNTY.~~

## ~~*Strategies:*~~

~~7.1 Identify, evaluate, and support transportation system management techniques to mitigate and limit congestion.~~

~~7.2 Work and coordinate efforts with ODOT, Metro, Multnomah County, the City of Portland, TriMet, Clackamas County, emergency services providers, and others as appropriate, to cooperatively develop sub-regional Arterial surface street management systems and programs that include signal system coordination and optimization, video data collection, data retrieval and archiving.~~

~~7.3 Investigate the potential for public/private participation to provide driver information services.~~

~~7.4 Develop and implement a Traffic Management Center in Washington County.~~

~~7.5 Continue to implement community development code access management and spacing standards on Principal Arterials, Arterials, Collectors, and Special Area Streets, as appropriate.~~

~~7.6 Integrate traffic calming elements into Local Streets and Neighborhood Routes where appropriate, as methods to optimize street system operations without creating excessive local traffic on the countywide road system.~~

~~7.7 Continue to restripe and/or conduct minor reconstruction of existing transportation facilities, to address roadway safety and operations.~~

## ~~*Roadway Safety Background*~~

~~The Roadway Safety section describes how to define and address system safety problems. Washington County uses technical evaluation systems for assessing intersection and bridge safety.~~

~~Intersection safety is evaluated using the Safety Priority Indexing System (SPIS) developed by ODOT for use throughout the state of Oregon. A SPIS score is assigned to an intersection based on the number, rate and severity of reported accidents occurring over a moving three year time period. Washington County conducts a SPIS evaluation on approximately 400 intersections of county with other jurisdiction's roads where three or more accidents or a fatality have occurred over the most recent three-year time period. SPIS scores are calculated for each of these intersections and each intersection is assigned a ranking, with higher scores and rankings indicating a more serious safety problem. Due to the large number of intersections analyzed and the need to focus on a more manageable list, only those intersections ranked in the 50th percentile and above are considered for safety improvements as part of an official SPIS list that is annually adopted through resolution and order by the Board of County Commissioners. A map and complete ranking of SPIS locations is contained in the Technical Appendix.~~

~~Washington County evaluates the condition and safety of its 181 bridges on a regular schedule. Bridge decks, superstructures and substructures are evaluated for structural sufficiency and assigned an appraisal rating. Based on this rating, bridges may be improved or replaced. Bridges may also be placed on an accelerated inspection schedule based upon standard inspections or load rating analysis, and may be~~

~~weight limited to prohibit use by heavy vehicles. Washington County also identifies functionally obsolete bridges that are narrow and require widening. The existing conditions of County maintained bridges are identified in the Technical Appendix.~~

## ~~8.0 ROADWAY SAFETY POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO PROVIDE A ROADWAY SYSTEM THAT IS SAFE FOR MOTORISTS, PEDESTRIANS AND BICYCLISTS.~~

## ~~*Strategies:*~~

~~8.1 Identify motor vehicle, bike and/or pedestrian safety problems on County roads and develop a list of projects necessary to eliminate deficiencies.~~

~~8.2 Identify access management problems and apply access management standards as set forth in the Community Development Code in order to reduce traffic conflicts and improve safety.~~

~~8.3 Ensure adequate access and mobility for emergency service vehicles throughout the system.~~

~~8.4 Utilize the Safety Priority Index System (SPIS) to help evaluate the priority for safety improvements on County roads.~~

~~8.5 Work with other agencies and organizations to provide bicycle and pedestrian safety and education programs.~~

~~8.6 Work with school districts, including individual schools, to identify barriers and hazards to children walking and bicycling to and from school. Develop strategies for funding improvements designed to reduce these barriers and hazards and give priority to these improvements in the Washington County Operations and Maintenance Work Program and the Transportation Capital Improvement Program.~~

~~8.7 Provide street lighting along all new streets within the urban area.~~

## ~~*Roadway Maintenance Background*~~

~~The Roadway Maintenance section contains a policy and strategies to ensure adequate general maintenance of the County's 1,271 miles of roadway and 181 bridges.~~

~~Of the 1,271 miles of maintained roadway, about 600 miles are in the urban area and 670 in the rural area. Nearly 300 of the 670 miles in the rural area are unpaved local roadways. Pavement conditions are evaluated through the Pavement Management System, which analyzes pavement structure and assigns an average Pavement Condition Index (PCI) to each section of paved roadway. Washington County strives to maintain its paved roadways in Fair or Better condition with PCIs of 50 or greater. Over the past decade Washington County has improved the condition of its major road system significantly, so that the~~

~~Collector and Arterial system now exhibits the Very Good rating with average PCI's ranging from 84 to 87.~~

~~The Local road system has not fared as well as the major system. Overall, Local roads exhibit a Fair rating with average PCIs of 67, but 17 percent of the Local road system has Poor to Very Poor ratings. Furthermore, more than half of the rural Local roadways are unpaved (gravel) with travel surfacing quality that varies significantly after winter rains and heavy vehicle use. More detailed information about average PCI by functional class is contained in the Technical Appendix.~~

## ~~9.0 ROADWAY MAINTENANCE POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ENSURE THE ROADWAY SYSTEM IS STRUCTURALLY SOUND AND ADEQUATELY MAINTAINED.~~

## ~~*Strategies:*~~

~~9.1 Identify current and future County roadway maintenance and reconstruction needs.~~

~~9.2 Carry out maintenance activities through the annual Washington County Road Maintenance Program.~~

## ~~*Functional Classification Background*~~

~~The Functional Classification section describes the hierarchy of roadway types, their relative roles in the system, and provides direction with regard to appropriate classification criteria and facility design. This section references and is to be used in conjunction with the Functional Classification System Map.~~

~~Roads perform two essential functions: they facilitate mobility and they provide access to individual properties. At the top end of the system, a Freeway's main function is to provide a continuous route that enables traffic to move easily over long distances. At the bottom end, a Local Street's primary function is to provide access to individual properties. Between these extremes, roadways provide access and mobility to varying degrees, as illustrated below.~~

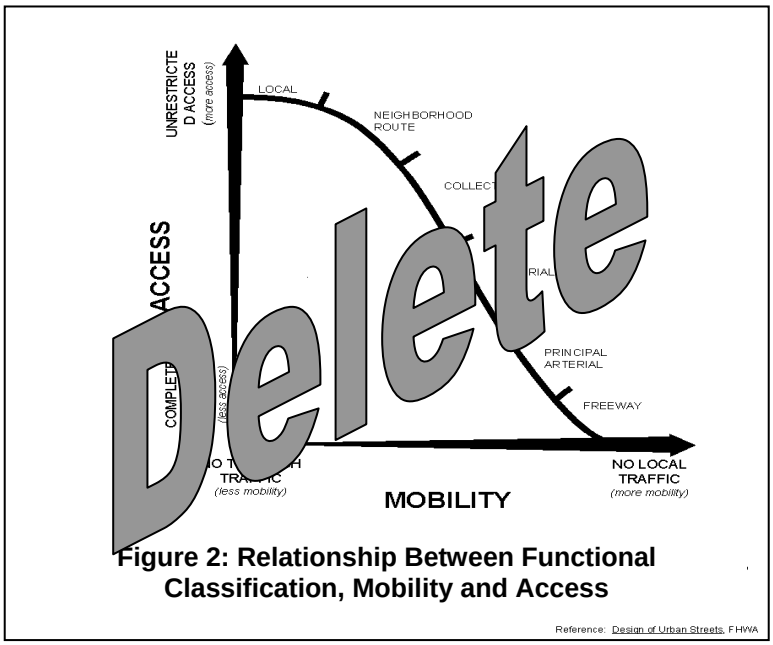



**Figure 2: Relationship Between Functional Classification, Mobility and Access**

Reference: Design of Urban Streets, FHWA

~~The Functional Classification System in the Plan is modified somewhat from that in the previous plan in order to provide more flexibility. The new functional classification system enables better management of neighborhood traffic in urban areas and maintains consistency with other local governments in Washington County. Also important to determining roadway design are the designations in the Plan's Road Lane Numbers Map, Regional Street Design Overlay Map, Planned Bicycle System Map, Pedestrian System Map, Transit System Map and Through-truck Route Map.~~

~~While not part of the Functional Classification System, the Rural Resource Route designation in the rural area is used to differentiate and give higher maintenance priority to the subset of local roadways that are most important to the rural economy. While the 1988 Plan required a plan amendment to remove or apply the Rural Resource designation, this Plan proposes addressing these roads at a program rather than plan level to allow more flexibility in responding to the changing locations of active farming, mining and timber harvesting activities.~~

## ~~10.0 FUNCTIONAL CLASSIFICATION POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ENSURE THE ROADWAY SYSTEM IS DESIGNED AND OPERATES EFFICIENTLY THROUGH USE OF A ROADWAY FUNCTIONAL CLASSIFICATION SYSTEM.~~

### ~~*Strategies:*~~

~~10.1 Apply the Washington County roadway system functional classification system described below and illustrated in the Functional Classification System Map (See Figures 4a-f).~~

~~Functional Classification Descriptions:~~

~~**A. Principal Arterials (Freeways and Highways)** form the backbone of the motor vehicle network. These routes connect over the longest distance (sometimes miles long) and are spaced less frequently than other Arterials or Collectors. These highways generally span several jurisdictions and often have statewide importance. At a minimum, highways that are classified by ODOT as Interstate or Statewide Highways are considered Principal Arterials. Important characteristics of Principal Arterials include:~~

- ~~Freeways have the highest level of access control, including grade-separated interchanges. No at-grade driveways or connections are allowed.~~
- ~~Highways generally have limited at-grade connections.~~
- ~~Freeways and highways provide connections for the movement of people, services and goods between the central city, regional centers and destinations beyond the region.~~
- ~~Principal Arterials that aren't freeways will be managed to minimize the degradation of capacity while providing limited access to abutting properties.~~

~~**B. Arterial Streets** interconnect and support the Principal Arterial highway system. Arterials intended to provide general mobility for travel within the region. Correctly sized Arterials at appropriate intervals allow through trips to remain on the Arterial system thereby discouraging use of Local streets for cut-through traffic. Arterial streets link major commercial, residential, industrial and institutional areas. Characteristics of Arterials include:~~

- ~~Arterials serve as primary connections to Principal Arterials, and should also connect to other Arterials, Collector and Local streets, where appropriate.~~
- ~~Arterials in the rural area provide urban-to-urban secondary connections to neighboring cities, and farm-to-market access between urban and rural areas. Urban-to-urban rural Arterials provide key connections to the regional motor vehicle system and 2040 land-use components inside the urban growth boundary. Farm-to-market rural Arterials provide farm-to-market access between urban and rural areas. Most rural Arterials serve a mix of urban-to-urban and farm-to-market traffic.~~
- ~~Arterials provide freight movement in support of Principal Arterials.~~
- ~~Arterials have moderate access control for cross streets and driveways. Typically, residential driveways are not allowed access to Arterials.~~

~~**C. Collector Streets** provide both access and circulation between residential, commercial, industrial and agricultural community areas and the Arterial system. As such, Collectors tend~~

~~to carry fewer motor vehicles than Arterials, with reduced travel speeds. Collectors may serve as freight access routes, providing local connections to the Arterial network. Collector characteristics include:~~

- ~~Collectors connect neighborhoods to nearby centers, corridors, station areas, main streets and nearby destinations in the urban area. Land development should not be sited to obstruct the logical continuation of Collector streets.~~
- ~~In the rural area, Collectors are a primary link between the local street system and Arterials for freight, people, goods and services.~~
- ~~Access control on Collectors is lower than on Arterials. Commercial, industrial and institutional uses will be eligible for direct access to Collectors in accordance with the provisions of Article V of the Community Development Code. Direct access to new residential lots is not permitted.~~

D. ~~**Neighborhood Routes** (generally former Minor Collectors) are in residential neighborhoods and provide connectivity to the Collector and Arterial system. They do not serve citywide or community circulation. Because traffic needs are greater than a Local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are allowed (including devices such as speed humps, traffic circles and other devices). New neighborhood routes may be established via the land development process.~~

- ~~The Neighborhood Route designation is appropriate for urban areas where neighborhood forms are more compact and the routes are much shorter than typically occur in the rural area.~~
- ~~Traffic management measures are allowed.~~

E. ~~**Commercial/Industrial Streets** are intended to provide access to commercial or industrial properties. The application of this designation through the development review process may require a different design standard than the underlying functional classification designation.~~

F. ~~**Local Streets** primarily provide direct access to adjacent land. While Local streets are not intended to serve through traffic, the aggregate effect of local street design impacts the effectiveness of the Arterial and Collector system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the Arterial street network. Local street connectivity maps in the Community Plans identify new local street connections that are required by the Community Development Code in conjunction with new development.~~

~~Rural local roads may be miles long because of large parcels and a relatively sparse street network. Many rural local roadways are unpaved (gravel) and serviceability can vary with rainfall and maintenance. Rural local roads provide direct access to a variety of rural land uses including agriculture, forestry, quarry activities, low-density rural residential uses as well as rural commercial and industrial uses. An objective of this Transportation Plan is to minimize the impacts of urban travel on rural land uses.~~

~~Rural Local street characteristics include:~~

- ~~Paved or oftentimes unpaved surfaces~~
- ~~Narrow lane widths with roadside ditches to provide drainage~~
- ~~No access control and access points spaced far apart~~

- ~~Lack of traffic calming measures, sidewalks and illumination~~

~~Urban Local street characteristics include:~~

- ~~Traffic calming measures are allowed.~~
- ~~Access control is minimal with direct driveway connections permitted from all land use types.~~
- ~~A connected network of local streets is required as set forth in the Local Street Connectivity Maps of the Community Plans and in the Community Development Code.~~

~~G. **Special Area Collectors** are intended to link traffic from Special Area Local Streets, Special Area Neighborhood Routes, and some Special Area Commercial Streets to Arterials. Speeds should be low to moderate. A moderate degree of non-transit oriented development traffic would be appropriate for these facilities.~~

~~The design of a Special Area Collector should provide multi-modal access to the Arterial system, station area employment and high-density residential areas while discouraging traffic infiltration on local streets. In addition to autos, these facilities should accommodate primary and secondary bus lines, bike lanes, and sidewalks separated from the street by a landscape strip. Left turn lanes in medium and low-density residential areas would be provided at intersections with Arterials.~~

~~Developments which are oriented to Special Area Collectors should be employment based or multi-family residential. Single-family residential developments that abut a Special Area Collector should be oriented away from this type of facility.~~

~~H. **Special Area Neighborhood Routes** are intended to serve both a traffic collection and distribution function and to provide access to adjacent properties. These facilities are intended to have less volume and less through traffic than Special Area Collectors. Speeds should be low. A limited degree of non-transit oriented development traffic would be appropriate for these facilities.~~

~~The design of Special Area Neighborhood Routes should emphasize neighborhood orientation by accommodating on-street parking, transit service, and bicycles in a relatively narrow paved width which includes the use of traffic calming measures. Exclusive turn lanes are not appropriate for these facilities, unless needed for safety at intersections with Arterials.~~

~~Special Area Neighborhood Routes should primarily serve residential land uses. Development which includes small to medium scale mixed use (commercial/residential) development is also appropriate.~~

~~I. **Special Area Commercial Streets** are intended to serve local access and service needs associated with urban high density residential, mixed use and employment oriented land uses. These roads are not intended to serve through trips but may have significant traffic volumes. The street may not exceed two travel lanes in each direction. Speeds should be low.~~

~~The design of Special Area Commercial Streets should reflect local intensive urban use by all modes. The road must accommodate autos, trucks, buses and bicycles while also~~

providing transit stop amenities and frequent opportunities for pedestrian crossings. Sidewalks should be wide with tree wells.

Special Area Commercial Streets should serve high density residential, mixed use and business districts.

J. **Special Area Local Streets** are intended to provide direct property access. They are not intended to serve through traffic. Speeds should be low. Non-transit oriented development traffic would be inappropriate for these facilities.

The design of Special Area Local Streets should reflect the residential neighborhood function by accommodating on-street parking on a narrow paved width and which includes traffic calming measures that compel autos to drive slowly.

Special Area Local Street should serve only low to medium density residential districts.

10.2 Special Area Streets are identified on the Special Area Street Overlay Map as well as in the Community Plans. Special Area Street design standards are included in the Washington County Uniform Road Improvement Design Standards.

10.3 Utilize some or all of the following criteria for defining or modifying functional classification: the extent of connectivity, length of roadway, the spacing or frequency of facilities, land use along the roadway and traffic characteristics.

10.4 Determine ultimate street design requirements based on a facility's designation in the road Lane Numbers Map (Figure 5), the Planned Bicycle System Map (Figure 13), the Pedestrian System Map (Figures 12a-f), the Transit System Map (Figure 11), the Through-truck Route Map (Figure 14) and considering the Regional Street Design Overlay Map (Figure 3).

10.5 Utilize a facility's ultimate design requirements as defined in Strategy 10.4 to establish conditions of approval for private development projects.

10.6 Analysis and design for proposed new road alignments will be performed as funds become available or when development applications for affected property are received.

10.7 Additional Neighborhood Routes and Special Area Local Streets will be identified through the development review process.

10.8 Resolve conflicts between the Transportation Plan and transportation elements of Community Plans or the Rural/Natural Resource Plan in favor of the Transportation Plan.

10.9 Recognize that the functional classification system represents a continuum in which through traffic increases and provisions for access decrease in the higher classification categories. On higher classification roadways, access management will be implemented through the Community Plans and the Community Development Code.

10.10 As provided for by the Jackson School Road Interchange Area Management Plan, the intended purpose and function of this interchange is to serve farm-to-market traffic needs and provide safe and efficient access for long-distance, regional trips (e.g., between Hillsboro/North Plains and the Portland metropolitan area). The interchange has been designed to provide capacity and safe

~~operations to accommodate this function over the twenty-year planning period. To ensure that the intended purpose and function are maintained, Washington County shall notify and coordinate with the Oregon Department of Transportation in evaluating any action to change the functional classification and/or capacity of Jackson School Road from a two-lane, Arterial facility.~~

10.11 ~~The Transportation Plan also identifies several specific study areas where the function or alignment or alignment of the facility has not been determined. These study areas are described below and shown on the Study Area Map.~~

## ~~STUDY AREAS~~

~~Study areas relate to facilities or areas for which further study is required to determine specifically how an identified need should be met. In general, the function, proposed alignment, or other specific solution has yet to be identified. "Placeholder" projects have been used in many study areas for purposes of analysis of the rest of the transportation system. These projects are possible but not necessarily the most appropriate projects for addressing an identified transportation need. The purpose of the Study Area designations is to facilitate the additional analysis that will need to occur before the most appropriate solutions to the identified traffic problems can be defined. As appropriate, interim projects in these areas are allowed prior to completion of the additional analysis. The following study areas are identified on the Washington County Study Areas Map (Figure 9).~~

**~~Hillsboro-Sherwood Improvement Area~~**:
~~The study area will be evaluated to identify and improve safety and mobility on existing rural roads between Aloha/Hillsboro and Tualatin/Sherwood. For planning purposes various minor safety improvements on Arterials were assumed. This is not the Western Bypass. Specific improvements have not been identified.~~

**~~Hornecker/Evergreen – Glencoe to Cornelius-Schefflin:~~**
~~Tualatin Valley Highway, particularly the intersections in Cornelius and Hillsboro, is expected to be more congested in the future. Alternative routes and/or relief for this road needs further evaluation. This study may be conducted in 2 separate phases: 1) road improvements needed to accommodate traffic between Hillsboro, Cornelius and Forest Grove, 2) future expansion of commuter rail to Hillsboro, Cornelius and Forest Grove, ensuring that expanded services are integrated with the regional transit system. For planning purposes, an extension of Evergreen Road to connect to Hornecker, improvements to Hornecker and an extension of Hornecker to Cornelius-Schefflin was assumed.~~

**~~Interstate 5 – Highway 217 to Wilsonville:~~**
~~This corridor is over capacity even with widening of I-5. Identified in the RTP as a Study Corridor, the County will work with the region to develop a long-term solution. For planning purposes a placeholder project of 4 through lanes each way plus auxiliary lanes was assumed. Even with the placeholder many links both on the mainline and ramp connections still exceed acceptable motor vehicle performance. Solutions to this corridor will require further study.~~

**~~Interstate 5 to Highway 99W Connector:~~**
~~An improved regional connection between Highway 99W and I-5 is needed in the Tualatin area to accommodate regional traffic, and to move it away from the Tualatin, Sherwood and Tigard Town Centers. For planning purposes a placeholder project of a limited access 4-lane highway was assumed which is consistent with the corridor refinement study in the Regional Transportation Plan. Investigation of an at-grade interim Arterial solution will also be conducted.~~

**~~Oregon 217:~~**

~~Improvements in this corridor are needed to accommodate expected travel demand and maintain acceptable levels of access to the Beaverton and Washington Square Regional Centers. Identified in the RTP as a Study Corridor, the County will work with the region to develop a long-term solution for this corridor. For planning purposes a placeholder project of 3 through lanes each way plus reconfiguration of the ramps was assumed. Generally with the placeholder the highway operated within acceptable motor vehicle performance standards, except for spot locations. It is expected that solutions to these issues will be identified and resolved with further study.~~

**~~Tualatin Valley Highway:~~**

~~A number of improvements are needed in this corridor to address existing deficiencies and serve increased travel demand. One primary function of this route is to provide access to and between the Beaverton and Hillsboro Regional Centers. The corridor is identified as a Study Corridor in the RTP. Additional study is needed to identify how significant the problems are in the corridor and the nature of the improvements needed to address them. For planning purposes a placeholder project of 7 total lanes was assumed from Hocken to Cornelius Pass. Even with the placeholder project, many segments and intersections along Tualatin Valley Highway have greater demand than capacity. Many of these trips access the local businesses. It is expected that these issues will be identified and resolved with further study.~~

**~~US 26 Sunset Highway:~~**

~~The Sunset Highway has been identified as a Corridor Refinement Study in the Regional Transportation Plan. Improvements are needed in this corridor to preserve mobility to and from the Central City and the Sunset Corridor employment areas, as well as provide access to Hillsboro Regional Center. For planning purposes a placeholder project of 3 lanes each way was assumed from Highway 217 to Cornelius Pass Road. With the placeholder the model shows the highway mainline operating at acceptable motor vehicle performance or better. Some of the ramps and crossing routes may still have motor vehicle performance problems, particularly the Cornell Interchange (from WB 26 to SB Cornell). It is expected that these issues will be identified and resolved with further study.~~

**~~Jackson School Road - US 26 to Evergreen:~~**

~~With the development of a planned interchange at Jackson School Road, and US 26, there are some concerns about the impact. This study area calls for an evaluation of the alignment of Jackson School Road, its connection to both Evergreen and US 26, including the alignment of the route and traffic operations.~~

**~~119th Avenue - Cornell to Barnes:~~**

~~There is an identified need for a new Collector facility between Cornell and Barnes in the general alignment of 119th Avenue. This study will review alignment alternatives, for the extension of 119th between Cornell and Barnes.~~

**~~Springville Road - 185th to West Union:~~**

~~There has been concern that the design of the intersection of 185th and West Union will not be able to handle the projected traffic. One solution suggested has been an extension of Springville from 185th to West Union. This study will further evaluate the problem, and possible solutions, including potential environmental issues.~~

~~**Meek Road – Realignment at Shute Road:**~~
~~There has been concern regarding the proximity of the intersection at Meek Rd and Shute Rd to the interchange at US 26 and Shute Rd. This study will evaluate options for moving the intersection of Meek further south.~~

~~**185th Avenue – US 26 to Baseline:**~~
~~185th at the interchange with US 26 and further south to the intersection with Baseline is predicted to have significant intersection delay during the peak period. This study will evaluate the potential for transportation system management to mitigate the traffic congestion. There also will be continued study of intersection improvements.~~

~~**South Hillsboro Urban Reserve Street Plan:**~~
~~The urban reserve area street plan development in this area currently includes an extension of Cornelius Pass to connect to 209th Avenue. This extension was included as a placeholder for evaluation purposes. It is recognized that the area will require further study, particularly resolution of issues along Tualatin Valley Highway, before inclusion in the UGB. The transportation study will evaluate the Cornelius Pass extension and the transportation needed to support the development prior to any UGB expansion in the area.~~

~~**Fairfield – Terman Study Area:**~~
~~The need for east-west connectivity and a street connection between Fairfield and Terman in this vicinity has been established, but a decision on how best to meet this need has not yet been made.~~

~~**OHSU West Campus Study Area:**~~
~~The OHSU West Campus Study Area is bounded by Northwest Cornell Road to the north, Northwest 185th Avenue to the east, Southwest Baseline to the south and Northwest Cornelius Pass Road to the west. The OHSU West Campus itself is bounded by Northwest Walker Road to the north, Northwest 185th Avenue to the east, the MAX light rail line to the south and Northwest 206th Avenue to the west. The OHSU West Campus currently has a need for east-west and north-south connections to provide connectivity and mitigate impacts of the Campus on adjacent transportation facilities. However, due to the unique uncertainty of the level or nature of further development on the OHSU West Campus, it is impractical to designate specific road alignments at this time. Therefore, additional streets to provide connectivity within the OHSU West Campus will be evaluated as part of the transportation impact analysis required for approval of a City of Hillsboro Concept Development Plan for the OHSU West Campus. In addition, the transportation impact analysis will also evaluate connectivity between the West Campus and the Quatama MAX Station and the Willow Creek Transit Center/MAX Station.~~

~~**David Hill Road Extension Study Area:**~~
~~A need for additional east-west and north-south travel connections in the area north of the current Forest Grove city limits and west of Hwy. 47 has been identified. The nature and location of these improvements, however, requires further study.~~

~~**Saltzman Road Extension Study Area:**~~
~~There is an identified need for a generally north-south Collector roadway in the vicinity of the Saltzman Road Extension Study Area shown on the Washington County Study Areas Map (Figure 9). The Study Area is more specifically described on the Saltzman Road Extension Study Area Overlay Map (Figure 9a), which identifies specific properties included in the study area. Land Development proposals affecting portions of properties within the Saltzman Road Extension Study Area shall be required to incorporate a Collector roadway in their development proposal and to indicate how that Collector might feasibly be extended to both serve other properties in the area and to connect with Saltzman Road to the~~

~~South. It is anticipated that this study area and its provisions are interim measures. The County anticipates undertaking a broader planning process to address the needs of properties included in future Urban Reserves. That study and its recommendations are expected to address this study area as well.~~

~~**Greater Bethany East-West Arterial Study Area:**~~
~~On-going Urban/Rural Reserves planning work suggests the probability that a significant amount of land west of the North Bethany Subarea Plan will be designated as an Urban Reserve Area. This Area could encompass land between NW 185th Avenue and the North Bethany Subarea Plan, as well as an area west of NW 185th Avenue. This land is referred to as the 'Greater Bethany' Urban Reserve Study Area (GBURSA).~~

~~Recognizing the potential for urbanization within the GBURSA, existing regional and county transportation planning policies indicate the need to study a future east-west arterial road connection between the existing North Bethany Subarea Plan and population and employment centers in Hillsboro. The extension and upgrading of the functional classification of Road A to provide this connection is a logical choice considering adopted regional and county arterial policies for spacing and connectivity. Travel demand modeling also indicates that further study of a future east-west arterial connection is warranted. Because of the importance of studying future transportation needs and acknowledging Urban/Rural Reserves planning efforts, Road A has been planned and designed to accommodate the needs of the North Bethany Subarea and the probability of its future extension and function as an east-west arterial connection. The Greater Bethany East-West Arterial Study Area will inform future planning for transportation needs in the GBURSA and beyond.~~

**Table 6: Functional Classification Design Parameters**

| | | | | |
|---|---|---|---|---|
| Principal Arterials & Arterials[5] | 7<br>5<br>3<br>2 | Yes<br>Yes<br>Yes<br>Yes | 122 Feet<br>98 Feet<br>90 Feet<br>90 Feet | 98 Feet<br>74 Feet<br>50 Feet<br>48 Feet |
| Collectors[3,4] | 5<br>3<br>2 | Yes<br>Yes<br>Yes | 98 Feet<br>74 Feet<br>74 Feet | 74 Feet<br>50 Feet<br>50 Feet |
| Special Area Collectors[5] | 3<br>2 | Yes<br>Yes | 52 Feet<br>40 Feet | 46 Feet<br>34 Feet |
| Neighborhood Routes | 2 | No | 60 Feet | 36 Feet |
| Special Area Neighborhood Routes[5] | 2 | No* | 44 Feet | 38 Feet |
| Commercial/Industrial | 4<br>3<br>2 | No<br>Yes<br>No | 70 Feet<br>64 Feet<br>64 Feet | 50 Feet<br>50 Feet<br>34 Feet |
| Special Area Commercial Streets[5] | 4<br>3<br>2 | No*<br>No*<br>No* | 70 Feet<br>58 Feet<br>46 Feet | 64 Feet<br>52 Feet<br>40 Feet |
| Locals | 24' Travel Way | No | 50 Feet | 32 Feet |
| Special Area Local Streets[5] | 16' Travel Way | No | 38 Feet | 32 Feet |

* While these facilities do not include bike lanes, they do include wide travel lanes of 14 feet due to constrained right-of-way width – see Footnotes 2 and 5.

Notes:

[1] The maximum number of travel lanes that can be built without a plan amendment is identified on the 'Road Lane Numbers' map in the Transportation Plan. This plan-level decision establishes the transportation system capacity necessary to adequately serve future travel demands identified in the plan. The number of lanes required to accommodate turning movements at intersections and interchanges will be determined through traffic analysis conducted during the transportation project development process. This project level decision identifies physical improvements necessary at or near intersections and

*(continued on next page)*

~~interchanges to safely and efficiently move toward attaining the system capacity identified in the Plan. Improvements may include turn lanes and auxiliary lanes adjoining the traveled roadway to accommodate weaving, merging, speed changes, or other purposes supplementary to through traffic movement. Auxiliary lanes to address spot area capacity and safety needs may extend between intersections (including interchanges) and beyond an intersection. Opportunities for public involvement at the transportation project development level are provided as defined in Washington County's adopted Transportation Project Development Public Involvement Guidelines (R&O 93-124, August 25, 1993). Additional opportunities for public participation are available as provided by Article VII of the Community Development Code.~~

~~[2] Bikeways are required on all urban Collectors and Arterials, including Special Area Collectors. Six-foot wide, striped and stenciled bike lanes shall be constructed along these urban facilities except where special constraints exist; in these areas, 14-foot wide, outside travel lanes may be used and transitioned back to six foot bicycle lanes when the constraint ends. Outside of the UGB, refer to the Bicycle System map to determine which facilities are intended to have bikeways. These bikeways may be a minimum of four-foot wide paved shoulders.~~

~~[3] Maximum right-of-way and pavement widths identified here are, as a rule, the maximum that can be built on roadway segments without an amendment to the Transportation Plan. However, plan amendments will not be required when it is determined during the project development or development review processes that these maximums should be exceeded to accommodate topography or project-level refinements associated with wider than standard pedestrian facilities; bus pullouts; on-street parking; project impact mitigation measures; and intersection, interchange or other project features identified as necessary for safe, efficient operation of the planned transportation system. All intersections along Arterials and Collectors shall be planned to include right-of-way necessary for turn lanes within 500 feet of intersections, based on a 20-year analysis of intersection needs. Actual right-of-way requirements may be less than the maximums specified in the table based on roadway characteristics and surrounding land uses. On two and three lane urban Collectors, right-of-way may be reduced to 60 feet and maximum paved width may be reduced to 36 feet through the land development or project development processes when there is a finding that a turn lane is reasonably unlikely to be needed based on anticipated future development and traffic analysis. Acquiring adequate right-of-way is important to avoid unnecessary and costly future roadway system improvement impacts. Efforts should be made to specifically define project/roadway right-of-way requirements during the project and/or land development processes in order to avoid acquiring excess right-of-way, however (by performing the traffic safety and access analysis necessary to determine whether a center turn lane is needed, for instance). In rural areas, the maximum right-of-way for Collectors shall be 60 feet. Opportunities for public involvement at the transportation project development level are provided as defined in Washington County's adopted Transportation Project Development Public Involvement Guidelines (R&O 93-124, August 25, 1993). Article VII of the Community Development Code identifies land use standards, public notice and public involvement provisions and appeal opportunities that are provided in the Land Use Permitting Process.~~

~~[4] On those Arterials and Collectors designated on the 'Regional Street Design Overlay' map as 'Boulevards', 'Boulevard Intersections' or 'Streets', or located within identified 'Pedestrian Districts' on the Pedestrian System Map, sidewalk widths and other design features such as planter areas shall be determined based on the applicable standards in the Community Plans, Community Development Code.~~

~~[5] 'Special Area' streets (Collector, Neighborhood, Commercial or Local classifications) are shown on the 'Special Area Street Overlay Maps'. Special Area Local Streets are also designated in the appropriate Community Plans and/or by the Community Development Code. Additional Special Area Neighborhood Routes and Special Area Local Streets may be designated using the development review process. Special Area Street designs will be determined via the development review process. While Special Area Commercial Streets do not include striped bicycle lanes, they shall include wide travel lanes of 14 feet to accommodate bicycle use. For Special Area Collectors, in addition to the right-of-way, a nine-foot minimum utility/sidewalk easement shall be dedicated on each side of the right-of-way. For Special Area Local streets, in addition to the right-of-way, a ten-foot minimum utility/sidewalk easement shall be dedicated on each side of the right-of-way. For Special Area Alleys, additional right-of-way may be required as part of development review.~~

## *Road Jurisdiction Background*

The Road Jurisdiction section addresses which portions of the system should be under the jurisdiction of the state, County and cities in the long term. This section is to be considered in conjunction with the Countywide Road System Map. The Countywide Road System Map identifies roadways that are judged to be appropriately under County jurisdiction in the long term, with remaining roadways either staying under state jurisdiction or becoming city roadways as currently unincorporated areas are annexed.

## 11.0 ROAD JURISDICTION POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO HAVE OR SEEK JURISDICTION OVER A COUNTYWIDE ROAD SYSTEM THAT SERVES MAJOR COUNTY TRAVEL MOVEMENTS, AND TO PURSUE THE TRANSFER OF ROADS THAT ARE NOT PART OF THAT SYSTEM TO OTHER JURISDICTIONS.

## *Strategies:*

11.1 Work with ODOT and the cities in Washington County to identify a Countywide Road System consisting of Principal Arterials and Arterials and, if appropriate, some Collectors that serve countywide travel and maintain or obtain jurisdiction over these roadways.

11.2 Work with the cities to transfer roads not identified on the Countywide Road System Map to city jurisdiction as urban unincorporated areas are annexed.

11.3 Work jointly with ODOT to identify and resolve State/County jurisdiction issues.

11.4 Establish and adopt a map of the Countywide Road System (See Figure 10).

## *Transit System Element*

## *Introduction*

Although the County and other local jurisdictions participate in regional decisions affecting transit planning and system development, TriMet has primary responsibility for providing transit services within Washington County. In addition, since transit is a regional service, Washington County's interests must be considered within the context of other regional interests.

## ***Transit Background***

TriMet currently operates 32 fixed bus routes plus MAX light rail within Washington County. The existing system is designed with the Westside MAX as the spine for travel east-west with feeder bus routes to rail stations or transit centers. The total passenger activity for all bus and rail routes on a typical weekday is 91,000 (TriMet, 2001). The highest patronage is along the MAX line that carries about one-third of the riders in the county.

~~Generally, most of the urban area of the county is served by bus or light rail. Transit coverage compares the transit service area to land use. The results indicate that the transit service buffer currently covers approximately 83% of the transit supportive areas. In general, the frequency of transit service is adequate in the urban area today. Exceptions include Beaverton-Hillsdale Highway between ORE 217 and Scholls Ferry Road and the Durham area west of Boones Ferry Road.~~

~~Para-transit service is aimed at providing access to the transit system for the special needs population. For TriMet's LIFT program, the origin or destination must be located within TriMet's service boundary and within 3/4 of a mile of fixed route service. The LIFT program generally covers the entire urban area, with a few exceptions. There is also a service called "Ride Connection" that provides transportation services on an as-available basis for transportation disadvantaged persons who may be located outside TriMet's service area boundary in Washington, Clackamas or Multnomah County. Ride Connection is a private non-profit and includes a network of over 30 agencies and senior centers and over 500 volunteers providing 198,000 rides annually.~~

~~Future transit services within Washington County are largely determined through the regional transportation and transit planning processes of Metro and TriMet. The RTP responds to state and regional transportation directives to reduce reliance on the automobile. Strategies for accomplishing this include modifying land use patterns and improving systems and services supporting non-auto travel modes. Responding to this, the RTP makes a significant commitment to improving transit services.~~

~~Transit also has a major role in supporting recent land use changes made to further the 2040 Regional Growth Concept, the region's long-term growth strategy. This strategy calls for focusing a significant portion of future growth in Regional and Town Centers, in Light Rail Station Communities, and in Corridors. The transit element serves these areas by providing high-quality, relatively high-speed connections between them and by supporting access to and from them to nearby neighborhoods.~~

~~The transit plan for the County is based on the Priority Network in the RTP. Planned transit service types in Washington County are shown on the Transit System Map (Figure 11), and future transit service may include the following:~~

- ~~Light Rail Transit - Provides frequent and high capacity service along a mostly exclusive right-of-way with limited stops. LRT runs at least every 10 minutes during the weekday and weekend midday base periods.~~
- ~~Commuter Rail - Uses existing freight railroad tracks for passenger service, on either a shared or exclusive basis. Commuter rail service is most often concentrated during peak commute periods.~~
- ~~Rapid Buses - Run at least every 15 minutes during the weekday and weekend midday base periods and are similar to LRT in terms of speed, service and comfort.~~
- ~~Frequent Buses - Run at least every 10 minutes on selected transit corridors and may include reserved bus lanes, signal preemption and enhanced passenger amenities.~~
- ~~Regional Buses - Operate with maximum frequencies of 15 minutes along routes with conventional bus stop spacing. Transit preferential treatments and passenger amenities are available at high ridership locations.~~
- ~~Demand Response Transit - Demand Response Transit provides service to riders when and where it is needed. It includes types of dial-a-ride, shared ride and shuttle services. It provides flexibility that fixed route service can not, as well as more comprehensive transit coverage. Demand Response Transit service is intended to be in addition to the expanded fixed route service and express transit service.~~

## ~~12.0 TRANSIT POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ENCOURAGE AND SUPPORT DEVELOPMENT OF TRANSIT FACILITIES AND SERVICES THAT INCREASE TRANSIT USE IN WASHINGTON COUNTY.~~

## ~~*Strategies:*~~

~~12.1 Work with TriMet, Metro, commercial rail carriers, ODOT, aviation service providers, transportation service providers, and other agencies to improve transit facilities and service to Washington County residents and businesses.~~

~~12.2 Coordinate with TriMet, Metro, ODOT and other agencies to provide appropriate signal priorities along frequent and rapid bus transit routes identified in the Regional Transportation Plan.~~

~~12.3 Partner with TriMet and other agencies to improve bike and pedestrian access to transit stops, particularly Major Transit Stops, and to make transit waiting areas safe and comfortable.~~

~~12.4 Partner with Metro, TriMet and other agencies to provide an appropriate level, quality and range of public transportation options to serve the variety of special needs individuals in the region and support the implementation of the 2040 Growth Concept. Rely on and support the implementation of the Tri-County Elderly and Disabled Transportation Plan as a guide for providing services for the special needs population.~~

~~12.5 Ensure that road improvements and private development in close proximity to major bus stops, commuter rail stations and existing and proposed light rail stations include appropriate features to support and complement existing and future transit services.~~

~~12.6 Participate in efforts to identify and provide transit facilities and services necessary to make progress towards mode share targets adopted in Strategy 5.3 of this Plan.~~

~~12.7 Support appropriate commercial bus service between Washington County and other parts of the state and ensure these services are integrated with the Regional transit system.~~

~~12.8 Provide pedestrian and bicycle access to existing and proposed light rail stations and bus stops through road, bicycle and pedestrian capital improvement and maintenance projects and in conjunction with new development.~~

~~12.9 Coordinate with federal, state, regional and local agencies to ensure the timely construction and operation of commuter rail between Wilsonville and Beaverton.~~

~~12.10 Work with TriMet, Metro and local governments to provide more north-south transit services throughout urbanized Washington County.~~

~~12.11 Work with TriMet, Metro and other affected agencies to research, investigate and develop new and alternative technologies that will lead to improved transit services.~~

~~12.12 Support the provision of public transit between rural cities and urban activity areas where it is cost-effective and warranted by demand.~~

~~12.13 Coordinate with federal, state, regional and local agencies to explore the expansion of commuter rail lines to Hillsboro, Forest Grove, Salem, Milwaukie and into Yamhill County.~~

~~12.14 Work with TriMet, Metro and local governments to implement, as appropriate, the Transit Choices for Livability Plan.~~

## ~~*Demand Management Element*~~

### ~~*Introduction*~~

~~Transportation Demand Management (TDM) is the general term used to describe any activity that provides an alternative to single occupant vehicle trips during peak travel demand periods. Demand management encompasses a range of strategies such as carpooling, staggered work shifts, or telecommuting. These strategies -- which encourage strategies such as ridesharing (e.g., car- or van-pooling); transit use (e.g., fare subsidies), bicycle commuting (e.g., on site showers, lockers or bike parking), walking to work, or providing flexible working hours -- are viewed as relatively low-cost initiatives that can help reduce traffic congestion and air quality problems. As growth in the Washington County area occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to provide alternatives will help accommodate this growth.~~

### ~~***Demand Management Background***~~

~~Demand management strategies and programs have taken on increased importance and emphasis in recent years, as interests in improving air quality and reducing the need for additional capacity on our transportation system have increased.~~

~~In response to air quality problems, employers with more than 50 employees are now required by state regulations to have programs in place that reduce the percentage of employees who drive alone to work. Transportation Management Associations (TMAs), are typically public/private partnerships that have been established in some areas to coordinate and assist firms in complying with these regulations and to be advocates for activities that reduce demands on our roadway system. There are currently two TMAs in Washington County: the Westside Transportation Alliance and the Tualatin Transportation Management Association.~~

~~Heightened interest in these programs is reflected in shifts in state and regional policy, which is most clearly reflected locally in provisions of the recently adopted Regional Transportation Plan (RTP). The RTP establishes "mode share targets" for the region, which are expressed in the form of the percentage of trips that are made in some fashion other than driving alone in a car. The mode share targets are implemented by strategies that help achieve the targets on a county- or region-wide basis.~~

## 13.0 DEMAND MANAGEMENT POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO ENCOURAGE AND SUPPORT IMPLEMENTATION OF DEMAND MANAGEMENT PROGRAMS THAT REDUCE THE NUMBER OF SINGLE OCCUPANT VEHICLE TRIPS AND/OR SHIFT TRAFFIC TO OFF-PEAK TRAVEL HOURS.

## *Strategies:*

13.1 Support and participate in development of travel demand management and reduction strategies, such as rideshare, preferential parking and flextime programs, among others.

13.2 Support and participate in Metro's, TriMet's and Transportation Management Associations' efforts to develop, monitor and fund regional TDM programs.

13.3 Work with and support Transportation Management Associations, major employers and business groups to develop and implement demand management programs to work towards mode share targets adopted in this Plan.

13.4 Regulate and manage the provision of parking facilities to achieve regional and state standards utilizing provisions in Community Plans and the Community Development Code.

13.5 Explore the use of new strategies to manage and reduce travel demand and to make more efficient use of capacity on the transportation system.

13.6 The County will examine the merit, feasibility and methodology involved in establishing a public education program to reduce trips by drivers of automobiles and trucks. The County may chose to engage its regional partners to pursue a region-wide effort that includes, but is not limited to, a substantial and sustained public education effort regarding strategies that will reduce the average number of vehicular trips made daily, especially in the peak hours.

## *Pedestrian Element*

## *Introduction*

Washington County residents historically have recognized walking as an important form of transportation. Walking provides access to a variety of destinations, including schools, transit, shopping and employment. The 2020 Transportation Plan dramatically elevates the importance of and the need to support pedestrian travel from the 1988 County Transportation Plan, in part because of strengthened pedestrian policies at the state and regional levels, but also to implement Comprehensive Plan changes that have created and will continue to create mixed-use environments well-suited to pedestrian travel. Light Rail Station Communities, Regional and Town Centers, Transit Corridors and Main Streets are among the areas that are or will be in the future most amenable to pedestrian travel.

## ~~*Pedestrian Background*~~

~~Washington County's urban pedestrian system consists of sidewalks along streets, off-street trails, and off-street neighborhood connections built through the development process. In the rural area, the pedestrian system consists of an on-street pedestrian network consisting of wide shoulders along County and State roads. These wide shoulders also are intended for use by bicyclists and slow-moving farm equipment.~~

~~Key elements of the urban pedestrian system are on-street sidewalks, off-street trails, crossing locations, connectivity, illumination and streetscape amenities. On-street sidewalks form most of the pedestrian system in urban Washington County.~~

~~In the rural area, due to the low population density and the lack of pedestrian destinations, the Pedestrian System Map (Figures 12a-f) identifies specific areas where pedestrian improvements are called for. The rural pedestrian activity areas are locations where there is a pedestrian destination(s) and nearby residences within walking distance. Within these areas, wide shoulders are called for in order to provide for safe pedestrian travel.~~

~~The off-street pedestrian network consists of existing and planned paved multi-use trails and pathways that are generally located within drainage and utility corridors, parks and other public rights of way (See Figures 12a-f). In unincorporated Washington County, off-street trails are constructed and maintained by trail providers and homeowners' associations. Trail providers include THPRD and cities. Trails and pathways constructed as part of private development are often maintained by homeowner's associations. The trails and pathways shown on the Off-Street Trail System includes trails from the RTP's Regional Pedestrian System, Metro's Greenspaces Master Plan, THPRD's Trails Master Plan, and Special Area Off-Street Pathways and Trails identified through light rail station area and regional and town center planning efforts. All trail alignments are generalized. Specific alignments will be determined through the development review process or a specific planning process for a trail.~~

~~Gaps in the existing sidewalk system constitute the major deficiency in the urban pedestrian system. The February 2001 sidewalk inventory shows there are approximately 211 miles of missing sidewalks along urban county Arterial, Collector and Neighborhood Route streets. There are also approximately nine miles of missing sidewalks on state arterials. The missing sidewalks will be constructed over time as part of public roadway projects, private development of adjacent land and as infill pedestrian improvement projects. The majority of sidewalk improvement s will be made as infill sidewalk improvement projects, independent of roadway projects.~~

~~There are a number of state and regional pedestrian provisions that are addressed in the Pedestrian Policy's strategies, including the state Transportation Planning Rule and the Regional Transportation Plan (RTP). Key requirements include constructing sidewalks along new urban streets and providing sidewalks along existing streets when they are reconstructed. New state legislation also requires the identification of safe routes to schools in order to increase pedestrian safety to and from schools. Strategy 8.6 in Policy 8, Roadway Safety, addresses this legislation. The RTP also identifies key pedestrian-oriented areas and streets that are to have enhanced pedestrian amenities. The Pedestrian policy's strategies identify other key actions needed to guide continued development of the pedestrian system over time, which will result in significant improvements to Washington County's pedestrian system. These strategies define a program that, over time, will result in a much more complete pedestrian system that is safe, convenient and attractive, making it easier for the public to walk to their destinations.~~

## ~~14.0 PEDESTRIAN POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ENCOURAGE AND SUPPORT GREATER PEDESTRIAN ACTIVITY IN THE COUNTY BY PROVIDING AND MAINTAINING AN ENVIRONMENT WHERE WALKING IS A SAFE, CONVENIENT AND PLEASANT MODE OF TRAVEL.~~

## ~~*Strategies:*~~

~~14.1 Foster a safe, convenient and pleasant pedestrian environment by providing for the development of a well designed, efficient and interconnected system of pedestrian facilities consisting primarily of sidewalks on the street system but utilizing separate accessways for pedestrians and bicycles when street connections are impractical or unavailable.~~

~~14.2 Construct pedestrian facilities on all new streets as provided in the Community Development Code and/or Community Plans. Provide pedestrian facilities and appropriate illumination on all new or reconstructed urban Arterials, Collectors, Neighborhood Routes, and Local and Special Area streets, including intersection improvements.~~

~~14.3 Consider activities on adjacent existing and planned land uses when determining appropriate pedestrian supportive features to be included with Arterial, Collector, and Neighborhood Route roadway improvements.~~

~~14.4 Construct pedestrian facilities, as appropriate, to full or interim standards on existing streets that are not built to ultimate standards. Develop standards for interim pedestrian improvements, including asphalt pathways.~~

~~14.5 Require that new urban development provide for safe, convenient and pleasant pedestrian travel as provided through the Transportation Plan, the Community Plans and/or the Community Development Code.~~

~~14.6 Identify and prioritize in the Transportation Capital Improvement Program and the Operations and Maintenance Annual Work Program the construction of missing pedestrian facilities, reconstruction of substandard pedestrian facilities and the provision of crossing and streetscape improvements on Arterials, Collectors, and Neighborhood Routes.~~

~~14.7 Work, as appropriate, with Metro, Tualatin Hills Park and Recreation District (THPRD), cities, other agencies and organizations, and private development to plan, map, and construct an off-street system of multi-use trails and pathways.~~

~~14.8 Develop and utilize standards for pedestrian facilities and amenities that adequately address pedestrian safety, sidewalk width, ease of street crossing, illumination, connectivity and streetscape improvements and amenities. In Pedestrian Districts and along Transit Corridors, Main Streets and Streetscape Improvement Areas shown on the Pedestrian System Map and roadways and intersections identified on the Regional Street Design Overlay Map, develop standards for enhanced pedestrian facilities and amenities that support the planned pedestrian environment. In areas where pedestrians are expected during non-day-light hours, such as transit routes, Main Streets and Pedestrian Districts, standards for pedestrian-scale lighting shall be~~

~~developed. Appropriate improvements, based upon these standards, shall be included in new urban development and urban road projects. (See Appendix C of the Technical Appendix for examples of specific types of improvements.)~~

~~14.9 Until such time as the standards contemplated in Strategy 14.8 are developed and adopted, consider the pedestrian enhancements set forth in the County's *Pedestrian Enhancements Design Guidelines Booklet* when development or redevelopment, including roadway construction or reconstruction, is proposed in Pedestrian Districts, along Transit Corridors, Main Streets and in Streetscape Improvement Areas shown on the Pedestrian System Map as well as on roadways and intersections identified on the Regional Street Design Overlay Map.~~

~~14.10 Employ the following pedestrian classification definitions:~~

~~A. Major Bus Stops: Major bus stops are all stops on rapid bus lines and major bus stops designated in the Regional Transportation Plan. Development in close proximity of major bus stops shall comply with the standards of Community Development Code Section 380, Convenient Access to Transit Overlay District. Major bus stops are identified on the Transit System Map and in the Community Plans.~~

~~B. Off-Street Pathways (includes special area off-street pathways): These paved, multi-use pathways serve an important circulation function in areas not well served by the street system and provide short cuts between origins and destinations. An accessway, which provides a short connection between two roadways, is an example of a pathway serving a circulation function. Special area off-street pathways are pathways that are located in a transit-oriented district. Off-street pathways are identified on the Off-Street Trail System Map and the Community Plans.~~

~~C. Pedestrian Connectivity Areas: Pedestrian connectivity areas are locations in the urban, unincorporated area where pedestrian facilities are needed to enhance local pedestrian connectivity. Generally, these are areas where the pedestrian facilities will connect neighborhoods and/or provide a more direct route for pedestrians to use. Pedestrian connectivity areas identify the specific locations that are to be connected. Appropriate types of pedestrian improvements include sidewalks along streets, accessways, off-street trails, or a combination of two or more of these improvements. In some instances, a particular type of improvement may be identified for construction, such as an accessway or off-street trail. The appropriate type(s) of pedestrian facilities and their location will be identified through the development review process, except in those areas where a specific facility is shown, and constructed as part of development within these areas. Pedestrian connectivity areas are identified in the Community Plans.~~

~~D. Pedestrian District: Pedestrian districts are Regional and Town Centers and Light Rail Station Communities. These areas are planned for dense, mixed-use development and are served by transit. All streets within these areas are important pedestrian connections. These areas shall be developed in a manner that makes walking a safe, convenient and interesting travel mode. These areas will be characterized by buildings oriented to the street, wide sidewalks, marked street crossings (with special crossing amenities at some locations), pedestrian-scale lighting, benches, bus shelters, awnings and street trees. The Pedestrian Districts located within urban, unincorporated Washington County are identified on the Pedestrian System Map. Regional~~

and Town Centers and Light Rail Station Communities located within Washington County cities are shown in city comprehensive plans.

E. Pedestrian Focus Area: Pedestrian focus areas are located within pedestrian districts. They have nearby transit service and will exhibit the characteristics of a pedestrian district. Walking is promoted as the preferred transportation mode choice by developing a strong pedestrian scale and emphasizing pedestrian access and activities. Generally, these areas will have the highest level of pedestrian amenities and pedestrian-scale design. Pedestrian focus areas are identified in the Community Plans.

F. Pedestrian Plaza: A pedestrian plaza is a small semi-enclosed area which provides a place for pedestrians to sit, stand or rest. They are generally located at a transit stop, a building entrance or an intersection. They connect directly to adjacent sidewalks, walkways, transit stops and buildings. Pedestrian plazas have amenities, such as pedestrian scale lighting and seating.

G. Special Area Trails: Special area trails are located in transit oriented districts and are intended to serve recreational walking trips (for example, along a stream or through a park). Special area trails are identified on the Off-Street Trail System Maps and in the Community Plans.

14.11 Provide four-to six-foot wide shoulders along Arterials, Collectors and Neighborhood Routes in Rural Pedestrian Activity Areas to provide for safe pedestrian travel. Shoulder width will be dependent upon the functional classification of a roadway and if it is designated as a rural bike route.

14.12 Develop criteria to prioritize the construction of needed pedestrian facilities, including crossing, connectivity and streetscape improvements.

14.13 Update the pedestrian inventory map and pedestrian accident data on a periodic basis to assist in the identification of needed improvements.

14.14 Review and modify as appropriate minimum landscaping and irrigation standards for the construction or reconstruction of Arterials, Collectors and Neighborhood Routes.

14.15 In addition to the pedestrian improvements required by the Community Development Code, development shall provide needed pedestrian improvements as part of future development in Pedestrian Connectivity Areas. The type and location of the pedestrian facility (ies) in these areas will be determined through the development review process unless a specific improvement is called for. Pedestrian facilities may include sidewalks along streets, accessways or off-street trails.

## *Bicycle Element*

## *Introduction*

The Bicycle Element of Washington County's Transportation Plan consists of a policy, strategies and a system map that define and support the development of the Planned Bikeway System. The Bicycle

~~Element is intended to guide continued development of the bikeway system through the year 2020. The Bicycle Policy and strategies in this section must be considered in conjunction with the Bicycle System Map.~~

## ~~*Bicycle Background*~~

~~Planning for bicycles as part of Washington County's transportation system began in the early 1970's and continues to play a significant role in the county's Transportation Plan.~~

~~The Bicycle Element is intended to guide continued development of a system of bikeways, consisting of bike lanes and paved shoulders, through the year 2020. The Bicycle System Map (Figure 13) identifies on-street bikeways within the Urban Growth Boundaries that are proposed to be constructed as part of the countywide bicycle system network. It also shows those rural roadways that are proposed to include paved shoulders of at least five feet in width. The planned off-street trail network is shown on the Off-Street Trails Map.~~

~~Oregon State statutes, administrative rules and the Oregon Transportation Plan establish that bicycle facilities are required on all Collector or higher classification roadways when those roads are constructed or reconstructed. Exceptions are provided where a bikeway is not safe, where cost is excessively disproportionate to need or where there is an absence of need due to sparsity of population or other factors. The Plan has been developed to ensure its consistency with state and regional (as provided in the Regional Transportation Plan) guidelines and requirements.~~

~~The Regional Transportation Plan (RTP) identifies a Regional Bicycle System, which includes a classification hierarchy for those roads and off-street paths that are part of this system. The RTP's four bikeway classifications are 'regional access bikeway', 'regional corridor bikeway', 'community connector bikeway' and 'multi-use paths with bicycle transportation function'. The Regional Bicycle System classifications are based on a route's connectivity, access, and use characteristics. The design guidelines for each type of bikeway are included in Metro's publication *Creating Livable Streets: Street Design Guidelines for 2040*.~~

~~The streets and off-street pathways that are part of the RTP's Regional Bicycle System are also part of the County's planned bicycle system. Off-street pathways are shown on the Off-Street Trails Map. Although this Plan does not include a classification hierarchy for the bicycle system, as discussed below, system design is consistent with Metro's guidelines.~~

~~As of the date of this Plan, the Washington County Arterial and Collector street system has 64 miles of completed bikeways; in addition, there are 62 bikeway miles on state roadways within the County. The following table describes existing road miles with bicycle lanes and paved shoulders as well as additional miles to complete the system.~~

Table 7: Bicycle Lanes/Paved Shoulder Inventory Summary

by Functional Classification (January 2002)

| Roadway Functional | Total Road Mileage | Road Miles With Bicycle Lanes/Paved Shoulders | *Percentage of Road Miles with* | Gap: Road Miles Without Bicycle Lanes or Shoulders & Percentage |
|---|---|---|---|---|
| State Principal Routes (ODOT) | 30.4 Miles | 22.6 Miles | 74% | 7.8 Miles or 26% |
| State Arterials | 31.4 Miles | 16.5 Miles | 53% | 14.9 Miles or 47% |
| | | | | |
| County Arterials | 107 Miles | 60.7 Miles | 57% | 46.4 Miles or 43% |
| County Collectors | 75.9 Miles | 2.9 Miles | 4% | 73 Miles or 96% |

Note: Although portions of Sunset Highway (US 26) are considered to include paved shoulders on which bicycles are allowed, high traffic volumes and speeds as well as conflicting traffic movements make riding dangerous on this facility. Freeways were therefore not included in this inventory summary.

In urban areas, bicycle facilities exist or are planned on both state and county roadways with functional classifications of Collector or higher. The county's on-street bicycle system consists of paved shoulders, 4 to 5 feet in width, as well as striped and stenciled dedicated bicycle lanes, 5 to 6 feet in width. In some instances, where constraints limit roadway width for bike lanes or paved shoulders, wide outside travel lanes of 14 feet may be used as bikeway for limited distances. These wide lanes will transition to either paved shoulders or bicycle lanes when roadway width is no longer constrained.

In rural areas, because of low population density and the lack of specific bicycling destinations, the planned rural bicycle network provides for facilities on a more strategic basis, generally limiting their designation to most Arterials and some Collectors.

Other agencies, primarily the Tualatin Hills Parks and Recreation District, have developed and planned an extensive network of paved, off-street pathways intended to be shared by bicycles and pedestrians. While the primary purpose of these facilities is for recreation, they serve a transportation function as well, providing an alternative means of accessing a variety of destinations. Some, but not all of these facilities are shown as part of the Regional Bicycle System in Metro's Regional Transportation Plan. The alignments shown on the Off-Street Trails Map have been taken from the Tualatin Hills Park and Recreation District's *Trails Master Plan* (revised May 2000) and are conceptual; actual alignments and crossing locations at street intersections will be determined via the development review process. For the current official planning status of these trails, consult the most recent version of the Tualatin Hills Parks and Recreation District's *Trails Master Plan.*

## 15.0 BICYCLE POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO ENCOURAGE AND SUPPORT GREATER BICYCLING ACTIVITY IN WASHINGTON COUNTY BY PROVIDING AN ENVIRONMENT IN WHICH BICYCLING IS A SAFE AND CONVENIENT MODE OF TRAVEL.

## *Strategis:*

abcdef Proposed additions
abcdef Proposed deletions

~~15.1 Focus bicycle improvements on connecting cities, neighborhoods, commercial areas, schools, recreational facilities, employment centers, other major destinations, regional and city bikeways and other transportation modes.~~

~~15.2 Coordinate the development of the bikeway system with other local and regional agencies and integrate it with the delivery of other transportation services.~~

~~15.3 Construct all bikeways according to applicable and accepted local, regional, state and federal guidelines and standards.~~

~~15.4 Provide for safe and convenient bicycle travel through an interconnected street network. When such a street network is impracticable or inappropriate to construct, shared accessways for pedestrians and bicycles shall provide the necessary connections.~~

~~15.5 Support local, regional and state agencies in their efforts to plan an off-street system of multi-use paths.~~

~~15.6 Coordinate with cities to identify wide streets with low traffic volume that are appropriate for signing as bicycle routes to enhance safety and connectivity and to supplement the system of bicycle lanes and paved shoulders found on the major street system.~~

~~15.7 Consider improvements to enhance bicycle safety on a case by case basis on minor roads (Neighborhood Routes and lower classifications) where factors such as traffic volume, terrain, road conditions and/or intensity/frequency of use warrant such improvements. In such instances, the design and type of improvements shall be determined through the project development process.~~

~~15.8 Construct interim bicycle facilities, as appropriate, on existing streets that are not built to ultimate standards where the construction of full street improvements is not practicable or imminent.~~

~~15.9 Prioritize and program the construction of bikeway improvements in the Washington County Transportation Capital Improvement Program.~~

~~15.10 Construct non-capital bikeway improvements through the annual Washington County Road Maintenance Program.~~

~~15.11 Require design features for bicycle facilities to be incorporated in new urban developments, including bicycle access and parking facilities in accordance with the Community Development Code.~~

~~15.12 Develop standards for and construct paved shoulders on rural roadways identified on the Bicycle System Map, considering the following:~~

~~A. Locations of existing and committed bicycle facilities (i.e., paved shoulders and bicycle lanes)~~

~~B. Locations of rural cities and communities~~

~~C. Locations of existing or planned recreational facilities (State, Regional or County parks)~~

D. Existing and anticipated (year 2020) roadway traffic volumes

E. Presence/absence of parallel routes consisting of other bicycle facilities or low traffic volume roadways

F. Designated RTP bicycle facilities and RTP Rural Roadways (which include paved shoulders)

G. Known traffic and/or terrain characteristics such as the presence of significant hills and/or grades) or large numbers of trucks, high traffic speeds and/or volumes

H. Potential connectivity between existing bicycle facilities and between regional destinations (recreation facilities, population centers and connections to bicycle facilities within the UGB).

15.13 Encourage cities and agencies within the county to develop regularly scheduled inspection and maintenance programs to ensure that debris is regularly removed from bikeways.

15.14 Consider developing and updating an appropriate County-wide bicycle route suitability map, such as the *Getting There by Bike* map, previously published by the County.

Consider placing 'Bike Route' signs on roadways identified as 'Secondary Bicycle Routes' on map of the same title in Technical Appendix C-8 of this Plan.

## *Roadway Freight Element*

## *Introduction*

The movement of freight is important to the economy of the Portland region and Washington County. Although detailed freight data is not available at the county level, more freight data is available at the aggregate regional (i.e., Washington, Multnomah, Clackamas and Clark counties) level. On the regional level more than 60 percent of all jobs are associated with transportation-dependent businesses such as manufacturing, warehousing, and distribution. Moreover, the volume of freight tonnage in the region is projected to double between 1996 and 2030, with nearly 60 percent of the tonnage expected to be moved by truck.

This section deals primarily with the transport of freight on roadways because it is the only mode of freight travel over which Washington County has control. Although it is recognized that significant amounts of freight are also transported by rail and pipeline, and to a much lesser extent air, the planning for these modes is done by private companies or other government agencies. Rail, pipeline, air and water modes are more specifically discussed as a separate element in the next section.

## *Freight Background*

Because the safe and efficient movement of freight is important to the economy and most freight is expected to be transported by truck in the future, the Through-truck route system (Figure 14) is an important element of the plan. To provide for the most efficient transport of freight and to

~~minimize impacts on residential neighborhoods, through-truck routes are designated primarily on Arterial and Collector roads, However through-truck route designations in this Plan encourage the use of these routes for through-truck travel, but do not restrict through-truck travel or local pickup and delivery by truck to these routes. The primary purpose of designating through-truck routes in this plan is to ensure that any future improvements on these roads provide for the safe and efficient movement of trucks. Through-truck route designations include Existing and Proposed and Interim Through-truck routes. Proposed through-truck routes are intended to serve through-traffic after a new road has been constructed or after improvements have been made to an existing road to make it a safe and efficient route for truck travel. Examples of this are Tongue Lane or Jackson School Road north of Evergreen Road.~~

~~The transport of hazardous materials is regulated by the Federal Motor Carrier Safety Administration under Title 49 Code of Federal Regulations, Parts 390-397, and is not governed by local jurisdictions. Hazardous materials include a variety of substances, ranging from radioactive and medical wastes to gasoline. The transport of non-radioactive hazardous materials requires that vehicles transporting these materials comply with any routing designations of a state, be placarded or marked and not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets or alleys, except where there is no practicable alternative. The transport of radioactive materials is generally restricted to designated preferred routes on interstate highways, beltways or bypasses, where alternative routes have not been designated by a state.~~

## ~~16.0 FREIGHT POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO DEVELOP AND MANAGE TRANSPORTATION SYSTEM ELEMENTS TO ENSURE THE SAFE AND COST-EFFECTIVE MOVEMENT OF FREIGHT IN THE COUNTY.~~

## ~~*Strategies:*~~

~~16.1 Coordinate planning, development, maintenance and operation of an efficient and safe freight system with the private sector, ODOT, TriMet, Metro, the Port of Portland and the cities of Washington County.~~

~~16.2 Define a Through-truck Route system consisting of Arterials and Collectors that support the efficient movement of goods throughout the county, while not prohibiting the use of other roads for local pick-up and delivery of goods and services.~~

~~16.3 Identify and correct roadway design and operational deficiencies that affect the safe and efficient movement of freight on the Through-truck Route system.~~

~~16.4 Coordinate with federal and state agencies as necessary to ensure compliance with federal and state regulations pertaining to the safe transport of hazardous materials within and through Washington County.~~

~~16.5 Support the efficient operation and development of intermodal freight facilities.~~

~~16.6 Correct safety deficiencies related to freight transport.~~

~~16.7 Establish truck counts as a standard element of system monitoring, and maintain a database of those counts that will make improved analysis and management of freight needs possible.~~

~~16.8 Develop criteria for evaluating freight impacts as part of the Transportation Capital Improvement Program project prioritization process.~~

~~16.9 Support the provision of adequate freight loading and unloading facilities, and ensure adequate access to intermodal freight facilities.~~

## ~~*Air, Rail, Pipeline and Water Element*~~

### ~~Introduction~~

~~The Air, Rail, Pipeline and Water Element deals with the movement of people, goods, or services by these modes (see Figure 15). Transportation related policies and strategies regarding these modes are described in Policy 17 of this Transportation Plan. With regard to the Air element, the scope of this Policy is limited to public use airports. [Note: Private use airports are not a required element of a transportation system plan, as stipulated in OAR 660-012-0020(2)(e).]~~

~~In addition to public use airports, there are several private use aviation facilites in Washington County. Private use facilities fall under two general categories: private use airports identified by the Oregon Department of Aviation/DOA (pursuant to ORS 836.608(2)) that are subject to LCDC's Airport Planning Rule (OAR 660-013), and personal use facilities that are subject to local regulation.~~

~~The County's Comprehensive Plan identifies Public Use Airports and state recognized Private Use Airports with land use overlay designations in the map elements of the Rural Natural Resource Plan and of the Cedar Hills-Cedar Mill Community Plan entitled Airport Overlay Districts. Land use related policies and strategies regarding the overlay-designated airport facilities are addressed in the Rural/Natural Resource Plan and in the Comprehensive Framework Plan for the Urban Area. Personal use airport and heliport facilities not identified by the Oregon Department of Aviation/DOA are not recognized on Comprehensive Plan maps. Development standards for all airport and heliport related uses, including personal use airports and heliports, are outlined in the Community Development Code.~~

~~As previously discussed in the Roadway Freight Element, rail and pipeline modes have freight implications, so policies and strategies described in this section should be considered together with those in the Roadway Freight element.~~

## ~~*Air, Rail, Pipeline and Water Background*~~

~~Air transport in Washington County consists of three public use airports. The larger of these airports, the Hillsboro Airport, operated by the Port of Portland, is a general aviation airport acting as a reliever airport for Portland International. Annual flight take-off and landing operations at this facility were over 236,000 in 2001. Aircraft at the Hillsboro Airport are limited to small engine and business class aircraft providing passenger shuttle rather than air cargo service for some of the major industries in the area. Plans to expand Hillsboro Airport in the future include the purchase of additional land for expansion and the addition of a third runway to accommodate increasing demand.~~

Stark's Twin Oaks Airpark is the largest privately owned public use airport in the region, with annual operations estimated at over 13,000 for the year 2001. It is located approximately six miles south of Hillsboro, between the Tualatin River and River Road, and is privately owned and operated. Aircraft at this general aviation facility are limited to helicopters and small engine airplanes. Physical constraints on runway length preclude potential expansion that would be necessary to accommodate larger class aircraft. However, operations could expand via the construction of additional hangers available for lease on site.

Skyport is the smallest public use airport in Washington County. This privately owned and operated facility is located approximately three miles north of Cornelius. Annual flight take-off and landing operations at the Skyport Airport for the year 2001 were estimated at just over 700. There are no current plans for expansion of this facility.

Rail service in Washington County is operated by the Burlington Northern, Portland & Western, and Port of Tillamook Bay railroads. These railroads currently provide freight service only, although there are plans to also operate peak-hour commuter rail service in the I-5/Hwy. 217 corridor between Wilsonville and Beaverton on tracks owned by the Union Pacific Railroad and ODOT. The proposed Wilsonville-Beaverton commuter rail project is projected to carry approximately 4,700 weekday passengers and reduce congestion by 17,400 vehicle miles per day by the year 2020.

Pipelines transmit natural and liquid gas in Washington County. Major high-pressure gas pipelines (60 pounds per square inch or greater) are shown in this plan to highlight possible conflicts with future roadway extensions or widenings. The Kinder-Morgan pipeline, connecting the Columbia River port area to Eugene and running through Beaverton and Tigard, is an important high transmission rate pipeline that transmits refined gas products at an average of 75,000 gallons per hour.

There are currently no waterways supporting freight or ferry passenger transport in Washington County.

## 17.0 AIR, RAIL, PIPELINE AND WATER POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO ENCOURAGE CONTINUED USE AND DEVELOPMENT OF AIR, RAIL, PIPELINE AND WATER TRANSPORTATION FACILITIES IN THE COUNTY.

## *Strategies:*

17.1 Coordinate planning and development of air, rail, pipeline and water transportation service with federal, state and regional regulators and transportation service providers to ensure the safety of operations as well as environmental and noise compatibility with surrounding land uses.

17.2 Coordinate with service providers to ensure that existing facilities are protected from encroachment by incompatible land uses and to minimize land use conflicts where future expansion is needed.

17.3 Work with other agencies and private parties and develop public/private partnerships as appropriate to use and further develop air, water and rail transportation resources. Avoid abandoning existing resources of these types.

17.4 For state identified airport facilities subject to the LCD Airport Planning Rule, address specific policies and strategies in the Rural/Natural Resource Plan and the Comprehensive Framework Plan for the Urban Area, and provide regulatory standards for airport related uses and safety concerns in the Community.

17.5 Investigate using existing rail lines for commuter rail or for other transportation purposes.

17.6 Consider using waterways in Washington County for passenger and freight transportation purposes.

17.7 Coordinate with appropriate parties the development and maintenance of pipeline facilities that are consistent with federal, state and local plans and regulations.

## *System Funding and Financing Element*

### *Introduction*

The Plan reflects the common finding in transportation matters – that needs appear likely to outstrip resources. The challenge, then, is first to take a hard look at what funding levels can reasonably be achieved; second, to ensure that responsible priorities for the expenditure of resources are in place; and third, to generate the interest and support to provide the system and services Washington County residents and businesses want. To ensure that available funds are expended in a responsible manner, this Plan has been developed with the recognition that urban and rural economies are linked together and served by a single transportation system.

### *Financial Background*

The cost and revenue estimates in this Plan are planning-level projections intended to provide an "order of magnitude" comparison of existing and projected costs and revenues. These estimates and projections are based upon a preliminary assessment of project costs as well as assumptions concerning the future rate of inflation and the proportion of various countywide funding programs allocated to needs on the county system identified in this plan. These project costs and assumptions can change quickly based upon more detailed engineering work, changes in the economy and political decisions.

Funding Needs

As shown in Table 8 below, this Plan identifies a need for $2.9 billion of roadway system improvements over the next 20 years on County, ODOT and City facilities in Washington County. Approximately 39 percent of this need, costing $1.1 billion is identified as currently being on County facilities. On County facilities, almost $849 million in roadway capacity projects are identified, with another $66 million estimated to address other capacity needs in Study Areas for which specific project solutions have not been yet identified. Although all roadway capacity needs include bicycle and pedestrian facilities as needed, the Plan also identifies $176 million in stand-alone (i.e., not constructed as part of a roadway capacity project) bicycle and pedestrian needs required to complete these systems. Historically, Washington County has not funded improvements to state facilities out of local revenue sources. However, approximately $1.1 billion

in roadway capacity needs alone are projected on the state system. Given the recent lack of available funding for capacity improvements on the state system and the importance of properly functioning state facilities to the County's system, ODOT costs are identified here as part of the funding needed to ensure the efficient operation of roadways in Washington County. Another approximately $92 million in capital improvements are identified as needed specifically in Washington County to support planned transit services, along with an undetermined share of the $384 million in capital costs for transit vehicles – buses and light rail cars – identified as needed throughout the Region by the year 2020.

In addition, the Plan identifies a need for approximately $595 million for system operations and maintenance and bridge repair through the year 2020. That's almost $ 29 million annually to patch hazardous potholes, provide pavement overlays to prevent roadway deterioration, grade gravel roads or overlay them when grading is no longer appropriate, and to replace culverts and make other environmental, signal and safety improvements.

**Table 8: Roadway Funding Needs in Washington County (2000-2019)**

| | Jurisdiction (Costs in 2002 Million $) | | | |
|---|---|---|---|---|
| **Type of Need** | **Wash. Co.** | **ODOT** | **City** | **Total** |
| Capital | | | | |
| Roadway Capacity (Identified projects only)[1] | $848.8 | $94.6 | $383.2 | $1,326.6 |
| Study Areas[1] | $66.1 | $1052.2 | NA[7] | $1,118.3 |
| Other[2] | $50.0 | NA | NA | $50.0 |
| Stand-Alone Bicycle[3] | $106.3 | NA | NA | $106.3 |
| Stand-Alone Pedestrian[4] | $70.1 | NA | NA | $ 70.1 |
| Transit[5] | NA | NA | NA | $92.0 |
| Total | $1,141.3 | $1,146.8 | $383.2 | $2,763.3 |
| Maintenance[6] | $595.0 | NA | NA | $595.0 |

Notes:
[1] See Technical Appendix.
[2] Includes TDM, town center improvements, etc. See Technical Appendix.
[3] See Technical Appendix
[4] See Technical Appendix
[5] Excludes transit vehicle costs.
[6] See Technical Appendix.
[7] Data not available.

Altogether, the identified needs are substantial, but as noted in the introduction, not necessarily insurmountable as past local initiatives that have contributed significantly indicate. Described below are three current funding mechanisms that go varying distances toward addressing identified needs.

- With voter support, 64 heavily used transportation system improvement projects costing a total of more than $350 million will have been built by 2006 through the Major Streets Transportation Improvement Program – a property tax-supported program.

- Traffic Impact Fees, another voter-approved program charged against new development to help address growth impacts, have contributed more than $50 million toward 74 road and transit projects, including our Westside Light Rail local match, Forest Grove's Highway 47 Bypass and the Cedar Hills Boulevard Extension.

- ~~The condition of Washington County's urban-area local neighborhood roads have been dramatically improved during the past decade with funding raised through another voter approved initiative – the Urban Road Maintenance District.~~

- ~~Through the development process, improvements have been made to existing streets and new facilities have been constructed in order to address impacts to the transportation system.~~

~~The following discussion of transportation system financing strategies will assist in continuing that record and achieving the transportation system Washington County residents want.~~

~~The transportation financing analysis consists of a section that compares the capital costs shown in Table 8 to projected revenues and a separate section that compares maintenance costs and revenues. Because this is the County transportation plan, and various city and state system plans already deal with their systems, the capital cost/revenue analysis primarily focuses on improvements to County roads. However, due to the lack of adequate state revenue to make needed capital improvements on the state system and the growing recognition that the County may need to help pay for improvements to this system in the future, the cost of capital improvements to the state system in Washington County has also been included in this analysis. Maintenance costs and revenues are only for roads under County jurisdiction. For purposes of comparison all costs and revenues are expressed in constant 2002 dollars.~~

~~Capital Revenues~~
~~To address the $2.9 billion in capital costs for needed motor vehicle, bike and pedestrian projects in Washington County through the year 2020, three illustrative capital revenue scenarios have been developed for financial analysis only and are shown in Table 9 below. These scenarios are illustrative only and intended to demonstrate the feasibility of funding needed improvements. Policy choices and decisions about financial strategies to be pursued would be made by the Board after considering these and possibly other alternatives.~~

~~These scenarios are referred to as the MSTIP Low, Medium and High scenarios. The scenarios differ only in the amount of MSTIP revenues that are assumed to be generated, but projected Traffic Impact Fee (TIF) and regional revenues are the same for all scenarios. The Medium MSTIP Scenario assumes a continuation of MSTIP at the current program levels. The Low MSTIP Scenario assumes a 50 percent reduction in MSTIP revenues from current funding levels, and the High MSTIP Scenario assumes an 50 percent increase in funding over current MSTIP levels through 2019. More generally it is assumed that annexation will reduce County revenues and costs equally and no major changes will occur in the TIF ordinance. More specific assumptions used in the analysis are described in the notes to Table 9.~~

**~~Table 9: Projected Capital Roadway Revenue Scenarios for County Projects (2000-2019)~~**

| ~~Funding Source~~ | ~~Total Revenues 2000-2019 (millions of 2002$)[7]~~ | ~~Average Annual Revenues (millions of 2002$)[7]~~ |
|---|---|---|
| ~~Low MSTIP Scenario[1]~~ | ~~$291.3~~ | ~~$14.6~~ |
| ~~Medium MSTIP Scenario[2]~~ | ~~$445.5~~ | ~~$22.3~~ |
| ~~High MSTIP Scenario[3]~~ | ~~$599.7~~ | ~~$30.0~~ |
| ~~County Roadway TIF[4]~~ | ~~$98.1~~ | ~~$4.9~~ |
| ~~City TIF to County Roadways[5]~~ | ~~$79.4~~ | ~~$4.0~~ |
| ~~Regional Funds[6]~~ | ~~$55.9~~ | ~~$2.8~~ |
| ~~Total (including Low MSTIP Scenario)~~ | ~~$524.6~~ | ~~$26.2~~ |
| ~~Total (including Medium MSTIP Scenario)~~ | ~~$678.8~~ | ~~$33.9~~ |
| ~~Total (including High MSTIP Scenario)~~ | ~~$833.0~~ | ~~$41.7~~ |

~~Notes:~~
~~[1]Reflects 50 percent reduction from current MSTIP funding levels, 6 percent annual increase to account for property value inflation and growth, estimated 85 percent allocated to County facilities through 2006 and assumed 60 percent thereafter.~~
~~[2]Reflects current MSTIP funding levels, 6 percent annual increase to account for property value inflation and growth, estimated 85 percent allocated to County facilities through 2006 and assumed 60 percent thereafter.~~
~~[3]Reflects 50 percent increase over current MSTIP funding levels, the maximum 6 percent annual increase to account for property value inflation and growth permitted by Measure 50, estimated 85 percent allocated to County facilities through 2006 and assumed 60 percent thereafter.~~
~~[4]Based upon average annual 2.35 percent growth in households/employment from Region 2040 forecasts.~~
~~[5]Reflects assumed 25 percent share of City TIF for use on County roads.~~
~~[6]Based upon share of project allocations lead by Washington County in 2000-2003 MTIP.~~
~~[7]All revenues discounted to 2002$ based upon assumed 4 percent annual rate of inflation.~~

## ~~Capital Cost/Revenue Comparison~~

~~Comparing costs of meeting County needs in Table 8 with projected revenues in Table 9 indicates that even under the High MSTIP Scenario generating a projected $833 million, there is a $267 million shortfall in meeting the $1.1 billion in County roadway needs. The High MSTIP Scenario of $833 million almost accommodates the projected $849 million need for Identified Capacity projects only, but this doesn't include Study Area, stand-alone bicycle and pedestrian, or needs on the state system. Maintaining MSTIP at current levels (i.e., the Medium MSTIP Scenario) results in a projected funding shortfall of $462 million. Even if needs are narrowly identified as the $849 million in Identified roadway capacity needs only on County facilities, MSTIP funding close to the High MSTIP Scenario is needed to address these needs.~~

## ~~Maintenance Cost/Revenue Comparison~~

~~Table 10 shows projected maintenance revenues of $353 million, assuming the continuation of existing revenue trends and no new revenue sources. The primary revenue source for maintenance is the State Highway Trust Fund, which is projected to provide $287 million over the 20-year period. Based upon a continuation of existing trends, this figure reflects that the County's share of the Highway Trust Fund will increase 2 percent annually. However, this is expected to result in an annual 2 percent decrease in~~

revenues, given a projected 4 percent annual inflation rate over the 20 year time period. Other current sources of maintenance revenue include the $0.01/gallon County gas tax, the $0.25/$1000 assessed valuation for the Urban Road Maintenance District and the continuation of Timber Revenues at current levels.

**Table 10: Projected Maintenance Revenues for County Facilities (2000-2019)**

| **Funding Source** | Total Revenues 2000-2019 **(millions of 2002$)**[5] | Average Annual Revenues **(millions of 2002$)**[5] |
|---|---|---|
| **State Highway Trust Fund**[1] | $287.8 | $14.4 |
| **County Gas Tax**[2] | $12.3 | $0.6 |
| **Urban Road Maintenance District**[3] | $48.0 | $2.4 |
| **Timber Revenues**[4] | $4.7 | $0.2 |
| **Total** | $ 352.8 | $ 17.6 |

Notes:
[1]Based upon extrapolation of ODOT 2000-2005 projections reflecting an annual growth rate of 2 percent.
[2]Based upon extrapolation of historical receipts rounded from 0.75 percent to 1- percent annual growth.
[3]Reflects annual growth of 3 percent in property values. New growth assumed to be offset by decreasing revenues from annexation.
[4]Projected to remain at current levels.
[5]Assumes 4 percent annual rate of inflation and annexations by cities offsetting increased maintenance costs resulting from construction of new County roads.

Projected maintenance costs for County roads, as shown in Table 8, are approximately $595 million for the 2000-2019 time period. A comparison of costs and revenues shown in Table 10 indicates a projected maintenance shortfall of approximately $242 million. Given this situation, maintenance revenues would need to increase 69 percent to fully address future needs.

Attacking Funding Shortfalls

Given the projected capital and maintenance revenue shortfalls, one possible strategy for dealing with this focuses on the following set of funding principles:

- Use federal and state funds first.
- Where possible and appropriate, try to identify projects that benefit specific users, and charge them directly.
- Choose funding sources with sufficient magnitude, stability, and predictability.
- Choose sources that allow flexibility to meet changing needs.
- Pay for projects out of existing revenue sources rather than developing new sources.
- Consider new funding sources, evaluating all the criteria above.

~~Potential Expanded or New Funding Sources for Capital Needs~~
~~Consistent with these principles, potential expanded or new capital funding sources for consideration should include, but not be limited to the following:~~

- ~~Federal and State Funding – Pursue additional funds through federal, state and regional sources.~~
- ~~MSTIP – Increase MSTIP funding at higher than the current Medium Scenario level shown in Table 9.~~
- ~~TIF – Increase TIF rates and update existing trip generation rates to reflect newer rates and recently available land use categories. A 10 percent increase in TIF would generate approximately $18 million in revenue over the next 20 years.~~
- ~~Congestion Pricing – Work with Metro and local jurisdictions to investigate the potential for a congestion pricing program that properly assigns costs to peak-hour system users, thereby more efficiently rationing facilities that are prone to congestion.~~

~~Potential Expanded or New Funding Sources for Maintenance Needs~~
~~A range of expanded and potential new maintenance revenue sources should be considered to address the maintenance funding shortfall. These are described as follows:~~

- ~~County Gas Tax – Increase the gas tax as a means of equitably assigning costs to users of the system.~~
- ~~Urban Road Maintenance District (URMD) or Rural Road Maintenance District (RRMD) – Increase the current URMD rate. Also, consider expanding the URMD to rural areas because rural roads often provide economic and recreational benefits for all county residents. Or, consider creating a separate RRMD that would tax rural residents at a different rate than urban residents.~~
- ~~Local Vehicle Registration Fee – Institute a local vehicle registration fee.~~
- ~~Street Utility Fee – Charge a fee through the current utility billing system for residential and non-residential uses.~~

~~As shown in Table 11 approximately $157 million in added revenues could be raised using the rates reflected in this table. These additional revenues would result in almost $510 million available for maintenance over the next 20 years. Although these expanded and new revenue sources do not eliminate the projected maintenance shortfall, they represent a potentially feasible set of new or expanded funding sources that would reduce it to a more manageable $97 million over the next 20 years. Increases higher than those shown here or revenues from new special assessments or taxes shown at the bottom of the table would reduce the shortfall even more.~~

**~~Table 11: Potential New and Expanded Maintenance Funding Sources, 2000-2019 (millions of constant, Year 2002 dollars)~~**

| SOURCE | TOTAL | ANNUAL AVG. |
|---|---|---|
| Vehicle Registration Fees ($10) | $[illegible]8 | $3.6 |
| Increase gas tax to 2c | [illegible].3 | $0.6 |
| Street Utility Fee ($2/mo./hh) | $[illegible].2 | $1.3 |
| Street Utility Fee for Non-Resident | [illegible]6.2 | $1.3 |
| URMD 20% inc[illegible] | $9.6 | $0.5 |
| RRMD at 25[illegible]ss se[illegible]al | $10.6 | $0.5 |
| LIDs or othe[illegible]bec[illegible]as[illegible]ments[illegible]her than URMD[illegible]RR[illegible] | varies | varies |
| Other taxes[illegible]cis[illegible]sale[illegible]payroll, construction | not estimated | not estimated |
| Congestion [illegible]cing (tolls) | not estimated | not estimated |
| **Total potential new OMP revenue** | $156.8 | $7.8 |

Delete

~~*Source: ECONorthwest*~~

## ~~18.0 FINANCIAL POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO SEEK FUNDING SUFFICIENT TO IMPLEMENT THIS PLAN.~~

## ~~*Strategies:*~~

~~18.1 Partner with other government agencies, tribal agencies, community residents, businesses, non-profit organizations and interest groups to develop and implement a financial plan that identifies, prioritizes, adequately funds, and equitably allocates the responsibility for funding long-term transportation system improvement, operation and maintenance needs identified in this Plan.~~

~~18.2 As part of the Washington County transportation system financing strategies:~~

~~A. Define and update the role of current public funding programs, including the Traffic Impact Fee program, the Major Streets Transportation Improvement Program, and the Urban Road Maintenance District.~~

~~B. Recognizing that many funding sources have limitations on their uses, by policy or by law, identify new or expanded funding mechanisms as necessary to pay for improvements, operations and maintenance not otherwise addressed.~~

~~C. Encourage public/private partnerships and procure appropriate levels of right of way and system improvements through the land development review process, recognizing these during system monitoring as contributions by the development community to system implementation.~~

~~D. Identify necessary and appropriate funding for capital improvements, including multi-modal projects, single-mode projects directed at auto, transit, bicycle or pedestrian needs, and interim projects.~~

E. Identify necessary and appropriate funding for projects supporting and mitigating the impacts of development of 2040 centers, corridors, and in other transit-oriented districts, such as implementation of special area street designs, traffic-calming strategies; new or reconstructed Local Street and Neighborhood Route connections; construction of special area off-street pathways; and other on- and off-site transportation improvements.

F. Identify appropriate funding for transit related capital improvements within the public right of way.

G. Seek long-term funding for countywide as well as local system maintenance and operations needs. Funding for local system needs shall address roadway maintenance, neighborhood traffic control, support of active rural commercial enterprises consistent with land use designations, and the upgrading of gravel roads to paved roads as appropriate.

H. Identify necessary and appropriate funding for transportation demand management, system management and traffic management programs and strategies designed to reduce demands on the system, improve system operating efficiency and mitigate traffic impacts of growth.

I. Partner with other agencies and organizations to investigate the use of market-based strategies, such as peak period pricing, that both encourage efficient use of resources and offer potential to raise revenues to help fund transportation system improvements.

18.3 Work with the Oregon Congressional Delegation and ODOT to encourage the provision of adequate federal and state transportation funding and to assure that the County competes well for these funds.

18.4 Work with Metro and ODOT in the development of the Metro Transportation Improvement Program (MTIP) and ODOT's Statewide Transportation Improvement Program (STIP) to ensure that Washington County's transportation improvement needs are considered.

18.5 Develop a strategic financing plan that establishes an approach or approaches to funding capital and maintenance needs identified in this Plan.

## *Plan Implementation and Monitoring Element*

### *Introduction*

The Transportation Plan is not a static document. This section describes how Plan provisions are put in place or carried out, how conditions in our communities should be monitored, and when and how changes to the Plan may be made.

The Transportation Plan implementation element consists of a number of interrelated activities and processes that should be carried out on a regular basis. The two primary tools for Plan implementation

~~are the Transportation Capital Improvement Program and the annual Road Maintenance Program. These two programs provide the blueprint for improvements to and maintenance of the transportation system.~~

~~Development of capital improvements and maintenance/reconstruction programs rely heavily on the Transportation Plan monitoring activities. Information provided by regular monitoring is needed in order to make informed decisions regarding selection of construction projects and financial strategies. In turn, coordination with state, regional and local jurisdictions and their planning processes is imperative in order to develop unified requests for funds and to secure optimum benefits for the transportation system in Washington County.~~

~~Ultimately, the value of the Transportation Plan will be determined by the success of its implementation. In order to assure that the transportation system effectively meets the needs of the county residents and businesses it serves, Washington County must make the commitments necessary to aggressively pursue Plan implementation.~~

~~Plan implementation and monitoring policies and strategies are addressed in five sections: Planning Coordination and Public Involvement; Capital Improvement Program and Prioritization; Road Maintenance and Operations; Plan Monitoring; and the Development Review Policy.~~

## ~~*Transportation Planning Coordination and Public Involvement Background*~~

~~Coordination of any plan implementation with affected parties is important. In Washington County, where the State of Oregon, Metro, TriMet, 14 local governments, several special service districts and a number of private enterprises either provide or rely on the transportation system, coordination is essential.~~

~~Local governments in Washington County - the fourteen cities and the County - have been very successful in coordinating and integrating their transportation activities, programs and policies in the past. Regular discussion at monthly meetings of local government leaders has strengthened consensus on issues and how to address them. The unity accompanying this stronger local consensus has translated to greater influence in regional, state and federal discussions, to the benefit of all county residents.~~

~~A coordinated approach to improving the transportation system resulted in the Major Streets Transportation Improvement Program (MSTIP). Three times since 1986, leaders of the fifteen local governments in the County have been able to assemble a package of projects that they all - and ultimately the voters - supported.~~

~~Likewise, public involvement in plan development and in defining how the Plan should be implemented is critical to ensuring needs are appropriately defined and met. Ensuring the use of mechanisms for involving interested groups and members of the public in transportation planning, programming and project development activities ensures that system implementation is reasonably and fairly carried out.~~

## ~~19.0 TRANSPORTATION PLANNING COORDINATION AND PUBLIC INVOLVEMENT POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO COORDINATE ITS TRANSPORTATION PLANNING WITH LOCAL, REGIONAL, STATE AND FEDERAL AGENCIES AND TO PROVIDE OPPORTUNITIES FOR CITIZENS TO PARTICIPATE IN PLANNING PROCESSES.~~

## ~~*Strategies:*~~

~~19.1 Participate in the regional and state technical and policy decision-making processes.~~

~~19.2 Work with the Washington County Coordinating Committee (WCCC) and the WCCC Transportation Advisory Committee (WCCC TAC) as the primary advisory bodies for countywide transportation coordination with cities in Washington County.~~

~~19.3 Involve the public in updating and implementing the Plan by keeping business groups, area employers, citizen participation organizations, neighborhood associations and citizens at large informed, and by providing opportunities for citizens to participate in Plan review and implementation processes.~~

~~19.4 Make specific efforts to involve populations that are traditionally underserved by the existing transportation system or underrepresented in transportation planning and plan implementation processes.~~

~~19.5 Work to integrate the findings and recommendations of this Plan with the Regional Transportation Plan where feasible. In locations with persistent problems, work with regional and state agencies and local jurisdictions to develop effective means of alleviating these problems.~~

~~19.6 Coordinate with other agencies and organizations to establish adequate, uniform and equitable methods for funding local transportation system needs.~~

~~19.7 Coordinate with other jurisdictions in Washington County to achieve consistency of roadway design standards.~~

~~19.8 Bring those deficiencies that have an adverse impact on Washington County facilities to the attention of other jurisdictions.~~

~~19.9 Review and consider the transportation system impacts of planning work and, on a case by case basis, land development actions taken by other local jurisdictions and transportation agencies after the Transportation Plan is adopted.~~

~~19.10 Periodically review the Transportation Plan to consider incorporating the work of local jurisdictions and transportation agencies.~~

~~19.11 Integrate the applicable provisions of the Oregon Transportation Planning Rule, Metro's Regional Transportation Plan and 2040 Growth Concept and the applicable provisions of Metro's Urban Growth Management Functional Plan into the Transportation Plan, Community Plans and Community Development Code.~~

~~19.12 Work with other jurisdictions to define a decision-making process through which transportation project development issues associated with conflicting, competing or confusing interjurisdictional interests and responsibilities can be identified and addressed.~~

~~19.13 Review all plan amendment requests for consistency with the applicable provisions of the Transportation Planning Rule as set forth in OAR 660-12-060.~~

## ~~*Capital Improvement Program and Prioritization Background*~~

~~The Transportation Capital Improvement Program (CIP) is a document that identifies and prioritizes projects to be undertaken in the next five to ten year timeframe, the estimated costs and funding sources for those projects, and if funding has been committed to a project, a schedule for the funded work, which may be design, right of way acquisition, construction or all three.~~

~~A primary purpose of capital improvement programming is to efficiently allocate funds to address near-term transportation needs. A secondary objective is to provide a forum for public input and to create a greater public awareness of the priority and timing of specific improvements.~~

~~Capital improvement projects are funded from a variety of federal, state, and local public funding sources, as well as private sector funding sources. Some funding is discretionary (may be spent for any project), while other funding is non-discretionary (limited to a specific type of program or project). Funding sources are unpredictable from year to year.~~

~~Programming involves identifying potential transportation projects, prioritizing projects, and authorizing funded projects to proceed. Projects are identified and prioritized based upon criteria set forth in the Transportation Plan and the County Transportation Capital Improvement Program (CIP).~~

~~The CIP process provides the opportunity to identify and prioritize transportation projects in a systematic manner, and set forth a specific schedule of projects that have been funded and authorized. Some projects are funded and authorized on an individual basis due to the unpredictability of funding, funding source constraints, variations in project readiness to proceed, and other variables in the transportation environment. The Board of County Commissioners makes the final decision to proceed with a project, either through adoption of the CIP or other programming action (e.g., approval of MSTIP), or on an individual basis.~~

~~Review and revision of the Transportation Capital Improvement Program on a periodic basis is intended to enable County officials, their service provider partners, county residents, businesses and other transportation system users to discuss and evaluate the status of transportation system implementation and to revisit plan priorities for capital improvements.~~

~~Specific project priorities are established through the CIP development process, but the general structure and criteria that will frame and guide those decisions are delineated in the Plan. Beyond general criteria of timing and functional classification, the Plan calls for further categorizing projects according to characteristics such as whether they benefit multiple or a single mode of travel and the nature of project benefits (e.g., safety, congestion, land use support or system connectivity, etc.) Within these categories, projects are ranked based upon how well they achieve objectives identified in the Plan.~~

~~It is important to understand that the ranking of projects in the CIP often does not reflect the order in which they will be built. Choices regarding which projects to fund are often influenced by the nature of available funding and other priorities that are not necessarily reflected in the CIP. Some funding can only be used on certain types of roads or road improvements, for instance. If local jurisdictions want to propose a package of projects that geographically balances benefits across the County, it is unlikely that this set of projects will also be the highest priority projects in the CIP, which are based upon CIP criteria. The project categories and rankings that emerge from the CIP process provide a broadly considered and endorsed hierarchy of potential investments in system improvements.~~

## ~~20.0 CAPITAL IMPROVEMENT PROGRAM AND PRIORITIZATION POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO PERIODICALLY PREPARE AND ADOPT A TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM THAT ESTABLISHES PRIORITIES FOR TRANSPORTATION CAPITAL IMPROVEMENTS FINANCED WITH PUBLIC FUNDS.~~

## ~~*Strategies:*~~

~~20.1 Establish a transportation capital improvement program with the following elements:~~

~~A. Administrative procedures and public review for the periodic update and adoption of the Transportation Capital Improvement Program by resolution and order;~~

~~B. A process for monitoring the performance and technical aspects of the transportation system;~~

~~C. A process for monitoring the availability of financial resources; and~~

~~D. A process for identifying and prioritizing capital improvements.~~

~~E. A process for involving citizens in the development of the CIP.~~

~~20.2 Utilize the following guidelines for establishing capital improvement priorities within the Transportation Capital Improvement Program:~~

~~A. General roadway system improvement priorities shall be based upon 1) functional classification, with Arterials being highest priority and Local roads the lowest priority, and 2) timing of need.~~

~~B. Multi-modal projects shall be categorized together and prioritized based upon the following criteria:~~

~~1. Correct safety and capacity deficiencies;~~

~~2. Correct only safety problems;~~

~~3. Correct only capacity deficiencies; and~~

~~4. Correct system connectivity shortcomings.~~

~~Projects may address these objectives indirectly, as in the case when a new system connection reduces traffic on other facilities, thereby eliminating or reducing a safety or capacity problem.~~

~~C. Single-mode or multi-modal non-auto projects shall be categorized for ranking by mode type and prioritized based upon the following criteria:~~

~~1. Improvements that address safety problems;~~

~~2. Improvements that address congestion problems;~~

~~3. Improvements that improve system connectivity by filling gaps in the system;~~

~~4. Improvements that enhance neighborhood access to community activity centers or transit;~~

~~5. Improvements that enhance the non-auto travel environment in 2040 centers and corridors and other transit oriented development areas, including providing support for meeting adopted mode share targets; and~~

~~6. Improvements required to maintain a rural land base and economy consistent with rural land use designations.~~

~~D. The following criteria shall also be considered in prioritizing projects:~~

~~1. Maintain acceptable performance levels on the Regional Street System, other Arterials and Collectors, and at critically deficient intersections.~~

~~2. Provide transportation system improvements that support existing and planned land uses, particularly in designated Regional Centers, Town Centers, Main Streets, Light Rail Station Areas and Corridors, including facilitating progress toward meeting adopted mode share targets in these areas.~~

~~3. Maximize the use of federal, state and other non-county funds that are available for transportation improvements, including bridge replacements.~~

~~4. Preserve the County's economic vitality by maintaining the access and mobility characteristics necessary to support commercial activities and the safe and cost-effective movement of freight, including provisions for the safe shipment of hazardous materials.~~

~~5. Maximize the cost efficiency of improvements by exploring potential low-cost and low-impact alternatives and coordinating with other local service providers before undertaking major capital improvement projects.~~

~~6. Ensure improvement projects are built to full design standards wherever feasible in order to reduce future engineering, project management and construction costs.~~

~~7. Provide interim improvements that do not exceed the maximum paved width specified on the functional classification maps, and do not impede planned future improvements.~~

~~8. Maximize public/private partnerships, and provide improvements that complement portions of the transportation network built or anticipated to be built by the private sector.~~

~~9. Pursue projects that provide relatively good returns, based upon consideration of the costs and benefits.~~

~~10. Provide projects that maintain or improve neighborhood livability.~~

## ~~*Road Maintenance/Reconstruction Prioritization Background*~~

~~The policy and strategies in this portion of the Plan call for maintaining roadway pavement condition at certain base-level standards, and establishing priorities for determining how available resources should be allocated to first achieve, then maintain these condition levels. Adequate roadway maintenance is critical: it is much less expensive in the long run to maintain the surface and integrity of a roadway than to let it go and have to completely replace it prematurely.~~

~~Maintaining the roadway system, including bike and pedestrian facilities, as well as unimproved portions of the right of way, includes a wide range of activities, from relatively minor activities, such as replacing signs to major and more costly activities, such as replacing a deteriorating roadway surface. Maintenance activities are defined below and prioritized in Table 12:~~

- ~~"Mandated Services" are activities that are required by Federal, State or local laws. Specific authorization varies for each type of activity. Examples of such activities include but are not limited to installation and maintenance of traffic control devices, signs, road striping and stenciling, and traffic analysis related specifically to road safety problems.~~

- ~~"Emergencies" are occurrences that cause a road to become impassable, or which require prompt action in order to protect human life. Examples of activities that may be required in response to emergency situations include but are not limited to sanding, snow removal, flooding, slides and washouts.~~

- ~~"Hazards" are defined as existing or pending conditions which may cause the operator of a vehicle to lose control, enter another travel lane, or which otherwise could lead to an emergency situation in which a person or property is at risk of injury or damage. Examples of maintenance to eliminate hazards include but are not limited to pot-hole patching on high speed roads, gravel road reshaping, eliminating sight obstructions, cleaning up chemical spills, and replacing damaged or missing safety equipment, such as guardrails.~~

- ~~"General Maintenance" includes preventative activities required to keep a road in good condition. Typical maintenance activities include pothole patching, grading graveled roads, cleaning drainage facilities (pipes and ditches), street cleaning and flushing, mowing roadside grass and clearing brush, maintaining traffic signals and replacing damaged signs. Examples of more intensive forms include heavy patching and sealing, asphalt overlays, and repair of damage caused by ice, snow, flooding and landslides.~~

- ~~"Minor Improvements" include what might be considered limited and relatively low-cost projects that go beyond general maintenance, but which are often done in conjunction with general maintenance, to address a specific problem that would not be addressed by general maintenance activities.~~

- ~~"Reconstruction" projects rebuild substandard or deteriorated roads to County design standards. These projects are sometimes considered a comprehensive form of maintenance. Their essential purpose is to improve the roadway base rather than to address a safety or capacity problem, though building to County design standards generally has beneficial effects on safety and capacity.~~

~~Historically, funding for maintenance of the system has fallen short of the need, although the 1988 Plan's policy to focus non-local maintenance funds on the major roadway system has kept the Arterial and~~

~~Collector roadways in good condition. The lack of funding for local rural roadway maintenance has caused some problems in that regard, however.~~

~~The majority of funding for maintenance of County roads comes from the county's share of state motor vehicle funds - a combination of fuel taxes and registration fees; these funds are supplemented by a one-cent per gallon County fuel tax. Revenues from these sources have been directed toward maintaining the major roadway system. An urban road maintenance district was established and funded by voters in 1994 to pay for maintenance of urban local roads - typically the roads that take you from the major system to your house.~~

~~The Plan calls for continuing the practice of developing an annual Road Maintenance Program that specifically identifies maintenance projects and activities for the year and how anticipated resources will be allocated.~~

## ~~21.0 ROAD MAINTENANCE/RECONSTRUCTION PRIORITIZATION POLICY~~

~~IT IS THE POLICY OF WASHINGTON COUNTY TO ESTABLISH ANNUAL ROAD MAINTENANCE AND RECONSTRUCTION PROGRAMS THAT PROTECT PUBLIC SAFETY AND PROPERTY, MAKE EFFECTIVE USE OF AVAILABLE FUNDS AND PRESERVE THE COUNTY'S INVESTMENT IN ITS TRANSPORTATION SYSTEM.~~

## ~~*Strategies:*~~

~~21.1 Confine countywide road maintenance and reconstruction program activities to roads that have been formally accepted as "County Roads". Roads not under County jurisdiction, including local access or "Public Roads," will only be eligible for expenditure of county funds as prescribed and limited by the Oregon Revised Statutes and policies of the Board of County Commissioners. County funds will not be expended for the maintenance or improvement of private roads. Emphasis will be placed upon maintaining those County roads that were constructed to County structural standards.~~

~~21.2 Prioritize road maintenance and reconstruction expenditures annually in a resolution and order adopted by the Board of County Commissioners, using Table 12 as a guide:~~

**~~Table 12: Road Maintenance Priority Matrix~~**

~~Road Classification/Priority*~~

| ~~Activity~~ | ~~Arterial~~ | ~~Collector~~ | ~~Rural Resource Route**~~ | ~~Neighborhood Route~~ | ~~Local Road~~ |
|---|---|---|---|---|---|
| ~~Mandated~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ |
| ~~Emergencies~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ |
| ~~Hazards~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ | ~~1~~ |
| ~~General Maintenance ***~~ | ~~2~~ | ~~3~~ | ~~4~~ | ~~5~~ | ~~8~~ |
| ~~Minor Improvements~~ | ~~6~~ | ~~7~~ | ~~11~~ | ~~13~~ | ~~14~~ |
| ~~Reconstruction~~ | ~~9~~ | ~~10~~ | ~~12~~ | ~~15~~ | ~~16~~ |

~~* *"1" is the highest priority; "16" is the lowest.*~~

~~** Resource Routes are an identified network of rural local roads important to the County's economy and connectivity. Their designation will be adjusted periodically as needed as part of the Board-adopted annual maintenance program.~~
~~*** Surface maintenance of paved roads shall be in conformance with the Base Condition concept described in Strategy 21.4.~~

~~21.3 Review procedures and response times for dealing with emergency and non-emergency requests for road maintenance service periodically by the Board of County Commissioners and revise as needed to ensure most effective use of available maintenance funds.~~

~~21.4 Implement a "Base Condition" concept for the maintenance of paved roads under which the average Pavement Condition Index (PCI) of all paved roads within a functional class are at or above the levels shown below:~~

| ~~Functional Class~~ | ~~Average Pavement Condition Index~~ |
|---|---|
| ~~Local Roads~~ | ~~65 (with 90% of road miles greater than or equal to 50)~~ |
| ~~Neighborhood Routes~~ | ~~70 (with 90% of road miles greater than or equal to 55)~~ |
| ~~Collectors~~ | ~~75 (with 90% of road miles greater than or equal to 65)~~ |
| ~~Arterials~~ | ~~80 (with 90% of road miles greater than or equal to 70)~~ |

~~21.5 Develop a "Base Condition" concept for gravel roads that would provide a systematic measurement and reporting of their condition.~~

~~21.6 Annually adopt by resolution and order a Rural Resource Route work program supporting Local roads that serve active commercial resource activity.~~

~~21.7 Limit expenditures for major reconstruction projects to those County roads that are not identified as needing capacity improvements prior to 2010, identifying and prioritizing these projects in the Transportation Capital Improvement Program.~~

~~21.8 Except as noted in 21.4, finance reconstruction and minor improvement activities for Neighborhood Routes and Local Streets through localized funding mechanisms, such as the creation of service districts or Local Improvement Districts (LIDs) established exclusively for maintenance of these roads. For Neighborhood Routes and Local roads within the urban areas, encourage annexation to a city.~~

~~21.9 Maintain bikeways in good condition and coordinate with the responsible agencies for the periodic cleaning of bikeways. Establish a bicycle lane inspection and maintenance program for facilities not adequately maintained through the general road maintenance program.~~

~~21.10 Integrate and fund, as appropriate, pedestrian and bicycle improvements with road maintenance projects, such as resurfacing or shoulder widening, to take advantage of cost- sharing opportunities.~~

~~21.11 Establish and fund a maintenance program to keep pedestrian facilities along County streets in good condition. Asphalt pathways shall be maintained by the County and sidewalks shall be maintained by adjacent property owners.~~

~~21.12 Prioritize and fund appropriate bicycle and pedestrian expenditures, particularly those reducing barriers or hazards to children walking and bicycling to and from school, in the annual Washington County Operations and Maintenance Work Program.~~

21.13 Establish and fund a program to maintain landscaping and pedestrian amenities within the road right-of-way by the County or adjacent property owners, or a combination of both.

## *Plan Monitoring Background*

Transportation system operating characteristics are influenced by a number of different factors, which should be reviewed regularly to determine whether changes in project lists, prioritization or general plan policies are warranted. Characteristics that warrant monitoring include population and employment growth, development activity, traffic volumes and accident analysis, transportation facility construction and condition, and plan amendments that occur over time.

Implementation of the Transportation Plan is almost entirely dependent upon the availability of funds. A periodic review of funding should include items such as an inventory of capital and maintenance expenditures, updates of planning-level project costs; estimates of anticipated revenues and an update of the long-term revenue forecast.

## 22.0 PLAN MONITORING POLICY

IT IS THE POLICY OF WASHINGTON COUNTY TO PERIODICALLY REVIEW THE TRANSPORTATION PLAN TO ENSURE THAT, CONSIDERING AVAILABLE RESOURCES, IMPLEMENTATION ACTIONS ARE CONSISTENT WITH AND ADVANCING PLAN POLICIES, ACHIEVING SATISFACTORY TRANSPORTATION AND LAND USE BENEFITS, AND ARE RESULTING IN ADEQUATE PROGRESS TOWARD ACHIEVING MODE SHARE TARGETS.

## *Strategies:*

22.1 Periodically develop a "Status of the Plan" report that describes progress toward implementation of the Plan.

22.2 Establish a team to refine and coordinate the technical and financial monitoring process and to address outstanding issues, including addressing the need to close the gap between available funding and system needs, after the Plan is adopted.

22.3 Provide for amendments and administrative adjustments to the Transportation Plan that include the following:

A. Legislative Amendments

Those changes which involve the creation, broad scale implementation or revision of public policy, including large scale map changes where a significant number of property owners are directly affected, may be processed as legislative plan amendments, including public hearings, as provided for in the Community Development Code. These include but are not limited to the Functional Classification Map and descriptions, Bicycle System Map (excluding alignment modifications to off-street pathways), plan policies, modifications to the general location of facilities identified in the plan, selection of the general location of a facility in a Corridor Study Area and deletion of proposed facilities identified in the plan.

~~B. Quasi-Judicial Amendments:~~

~~When property is proposed for development and is affected by (i.e., contiguous to or traversed by) a proposed road alignment as shown on the functional classification map, a modification to the proposed road alignment may be processed as a quasi-judicial plan amendment as provided for in the Community Development Code, including a public hearing, when the road alignment affects only the subject property or other properties in the immediate vicinity. Applications for quasi-judicial plan amendments may be initiated by the Board of County Commissioners, the Director or the owners of all property affected by the proposed alignment. A quasi-judicial plan amendment may be approved only if all the following criteria are satisfied:~~

~~1. The new alignment maintains the intent and purpose of the proposed alignment as originally shown on the Plan maps;~~

~~2. The new alignment will not adversely affect the carrying capacity, safety, or integrity of the transportation system;~~

~~3. The new alignment is necessary to preserve a significant natural feature, minimize engineering or construction constraints or would result in a significant enhancement of the development potential of the affected properties;~~

~~4. The new alignment will not significantly increase the cost or complexity of any off-site improvements; and~~

~~5. The new alignment does not have significant adverse affects on nearby property.~~

~~C. Minor Adjustments include:~~

~~1. Adjustments to reflect minor modifications of existing roads outside an Urban Growth Boundary that are determined to comply with the provisions of OAR 660-12-065.~~

~~2. Adjustments to reflect minor modification of a proposed road alignment that is part of a proposed development action within the Urban Growth Boundary when the proposed change is contained within the subject site and does not adversely affect an adjacent property.~~

~~When these criteria are met, the change in alignment may be processed as part of a development application without separate notice or hearing. The Minor Adjustment criteria does not apply to adjustments of Special Area Streets.~~

~~D. For Special Area Streets, adopt road alignment corridors maps in Community Plans which allow limited movement of road centerlines through a Type II process. Modifications to streets to a greater extent than is allowed through a Type II process may be allowed through a Type III process subject to the criteria in the Community Development Code. Modifications that do not meet the Type III criteria shall be subject to a quasi-judicial or legislative plan amendment process.~~

~~E. The Director shall determine if a proposed road alignment modification is legislative, quasi-judicial or a minor adjustment.~~

22.4 Provide for changes to the Transit System Map by coordinating any proposed modifications with TriMet and Metro.

## *Development Review Background*

In 1992, Washington County adopted by resolution and order a citizen involvement program to be used during the transportation project development process for County projects. The adopted resolution and order described how the public would be involved in the development of the design of various types of transportation improvements. Requirements for appropriate notice to the public and service providers to be used during project development were included in the resolution and order.

Recognizing that many types of transportation improvements are defined by law as land use decisions or limited land use decisions, the County also adopted in 1992 a specific development review process and standards for the land use review of appropriate transportation facility improvements in unincorporated Washington County. The review procedures and standards are included in the Community Development Code. Transportation development application notice requirements to the public and service providers are listed in the Community Development Code.

# 23.0 DEVELOPMENT REVIEW PROCESS

IT IS THE POLICY OF WASHINGTON COUNTY TO PROVIDE A DEVELOPMENT REVIEW PROCESS THAT IDENTIFIES, ADDRESSES AND COORDINATES REVIEW OF ROADWAY, TRANSIT, BICYCLE AND PEDESTRIAN FACILITY IMPROVEMENTS THAT MAY HAVE A SIGNIFICANT IMPACT ON THE TRANSPORTATION SYSTEM OR THE COMMUNITY.

## *Strategies:*

23.1 Utilize the development review process and standards contained in the Community Development Code (CDC) to review transportation development applications. Identify as subject to development review those types of roadway, transit, bicycle and pedestrian facility improvements most likely to have significant transportation system or community impacts. Exempt from review those types of improvements which generally do not have significant impacts or which involve final engineering, design, construction, operation, maintenance, repair or preservation decisions.

23.2 Recognize that proposed and existing alignments shown on the Functional Classification System Map and Community Plans are generalized. The Community Development Code shall provide a process and standards for reviewing the significant impacts of alignment and right-of-way modification decisions. All alignments must be consistent with the Functional Classification System Map.

23.3 Review the design of improvements subject to development review to consider ways to mitigate significant impacts on the community or neighborhoods.

23.4 Utilize Washington County's Citizen Involvement Program during the project development process for County transportation projects.

23.5 Provide for appropriate public notice and review, including notice to affected transportation service and facilities providers, during the development review process.

## ~~*Glossary*~~

~~**2040 Growth Concept** - A concept for the long-term growth management of our region, stating the preferred form of the regional growth and development, including if, where, and how much the urban growth boundary should be expanded, what densities should characterize different areas, and which areas should be protected as open space.~~

~~**Access** - The ability to gain direct ingress or egress to or from a specific location along a roadway. Local roads providing direct access to individual properties generally have better access than Arterial roads or freeways, whose primary purpose is to serve through travel.~~

~~**Accessibility** - The relative ease with which a given destination or type of land use can be reached by one or more modes of travel. Locations that can be accessed by many people using a variety of modes of transportation generally have high accessibility.~~

~~**Access Management** - Measures regulating access to streets, roads and highways from public roads and private driveways. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and use of physical controls, such as signals and channelization including raised medians, to reduce impacts of approach road traffic on the main facility.~~

~~**Accessway** - A paved transportation facility that is not part of a roadway and is built to provide a direct access for pedestrians and bicyclists when a direct street connection is not practicable.~~

~~**Advanced Traffic Management System (ATMS)** - This term refers to traffic management techniques that use computer processing and communications technologies to optimize performance of motor vehicle, freight and public transportation systems. ATMS is a subset of intelligent transportation system (ITS) technologies and must be addressed as one of the 16 ISTEA planning factors.~~

~~**Americans With Disabilities Act (ADA) of 1990** - Civil rights legislation enacted by Congress that mandates the development of a plan to address discrimination and equal opportunity for disabled persons in employment, transportation, public accommodation, public services and telecommunications. TriMet's ADA transportation plan outlined the requirements of the ADA as applied to TriMet services, the deficiencies of the existing services when compared to the requirements of the new act and the remedial measures necessary to bring TriMet and the region into compliance with the act. Metro, as the region's metropolitan planning organization (MPO) is required to review TriMet's ADA Paratransit Plan annually and certify that the plan conforms to the Regional Transportation Plan. Without this certification, TriMet cannot be found to be in compliance with the ADA. ADA also affects the design of pedestrian facilities being constructed by local governments.~~

~~**Arterial** - Arterial streets interconnect and support the Principal Arterial highway system. Arterials intended to provide general mobility for travel within the region. Correctly sized Arterials at appropriate intervals allow through trips to remain on the Arterial system thereby discouraging use of Local streets for cut-through traffic. Arterial streets link major commercial, residential, industrial and institutional areas.~~

~~**Bicycle** - A vehicle having two tandem wheels, a minimum of 14 inches in diameter, propelled solely by human power, upon which a person or persons may ride. A three-wheeled adult tricycle is considered a bicycle. In Oregon, a bicycle is legally defined as a vehicle. Bicyclists have the same right to the roadways and must obey the same traffic laws as the operators of other vehicles.~~

~~**Bicycle facilities** - A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking facilities, all bikeways and shared roadways not specifically designated for bicycle use.~~

~~**Bike lane** - A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.~~

~~**Bikeway** - A bikeway is created when a road has the appropriate design treatment for bicyclists, based on motor vehicle traffic volumes and speeds. Bikeways include striped and stenciled bike lanes of 5 to 6 feet in width, paved shoulders of at least 4 feet in width and off-street, paved, multi-use paths at least 10 feet in width. In areas where constraints limit roadway width, 14 foot wide outside travel lanes that transition to either paved shoulders or bike lanes when the constraint ends are also considered bikeways.~~

~~**Boulevard** - A "Boulevard" is a design overlay intended to improve the pedestrian environment in specified locations throughout the metropolitan area. Boulevard locations within Washington County are specifically identified in the Regional Street Design Overlay Map (Figure 3) in the Plan. A "Boulevard Study Area" is an area where a Boulevard is planned but its location has not yet been determined. Boulevard design features will be considered for facilities identified for "Boulevard Design Consideration" on the map, and may be incorporated into these projects. A Boulevard may have three or more lanes and may include landscaped medians, on-street parking, landscape buffered sidewalks and enhanced pedestrian crossings. These roadways also include bicycle lanes and wide sidewalks that can accommodate transit enhancements such as benches or bus shelters.~~

~~**Boulevard intersections** - Boulevard design classifications are usually focused on centers and some main streets where a pedestrian and transit-oriented street design can best complement dense development patterns. However, there are many locations where corridors and some main streets intersect along major streets. At these intersections, the confluence of motor vehicle traffic must be managed to limit negative impacts on multi-modal travel and the development of planned land uses. While boulevard intersections accommodate a significant amount of motor vehicle travel, they are designed with special amenities that promote pedestrian, bicycle and public transportation travel. Pedestrian improvements are substantial, including wide sidewalks, special lighting, crossings on all streets and special crossing features where unusually heavy motor vehicle traffic is present.~~

~~**Capacity** - The maximum number of vehicles (vehicle capacity) or passengers (person capacity) that can pass over a given section of roadway or transit line in one or both directions during a given period of time under prevailing roadway and traffic conditions.~~

~~**Capital Improvements Program (CIP)** - a document that lists projects to be undertaken in the next five-to-ten-year timeframe, the estimated costs and funding sources for those projects, and if funding has been committed to a project, a schedule for the funded work, which may be design, right of way acquisition, construction or all three.~~

~~**Citizen Advisory Committee (CAC)** - Selected for a specific issue, project or process, a group of citizens volunteer and are appointed by the Washington County Board of Commissioners to represent citizen interests.~~

~~**Collector** - Collector streets provide both access and circulation between residential, commercial, industrial and agricultural community areas and the Arterial system. As such, Collectors tend to carry~~

~~fewer motor vehicles than Arterials, with reduced travel speeds. Collectors may serve as freight access routes, providing local connections to the Arterial network.~~

~~**Corridor study** – A study that is directed toward specifically defining projects and strategies for meeting an identified need in a transportation corridor.~~

~~**Deficiency area** – Deficiency areas result from an evaluation of 2020 conditions based upon the projects identified in this Plan being in place. Even with the planned projects certain facilities, system elements and sub-areas are expected to exceed the acceptable performance measures defined and no appropriate feasible solution has been identified. Additional strategies to raise the motor vehicle performance in these areas, if any, will be approached on a case by case basis.~~

~~**Development review** – The process of reviewing a proposed development action for conformance with the County's Community Development Code ("Code") and the applicable standards and requirements of the Comprehensive Plan as specified by the Code.~~

~~**Director** – The Director of Washington County's Department of Land Use and Transportation.~~

~~**Functional classification** – A mechanism for classifying roadways according to the function they perform in the transportation system. Classifications typically range from Arterials, which are intended to facilitate relatively high speed traffic over long distances, to Local Roads, which facilitate access to properties. When properly combined, roadways with different functional classifications provide a system that meets both the access and mobility needs of the communities it serves.~~

~~**High-occupancy vehicle (HOV)** – This term refers to vehicles that are carrying two or more persons, including the driver. An HOV could be a transit bus, vanpool, carpool or any other vehicle that meets the minimum occupancy requirements of the specific facility. In practice, only vehicles with two or three or more persons would be able to use a designated "HOV" travel lane.~~

~~**Intermodal facility** – A transportation element that accommodates and interconnects different modes of transportation and serves the statewide, interstate and international movement of people and goods. For example, an intermodal yard is a railyard that facilitates the transfer of containers or trailers. See also passenger intermodal facility and freight intermodal facility definitions.~~

~~**Local Street** – Local Streets primarily provide direct access to adjacent land. While Local streets are not intended to serve through traffic, the aggregate effect of local street design impacts the effectiveness of the Arterial and Collector system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the Arterial street network. In the urban area, local roadway system designs often discourage "through traffic movement", however, in the rural area local roads are sometimes the only facilities available for access to dispersed rural land uses.~~

~~**Major transit stop** – Major bus stops, transit centers and light-rail stations on the regional transit network.~~

~~**Metro** – The regional government and designated metropolitan planning organization (MPO – see below) of the Portland metropolitan area. It is governed by a 7-member Metro Council elected by and representing districts within Metro's jurisdictional boundaries: Multnomah County and generally the urban portions of Clackamas and Washington counties. Metro is responsible for the Oregon Zoo, solid waste landfills, the Oregon Convention Center, the Portland Center for the Performing Arts, establishing~~

and maintaining the urban growth boundary, and for regional transportation planning activities such as the preparation of the RTP, and the planning of regional transportation projects including light rail.

**Minor modification** - Minor modification to a roadway including channelization or realignment that does not have significant land use or traffic impacts beyond the immediate neighborhood.

**Mobility** - The ability of people and goods to move quickly, easily and cheaply to where they are destined at a speed that represents free flow or comparably high-quality conditions.

**Motor vehicle** - This includes automobiles, motorcycles, recreational vehicles and all types of trucks, including those used for freight. It does not include buses as those are considered an element of another mode (transit).

**Motor Vehicle Level of Service** - A qualitative measure 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, freedom to maneuver, traffic interruptions, comfort, convenience and safety. A LOS rating of "A" through "F" describes the traffic flow on streets and highways and at intersections. The following information describes general traffic flow characteristics for each level of service on a street or highway.

A. Virtually free flow; completely unimpeded
B. Stable flow with slight delays; reasonably unimpeded
C. Stable flow with delays; less freedom to maneuver
D. High Density but stable flow
E. Operating conditions at or near capacity; unstable flow
F. Forced flow, breakdown conditions

**Neighborhood Route** - Neighborhood Routes (generally former Minor Collectors) are in residential neighborhoods and provide connectivity to the Collector and Arterial system. They do not serve citywide or community circulation. Because traffic needs are greater than a Local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are allowed (including devices such as speed humps, traffic circles and other devices). New neighborhood routes may be established via the land development process.

**Off-Street Trails** - A transportation facility that is physically separated from motor vehicle traffic by an open space or barrier for use by bicyclists; pedestrians, including persons using a wheelchair; skaters; and other non-motorized travel. Off-street trails may be located in a road right-of-way or within an independent right-of-way.

**Peak two-hour period** - The highest hour of motor vehicle demand on a given facility or segment and the hour immediately following the highest hour of demand.

**Pedestrian** - A person on foot, in a wheelchair or walking a bicycle.

**Pedestrian facility** - An improvement provided for the benefit of pedestrian travel, including sidewalks, crosswalks, illumination, signals and benches.

**Planning period** - The twenty-year period to which the Plan applies.

~~**Placeholder projects** – A "placeholder" project is used as a surrogate for a project that has not yet been defined. Placeholder projects are generally used in study areas, and serve primarily as mechanisms for estimating the impacts on the rest of the transportation system of a project that will be identified later as part of study area analysis.~~

~~**Principal Arterial** - Principal Arterials (Freeways and Highways) form the backbone of the motor vehicle network. These routes connect over the longest distance (sometimes miles long) and are spaced less frequently than other Arterials or Collectors. These highways generally span several jurisdictions and often have statewide importance. At a minimum, highways that are classified by ODOT as Interstate or Statewide Highways are considered Principal Arterials.~~

~~**Regional Transportation Plan (RTP)** - The official intermodal transportation plan that is developed through a regional transportation planning process and adopted by Metro.~~

~~**Right-of-way (ROW)** - This term refers to publicly-owned land, property or interest therein, usually in a strip, within which the entire road facility (including travel lanes, medians, sidewalks, shoulders, planting areas, bikeways and utility easements) must reside. The right-of-way is usually defined in feet and is acquired for or devoted to multi-modal transportation purposes including bicycle, pedestrian, public transportation and vehicular travel.~~

~~**Roadway segment** - A portion of a street right-of-way developed for vehicular traffic.~~

~~**Sidewalk** - A concrete walkway that is separated from the roadway by a curb, planter area or roadside ditch that is built to adopted standards.~~

~~**Single-occupancy vehicle** - This term refers to vehicles that are carrying one person.~~

~~**Study area** – In general, study areas relate to facilities or areas for which further study is required to determine specifically how an identified need should be met. In these cases the function, proposed alignment, or other specific solution has yet to be identified. Additional analysis will need to occur before solutions to the identified traffic problems can be addressed. The purpose of each study area is defined in the study area descriptions in Plan strategy 10.10.~~

~~**Telecommute** - This term refers to a transportation demand management strategy whereby an individual substitutes working at home for commuting to a work site on either a part-time or full-time basis.~~

~~**Traffic calming** – A transportation system management technique that aims to prevent inappropriate through-traffic and/or reduce motor vehicle speeds on a particular roadway. Traditionally, this technique may include speed humps/tables, curb extensions, planted median strips or rounds and narrowed travel lanes.~~

~~**Transit** - This term refers to publicly funded and managed transportation services and programs within the urban area, including light rail, regional rapid bus, frequent bus, primary bus, secondary bus, minibus, paratransit and park-and-ride.~~

~~**Transportation Demand Management (TDM)** – Actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.~~

~~**Transportation disadvantaged** - Individuals who have difficulty in obtaining transportation because of their age, income, physical or mental disability.~~

~~**Transportation Management Association (TMA)** - This term refers to non-profit coalitions of local businesses and/or public agencies dedicated to reducing traffic congestion and pollution and improving commuting options for employees.~~

~~**Transportation Plan ("the Plan")** - The Washington County 2020 Transportation Plan.~~

~~**Transportation Planning Rule (TPR)** - The implementing rule of statewide planning goal (#12) dealing with transportation, as adopted by the state Land Conservation and Development Commission (LCDC). Among its many provisions, the rule includes requirements to preserve rural lands, reduce vehicle miles traveled (VMT) per capita by 20 percent in the next 30 years, reduce parking spaces and to improve alternative transportation systems.~~

~~**Transportation System Management (TSM)** - Strategies and techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without major new capital improvements. This may include signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response, targeted traffic enforcement and programs that smooth transit operations.~~

~~**TriMet** - Tri-County Metropolitan Transportation District, which is the transit agency for most of Clackamas, Multnomah and Washington counties.~~

~~**Urban Growth Boundary (UGB)** - The legally defined boundaries adopted by Washington County, Metro or appropriate incorporated cities, and acknowledged by LCDC, which identify and separate urbanized lane from rural and natural resource land.~~

~~**Vanpool/Carpool** - A group of two or more people who share the use and/or cost of a van or car for transportation to and from a destination.~~

~~**Vehicle miles traveled (VMT)** - Automobile vehicle miles of travel. Automobiles, for purposes of this definition, include automobiles, light trucks, and other similar vehicles used for movement of people. The definition does not include buses, heavy trucks and trips that involve commercial movement of goods. VMT includes trips with an origin and a destination within the MPO boundary and excludes pass through trips (i.e., trips with a beginning and end point outside of the MPO) and external trips (i.e., trips with a beginning or end point outside of the MPO boundary). VMT is estimated prospectively through the use of metropolitan area transportation models.~~

~~**Walkway** - A hard-surfaced transportation facility built for use by pedestrians, including persons using wheelchairs, such as a sidewalk, off-street trail, accessway or path.~~

# Introduction

***Preface***

The transportation system in Washington County has developed incrementally over time, starting with the seasonal travels of the Kalapuya people throughout western Oregon. European settlers built upon these early routes, bringing successive layers of transportation innovations to connect farms and forests with local markets and beyond. Stage coach routes and plank roads gave way to river steamboats and railroads. Automobiles and paved roads now dominate the transportation system, supplemented by pedestrian, bicycle, transit and freight rail facilities. Much of the transportation network in Washington County is characterized by legacy rural routes and small, platted towns overlaid with incremental suburban development and several large-scale highway and transit investments. The sum of these parts is the transportation system now used every day by residents, workers and visitors throughout Washington County.

Today the Washington County transportation system faces new challenges. Many major roadways have failed to keep pace with the travel demand associated with population and employment growth. Alternatives to driving are increasingly in demand. People and companies are deciding where to locate or expand, and transportation plays a significant role. Washington County is presented with a complex and, at times, conflicting array of transportation challenges and opportunities. Among them:

- Washington County has outgrown the farm-to-market road system that serves as the basic network for our transportation system;
- Washington County is now a leader in employment opportunities in the Metro region, shifting the transportation needs of the commuter population to Washington County employment destinations;
- Urban traffic congestion related to continued employment and population growth;
- Older roads built without adequate pedestrian and/or bicycle facilities;
- Mobility challenges between sub-sections of the metropolitan area;
- Rural traffic growth, and urban traffic moving between urban areas;
- Maintenance obligations on existing transportation facilities;
- Increased demand for transit service during a time of transit funding challenges;
- The decreasing “buying power” of existing fuel taxes due to inflation and increased fuel efficiency;
- Uncertain federal and state transportation funding outlooks;
- Public health and safety concerns; and
- Evolving lifestyle and travel preferences due to shifting demographics and economics.

This Transportation System Plan (TSP) update takes into account these and other circumstances, challenges and opportunities. It provides direct guidance on how to build, operate and maintain Washington County’s major roadway network, while addressing complementary elements of the larger transportation system – including transit, multi-use trails, state highways and freight railroads – maintained by other entities. The TSP addresses a diversity of transportation needs while integrating social, economic, environmental and livability aspirations. It provides a framework for future transportation decisions, and makes strides toward county and regional transportation aspirations, goals and targets.

## About This Plan

The Washington County Transportation System Plan (TSP) serves as the guiding document establishing the policies, projects and programs necessary to achieve Washington County's transportation goals. The TSP considers the diverse needs of all users of the transportation system and provides recommendations to meet them.

The previous comprehensive TSP update was adopted in 2002 and was based on anticipated growth and travel demand through the year 2020. This TSP update comprehensively reviews existing and expected future conditions, anticipating growth and travel demand through the year 2035 and beyond. The 2002 plan has been amended multiple times to respond to changes in growth patterns and policy. This update of the TSP restructures the plan to focus on key transportation policy concepts and to achieve consistency with recent state and regional transportation policy changes.

This plan has been prepared in compliance with state, regional and local plans and policies, including the *Oregon Highway Plan* (OHP), the state *Transportation Planning Rule* (TPR), Metro's *Regional Transportation Plan* (RTP), Metro's *Regional Transportation Functional Plan* (RTFP)~~,~~ and Washington County's *Comprehensive Plan.*

## ***Plan Development Process***

The TSP update process began in 2012. Given the range of issues involved and the desire to allow adequate time for review by the public and governing bodies, the ~~c~~County developed this update in two phases, with completion in 2014.

The two phases are illustrated below in Figure 1:

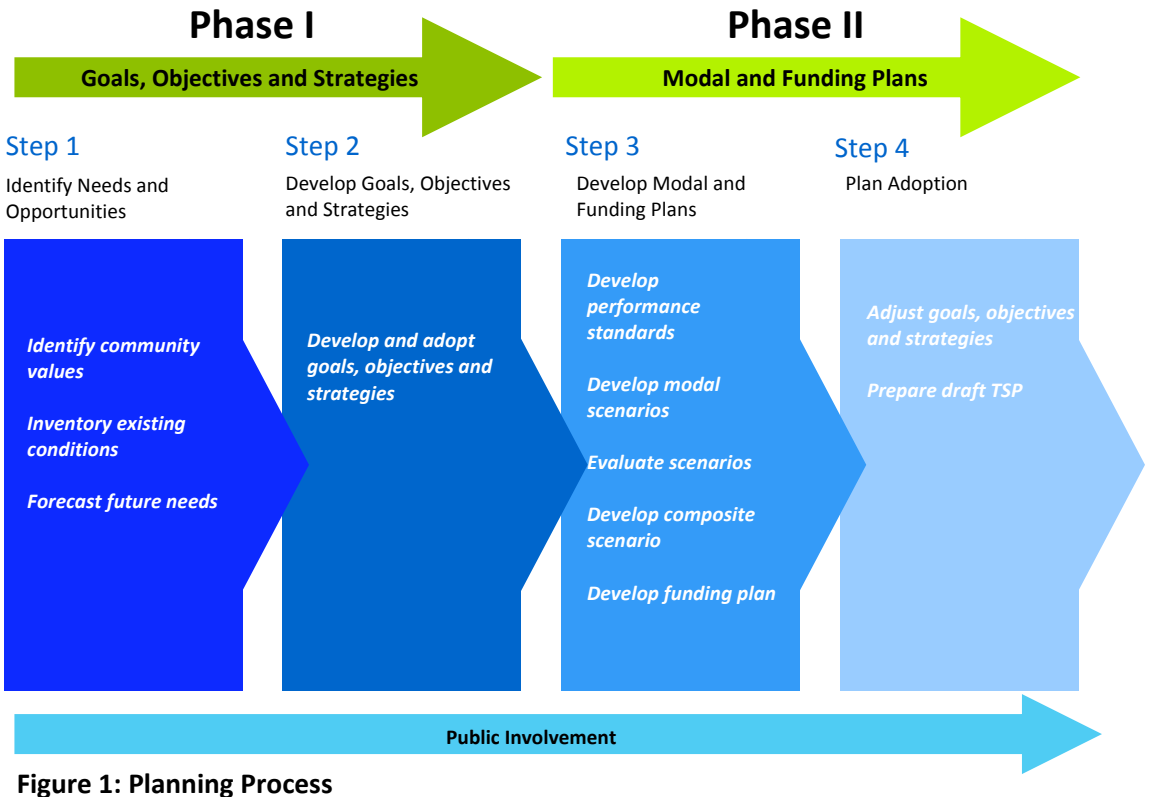



**Figure 1: Planning Process**

Phase I of the project consisted of a description of existing conditions accompanied by a more general identification of both existing and future needs on the transportation system. Phase I also included a reorganization of the plan's policy content. Policies from the 2020 plan were reviewed, modified and reorganized into a series of goals, objectives and strategies.

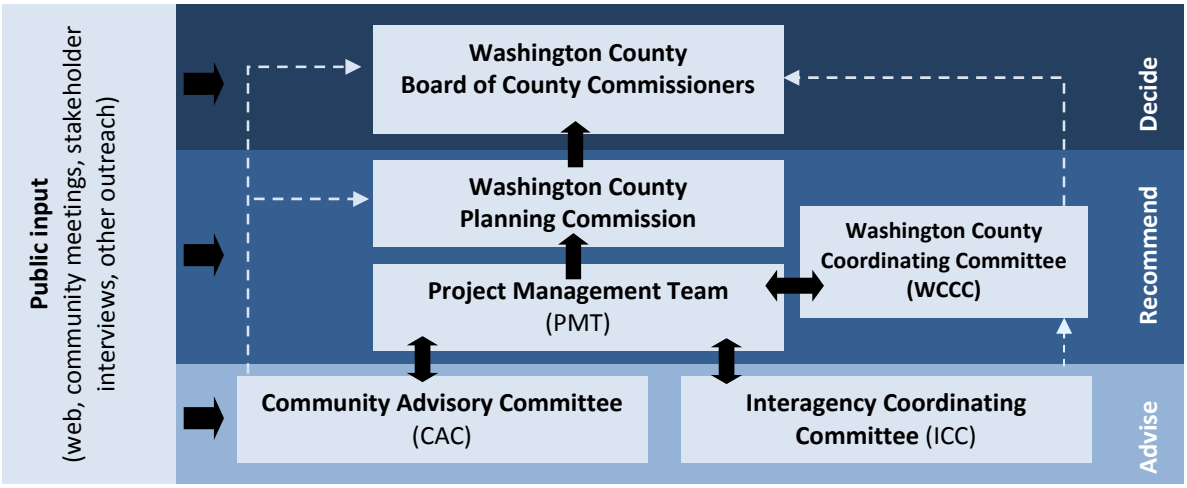
Phase II entails an analysis of future transportation needs, including development and evaluation of various alternative transportation scenarios. Phase II includes an assessment of future system performance based on a variety of performance measures and also includes an analysis of anticipated future revenues and projects, by modes. Phase II updates the map elements of the TSP and provides consistency with city and regional plans where appropriate.

## Public Involvement Structure

Public involvement played a role throughout the planning process. The project team coordinated with two advisory committees appointed by the County Board of Commissioners for the duration of the planning process. The Community Advisory Committee (CAC), an 18-member group consisting of neighborhood, business and advocacy group representatives, provided input and advice during the development of the TSP. The Interagency Coordinating Committee (ICC), a technical committee consisting of representatives from local cities, Tualatin Hills Park & Recreation District (THPRD), TriMet, Metro, Port of Portland and Oregon Department of Transportation (ODOT), provided input and advice during the development of the TSP and considered the policy implications within the jurisdictions they represent. Regular meetings were held with both the CAC and ICC over the course of the plan update to review interim work products and to develop policy and technical direction for the TSP.

Other official bodies and entities involved in decision making for the TSP update included the Board, Planning Commission~~,~~ and the WCCC.

**Figure 2: TSP Committee Structure and Decision Making Process**




To gain an understanding of public perspectives on the transportation system, the project team held open houses at several locations throughout Washington County. Staff also attended a number of farmers markets, Citizen Participation Organization meetings, and interviewed and participated in briefing sessions with a variety of stakeholder groups including Adalante Mujures, Committee for Citizen Involvement, the Rural Road Operations and Maintenance Advisory Committee (RROMAC), the Urban Road Maintenance District Advisory Committee (URMDAC), Washington County Farm Bureau, Westside Economic Alliance~~,~~ and Westside Transportation Alliance. The approach sought to engage people not historically involved in transportation planning. Informational material was translated into Spanish and distributed at events and posted on the project website. The project website also included a comment map where interested parties and citizens could identify transportation problems.

The Draft Goals, Objectives and Strategies were reviewed by the CAC, ICC and other interested parties through May 2013. Based upon comments received during this period, staff revised the draft plan and developed ordinances to submit to the Planning Commission and Board of Commissioners for formal review.

During the summer and fall of 2013, an ordinance containing the Goals, Objectives and Strategies of the Transportation Plan, along with policy and regulatory provisions necessary to implement the plan, were considered by the Planning Commission and the Board through a series of public hearings. During these hearings Washington County residents and interested parties provided comments on the ordinance.

This Ordinance was modified during the hearings process and further modified during the development of the modal plans in Phase II to reflect the aspirations of the community. Such modifications were made based on the recommendations of Planning Commission at the direction of the Board.

## Transportation System Planning in Washington County

Transportation planning must recognize that transportation systems have significant impacts on the physical, social and economic characteristics of the areas they serve. In order to have an integrated and consistent plan for transportation, the transportation needs for the urban and rural areas are combined in a single document.

The TSP is a comprehensive analysis and identification of transportation needs associated with the implementation of development patterns described in the County Comprehensive Plan. The TSP addresses the major roadway system, transit, pedestrian, bicycle and freight transportation issues and focuses on specific system requirements. The TSP designates major transportation system elements and provides classifications indicative of their existing and/or planned function, right-of-way needs, general location and general size. Local street connections are addressed through connectivity strategies that reference Washington County's Community Development Code and Local Street Connectivity maps. These maps show required street and accessway connections in developable areas of unincorporated Washington County. Some new neighborhood routes may be prescribed through the TSP, while other neighborhood routes may be designated through the development review process.

The Department of Land Use & Transportation relies upon the Comprehensive Plan to carry out its mission. The TSP is an element of Washington County's Comprehensive Plan which is a set of documents that establishes general land use and transportation policies. These documents consider local concerns; social, economic, energy and environmental consequences; and the planning requirements of the region and the state. Other components of the Comprehensive Plan include the Comprehensive Framework Plan for the Urban Area, the Rural/Natural Resource Plan~~,~~ and the Community Development Code. In addition the Road Design and Construction Standards are set forth in the Washington County Code.

## Transportation System Plan Outline and Structure

The Transportation System Plan is organized into the following sections:

- Background
- Guiding Principles
  - Goal 1: Safety
  - Goal 2: Economic Vitality
  - Goal 3: Livability
  - Goal 4: Natural Environment
- System Design
  - Goal 5: Mobility
  - Goal 6: Accessibility
  - Goal 7: Connectivity
  - Goal 8: Active Transportation
- Implementation
  - Goal 9: Coordination
  - Goal 10: Funding
  - Goal 11: Maintenance

- Modal Elements *(these sections are expected to be developed and refined during Phase 2)*
  - Performance Measures and Standards
  - Roadways
    - Functional Classification System
    - Lane Numbers
    - Regional Street Design Overlay
    - Special Street Overlay
    - Deficiency Areas
    - Countywide Roadway System
    - Study Areas
    - Freight Routes
  - Active Transportation
    - Pedestrian System
    - Bicycle System
    - Trails
    - Transit System
  - System Management and Operations
- Funding and Project Lists (*this section is expected to be developed and refined during Phase 2)*

# Background

This chapter provides a summary of existing conditions and background related to transportation planning in Washington County.

To understand existing and future travel demand in Washington County, it is important to look at the larger context, including population and employment trends and land use patterns. Changes in planning policy at the local, regional and state level also shape transportation outcomes.

## Land Use Patterns

Since 1973, Washington County's urban growth and rural preservation has taken place in an efficient geographic pattern consistent with requirements in the State of Oregon's Urban Growth Management Program. Within the urban area, requirements that guide development patterns were further refined in 1994 through the Metro 2040 Growth Concept, which called for active centers connected by multi-modal transportation corridors. These planning concepts have helped contain and focus urban growth, and protect industrial and employment areas.

Washington County is one of the fastest growing areas in the Pacific Northwest. Planning actions have helped accommodate Washington County's strong ongoing demand for housing and employment land. Washington County collaborated on the regional Urban and Rural Reserve process to determine where future growth may take place over the next 40 to 50 years. The Transportation System Plan (TSP) is intended to respond to the Urban and Rural Reserve designations. The TSP focuses on accommodating future development within the adopted urban growth boundary, but does not ignore the possibility of future urban growth boundary expansions into the Urban Reserves. Furthermore, it is assumed that the land within Rural Reserves will not develop as urban areas within the planning horizon. Land use planning decisions, combined with population/employment forecasts, are critical to determining where and what type of transportation improvements are needed throughout Washington County. For travel demand forecasting purposes, it is assumed that by 2035, additional areas within the current urban growth boundary will have been developed. Infill development will have occurred in centers, corridors and other appropriate locations in the urban area and urban reserve areas will have been partially developed consistent with the assumptions in Metro's land use forecasts.

## Population and Employment Trends

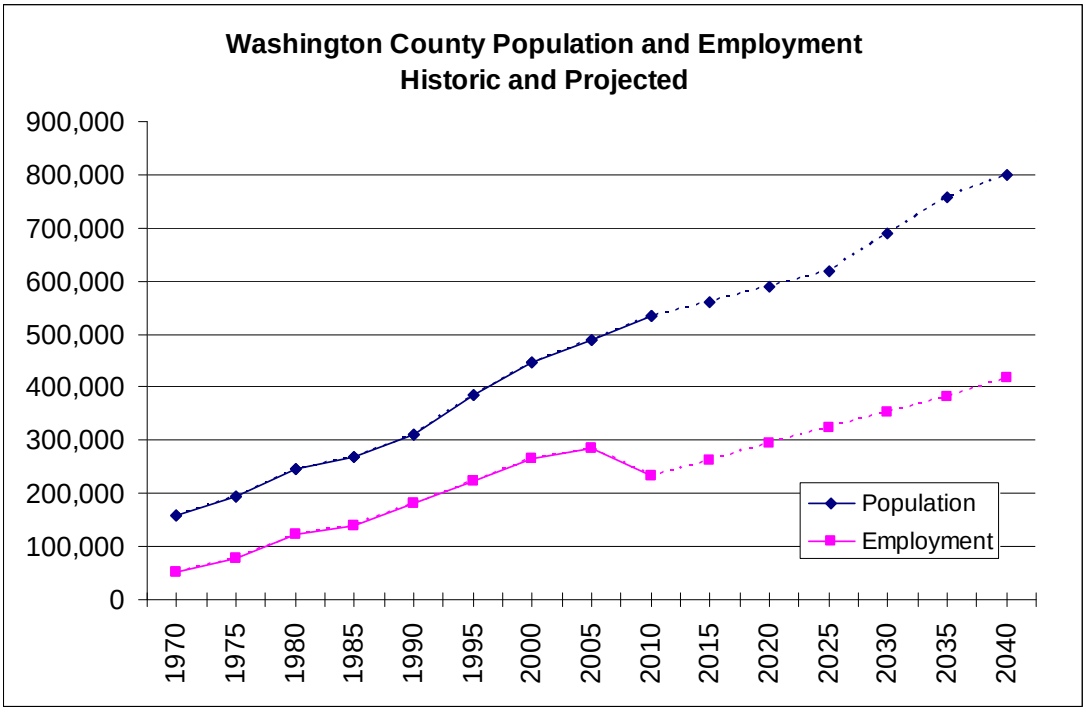
Washington County has grown considerably during the last 40 years. Since 1970, the population within Washington County has increased 71%, from 311,544 to 532,620. In the same four decades Washington County employment has grown from 180,302 to 232,019 jobs, a 29% increase. In the last decade (from 2000 to 2010), Washington County gained over 87,000 new residents, a 20% increase. Employment, however, suffered a 13% loss in this period. When measured from 2005 to 2010, job losses were 22%, or about 52,000 jobs.[1] Regardless of the recent trends and job losses, this planning effort envisions the continuation of the long-term growth trends. The recent loss of employment is viewed as a temporary adjustment in the larger national economy.

[1] Bureau of Labor Statistics and U.S. Census data as compiled by Washington County.

Washington County is expected to resume growth trends in population, employment and travel demand. By the year 2035, the population of Washington County is expected to increase to 758,500, an increase of 42% over 2010. Forecasted average annual growth is approximately 1.42% per year for the 25 year period. This is down significantly from the 2.8% annual average growth rate seen in the preceding 25 years, which is typical of more mature areas.

By 2035 the employment in Washington County is expected to increase to about 382,000 jobs. This would be an increase of about 150,000 jobs above the 2010 employment, or about 100,000 above 2005 employment. The forecasted average annual employment growth is approximately 2.02% per year for the 25 year period 2010-2035.

**Figure 3: Washington County Population and Employment: Historic and Projected**




Washington County has seen increases in ethnic and cultural diversity and shifts in age distribution. In 2010, the US Census reported that Washington County featured:

- A higher percentage of Asian or Pacific Islander residents (8.6%) compared to the state (3.7%).
- A higher percentage of Hispanic or Latino residents (15.7%) compared to the state (11.7%).
- Almost double the proportion of foreign born residents (16.8%) than statewide (9.7%).
- A higher percentage of residents speaking a language other than English at home (22.7%) compared to the state (14.3%).
- Significant youth and senior populations, with 25% of residents under 18 years and 10% over 65 years of age.

**Travel Demand**

The growth envisioned in the 2035 population and employment forecast translates directly into transportation system needs. Of particular significance for the Washington County transportation system is employment growth and peak-hour travel demand. Washington County contains several regionally significant employment areas, including the high tech Sunset Corridor of Hillsboro and Beaverton, the Tigard Triangle, and the Tualatin-Sherwood industrial corridor.

Washington County estimates existing and future travel demand using a west side-specific version of the Regional Travel Demand Model. The model is calibrated with a number of inputs, including household activity surveys, traffic counts, land use policies and anticipated transportation investments. Table 3-1 below describes existing and forecasted travel demand in terms of total person trips, then by travel mode.

**Table 1: Washington County Travel Demand (Average Weekday)[1]**

| Mode | 2010 | 2035 RTP[6] | Percent Change |
|---|---|---|---|
| Total Person Trips | 3,866,409 | 5,541,705 | +43% |
| Auto | 3,610,591 | 5,094,927 | +41% |
| SOV[2] | 1,861,046 | 2,680,680 | +44% |
| Shared Ride[3] | 1,749,546 | 2,414,247 | +38% |
| Transit[4] | 68,719 | 130,709 | +90% |
| Pedestrian[5] | 171,716 | 261,492 | +52% |
| Bicycle[5] | 35,383 | 54,577 | +54% |

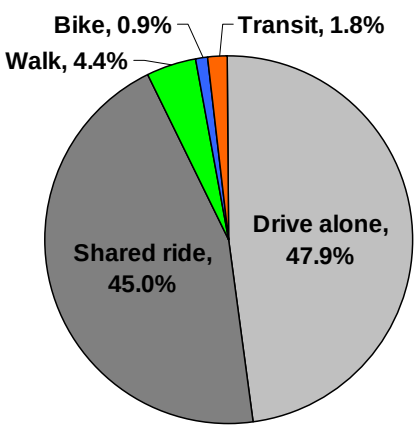
Notes:
1. All modes include all daily trips that either start or end within Washington County, including the rural areas outside the Metro Boundary.
2. SOV – Single Occupancy Vehicle, a vehicle in which the driver is traveling alone (this is a subset of the Auto category).
3. Shared Ride – Includes both the driver and other passengers (this is a subset of the Auto category).
4. Yellow school bus trips are not included.
5. Pedestrian and Bicycle trips do not include travel for the purpose of exercise.
6. Travel demand forecasts consistent with the Regional Travel Plan (adopted 2010).

Another commonly used indicator of travel demand is vehicle miles traveled (VMT), or the total number of miles driven by all vehicles in a defined area. VMT estimates do not track miles driven outside Washington County by residents or employees, and does not include weekend or holiday travel. VMT within Washington County in 2010 is estimated at 8.4 million miles per weekday. Divided by Washington County's population, that is 15.76 miles per weekday per capita. VMT in 2035 is forecast to increase to 11.9 million miles per weekday, but population growth is expected to outpace it, resulting in a slightly lower per capita VMT of 15.71 miles per weekday per person.

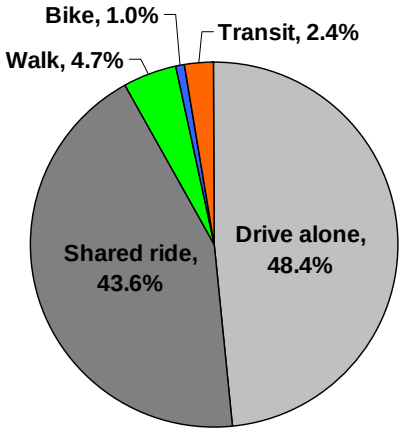
**Mode Share**

The Regional Travel Demand Model can estimate mode share, or the proportion of trips made using a certain means of travel. Figure 4 below shows estimated mode share for 2010, forecast mode share for 2035, and the target mode share urban Washington County needs to strive towards to be consistent with the RTP for 2035. Worth noting is that the RTP targets apply only to urban Washington County.

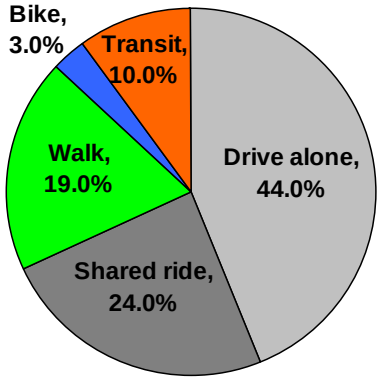
**Figure 4: Washington County Mode Share**




All trips, 2010 model. Source: Regional Travel Demand Model (Metro / Washington County)




All trips, 2035 forecast. Source: Regional Travel Demand Model. (Metro / Washington County)




Regional Transportation Plan targets for 2035 (Metro)

Another important travel characteristic of Washington County is its bi-directional commute patterns. Washington County has a strong jobs base that attracts workers from elsewhere in the Portland region. Washington County also has the more traditional suburban role of providing housing for people who commute to Portland. Commutes also include trips that remain entirely within Washington County. As shown in Table 2 below, nearly half of Washington County residents worked outside the county; and nearly half of employees that work within Washington County lived outside the county in 2010.

**Table 2: Commuter Residence Characteristics – 2002 & 2010**

| Washington County | 2002 | 2010 |
|---|---|---|
| Employee Population (Residents) | 215,901 | 216,424 |
| Employment (Jobs) | 213,028 | 222,588 |
| Employees Living Outside of County | 43.7% | 48.8% |
| Residents Working Outside of County | 44.5% | 47.4% |

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics

## Plan Coordination and Consistency Requirements

Public policies at the state, regional, county and local levels provide policy direction and legal requirements for transportation planning in Washington County. Coordination and achieving consistency with other planning work is an important part of Transportation Plan development. In this regard, primary objectives of the TSP update included:

- *Comply with the Oregon Transportation Planning Rule (TPR) requirements* — Oregon Administrative Rule 660-012 is referred to as the Transportation Planning Rule (TPR). It implements Statewide Planning Goal 12: Transportation. The purpose of the TPR is to ensure adequate coordination of transportation and land use planning both for TSPs and in project development. The TPR is the legislative mandate that requires Washington County to prepare and update its TSP.

- *Coordinate with the Oregon Highway Plan (OHP)* — The Oregon Highway Plan (OHP) sets visions, policies, and strategies for investing in state and federal highways in Oregon. Since adoption of the last Washington County TSP in 2002, there have been two major amendments to the OHP that affect Washington County. These amendments include amendments Policy 1B (land use and transportation policy) in 2005 and revisions to Policy 1F (highway mobility policy) in December 2011.

- *Coordinate with the Regional Transportation Plan (RTP)* — There are several key items in the RTP that affect transportation planning in Washington County. These include the designation of mobility corridors, performance targets, modal targets, and mobility standards. Desired outcomes for the RTP are as follows:
  **Vibrant communities** – People live and work in vibrant communities where they can choose to walk for pleasure and to meet their everyday needs.
  **Economic prosperity** – Current and future residents benefit from the region's sustained economic competitiveness and prosperity.
  **Safe and reliable transportation** – People have safe and reliable transportation choices that enhance their quality of life.
  **Leadership on climate change** – The region is a leader in minimizing contributions to global warming.
  **Clean air and water** – Current and future generations enjoy clean air, clean water and healthy ecosystems.
  **Equity** – The benefits and burdens of growth and change are distributed equitably.[2]

- *Comply with the Regional Transportation Functional Plan (RTFP) adopted by Metro in 2010* – The RTFP implements the goals, objectives and policies of the RTP., if a TSP is consistent with the RTFP then it is also consistent with the RTP. The cities and counties of the region are to carry these regional directives through the development and implementation of TSPs. The RTFP includes requirements for the design of streets, transit systems, pedestrian systems, bicycle systems, freight systems, and transportation system management and operations. The RTFP also includes specific requirements for the development and update of TSPs, the identification of transportation needs, assessment of solutions, and the use of performance targets and standards.

[2] Metro 2035 RTP, page 2-2.

- *Coordinate with adopted city Transportation System Plans (TSP)* — Most cities in Washington County have adopted TSPs.

- *Address planned growth in housing and employment, consistent with the adopted regional plans* — Most of the adopted city TSPs and the Metro's RTP use 2035 as their plan horizon year and include some consideration of Urban Reserves adopted by Metro. Washington County's 2035 plan horizon year must be updated to match the RTP.

- *Confirm sufficiency of existing programs* — Strategies for capital improvements and system maintenance were reviewed to highlight where new strategies and priorities were required. The rural road system, in particular, was reviewed in terms of how the facilities were maintained and how growth in traffic volumes has heightened safety improvement needs.

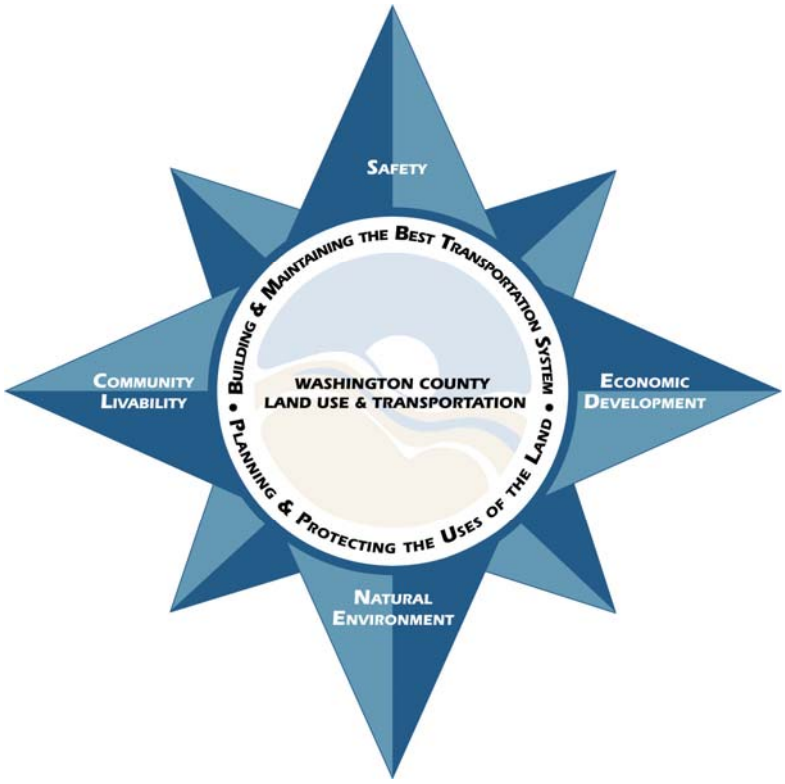
# Guiding Principles

The guiding principles of the Transportation System Plan (TSP) reflect the mission of Washington County's Department of Land Use &Transportation:

- *Building & Maintaining the Best Transportation System.*
- *Planning & Protecting the Uses of the Land.*

The following four goals help to define that twofold mission (as illustrated in the Department's emblem), to provide safety, enhance community livability, protect the natural environment and support economic vitality within Washington County:

- **Goal 1: Safety**
- **Goal 2: Economic Vitality**
- **Goal 3: Livability**
- **Goal 4: Natural Environment**




These four goals – which are in no particular order – complement and balance each other. While at times, due to specific circumstances, choices may be necessary to establish the desired balance, on the whole the goals of safety, economic vitality, livability, and natural environment complement each other. This TSP intends to refine and apply these goals as the guiding principles for the planning, development and operation of the transportation system throughout Washington County.

abcdef Proposed additions
~~abcdef~~ Proposed deletions

# Goal 1: Safety

*Provide a safe transportation system for all users.*

Transportation safety is a complex subject due to a variety of interacting factors. Road conditions, weather, driver ability and vehicle type are just some of the factors that come into play when considering the safety of a particular situation or location. Predictive models are available, along with anecdotal knowledge and experience with similar conditions. Traffic volumes, crash data, and citizen observations are just some of the ways that staff can analyze locations and corridors to determine what type of improvements or changes to transportation infrastructure would enhance safety. Each situation and location is unique, requiring engineering analysis and professional judgment. This section is intended to provide a broad explanation of safety trends and considerations for planning purposes.

In Washington County, new road construction, and the ongoing maintenance of the existing transportation system, uses modern techniques, industry standards, and best management practices. In addition, an active presence by law enforcement personnel reinforces the rules of the road. These roads are still subject to traveler behavior factors such as speeding, following too closely, drunk driving and walking or bicycling without appropriate visibility gear. Non-behavior factors may also play a role.

Tens of thousands of vehicles traverse Washington County roads on a daily basis and the vast majority of those trips are without incident. However, there are some locations that tend to have an increased rate of crashes. Metro's *State of Safety 2011 Report* reveals that in 2007 through 2009, urban Washington County had the lowest rate of injuring crashes per capita, the lowest rate of fatal or incapacitating crashes per capita, and the lowest rate of fatal or incapacitating crashes per vehicle miles travelled, compared to urban Clackamas County, the City of Portland, and east Multnomah County.[1] Looking at trends over time, crash rates for all modes (except motorcycles) are continuing to decline locally, regionally and nationally after peaking in the 1990s.

Safety initiatives in the region, including various Safe Routes to School programs and Portland's High Crash Corridor program, typically dissect transportation safety into three or more components within which action may be taken. These are known as the three 'E's:

- **Engineering**: Physical enhancements to improve safety on a transportation facility.
- **Enforcement**: Partnering with law enforcement to identify and reduce violations of traffic laws.
- **Education**: Helping people understand the rules of the road and how to walk, bike or drive safely.

Some Safe Routes to School programs have added other 'E's – encouragement, evaluation and equity – that are useful tools in the broader context of transportation safety.

Evaluation is a particularly important function that Washington County undertakes. The **Safety Priority Index System (SPIS) List** is the primary tool for identifying intersections where crashes have been occurring frequently. SPIS, originally developed in 1986 by ODOT, assigns

[1] Metro State of Safety 2011 Report, p 14, Metro.

intersections a score based on crash frequency (total number of crashes), crash rate (number of crashes per entering vehicles) and crash severity (number of crashes involving injuries or fatalities), over a three-year period. Intersections with high SPIS scores may or may not have cost effective or feasible remedies to reduce the frequency or severity of crashes, but the SPIS tool is effective in helping identify safety issues in a strategic fashion.

Some safety concerns are less measurable. Issues of perceived safety and pedestrian/bicycle comfort may not be evident in crash statistics, even though these issues may be detracting significantly from the use of certain modes or facilities. People may avoid walking or biking along certain roads that lack appropriate facilities to do so, regardless of the facility's safety record.

Safety strategies in the TSP focus on:

- Engineering and maintenance solutions.
- Strategic evaluation of and response to crash patterns.
- Addressing safety deficiencies through development review.
- Education and enforcement initiatives.
- Lighting.

While the TSP cannot, in and of itself, reduce crashes, it provides a framework for systematically building, maintaining, operating and monitoring a safe transportation system for all users.

## Goal 1: Safety

*Provide a safe transportation system for all users.*

### Objective 1.1 Provide a transportation system that is structurally and operationally safe for all users and all modes.

Strategy 1.1.1 Plan, engineer, design and construct the transportation system using accepted design standards that promote safety and that provide the intended multi-modal function as indicated in the TSP and the Road Design and Construction Standards.

Strategy 1.1.2 Regularly inspect the transportation system to identify and correct safety deficiencies.

Strategy 1.1.3 Use the Maintenance Priority Matrix to help prioritize maintenance and safety expenditures.

Strategy 1.1.4 Where and when practicable, separate travel modes and minimize conflicts between and within modes.

Strategy 1.1.5 Limit sign clutter by utilizing the Manual on Uniform Traffic Control Devices or other appropriate standards for the design and placement of traffic signs.

**Objective 1.2 Strategically monitor, evaluate and respond to crash patterns and safety concerns.**

Strategy 1.2.1 Utilize and where practicable improve upon the Safety Priority Index System (SPIS) and other available data sources to identify locations on county roads where crash frequency, rate and severity is disproportionately high.

Strategy 1.2.2 Make improvements to existing transportation facilities to address SPIS findings, Bicycle and Pedestrian Improvement Prioritization Project findings, and other identified safety concerns, using appropriate and available funding sources.

Strategy 1.2.3 Identify appropriate safety solutions for designated truck routes to safely move freight and agricultural equipment amid other modes.

Strategy 1.2.4 Consider developing a Transportation Safety Action Plan for Washington County or subsections or corridors of Washington County.

Strategy 1.2.5 Develop crash reduction performance measures.

**Objective 1.3 Review all development proposals, including those within incorporated areas, to continue the safe operation of county roads.**

Strategy 1.3.1 Require development to address safety deficiencies identified on the SPIS List or in other sources, through the development review process described in the Community Development Code (CDC), as appropriate.

Strategy 1.3.2 Apply access management standards as set forth in the CDC in order to reduce traffic conflicts and improve safety.

Strategy 1.3.3 Consider an update to Resolution and Order 86-95, to implement safety improvements associated with new development and redevelopment.

Strategy 1.3.4 Consider Traffic Calming Devices during the land development process, when the County Engineer finds that safety related issues are likely to occur without the installation of such devices.

**Objective 1.4 Coordinate with law enforcement and other safety related agencies and organizations to improve the safe operation of the transportation system by all modes.**

Strategy 1.4.1 Coordinate with law enforcement agencies to reduce violations of traffic laws and to target violation problem locations.

Strategy 1.4.2 Consider security and law enforcement issues in the design and maintenance of transportation facilities, including “crime prevention through design” principles.

Strategy 1.4.3 Encourage educational programs that improve public understanding of safe use of the transportation system.

Strategy 1.4.4 Coordinate with and identify opportunities to advance the goals of Safe Routes to School programs in Washington County.

**Objective 1.5 Illuminate the transportation system appropriately.**

Strategy 1.5.1 Require new development and redevelopment in the urban area to install street lighting under the provisions identified in the CDC.

Strategy 1.5.2 Integrate street lighting into major county transportation improvement projects, where appropriate.

Strategy 1.5.3 Use the proposed Urban Streetscape Toolkit to explore a variety of lighting options and to identify appropriate contexts to use them.

Strategy 1.5.4 Consider street lighting designs and practices that limit impacts on neighborhoods and agriculture.

# Goal 2: Economic Vitality

*Provide a reliable transportation system that enhances the economic health of Washington County.*

The transportation system plays a critical role in the economic vitality of Washington County. In 2013 Washington County was home to over 232,000 jobs and the highest average weekly wages in Oregon. Continued economic health depends on effectively serving the transportation needs of businesses large and small, including the people who work, shop and/or provide services. For the movement of goods, this means providing reliable freeway and arterial access to and from major employment areas, and helping railroad companies move goods efficiently and safely. Employers also need access to a sufficient labor market within a reasonable commute time and by multiple modes.

Economic vitality is addressed in the TSP in the following ways:

- Designating a safe, reliable network of truck routes, including routes for hazardous materials and over-dimensional vehicles.
- Working with private railroad operators to continue the efficient movement of rail freight.
- Ensuring that airports and pipelines are planned, sited and operated in accordance with all applicable regulations.
- Encouraging infrastructure investments in economic activity centers.
- Making sure employers have adequate access to the labor market.
- Promoting rural economic vitality by accommodating safe, reliable travel for the agricultural, forestry and tourism industries.

Additional considerations on the components of economic vitality are provided below.

Truck Routes

Most freight in Washington County is expected to be shipped by truck in the future. To provide for the most efficient transport of freight and to minimize impacts on residential neighborhoods, Through Truck Routes are designated primarily on Arterial and Collector roads. The truck route designations in the TSP encourage, but do not require, truck drivers to use these routes. The primary purpose of designating truck routes in the TSP is to identify where future improvements on these roads should provide for the safe and efficient movement of trucks.

Hazardous Materials Trucking
The transport of hazardous materials is regulated by the Federal Motor Carrier Safety Administration under Title 49 Code of Federal Regulations, Parts 390-397, and is not governed by local jurisdictions. Hazardous materials include a variety of substances, ranging from radioactive and medical wastes to gasoline. The transport of non-

radioactive hazardous materials requires that vehicles transporting these materials comply with any routing designations of a state, be placarded or marked and not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets or alleys, except where there is no practicable alternative. The transport of radioactive materials is generally restricted to designated preferred routes on interstate highways, beltways or bypasses, where alternative routes have not been designated by a state. The transport of hazardous materials is permitted on all Through Truck Routes within the county. However, the Vista Ridge Tunnel just east of Washington County on US 26 is closed to such traffic. As a result, hazardous materials are often transported via Cornelius Pass Road or OR 217.

Over-Dimensional Vehicles
Over-dimensional vehicles are trucks with wide or long loads that require a special permit. Washington County Operations Division maintains and annually updates a pre-approved over-dimension permit route map to facilitate such vehicles.

Freight Rail
While the role of railroads in Washington County's overall freight network is relatively small, a number of local firms continue to use them regularly, particularly in the forest products industry. Portland & Western is the primary operator of freight railroads within Washington County, with lines stretching from Banks to Wilsonville, and from Lake Oswego to Sherwood. The majority of roadway rail crossings in Washington County are at grade, posing potential conflicts and hazards. ODOT Rail Division authorizes new or modified rail crossings.

Air
Washington County's Comprehensive Plan identifies Public Use Airports and state-recognized Private Use Airports with land use overlay designations in the map elements of the Rural/Natural Resource Plan and/or Community Plans entitled Airport Overlay Districts. Land use related policies and strategies regarding the overlay-designated airport facilities are addressed in the Rural/Natural Resource Plan and in the Comprehensive Framework Plan for the Urban Area. Development standards for all airport and heliport related uses, including personal use airports and heliports, are outlined in the Community Development Code. Private use facilities fall under two general categories: private use airports identified by the Oregon Department of Aviation (pursuant to ORS 836.608(2)) that are subject to LCDC's Airport Planning Rule (OAR 660-013), and personal use facilities that are subject to local regulation.

Pipelines
Major high-pressure gas pipelines (60 pounds per square inch or greater) are shown in the TSP to highlight possible conflicts with future roadway extensions or expansions.

Economic Activity Centers
Economic Activity Centers include employment land (such as North Hillsboro and the Tualatin-Sherwood Corridor) and regional centers (including downtown Beaverton, downtown Hillsboro, Tanasbourne-Amberglen and Washington Square). They are identified in the TSP because their intensity of commercial or industrial uses often demands a commensurate level of transportation operational or capital improvements.

Access to Labor
For Washington County employers, having access to the regional labor market is just as important as moving goods or services. Part of a company's location decision is based on having a sufficient pool of talented workers be able to reach that location within a reasonable travel time of their homes, and by multiple modes if possible. Employers count on Washington County and its partner jurisdictions to provide an efficient, reliable transportation system so that employees are willing to take jobs here and are able to get to work on time. Roadway congestion and poor transit service can both negatively affect employers' access to labor.

Rural Economic Vitality
In rural Washington County, agriculture, forestry and tourism contribute significantly to the economy. Washington County ranks in the top five Oregon counties for gross sales of greenhouse/nursery products, wine grapes and cane berries, and hosts thousands of acres of timber and recreation land in the Coast Range.[1] Tourism augments these rural economic activities when people visit farmstands, wineries and recreational destinations. Transportation's role is to provide a safe, reliable network of roads for everyone who lives, works, visits or passes through the rural area. This includes managing conflicts between agricultural equipment, log trucks, cars and bicycles.

## Goal 2: Economic Vitality

*Provide a reliable transportation system that enhances the economic health of Washington County.*

### Objective 2.1 Designate a truck route system that facilitates the efficient movement of goods, services and agricultural equipment.

Strategy 2.1.1 Coordinate planning, development, maintenance and operation of an efficient and safe truck route system with the private sector, ODOT, TriMet, Metro, the Port of Portland and the cities of Washington County.

Strategy 2.1.2 Improve monitoring, analysis and management of freight needs by maintaining a truck classification count database.

Strategy 2.1.3 Develop freight reliability criteria, including percentage reduction in delay per truck trip, for purposes of project prioritization.

Strategy 2.1.4 Proactively identify and correct roadway design, safety and operational deficiencies on truck routes to meet freight reliability targets.

Strategy 2.1.5 Coordinate with federal and state agencies as necessary for compliance with federal and state regulations pertaining to the safe transport of hazardous materials within and through Washington County.

[1] Oregon Agriculture: Facts and Figures. National Agricultural Statistics Service and Oregon State University Extension Service, July 2012.

Strategy 2.1.6 Designate and map over-dimensional freight routes, and identify where roadway improvement projects should not further restrict or limit over-dimensional vehicle operations, as appropriate.

**Objective 2.2 Encourage the safe, efficient operation of railroad, airport and pipeline facilities.**

Strategy 2.2.1 Maintain or establish safe and effective rail crossing treatments through federal and state rail regulations.

Strategy 2.2.2 Protect active freight railroads from unregulated crossings and encroachment.

Strategy 2.2.3 Consider the needs of freight rail operators, including the practice of storing and staging longer freight trains between road crossings.

Strategy 2.2.4 Work with public and private sector partners to preserve existing railroads and railroad rights-of-way for transportation purposes or alternative public purposes, to the extent practicable.

Strategy 2.2.5 Coordinate with service providers to continue the safe operation and adequate maintenance of existing air, rail, and pipeline facilities; and protect such facilities from encroachment by incompatible land uses.

Strategy 2.2.6 Coordinate planning and development of new or expanded air, rail, and pipeline facilities and services consistent with federal, state and regional plans and regulations, including analysis of environmental and noise compatibility with surrounding land uses.

**Objective 2.3 Invest in transportation to encourage economic development.**

Strategy 2.3.1 Prioritize economic development-focused transportation investments within and connecting to regional centers, industrial areas, freight and passenger intermodal facilities.

Strategy 2.3.2 Facilitate a transportation system that provides employers access to an adequate labor pool.

Strategy 2.3.3 Recognize the economic benefits that active transportation and transit investments have for recruiting and retaining businesses, attracting talent, and reducing congestion that negatively affects roadway freight transport, and facilitate these investments appropriately.

**Objective 2.4 Encourage rural economic vitality in Washington County.**

Strategy 2.4.1 Facilitate the safe, efficient movement of agricultural and forest products, including agricultural machinery.

Strategy 2.4.2 Consider developing rural road safety strategies to address conflicts between agricultural equipment, log trucks, cars and bicycles on rural roads.

Strategy 2.4.3 Consider the transportation and land use needs of agricultural and forest industries when designing roadway improvements in the rural area.

Strategy 2.4.4 Facilitate safe travel for rural tourism traffic, including the safe operation of designated scenic driving and bicycling routes.

# Goal 3: Livability

*Preserve and enhance Washington County's quality of life for all residents, workers and visitors.*

Livability means different things to different people, but most would agree that good transportation is a critical component of community livability. For some, a transportation system that supports a livable community means attractive streets and a variety of travel options; for others it means uncongested freeways and quick travel times. The transportation system provides connections – both literally and figuratively – between commonly-stated elements of livability: affordable housing, good jobs, strong schools, nearby shopping, and a safe, healthy environment. A well-planned transportation system should meet the fundamental need of mobility while also providing the benefits of safe, livable and vibrant communities.

TSP livability strategies focus on:

- Reducing negative impacts on the human environment, which includes neightborhoods, business districts, farms, parks, and other features that people value in the built environment.
- Coordinating land use and transportation planning.
- Recognizing and addressing the unique concerns of the rural area.
- Addressing social and geographic equity in transportation investments and impacts.

Additional context is provided below.

Land Use and Transportation Integration

The successful integration of land use and transportation planning can reduce the need for travel, promote fiscally responsible investment of public dollars, and create livable communities. Land use and transportation integration is well established in Washington County.

In 1995, Metro adopted the 2040 Growth Concept, the long-range plan for managing regional growth that "merged land use and transportation planning to reinforce the objectives of both.[1]" Washington County and the cities therein plan their land use designations and transportation investments in concordance with the 2040 Growth Concept, concentrating mixed-use and higher-density development into "centers," "station communities" and "main streets" and connecting them with multi-modal transportation corridors.

[1] Metro Regional Transportation Plan, page 2-4, 2010.

Livable Streets

"Livable streets" is a term used to reflect enhanced street design features that may encourage more walking, bicycling and transit use~~,~~ and foster economic development. Elements of livable streets such as trees, wider sidewalks, landscaped medians, enhanced pedestrian crossings and pedestrian-scale lighting, can help improve the vibrancy of communities. Careful consideration must be given as to the appropriate locations for enhanced street designs, and how the improvements will be maintained in the long term.

Enhanced street designs are encouraged in Regional Centers, Town Centers, Station Communities and Main Streets (as designated in the Metro 2040 Growth Concept) and in Pedestrian Districts identified in the Washington County TSP. These enhancements can help foster the land use, economic and transportation mode share targets envisioned for these areas.

Equity

Equity in transportation planning includes both social and geographic equity.

Planning for equity often means examining socio-economic, demographic~~,~~ and geographic characteristics. Some demographic groups may not have been engaged in planning efforts in the past. Currently, a concerted effort is made to engage these historically underrepresented populations of Washington County – including low-income, minority, youth~~,~~ and low English proficiency residents – and provide them a voice throughout the planning process. A livable future is one that engages and benefits all residents and users of the transportation system.

**Goal 3: Livability**

*Preserve and enhance Washington County's quality of life for all residents, workers and visitors.*

**Objective 3.1 Strive to maintain and enhance the livability of existing and future communities and neighborhoods.**

Strategy 3.1.1 When considering transportation improvements that create new, expanded or extended roadways, evaluate and balance the needs of the traveling public with the livability and viability of neighborhoods, business districts, agricultural areas, historic places and other cultural resources.

Strategy 3.1.2 Strive to limit inappropriate through-traffic and speeding in residential areas using the Neighborhood Streets Program, while maintaining adequate neighborhood and emergency access.

Strategy 3.1.3 Consider low-impact strategies to improve traffic flow including appropriate lane-markings, safety improvements, roundabouts and other operational devices.

Strategy 3.1.4 Identify scenic view corridors and vistas, and strive to maintain and enhance these visual resources for residents and users of the transportation system.

Strategy 3.1.5 Follow federal and state regulations and guidelines on reducing transportation-related noise.

Strategy 3.1.6 Work with appropriate entities to identify, avoid and/or mitigate negative impacts on the community from airport, rail freight, pipeline and electric transmission projects.

Strategy 3.1.7 Regulate the provision of parking as identified in the Community Development Code (CDC).

**Objective 3.2 Coordinate transportation and land use planning.**

Strategy 3.2.1 Plan and provide a multi-modal transportation system that encourages the land uses, mixes and densities indicated in the Comprehensive Plan, community plans and/or other applicable, adopted land use plans.

Strategy 3.2.2 Plan for the anticipated multi-modal travel demand generated by proposed development within and near Washington County.

Strategy 3.2.3 Explore opportunities to further improve accessibility, including jobs/housing balances, through integrated transportation and land use solutions.

**Objective 3.3 Use transportation investments to enhance the viability of centers.**

Strategy 3.3.1 Prioritize enhanced complete street and boulevard designs with wider sidewalks and a higher level of streetscape amenities within Metro 2040 Regional Centers, Town Centers, Station Communities and Main Streets, and consolidate the TSP overlay designations of these streets.

Strategy 3.3.2 Consider developing an Urban Streetscape Toolkit that illustrates and describes the palette of available design options for streetscape projects such as sidewalks, lighting, trees, landscaping and retaining walls.

Strategy 3.3.3 Recognize the continued importance of adequate mobility for people and goods, to, from and between centers in order to create and sustain economic vitality.

**Objective 3.4 Identify, limit and/or mitigate adverse impacts of transportation on rural, agricultural and resource areas in Washington County.**

Strategy 3.4.1 Consider education, enforcement and engineering solutions to mitigate conflicts between motor vehicles, bicycles and agricultural equipment on rural roads.

Strategy 3.4.2 Involve affected property owners early in the project development process to address land use compatibility issues adjacent to roads that form the boundary between urban areas, urban reserves, rural areas and/or rural reserves on a case-by-case basis.

Strategy 3.4.3 During the concept planning of newly-designated urban areas, strive to design the transportation system so that the traffic associated with these areas may travel primarily through the existing urban area.

**Objective 3.5 Distribute transportation benefits and impacts equitably among residents, businesses, workers and visitors in Washington County.**

Strategy 3.5.1 Equitably distribute the benefits and impacts of transportation improvements, maintenance and operations activities geographically across Washington County.

Strategy 3.5.2 Identify, map and periodically update the locations of transportation disadvantaged / underrepresented populations, including concentrations of children, elderly, low-income, racial/ethnic minority, English as a second language (ESL) and zero-car households, and use this information to help inform transportation investment decisions.

Strategy 3.5.3 During transportation and land use planning and implementation, consider the share of household income spent on housing and transportation.

# Goal 4: Natural Environment

*Create and maintain a transportation system that first avoids, then minimizes, then mitigates impacts to the natural environment.*

All transportation modes, vehicle types and facilities – even electric vehicles and multi-use trails – have impacts on the natural environment, from localized habitat degradation caused by the horizontal footprint of a road or trail, to global climate change influenced by carbon emissions. The TSP divides environmental considerations into three categories: air and climate; land and water; and efficiency. (Impacts to the built environment are addressed under Goal 3: Livability.)

Air and Climate

The Portland Air Quality Maintenance Area currently meets all federal air quality health standards. However, in the past, the Portland Air Quality Maintenance Area did not meet the air quality health standards for ground-level ozone (smog) and carbon monoxide. Gasoline powered vehicles emit both carbon monoxide and ozone precursors. Therefore, the Oregon Department of Environmental Quality (DEQ) has established an emission budget for ozone precursors and carbon monoxide. These emission budgets include a mobile source (vehicle) category. For regional transportation planning purposes, the transportation network must demonstrate compliance with the mobile source emission budgets for these pollutants.

Ground-level ozone (smog) is a serious ~~type of~~ type of air pollution caused by a chemical reaction when nitrogen~~-~~ oxides and volatile organic compounds are exposed to sunlight and warmer temperatures. Smog discolors the atmosphere and can harm human health. The ozone precursors of nitrogen~~-~~ oxides and volatile organic compounds are criteria pollutants for air quality conformity determinations.

Carbon monoxide is a colorless, odorless gas that can lead to serious human health problems with prolonged exposure, or short term concentrated exposure. Carbon monoxide exposure issues may occur during winter conditions with both cold temperatures and stagnant air.

Both ground-level ozone and carbon monoxide are air quality pollutants monitored by DEQ. These and other emissions are measured hourly through an air quality surveillance network of established sites throughout the region that record the chemical composition of the air.

The transportation sector further affects air quality and climate through the emission of greenhouse gases such as carbon dioxide, air~~-~~borne toxics such as benzene~~,~~ and particulate matter. Both air toxics and particulate matter are known or suspected to cause cancer or other health problems. In Oregon, an estimated 34% of greenhouse gas emissions – the largest single share – can be attributed to transportation related sources.[1] Recent data from DEQ also suggest that air toxics are disproportionately concentrated in urban Washington County due to stagnant air.[2]

[1] Clean Fuels Program, Oregon Department of Environmental Quality, 2012 http://www.deq.state.or.us/aq/cleanFuel/index.htm
[2] Portland Air Toxics Report, Oregon Department of Environmental Quality, 2012. http://www.deq.state.or.us/aq/planning/patsReport.htm

Clean air has been a federal mandate since the Clean Air Act of 1970. Clean Air Act Amendments in 1990 required metropolitan planning organizations to demonstrate air quality conformity in their transportation plans in order to receive federal transportation funds. The air quality/transportation connection is also part of Oregon's Statewide Planning Goal 6 (Air, Water and Land Resources Quality), and is enforced by DEQ through OAR 340-200-0040. By developing the Washington County TSP consistent with the Metro RTP (which complies with federal and state air quality conformity regulations), Washington County helps the region meet federal, state and regional air quality regulations.

Plan strategies that address air quality and climate change focus on (1) reducing vehicle trips and trip lengths by moving more trips to active (transit, walk and bike) modes, increasing shared ride trips~~,~~ and reducing travel demand through telecommuting and land use planning, and (2) increasing and encouraging the use of fuel efficient and zero-emission vehicles.

Land and Water

Washington County is host to significant terrestrial and aquatic resources, including the Tualatin River and its tributaries, a number of regionally-significant wetlands, some of the most productive agricultural lands in Oregon~~,~~ and upland areas of oak savanna and Douglas-fir forest. The value of these resources is multi-faceted: providing fish and wildlife habitat, filtering and cooling runoff, cleaning the air and adding unquantifiable aesthetic and economic value.

Washington County's Community Development Code Article VII specifically addresses the impacts of transportation projects on land and water resources, as well as other resources including cultural, visual and recreational resources. Transportation project applicants must describe anticipated impacts on the natural, built and planned environment, and propose potential mitigation measures. Land and water resources in Washington County are documented in the county's Rural/Natural Resource Plan, and in mapping associated with Metro's Functional Plan Title 3~~,~~ and Oregon's Goal 5 (Natural Resources, Scenic and Historic Areas and Open Spaces).

Transportation improvement projects must demonstrate compliance with applicable environmental regulations pertaining to stormwater and aquatic resources. In many areas of the county, this includes a permit from Clean Water Services. Elsewhere, appropriate city, regional, state and/or federal regulations apply – particularly when a project may disrupt a waterway, floodplain or wetland. State land use regulations also apply in Exclusive Farm (State Goal 3) and Forest Districts (State Goal 4).

Plan strategies that address impacts to land and water resources focus on identifying natural resources through existing planning and regulatory mechanisms, avoiding impacts to these resources if possible and – if impacts are unavoidable – reducing and mitigating them through context-sensitive design features and enhancements.

Efficiency

The TSP addresses energy and resource conservation through vehicle fleet-based strategies such as encouraging the use of fuel-efficient or zero-emission vehicles and through the use of recycled or low-impact materials in transportation projects.

## Goal 4: Natural Environment

*Create and maintain a transportation system that first avoids, then minimizes, then mitigates impacts to the natural environment.*

### Objective 4.1 Reduce negative impacts of the transportation system on air quality and global climate.

Strategy 4.1.1 Meet regional air pollutant and greenhouse gas reduction performance targets by implementing the active transportation, travel demand management and accessibility strategies in this plan.

Strategy 4.1.2 Help the region meet the air quality emission budgets for mobile sources for carbon monoxide and ground-level ozone precursors.

Strategy 4.1.3 Using the Comprehensive Framework Plan and the Community Development Code, implement the Metro 2040 Growth Concept to create a compact urban form that increases the accessibility of destinations and reduces vehicle miles traveled.

### Objective 4.2 Reduce and/or mitigate negative impacts of the transportation system on the natural environment.

Strategy 4.2.1 Identify, and first avoid, then limit and/or mitigate adverse impacts of transportation projects on mapped Significant Natural Resources.

Strategy 4.2.2 Transportation improvements are to be developed consistent with Oregon statewide planning goals and administrative rules, when establishing general transportation alignments, unless a special exception is allowed.

Strategy 4.2.3 Washington County's Department of Land Use & Transportation Project Review Committee shall review transportation project applications for completeness and compliance with applicable regulations.

Strategy 4.2.4 Consider the temporary and long-term impacts of construction and maintenance activities on the natural environment and adopt practices that mitigate these impacts.

Strategy 4.2.5 Consider and incorporate as appropriate context-sensitive design treatments that reduce and/or mitigate transportation impacts including surface stormwater management features and impervious surface reductions.

Strategy 4.2.6 In agricultural areas avoid and/or limit significant disruption of farming activities during both project implementation and maintenance, in accordance with Policy 15 of the Rural/Natural Resource Plan, as appropriate.

Strategy 4.2.7 Consider existing natural hazards, as well as potential future natural hazards, during the design and engineering of transportation improvements.

**Objective 4.3 Reduce energy and resource consumption associated with transportation.**

Strategy 4.3.1 Encourage the purchase of fuel-efficient vehicles when replacing county fleet vehicles to reduce energy consumption and help achieve greenhouse gas reduction goals.

Strategy 4.3.2 Encourage the use of recycled and other low-impact materials in the construction and maintenance of the transportation system.

Strategy 4.3.3 Coordinate with private and public sector partners to standardize, codify~~,~~ and incentivize technological solutions to reducing energy consumption, including the installation of additional electronic vehicle charging/parking spaces throughout Washington County.

Strategy 4.3.4 Encourage the use of native vegetation in the landscaping for transportation projects.

# System Design

This section establishes the design and functional framework of the transportation system. A network of roads, freeways, trails, bicycle facilities and transit routes is envisioned to provide mobility, accessibility, connectivity and active transportation options throughout Washington County. The System Design element of the Transportation System Plan (TSP) states these concepts as goals:

- **Goal 5: Mobility**
- **Goal 6: Accessibility**
- **Goal 7: Connectivity**
- **Goal 8: Active Transportation**

The System Design goals, objectives and strategies help implement the Guiding Principles described in the previous section: safety, economic vitality, livability and a natural environment. The System Design goals outline and guide the development, design and management of the transportation system. Specific system solutions and performance measures will be described in the modal chapters to follow.

The System Design Goals establish a framework for a transportation system that:

- Provides a network of multi-modal transportation facilities and operational systems intended for travel between points A and B.

- Connects and integrates land use and transportation.

- Provides multiple travel routes and connections within and between parts of the community.

- Provides for travel by all modes including walking, bicycling and public transit.

New and improved connections, with rare exception, are to be implemented as “complete streets” within the urban area. Complete streets are roadways designed and operated with all users in mind – people walking, bicycling, using mobility devices, transit, cars and motorcycles and freight vehicles. Complete streets accommodate the safe, comfortable and convenient movement of people of all ages, abilities and means.

Transportation system design also must respond to land use patterns and community needs. Existing and future development patterns determine where homes, schools, work, shopping and other activities are located. The location and design of our communities can profoundly affect the way in which we move about. Clackamas, Multnomah and Washington Counties have recently collaborated with Metro on a regional effort to help determine the shape of the Portland region over the next 40 to 50 years. The adopted Urban and Rural Reserves are intended to provide greater predictability for the region as to where future growth may take place both inside and outside the current Urban Growth Boundary. The transportation system must be designed and planned with these areas and future growth in mind.

# Goal 5: Mobility

*Promote the efficient and cost-effective movement of people, goods and services by all modes.*

Mobility means travel between points A and B. The mobility goal calls for providing a network of multi-modal roadways and operational systems. Achieving the mobility goal entails the effective and efficient management of the existing and future roadways, including the improvement of roadways to urban standards as complete and livable streets.

The four primary objectives of the design, implementation and management for the mobility functions of the roadway system include:

1. **Designation of an appropriate functional classification system and maps**
   The Transportation System Plan calls for developing an appropriate roadway functional classification system based on travel characteristics and community aspirations. This functional classification system describes appropriate operational attributes, as well as roadway design treatments and standards. Roadway functional classification definitions are described at the end of this section.

   Streets where Regional Street Design standards are to be considered are shown on the Regional Street Design Overlay Map. The intent of this map is to identify those Arterial and Collector streets where certain design treatments may be used to enhance pedestrian, bicycle and transit functions while also seeking to provide adequate motor vehicle capacity resulting in safer, modally balanced streets. The Regional Street Design Overlay Map identifies Boulevards, Boulevard Intersections and Streets, the designs for which are discussed below.

   - Boulevards may have three or more lanes and may include landscaped medians, on-street parking, landscape buffered sidewalks and enhanced pedestrian crossings. These roadways also include bicycle lanes or other bicycle treatments and wide sidewalks that can accommodate transit enhancements such as benches or bus shelters.
   - Boulevard Intersections may include broad or wide sidewalks up to 12 feet in width as well as special lighting and crossing features to improve pedestrian, bicycle and transit safety and accessibility.
   - Streets may range from two to more travel lanes and may include continuous two-way left turn lanes or median treatments, with landscaping where appropriate, bike lanes and landscape buffered sidewalks of six or more feet. Streets may include marked pedestrian crossings at intersections and/or may include special crossing amenities at major intersections.

2. **Providing systems to manage and operate the roadway system efficiently**
   The plan also calls for improved systems to manage and operate roadways within a constrained urban context. Access management, traffic calming and facility design are important elements of managing the transportation system. Access management reduces conflicts between through movements and vehicles turning off and onto the roadway, as well as conflicts between motor vehicles and pedestrians or bicyclists. Facility design addresses

roadway safety and operations with striping, geometry, turn movement channelization and other minor roadway reconstruction. Traffic calming devices may be applied to Local Streets and Neighborhood Routes to attempt to help protect neighborhoods from the intrusion of through-traffic, and from speed violations. Traffic calming techniques may include signage, curb extensions, traffic barriers, narrowed travel lanes, planted medians and other features.

Programs that allow better use of the existing transportation system benefit all users and improve system capacity and efficiency. Transportation System Management (TSM) is a general term used to describe techniques for increasing the efficiency, safety and capacity of a transportation facility without major new capital improvements. This may include signal improvements, facility design treatments, access management, managed lanes, turn restrictions, ramp metering, incident response, targeted traffic enforcement and/or programs that smooth transit operations, among other treatments.

3. **Monitoring travel conditions with an appropriate level-of-service or other performance standard**
The Transportation System Plan makes the presumption that building a roadway system to accommodate all motor vehicle traffic at desired standards during the peak travel period may not be practical. Certain project(s) necessary to provide desired peak-period motor vehicle performance would be extremely difficult to build for reasons of physical impacts, costs, and conflicts with other goals or community aspirations. In the meantime, the Interim Washington County Motor Vehicle Performance Measures will continue to fulfill the important role of evaluating target and acceptable motor vehicle performance. The Interim Washington County Motor Vehicle Performance Measures table is included at the end of this section in Table 4.

4. **Encouraging transportation demand management programs and partnerships**
Transportation Demand Management (TDM) is the general term used to describe any activity that provides an alternative to single-occupant-vehicle trips. TDM encompasses a range of strategies such as carpooling, staggered work shifts and/or telecommuting. These strategies encourage ridesharing (e.g., car- or van-pooling), transit use (e.g., fare subsidies), bicycle commuting (e.g., on-site showers, lockers or bike parking), walking to work and/or flexible work hours. TDM strategies are relatively low-cost initiatives that can help reduce traffic congestion problems and improve overall mobility.

As growth in Washington County occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to provide alternatives may help accommodate this growth. TDM strategies and programs have taken on increased importance and emphasis recently. This is in part due to an increased interest in improving air quality and active transportation and health. TDM strategies are encouraged by a number of organizations for these reasons, as well as reducing the need and expense for additional vehicle capacity. The State of Oregon requires employers with more than 50 employees to have programs in place that reduce the percentage of employees who drive alone to work.

Transportation Management Associations (TMAs) are typically public/private partnerships that have been established in some areas to coordinate and assist firms in complying with these regulations and to be advocates for activities that reduce demands on our roadway system. TMAs play a role in reducing single-occupant-vehicle trips, reduce green-house gas emissions, foster economic vitality, improve health and enhance the efficiency of our

regional transportation network. Since 1997 the Westside Transportation Alliance (WTA) has worked with its partners and Washington County employers to offer workplace services and programs that help employees commute to work by transit, carpool, vanpool, walking and biking. More recently the WTA expanded its focus to include business services such as "last mile" connections and creation of bicycle parking resources.

## Goal 5: Mobility

*Promote the efficient and cost-effective movement of people, goods and services by all modes.*

**Objective 5.1 Provide a roadway system that is cost-effective, designed to operate efficiently, and serves all travel modes.**

Strategy 5.1.1 Recognize that the functional classification system represents a continuum in which through traffic increases and provisions for vehicle access decrease in the higher classification categories (see figure 5). Designate a roadway Functional Classification Map utilizing some or all of the following criteria for defining or modifying the functional classification:

A) Expected amount, type and characteristics of vehicle traffic.
B) Distance between similar roadways within the system.
C) Expected needs of the community and traveling public.
D) Extent of appropriate access.
E) Length of the roadway.
F) Land use along the roadway.
G) Neighborhood and community aspirations.

Strategy 5.1.2 Determine ultimate street design requirements and street profile for development review and/or public improvement based on the Functional Classification Map designation and/or Special Area Street Map designation; and utilize both the Regional Street Design Overlay Map, and the Lane Numbers Map to determine the appropriate right-of-way dedication and design treatment applicable within the currently adopted roadway standards (see table 3).

Strategy 5.1.3 Address potential impacts of long-distance trips on neighborhoods or communities by:

A) Ensuring that the collectors and arterials of the transportation system are designed to adequately accommodate these trips.
B) Designing and managing local streets to accommodate local trips and to discourage long-distance trips.

Strategy 5.1.4* Prior to adding through travel lane capacity to the Lane Numbers Map, or elsewhere in the transportation system plan, consider the following strategies~~,~~ in the order listed below:

A) Transportation System Management strategies, including Travel Demand Management, safety, operational and access management improvements.
B) Bicycle and pedestrian system improvements.
C) Appropriate lane-markings, safety improvements~~,~~ and other operational devices to improve traffic flow.
D) Land Use strategies to reduce motor vehicle congestion and peak-period demand.
E) Parallel connections and local street connectivity improvements.

*Strategy 5.1.4 has been developed based on and in response to the Regional Transportation Functional Plan requirements in Title 2, 3.08.220.

Strategy 5.1.5 Define and maintain a Countywide Roadway System that is intended to serve major travel movements, and appropriate for long-term Washington County operation and maintenance. Maintain a map which identifies county and state facilities on the Countywide Roadway System. Pursue jurisdiction of facilities identified for long-term county operation and maintenance.

**Objective 5.2 Provide systems to efficiently manage and operate the roadways.**

Strategy 5.2.1 Identify, evaluate, develop and enhance transportation system management and operation technology and techniques that limit congestion and maximize transportation system operating efficiency.

Strategy 5.2.2 Implement intelligent/adaptive transportation system technologies and techniques that improve the efficiency and operation of the transportation system.

Strategy 5.2.3 Coordinate efforts with regional partners to cooperatively develop subregional arterial surface street management systems and programs that include, but are not limited to, signal system coordination and optimization, video data collection, data retrieval and archiving.

Strategy 5.2.4 Coordinate with TriMet, Metro, the Oregon Department of Transportation (ODOT) and other agencies to provide appropriate signal priorities along frequent and rapid bus transit routes.

Strategy 5.2.5 Investigate managed lane treatments and other priority treatments for freight, transit~~,~~ or other modes, in appropriate corridors and/or locations.

Strategy 5.2.6 Investigate the potential for public/private partnerships to provide driver information services (such as phone applications and/or social media).

**Objective 5.3 Utilize the Interim Washington County Motor Vehicle Performance Measures to manage congestion** (*please note Interim Washington County Motor Vehicle Performance Measures will be the same as the volume to capacity ratio (V/C) standards adopted in 2002 (see table 4) until an analysis and update of performance standards has been completed and adopted*).

Strategy 5.3.1 Provide a transportation system that accommodates travel demand consistent with applicable performance standards for all modes of travel where feasible.

Strategy 5.3.2 Provide a roadway system that meets the mobility needs of Washington County residents and businesses~~,~~ as defined by performance standards identified in Interim Washington County Motor Vehicle Performance Measures of this plan.

Strategy 5.3.3 Implement Washington County projects necessary to improve performance and reduce system design deficiencies in roadway corridors and segments that are operating or forecasted to operate at less than acceptable standards as identified in the Interim Washington County Motor Vehicle Performance Measures.

Strategy 5.3.4 Implement Washington County's Comprehensive Plan, including the review of development applications, as defined by the performance standards identified in the Interim Washington County Motor Vehicle Performance Measures of this plan.

Strategy 5.3.5 Help provide a roadway system that addresses travel demand associated with anticipated new development or redevelopment~~,~~ by applying appropriate access management standards as defined and required within the Community Development Code (CDC).

Strategy 5.3.6 Recognize that flexibility is necessary and it may not be desirable or practicable to meet the interim level-of-service standard in all cases.

**Objective 5.4 Encourage Travel Demand Management efforts to reduce total vehicle travel~~,~~ and vehicle travel during peak hours.**

Strategy 5.4.1 Develop and emphasize Travel Demand Management and reduction strategies as mechanisms for reducing vehicle trips and shifting travel to off-peak periods.

Strategy 5.4.2 Work with the Westside Transportation Alliance, major employers and business groups to develop and implement demand management programs to work towards the mode share targets adopted in this plan.

Strategy 5.4.3 Explore Washington County's role~~,~~ with partners~~,~~ in coordination and development of Transportation Demand Management programs.

## Mobility Concepts

Functional Classification
This section elaborates on the functional classification system described by Strategy 5.1.1.

There are numerous ways in which the concept of roadway functional classification is defined and interpreted. Federal, state, regional and some city definitions within Washington County may differ from the classification scheme used here. ~~In practice, t~~This is not a problem in practice, because these classification systems reflect the general process described below.

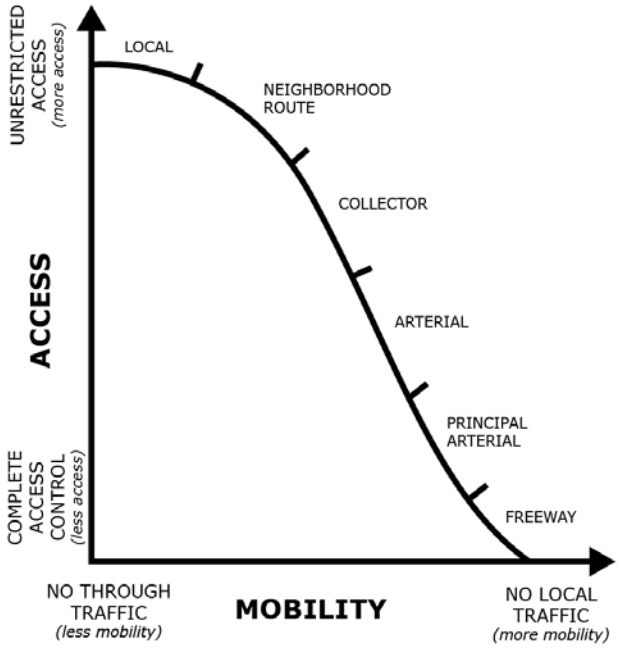
> Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.[1]

Both the Washington County Functional Classification System and Metro's Regional Transportation Plan Arterial and Throughway Network map describe a hierarchy of roadway types, their relative roles in the transportation system~~,~~ and provide direction with regard to appropriate classification criteria and facility design.

As depicted in Figure 5 below, roads perform two essential functions: they facilitate mobility and they provide access to individual properties. At the top end of the system, a Freeway's main function is to provide a continuous route that enables traffic to move easily over long distances. At the bottom end, a Local Street's primary function is to provide access to individual properties. Between these extremes, roadways provide access and mobility to varying degrees. In this manner, the functional classification system represents a continuum in which through-traffic increases and provisions for access decrease in the higher classification categories.

[1] FHWA Functional Classification Guidelines, 1989

**Figure 5**




**Relationship Between Functional Classification, Mobility, and Access**

Functional Classification Definitions

**Principal Arterials** form the backbone of the road network and are generally labeled freeways and highways. These routes connect over the longest distance (miles) and are spaced less frequently than other Arterials. These freeways and highways generally span several jurisdictions and can have statewide importance. At a minimum, highways that are classified by ODOT as Interstate or Statewide Highways are considered Principal Arterials. General characteristics of Principal Arterials can include:

- Freeways have the highest level of access control, including grade separated interchanges. No at-grade driveways or connections are allowed.
- Highways generally have limited at-grade connections.
- Freeways and highways provide connections for the movement of people, services and goods between the central city, regional centers and destinations beyond the region.
- Principal Arterials that are not freeways are managed to minimize the degradation of capacity while providing limited access to abutting properties.

**Arterial streets** interconnect with the Principal Arterial highway system. Arterials provide general mobility for travel within the Washington/Multnomah/Clackamas County area. Correctly sized Arterials at appropriate intervals allow through-trips to remain on the Arterial system thereby discouraging use of Local Streets for cut-through traffic. Arterial streets link major

commercial, residential, industrial and institutional areas. General characteristics of Arterials may include:

- Arterials serve as primary connections to Principal Arterials, and connect to other Arterials, Collector and Local Streets~~,~~ where appropriate.
- Arterials in the rural area provide connections to neighboring cities~~,~~ and farm-to-market access between urban and rural areas. Most rural Arterials serve a mix of rural-to-urban and farm-to-market traffic. In some cases rural Arterials, especially in rural/urban fringe areas, accommodate significant amounts of urban-to-urban through-traffic during peak commuting time periods. This is not the intended function of the rural Arterial designation and is often the result of congestion on urban Arterials.
- Arterials may provide freight movement similar to Principal Arterials.
- Arterials have moderate access control for cross streets and driveways. Typically, residential driveways are not allowed access to Arterials.

**Collector Streets** provide both access and circulation between residential, commercial, industrial and agricultural community areas and the Arterial system. As such, Collectors tend to carry fewer motor vehicles than Arterials, with reduced travel speeds. Collectors may serve as freight access routes~~,~~ providing local connections to the Arterial network. General collector characteristics can include:

- Collectors connect neighborhoods to nearby centers, corridors, station areas, main streets and nearby destinations in the urban area. Land development should not be sited to obstruct the logical continuation of Collector streets.
- In the rural area, Collectors are a primary link between the Local Street system and Arterials for freight, people, goods and services.
- Access control on Collectors is lower than on Arterials. Commercial, industrial and institutional uses will be eligible for direct access to Collectors in accordance with the provisions of Article V of the Community Development Code. Direct access to new residential lots is not permitted.

**Neighborhood Routes** are located in residential neighborhoods and provide connectivity to the Collector and Arterial system. They do not serve citywide or community circulation. Because traffic needs are greater than a Local Street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are allowed (including devices such as speed humps, traffic circles and other devices). New Neighborhood Routes that are not in this plan may be established via the land development process.

- The Neighborhood Route designation is appropriate for urban areas where neighborhood forms are more compact and the routes are much shorter than typically occur in the rural area.
- Traffic management or calming measures are allowed.

**Commercial/Industrial Streets** are a design variant of the Collector street designation and are intended to provide access to commercial or industrial properties. The application of this designation through the development review process may require a different design standard than the underlying functional classification designation.

**Local Streets** primarily provide direct access to adjacent land. While Local Streets are not intended to serve through-traffic, the aggregate effect of Local Street design can impact the effectiveness of the Arterial and Collector system when local trips are forced onto the Arterial Street network due to a lack of adequate Local Street connectivity. Local Street connectivity maps in the Community Plans identify new Local Street connections that are required by the Community Development Code in conjunction with development. New Local Streets that are not in this plan may be established via the land development process.

Rural Local Roads may be miles long because of large parcels and a relatively sparse street network. Many Rural Local Roadways are unpaved (gravel) and serviceability can vary with rainfall and maintenance. Rural Local Roads provide direct access to a variety of rural land uses including agriculture, forestry, quarry activities, low-density rural residential uses as well as rural commercial and industrial uses.

Rural Local Road characteristics include:

- Paved or unpaved surfaces.
- Narrow lane widths with roadside ditches to provide drainage.
- No access control and access points spaced far apart.
- Lack of traffic calming measures, sidewalks and illumination.

Urban Local Street characteristics include:

- Traffic calming measures are allowed.
- Access control is minimal with direct driveway connections permitted from all land use types.
- A connected network of Local Streets is required as set forth in the Local Street Connectivity Maps of the Community Plans and in the CDC.
- Sidewalks and street lighting.

**Special Area Streets** are sub-categories of Collector, Neighborhood Route, Commercial Street and Local Street underlying functional classification designations. Special Area street designations are most frequently applied in transit-oriented overlay districts within 2040 Center and Station Community Area designations. They are identified on the Special Area Street Overlay Map and also in the Community Plans. Special Area Street design standards are included in the Washington County Road Design and Construction Standards.

- **Special Area Collectors** are intended to link traffic from Special Area Local Streets, Special Area Neighborhood Routes, and some Special Area Commercial Streets to Arterials. Posted speeds are low to moderate. A moderate degree of non-transit oriented development traffic would be acceptable for these facilities.

  The design of a Special Area Collector provides multi-modal access to the Arterial system, station area employment and high density residential areas while discouraging traffic infiltration on local streets. In addition to autos, these facilities accommodate primary and secondary bus lines, bike lanes~~,~~ and sidewalks separated from the street by a landscape strip. Based on an engineering analysis, left turn lanes in medium and low density residential areas may be generally provided at intersections with Arterials.

Developments which are oriented to Special Area Collectors are generally employment-based or multi-family residential. Single-family residential developments that abut a Special Area Collector are typically oriented away from road.

- **Special Area Neighborhood Routes** serve both a traffic collection and distribution function and provide access to adjacent properties. These facilities are intended to have less volume and less through-traffic than Special Area Collectors. Posted speeds are low~~,~~ and a limited amount of non-transit oriented development traffic is acceptable for these facilities. New Special Area Neighborhood Routes that are not in this plan may be established via the land development process.

  The design of Special Area Neighborhood Routes emphasizes neighborhood orientation by accommodating on-street parking, transit service~~,~~ and bicycles in a relatively narrow paved width which includes the use of traffic calming measures. Exclusive turn lanes are not appropriate for these facilities unless needed for safety at intersections with Arterials.

  Special Area Neighborhood Routes primarily serve residential land uses. Development which includes small to medium scale mixed uses is also appropriate.

- **Special Area Commercial Streets** serve local access and service needs associated with urban high density residential, mixed use and employment-oriented land uses. These roads are not intended to serve through-trips but may have higher traffic volumes than Special Area Neighborhood Routes. The street may not exceed two travel lanes in each direction. Speeds should be low. New Special Area Commercial Streets that are not in this plan may be established via the land development process.

  The design of Special Area Commercial Streets reflects intensive localized urban use by all modes. The road must accommodate autos, trucks, buses and bicycles while also providing transit stop amenities and frequent opportunities for pedestrian crossings. Sidewalks are wide and have tree wells to encourage walking.

- **Special Area Local Streets** provide direct property access. They are not intended to serve through-traffic. Posted speeds are generally low. The design of Special Area Local Streets reflects the residential neighborhood function by accommodating on-street parking on a narrow paved width which can include traffic calming measures to slow down traffic. Special Area Local Streets should serve only low to medium density residential districts. New Special Area Local Streets that are not in this plan may be established via the land development process.

**Table 3: Functional Classification Design Parameters**

| Roadway Classification | Lanes[1] | Bike Lanes[2] | Max ROW[3] | Max Paved Width[3] |
|---|---|---|---|---|
| Principal Arterials & Arterials[5] | 7 | Yes | 122 Feet | 98 Feet |
| | 5 | Yes | 98 Feet | 74 Feet |
| | 3 | Yes | 90 Feet | 50 Feet |
| | 2 | Yes | 90 Feet | 48 Feet |
| Collectors[3,4] | 5 | Yes | 98 Feet | 74 Feet |
| | 3 | Yes | 74 Feet | 50 Feet |
| | 2 | Yes | 74 Feet | 50 Feet |
| Special Area Collectors[5] | 3 | Yes | 52 Feet | 46 Feet |
| | 2 | Yes | 40 Feet | 34 Feet |
| Neighborhood Routes | 2 | No | 60 Feet | 36 Feet |
| Special Area Neighborhood Routes[5] | 2 | No* | 44 Feet | 38 Feet |
| Commercial/Industrial | 4 | No | 70 Feet | 50 Feet |
| | 3 | Yes | 64 Feet | 50 Feet |
| | 2 | No | 64 Feet | 34 Feet |
| Special Area Commercial Streets[5] | 4 | No* | 70 Feet | 64 Feet |
| | 3 | No* | 58 Feet | 52 Feet |
| | 2 | No* | 46 Feet | 40 Feet |
| Locals | 24' Travel Way | No | 60 Feet | 32 Feet |
| Special Area Local Streets[5] | 16' Travel Way | No | 38 Feet | 32 Feet |

*While these facilities do not include bike lanes, they do include wide travel lanes of 14 feet due to constrained right-of-way width – see Footnotes 2 and 5.

Footnotes:
1. The maximum number of travel lanes that can be built without a plan amendment is identified on the "Road Lane Numbers" Map except for roads allowed to be built as provided by the Community Development Code (CDC). This plan-level decision establishes the transportation system capacity necessary to adequately serve future travel demand identified in the TSP. The number of lanes required to accommodate turning movements at intersections and interchanges will be determined through traffic analysis conducted during the transportation project development process. This project-level decision identifies physical improvements necessary at or near intersections and interchanges to safely and efficiently move toward attaining the system capacity identified in the TSP. Improvements may include turn lanes and auxiliary lanes adjoining the traveled roadway to accommodate weaving, merging, speed changes~~,~~ or other purposes supplementary to through traffic movement. Auxiliary lanes to address spot area capacity and safety needs may extend between intersections (including interchanges) and beyond an intersection. Opportunities for public participation are available as provided by the CDC.

*<continued next page>*

2. Bikeways or bicycle lanes are required on all urban Collectors and Arterials, including Special Area Collectors. Six-foot wide, striped and stenciled bike lanes or other appropriate bicycle treatments shall be constructed along these facilities except where special constraints exist, as determined by the County Engineer. In those areas, five-foot wide bike lanes, 14-foot wide outside travel lanes or other appropriate facilities may be used and transitioned back to the appropriate bicycle facility when the constraint ends. Outside of the UGB, refer to the Bicycle System map to determine which facilities are intended to have bikeways. These bikeways may be a minimum of six-foot wide paved shoulders.

3. Minimum right-of-way and maximum paved widths identified here are, as a rule, the maximum that can be built on roadway segments without an amendment to the TSP. However, plan amendments will not be required when it is determined during the project development or development review processes that these maximums should be exceeded. The reasons to exceed the maximums may include ~~to~~ accommodation~~te~~ or topography or other project-level refinements associated with safety and/or wider than standard pedestrian facilities bus pullouts; on-street parking; project impact mitigation measures; and intersection, interchange or other project features identified as necessary for safe, efficient operation of the planned transportation system. All intersections along Arterials and Collectors shall be planned to include right-of-way necessary for turn lanes within 500-feet of intersections~~,~~ based on a 20-year analysis of intersection needs. Actual right-of-way requirements may be less than the maximums specified in the table based on roadway characteristics and surrounding land uses. On two and three lane urban Collectors, right-of-way may by reduced to 60 feet and maximum paved width may be reduced to 36 feet through the land development or project development processes. Such a determination can be made when there is a finding that a turn lane is reasonably unlikely to be needed based on anticipated future development and traffic analysis, and after consideration of other related transportation facilities including storm water quality facilities. Acquiring adequate right-of-way is important to avoid unnecessary and costly future improvement impacts. In all circumstances, Arterial, Collector and Neighborhood roadways right-of-way shall be no less than the roadway width (curb to curb or back of shoulder to back of shoulder) plus 24 feet. In rural areas, the maximum right-of-way for Collectors shall be 60-feet. Article VII of the CDC identifies land use standards, public notice and involvement provisions and appeal opportunities that are provided in the land use permitting process.

4. On those Arterials and Collectors designated on the 'Regional Street Design Overlay' Map as 'Boulevards', 'Boulevard Intersections' or 'Streets', or located within identified 'Pedestrian Districts' on the Pedestrian System map, sidewalks widths and other design features such as planter areas shall be determined based on the applicable standards in the Community Plans~~,~~ and/or CDC.

5. 'Special Area' streets (Collector, Neighborhood, Commercial or Local classifications) are shown on the 'Special Area Street Overlay' maps. Special Area Local Streets may also be designated in the appropriate Community Plans and/or by the CDC. Additional Special Area Neighborhood Routes and Special Area Local Streets may be designated using the development review process. Special Area Street designs will be determined via the development review process. While Special Area Commercial Streets do not include striped bicycle lanes, they shall include wide travel lanes of 14 feet to accommodate bicycle use. For Special Area Collectors, in addition to the right-of-way, a nine-foot minimum utility/sidewalk easement shall be dedicated on each side of the right-of-way. For Special Area Local streets, in addition to the right-of-way, a ten-foot minimum utility/sidewalk easement shall be dedicated on each side of the right-of-way. For Special Area Alleys, additional right-of-way may be required as part of development review. The right-of-way determination may include special consideration of other related transportation and water quality facilities, such as (but not limited to): low impact water quality treatment, parking, intersection bump outs, mid-block crossings and/or trail extensions.

Interim Washington County motor vehicle Level-of-Service standard
This section elaborates on the motor vehicle level-of-service standard described by Objective 5.3

**Table 4: Interim Washington County Motor Vehicle Performance Measures**

| MAXIMUM VOLUME TO CAPACITY (V/C) RATIO STANDARDS | | | | |
|---|---|---|---|---|
| **Location[2]** | **AM/PM Peak Two-hour Period** | | | |
| | **Target[1] Performance Measures[3]** | | **Acceptable[1] Performance Measures[3]** | |
| | First Hour[4] | Second Hour[4] | First Hour[4] | Second Hour[4] |
| Regional Centers<br>Town Centers<br>Main Streets<br>Station Communities | .99<br>(E) | .9<br>(D) | .99<br>(E) | .99<br>(E) |
| Other Urban Areas | .9<br>(D) | .9<br>(D) | .99<br>(E) | .9<br>(D) |
| Rural Areas | .9<br>(D) | .9<br>(D) | .9<br>(D) | .9<br>(D) |

[1] For development review purposes, these performance standards will be used in assessing safety improvements. For plan amendment purposes, if a plan amendment is predicted to exceed the acceptable performance standard, the performance on applicable facilities will not be allowed to deteriorate further, and mitigation may be necessary. For project development purposes, these performance standards will be used to evaluate conditions beyond the transportation plan's planning horizon, as appropriate.
[2] For location reference see 2040 Growth Concept Design Types Map.
[3] Vehicle performance shall be determined by using volume to capacity ratios. Volume to Capacity equivalencies to Level of Service (LOS) are as follows: LOS C = V/C of 0.8 or lower; LOS D = V/C of 0.81 to 0.9; LOS E = V/C of 0.91 to 0.99. Further discussion of vehicle performance is provided in the Technical Appendix.
[4] First Hour is defined as the highest hour of the day. Second hour is defined as the hour following the first hour.

Access Management
This section elaborates on the access management provisions described by Strategy 5.3.5

**Roadway Access:**
All developments shall have legal access to a county or public road. Access spacing shall be measured from existing or approved accesses on either side of a street or road. In general, no use is permitted to have direct access to a street or road except as specified below, unless otherwise specified in the CDC.

**Principal Arterials:**
Principal Arterials shall be designed and developed as limited access facilities. Access to a Principal Arterial is subject to approval by ODOT through the State's Access Management Policy and its implementing measures.

**Arterials:**
Direct access to Arterial roads shall be from Collector or other Arterial roadways.

**Collectors:**
All commercial, industrial and institutional uses with one hundred fifty (150) feet or more of frontage will be permitted direct access to a Collector. Where a common access is available it shall be used, provided that such use will not result in serious operational or safety problems.

Access shall be located to provide adequate left turn refuge as required by Resolution and Order No. 86-95 as modified or updated.

**Neighborhood Routes:**
All residential, commercial, institutional and industrial uses with seventy (70) feet or more of frontage will be permitted direct access to a Neighborhood Route. Uses with less than seventy (70) feet of frontage shall not be permitted a permanent single or separate direct access to a Neighborhood Route. Where a common access is available it shall be used, provided that such use will not result in serious operational or safety problems.

**Local Streets:**
Access points near an intersection of a Collector or Arterial shall be located beyond the influence of standing queues of the intersection in accordance with engineering standards.

**Interim Access:**
Interim access onto any county road in the unincorporated or incorporated urban area shall be permitted only upon issuance of an access permit. An access permit may only be issued upon demonstration of compliance with the provisions of the road standards and the standards of the CDC.

# Goal 6: Accessibility

*Provide safe and efficient access to destinations within Washington County.*

Accessibility provides the connection and integration between land use and transportation. The accessibility goal~~,~~ and its related objectives and strategies~~,~~ encourages Washington County to plan for equitable access and a barrier free transportation system, including compliance with the Americans with Disabilities Act (ADA). The transportation system should be designed to provide affordable and equitable access to travel choices that serve the needs of people and businesses, including those with low income, children, the elderly and people with disabilities. The transportation system is needed to provide access to and within all destinations, with particular emphasis on providing access to destinations essential for daily needs.

Accessibility can be measured by the ability to reach desired goods, services, activities and destinations with relative ease~~,~~ and within reasonable timeframes and costs. Many factors may affect accessibility (or physical access), including the quality, cost and affordability of transportation options, land use patterns, connectivity of the transportation system and the degree of integration between travel modes. The accessibility of a particular location can be evaluated based on distances and travel options~~,~~ and how well various modes serve that location.

The Regional Transportation Plan (RTP) calls for a measurement of "basic infrastructure." This performance target is measured by the number of essential destinations accessible within 30 minutes by trails, bicycling and public transit~~;~~ or within 15 minutes by sidewalk. The RTP also calls for "access to daily needs" using the same measurement methodology, but specifically measures transportation disadvantaged populations. The RTP calls for monitoring of these performance targets to provide accountability. Decision-makers can use this information to adapt policies and investment strategies based on what is learned.

The Americans with Disabilities Act (ADA) of 1990 affects a great deal of transportation infrastructure. Many of the requirements have been implemented through the Uniform Building Code, which outlines the details of designing and implementing appropriate features for people with disabilities. Washington County sidewalks are now required to be implemented with curb-cuts at intersections. As a component of ADA compliance, TriMet operates a paratransit service called LIFT. Registered customers who have a disability or disabling health condition that prevents independent use of TriMet buses and/or trains may use this shared-ride public transportation service. Rides are by advance reservation only. The origin and destination of a trip must be located within TriMet's service boundary and within three-quarters of a mile of fixed route transit service. TriMet's stops, stations and vehicles have accessibility features that help make it easier for people with disabilities to readily use TriMet.

Another form of accessibility is emergency response. Emergency response time for life-threatening emergencies is critical. Total response time for these events is measured in three elements:

- Alarm processing - the time interval from incident initiation (9-1-1 pick-up) to dispatch.
- Turnout - the time interval from dispatch to vehicle enroute for first arriving unit.
- Travel – the time interval enroute to arrival of first responding unit.

## Goal 6: Accessibility

*Provide safe and efficient access to destinations within Washington County.*

**Objective 6.1 Provide an accessible, multi-modal transportation system that meets the needs of the community.**

Strategy 6.1.1 Coordinate with private and public developers and the public to provide access via a safe, efficient, and appropriately balanced system of complete streets.

Strategy 6.1.2 Encourage modifications that bring driveway and other access points into compliance or closer to compliance with applicable standards.

Strategy 6.1.3 As appropriate, require development adjacent to transit routes, and within transit oriented districts, to provide direct pedestrian and bicycle access to transit, including street crossings.

Strategy 6.1.4 Provide or encourage enhanced or improved pedestrian and bicycle street crossings in locations where demand for crossing is apparent, conflicts between vehicles and pedestrians or bicycles have been observed, and safe operational conditions can be maintained for all modes after installation. Such crossings are preferred at intersections. Mid-block crossings of county roadways must meet applicable warrants.

Strategy 6.1.5 Develop performance measures that quantify the accessibility of essential destinations and work to increase the accessibility of those destinations.

Strategy 6.1.6 Consider all abilities and travel options when planning, designing and implementing transportation improvements.

Strategy 6.1.7 Provide adequate access for emergency service vehicles throughout the system. Coordinate with emergency service providers on proposed transportation improvements and/or design and placement of traffic calming devices. Consider emergency vehicle access during the review of proposed private development actions as required by the Community Development Code (CDC).

Strategy 6.1.8 Identify opportunities, and consider actions, to improve access in underserved communities.

# Goal 7: Connectivity

*Provide improved and new transportation connections within and between developed and developing areas.*

Connectivity creates multiple opportunities for movement within and between neighborhoods~~,~~ as well as within areas of employment and other parts of the community. The connectivity goal encourages Washington County to plan for an interconnected transportation network. Connectivity focuses on an interconnected multi-modal local street network and provision of accessways for non-motorized modes where multi-modal street connections are impractical. This encourages local travel needs so that local trips are can be made easily and efficiently, without needing to use the Arterial or Collector street system. New development and redevelopment is required to meet connectivity standards.

This goal does not necessarily require a grid street system, but is intended to provide for a development and system pattern which provides choices and convenient circulation for pedestrians, bicyclists and transit users and motorists. The Community Development Code (CDC) requires appropriate neighborhood circulation. See the CDC for more information regarding requirements and standards for both on-site and off-site circulation.

Local Street Connectivity

Local Streets are intended to provide direct property access. Local Streets should provide routes for local trips to help keep through trips on Collector and Arterial streets. While Local Streets are not intended to serve through traffic, the aggregate effect of Local Street connectivity impacts the effectiveness of the Arterial and Collector system. Therefore, a connected Local Street system should be established in order to provide for local travel needs and to help preserve the capacity of the Arterial and Collector streets for longer or regional trips. Local Street connectivity requirements are defined within the CDC.

**Community Plan Local Street Connectivity Maps**

The Local Street system will provide a connected network that facilitates local travel needs, lands that have been determined to be of sufficient size and that are candidates for development or redevelopment, are identified on the Local Street Connectivity maps~~./~~ Local Street Connective Maps and standards are used to meet Metro's street connectivity requirements, provide a generally direct and uncircuitous pattern of streets~~,~~ and to ensure the development will not preclude future street connections to lands not yet developed. The Local Street Connectivity Map indicates where, as part of development, Local Streets are required to connect to the existing system. Where it is impracticable to provide a Local Street connection based on criteria in the CDC, bicycle and pedestrian accessways are required instead. The general connectivity requirements of the CDC apply to lands not on these maps.

Washington County has identified potential Local Street Connectivity Lands. These lands are defined as contiguous vacant or underdeveloped urban lands of five (five) acres or more. On these lands, new development would be subject to a shorter block length standard (530 feet vs. the existing 600 foot standard). In addition, cul-de-sacs are limited to no more than 200 (two hundred) feet and no more than 25 dwelling units are allowed on closed end streets that cannot be extended due to physical or environmental constraints. Within areas designated as Local

Street Connectivity Lands, the connectivity standards are applicable to mixed use developments, ~~which could~~ include~~e~~ing multi-family and/or commercial development. ~~On such lands, s~~Street connections would be required where practicable on such lands.

**Circulation System Design and Transit Oriented design principles**
Throughout Washington County the design and location of the circulation system in a community is the key element for determining pedestrian connectivity and the arrangement of land uses. These principles and standards are of particular importance with Transit Oriented Districts. Within such Transit Oriented Districts, an urban scale block dimension and clearly delineated pedestrian system should provide direct connections to transit service. These direct pedestrian connections should be clearly marked and designed to avoid conflicts with vehicles. When developing the design, considerations may include the anticipated concentrations of employment or housing~~,~~ as well as public building and common open spaces.

## Goal 7: Connectivity

*Provide improved and new transportation connections within and between developed and developing areas.*

**Objective 7.1 Provide an interconnected transportation network that offers multi-modal travel choices and minimizes out-of-direction travel for all modes.**

Strategy 7.1.1 Require development to provide an interconnected local street system~~,~~ as set forth in the Community Development Code and/or Community Plans, including a pedestrian and bicycle network. Require accessways in locations where street connections are undesirable or impracticable.

Strategy 7.1.2 Require development to provide connections to established or planned accessways, trails, easements and other non-motorized facilities.

Strategy 7.1.3 Require development to address connectivity standards on lands designated on the Local Street Connectivity Maps and/or within areas designated as Transit Oriented Districts.

Strategy 7.1.4 Prioritize projects that complete facility gaps and deficiencies as funding allows.

Strategy 7.1.5 Encourage the off-street trail networks to be integrated with on-street pedestrian and bicycle facilities.

**Objective 7.2 Identify as Study Areas locations where new Arterial or Collector connections are necessary, but the specific route of the connection has not been determined.**

Strategy 7.2.1 Within designated Study Areas, require that development demonstrate how the proposal shall accomplish the needs identified by the Study Area.

Strategy 7.2.2 Seek to identify the specific location of the Arterial or Collector connections within Study Areas, amend the appropriate maps and remove the study area designation~~,~~ as funding and resources allow.

**Objective 7.3 Consider new road alignments shown on the Functional Classification System Map and Community Plans to be general and subject to modification depending on impacts and issues assessed during the project development and development review process.**

Strategy 7.3.1 Analyze and design new roads when development applications are received or funds become available.

Strategy 7.3.2 Provide flexibility at the plan and project development level to respond to location-specific considerations consistent with environmental, community and transportation system objectives.

Strategy 7.3.3 Identify on-site new and/or additional Neighborhood Routes and Special Area Local Streets through the development review process.

Strategy 7.3.4 Modify alignment of proposed roads as determined through project development and/or the development review process and consistent with the Implementation section of this plan.

# Goal 8: Active Transportation

*Create a built environment that encourages safe, comfortable and convenient active transportation options that are viable for all users.*

Active transportation refers to human-powered travel, including walking and bicycling. Public transit is also a component of active transportation because accessing transit stops usually involves walking or bicycling. Widespread use of the term began in the first decade of the 21st century as transportation policy placed increased emphasis on non-automobile modes, and as the links between human health and transportation planning became more evident.

Active transportation modes are essential components of the overall transportation system, meeting a variety of societal, environmental and economic goals. These include:

- **Environmental stewardship and energy sustainability** Replacing gasoline--powered automobile trips with active trips reduces the emission of greenhouse gases, air toxins and particulates, helping to maintain air quality and address energy sustainability.

- **Congestion alleviation** People who walk, bike and use transit reduce the number of motor vehicles vying for space on roadways and in parking lots. The active mode share for commuting from Washington County is currently estimated to be about 11% for work-related trips.[1] Reduced congestion improves air quality, livability, and economic vitality.

- **Health** "Obesity is one of the biggest public health challenges the country has ever faced."[2] The conditions in which we live explain in part why some Americans are healthier than others, and why Americans are generally not as healthy as they could be. The social determinates of health include five key areas: Economic Stability, Education, Social and Community Context, Health Care and Neighborhood and Built Environment. The TSP sets the framework for future decisions about ~~the last of these,~~ the Neighborhood and Built Environment component. Due to the connection to public health and healthy outcomes, it is necessary that public health and active lifestyles are considered as we make these choices. The transportation system is necessary to provide access to health care and emergency services. Furthermore the transportation system provides the environment for an active lifestyle. Infrastructure that enhances pedestrian, bicycle and transit networks also enhances opportunities for physical activity within our communities. This may in turn help address obesity and other public health related issues.

- **Safety** As walking and bicycling trips increase, so does the relative safety of those modes. In Portland, for example, the bicycle crash rate (reported crashes normalized by counted bicycle trips) has shown a general downward trend in the past decade, even as daily bicycle trips have more than doubled.[3] This can be partly attributed to increased attentiveness on the part of motorists as they see more bicyclists on the road. The same trend applies to pedestrian safety.

[1] American Community Survey 2010 One-Year Estimates, U.S. Census Bureau, 2011.
[2] *F as in Fat: How Obesity Threatens America's Future 2010*, a report from the Trust for America's Health.
[3] 2011 Bicycle Counts Report, Portland Bureau of Transportation, 2012.

abcdef Proposed additions
~~abcdef~~ Proposed deletions

- **Efficient travel** For many trips, active transportation choices are the most sensible and efficient mode. For very short trips, such as a quarter-mile trip to a convenience store, walking can be the best choice. Trips in the one to five mile range are often ideal for bicycling.

- **Cost savings and social equity** Some people in Washington County and nationwide cannot afford to or choose not to own or operate a private vehicle. For those who need or want to reduce their transportation costs, active transportation is a common solution.

- **Attractive, efficient urban form** The popularity of neighborhoods designed around a higher density urban form with active transportation facilities shows this type of community is increasingly desirable. From the historic, tree-lined streets of Forest Grove to the rapidly growing Orenco Station neighborhood, active transportation facilities like sidewalks, bike lanes and frequent transit are drawing residents and businesses. Walkable neighborhoods tend to be compact, using urban land efficiently and helping to meet other land use policies such as agricultural preservation.

Washington County has ~~been conducting~~ conducted active transportation planning for several decades, responding to regional and state mandates as well as the needs and desires of its populace. In addition to pedestrian, bicycle and transit components found in every major update to the Washington County Transportation Plan, the County has pursued targeted planning efforts to address active transportation needs and opportunities including:

- The **Washington County Pedestrian and Bicycle Plan** (2010)~~:~~ which built upon the wealth of information collected in the 2020 Transportation Plan, this plan lists prioritizes and estimates costs for needed pedestrian and bicycle improvements.

- The **Washington County Bicycle Facility Design Toolkit** (2012)~~:~~ is a design guide that helps the County make informed decisions on how to incorporate context-specific bikeway facilities into roadway capital and other projects.

- The **Washington County Bicycle and Pedestrian Improvement Prioritization Project** (2013)~~:~~ performed a detailed gap analysis of sidewalks and bicycle facilities along Arterial and Collector roads, followed by a criteria-based prioritization of system deficiencies. This project was funded by a grant from the U.S. Department of Energy (DOE).

- The **Washington County Neighborhood Bikeways Plan**~~:~~ was developed concurrent with the TSP, and identifies low-volume, low-speed neighborhood streets in the urban unincorporated area that can accommodate a wide-array of bicycle comfort levels.

**Complete Streets:**
ORS, OAR and the Oregon Transportation Plan establish that bicycle facilities are required on all Collector or higher classification roadways (except freeways) when those roads are constructed or reconstructed. Exceptions are provided where a bikeway is not safe, where cost is excessively disproportionate to need~~,~~ or where there is an absence of need due to sparse population or other factors. Likewise these requirements include constructing sidewalks along new urban streets and along existing urban streets when they are reconstructed. Roadways within Washington County are required to be consistent with these complete street regulations.

All projects are to be implemented in compliance with these and other applicable rules and regulations.

## Goal 8: Active Transportation

*Create a built environment that encourages safe, comfortable and convenient active transportation options that are viable for all users.*

**Objective 8.1 Provide a network of "complete streets" that safely and comfortably accommodate road users of all ages and abilities, including people walking, cycling, using mobility devices, taking transit and driving.**

Strategy 8.1.1 Prioritize public active transportation projects that are effective at improving connectivity, filling gaps, expanding coverage of the active transportation network and positively influencing walk/bike/transit mode shares.

Strategy 8.1.2 Early in the project development process, solicit and consider input from active transportation advocates to help optimize the design of pedestrian, bicycle and access-to-transit projects.

Strategy 8.1.3 On existing substandard streets where the construction of full street improvements is not practicable within the foreseeable future, consider the construction of interim pedestrian and bicycle facilities, as available public funding allows.

Strategy 8.1.4 Require new development to provide multi-modal complete street connections as defined in the CDC.

**Objective 8.2 Provide a pedestrian network that is safe, comfortable and convenient for people of all ages and abilities.**

Strategy 8.2.1 Prioritize pedestrian projects that are technically and financially feasible and that also improve connectivity, fill gaps, and/or provide safe routes to schools, community facilities, commercial areas, transit stops~~,~~ or essential destinations.

Strategy 8.2.2 Prioritize pedestrian projects based on need; factors to consider may include: safety, density (residential and employment), access to essential destinations and transit~~,~~ and environmental justice factors, among others.

Strategy 8.2.3 Inside the Urban Growth Boundary, require that sidewalks are constructed along new or improved streets and along street frontages of new developments.

Strategy 8.2.4 Facilitate safe, convenient and comfortable pedestrian facilities through the provision of pedestrian scale amenities as deemed appropriate and in compliance with applicable regulations.

Strategy 8.2.5 Consider enhanced pedestrian crossings treatments at intersections and at other appropriate locations~~,~~ including school zones, commercial areas, major transit stops, trail crossings, Pedestrian Districts and warranted mid-block locations, using county-approved crossing treatments.

Strategy 8.2.6 In rural pedestrian activity areas, which includes recreational trail crossings, consider improvements that enhance pedestrian safety.

**Objective 8.3 Expand and improve the quality of bicycling infrastructure.**

Strategy 8.3.1 Refer to the guidelines set forth in the Washington County Bicycle Facility Design Toolkit when designing new or reconstructed urban and rural Principal Arterials (except for freeways), Arterials and Collectors, and implement treatments as deemed appropriate.

Strategy 8.3.2 Develop a system of neighborhood bikeways on appropriate low-volume streets (as defined in the Neighborhood Bikeways Plan) to supplement the system of bicycle lanes and paved shoulders on major streets.

Strategy 8.3.3 Designate a functional classification of bikeway travel, including a preferred bikeway network, considering the following criteria for defining or modifying the classification:

A) Expected amount, type and characteristics of bicycle use.
B) Population density of surrounding community.
C) Average daily vehicle traffic.
D) Posted travel speed.
E) Topography.
F) Road network density.
G) Land use mix.

Strategy 8.3.4 Maintain and periodically revisit bicycle parking requirements in the CDC for applicable new development.

Strategy 8.3.5 Coordinate the development of the bikeway system with other local and regional agencies and integrate it with the delivery of other transportation services.

Strategy 8.3.6 Consider developing a rural road bicycle safety study that proposes solutions and strategies to increase the safety of recreational and utilitarian cycling in the rural area. Implement recommendations as appropriate.

**Objective 8.4 Assist partners in developing and maintaining an off-street trail and accessway network that serves both recreational and transportation functions.**

Strategy 8.4.1 Require new development and redevelopment to provide adequate neighborhood connectivity by constructing public accessways, both within the site and connecting to adjacent land uses, in cases where street connections are not possible or not desired.

Strategy 8.4.2 Ensure that new development and redevelopment does not preclude implementation of the planned off-street trail network shown in the TSP.

Strategy 8.4.3 Work with Metro, Tualatin Hills Park & Recreation District (THPRD), cities, private developers and other entities to plan, map and improve countywide trail connectivity, including filling gaps in existing regional trails and planning new trails in areas lacking in these facilities.

Strategy 8.4.4 Designate a functional classification of existing and planned trails consistent with Metro and THPRD trail planning activities.

Strategy 8.4.5 For appropriate multi-use trails that are intended to serve a utilitarian function, encourage trail design and management solutions that facilitate the safe and efficient movement of trail users, including, but not limited to, the following:

A) Using surface materials that are durable, slip-resistant, watershed-friendly and resistant to ponding.
B) Avoiding or addressing flood-prone areas.
C) Minimizing sharp curves and out-of-direction travel that increase travel times and create blind spots.
D) In higher-density areas, installing pedestrian-scale trail lighting sensitive to surrounding land uses and wildlife habitat.
E) Keeping trails legally open during night hours.
F) Regular maintenance, surface repairs and debris clearing by the responsible jurisdiction.

Strategy 8.4.6 Explore trail provision and management solutions for areas of Washington County that lack a recreation district, parks department~~,~~ or other provider of trails.

**Objective 8.5 Improve access to and encourage the enhancement of transit service in Washington County.**

Strategy 8.5.1 Provide safe, convenient pedestrian and bicycle access to existing and proposed transit stops, including pedestrian crossings and other appropriate features near Major Transit Stops.

Strategy 8.5.2 Coordinate with TriMet and other transit providers in their efforts to provide new or improved transit service to underserved locations in the urban area where concentrations of households, jobs or transit-dependent populations may warrant better service.

Strategy 8.5.3 Work with Metro, TriMet and the cities to plan and implement new High Capacity Transit Corridors identified in the Regional High Capacity Transit System Plan.

Strategy 8.5.4 Work with employers, Westside Transportation Alliance, TriMet and other transit providers to identify creative solutions to bridge the "last mile" from transit stop to workplace.

Strategy 8.5.5 Encourage Ride Connection, Yamhill County Transit, Columbia County Transit and other transit providers to continue and potentially enhance operation of rural transit where it is cost-effective and warranted by demand.

Strategy 8.5.6 Facilitate TriMet LIFT service operations, and the provision of accessibility features at transit stops and on transit vehicles.

**Objective 8.6 Encourage and promote the use of active transportation options through programmatic approaches.**

Strategy 8.6.1 Work with transportation management associations, employers, schools, agencies that serve disadvantaged populations, and active transportation advocacy organizations, to promote walking, bicycling and transit options for residents and workers in Washington County.

Strategy 8.6.2 Consider developing a countywide Safe Routes to School program in partnership with school districts.

Strategy 8.6.3 Develop wayfinding signage guidelines in coordination with Metro, cities and THPRD, and incorporate signage into proposed Neighborhood Bikeway, trail, streetscape and other appropriate improvement projects, as funding allows.

Strategy 8.6.4 Coordinate with the Washington County Department of Health and Human Services and other health organizations to promote and measure the public health benefits of active transportation.

Strategy 8.6.5 Develop active transportation performance measures, including mode share targets.

# Implementation

Ultimately, the value of the Transportation System Plan (TSP) will be determined by the success of its implementation. In order to assure that the transportation system effectively meets the needs of county residents and businesses, Washington County must make the commitments necessary to pursue implementation. How the provisions are carried out is at least as important as what is in the TSP. Among the most important provisions, the TSP stresses the need for efficient management of the system over time. The TSP implementation element consists of a number of interrelated activities and processes that should be carried out on a regular basis. Implementation objectives and strategies are addressed in the following three goals:

- **Goal 9 Coordination**
- **Goal 10 Funding**
- **Goal 11 Maintenance**

Many transportation system investments are completed by the development community as conditions of development approval. Implementing the TSP includes working with the development community to provide improvements proportional to the impacts of the development and transportation related conditions of development approval reflective of the aspirations of the community.

Public capital improvement programs cover a broad range of scale and type of improvements and funding categories. Development of capital improvement and maintenance programs rely heavily on the TSP monitoring activities. Information provided by regular system monitoring is needed in order to make informed decisions regarding selection of construction and maintenance projects. Coordination with state, regional and local jurisdictions and their planning processes is imperative in order to develop unified requests for funds and to help secure optimum benefits for the transportation systems within Washington County. A periodic review of funding and maintenance should include items such as an inventory of capital and maintenance expenditures, updates of planning-level project costs, estimates of anticipated revenues and an update of the long-term revenue forecasts.

Likewise, public involvement is critical during the development and implementation of the TSP. Such public involvement ensures that transportation needs are appropriately defined and met. Engagement of interested groups and members of the public in transportation planning, programming and project development activities ensures that system implementation is reasonably and fairly carried out.

**Monitoring**

Transportation system operating characteristics are influenced by a number of different factors~~,~~ which should be reviewed regularly to determine whether changes in project lists, prioritization or general plan policies are needed. Characteristics to monitor include population and employment growth, changes in travel patterns or modes, development activity, traffic volumes and accident analysis, transportation facility construction and condition~~,~~ and plan amendments that occur over time.

Periodic reviews of the TSP help Washington County achieve satisfactory transportation and land use benefits~~,~~ as well as progress towards achieving regional mode share targets.

Amendments and administrative adjustments are necessary to enable Washington County to ensure implementation actions are consistent with and advancing Plan goals and objectives. Washington County amends and adjusts the TSP as necessary, according to the following procedural descriptions:

**A. Legislative Amendments:**

Changes which involve the creation, broad scale implementation or revision of public policy, including map changes where property owners are directly affected~~,~~ may be processed as legislative plan amendments, including public hearings~~,~~ as provided for in the Community Development Code (CDC). These include but are not limited to the Functional Classification Map and descriptions, Bicycle System Map (excluding alignment modifications to off-street pathways), Plan goals, objectives and strategies, modification to the general location of facilities identified in the Plan~~,~~ and selection of the general location of a facility in a Corridor Study Area.

**B. Quasi-Judicial Amendments:**

When property is proposed for development and is affected by (i.e., contiguous to or traversed by) a proposed road alignment as shown on the functional classification map, a modification to the proposed road alignment may be processed as a quasi-judicial plan amendment. Such quasi-judicial plan amendments are provided for in the CDC. Quasi-judicial plan amendments may include a public hearing when the road alignment affects other properties in the immediate vicinity. Applications for quasi-judicial plan amendments may be initiated by the County Board of Commissioners, the Director of the Department of Land Use & Transportation~~,~~ or the owners of property affected by the proposed alignment. A quasi-judicial plan amendment may be approved only if all the following criteria are satisfied:

1. The new alignment maintains the intent and purpose of the proposed alignment as originally shown on the Plan maps;
2. The new alignment will not adversely affect the carrying capacity, safety~~,~~ or integrity of the transportation system;
3. The new alignment is necessary to preserve a significant natural feature, minimize engineering or construction constraints or would result in a significant enhancement of the development potential of the affected properties;
4. The new alignment will not significantly increase the cost or complexity of any off-site improvements; ~~and~~
5. The new alignment does not have significant adverse affects on nearby property; and~~.~~
6. The new alignment does not render a parcel unbuildable unless the owner consents.

**C. Minor Adjustments include:**

1. Adjustments to reflect minor modifications of existing roads outside an Urban Growth Boundary (UGB) that are determined to comply with the provisions of OAR 660-12-065.
2. Adjustments to reflect minor modification of a proposed road alignment that is part of a proposed development action within the UGB when the proposed change is contained within the subject site and does not adversely affect an adjacent property.

When these criteria are met, the change in alignment may be processed as part of a development application without separate notice or hearing. The Minor Adjustment criteria does not apply to adjustments of Special Area Streets.

D. For Special Area Streets, adopt road alignment corridor maps in Community Plans which allow limited movement of road centerlines through a Type II process. Modifications to streets to a greater extent than is allowed through a Type II process may be allowed through a Type III process subject to the criteria in the CDC. Modifications that do not meet the Type III criteria shall be subject to a quasi-judicial or legislative plan amendment process.

E. The Director of the Department of Land Use & Transportation shall determine if a proposed road alignment modification is legislative, quasi-judicial or a minor adjustment.

# Goal 9: Coordination

*Implement the Transportation System Plan by working with the public, community groups, transit providers, cities and other government agencies.*

**Public involvement**

Engaging the general public, interested stakeholders and working with state, regional and local jurisdictions is imperative to assure that the transportation system effectively meets the needs of all county residents and businesses.

Public involvement is critical during the development of the TSP and in defining how the TSP should be implemented. Public involvement is intended to ensure that transportation related needs are appropriately defined and met. Methods for engaging the public, interested stakeholders and community groups are constantly evolving. This element of the TSP ensures individuals have the opportunity to be actively involved in all phases of the planning, programming and project development processes. In addition to other outreach efforts, Washington County has an active public involvement program used during all stages of transportation planning, programming and project development.

**Agency coordination**

In Washington County, where the State of Oregon, Metro, TriMet, 16 local governments, several special services districts, including Tualatin Hills Park & Recreation District (THPRD), and a number of private enterprises either provide or rely on the transportation system, coordination is essential.

Local governments in Washington County have been successful in coordinating and integrating transportation activities, programs and policies. Regular discussions at monthly meetings of local government leaders has strengthened consensus around identifying and responding to issues. The Washington County Coordinating Committee's (WCCC) primary purpose is to coordinate activities of Washington County local governments and to work toward positions of consensus on regional and state land use and transportation planning matters. The WCCC is composed of elected representatives from Washington County and an elected representative from each city within Washington County. The WCCC may be delegated the responsibility for reviewing and providing recommendations on local, regional and state transportation funding decisions. The WCCC is supported by the WCCC Transportation Advisory Committee (WCCC TAC), which is composed of senior staff representatives from local governments. Submission of transportation activities, programs, and policies to the WCCC is voluntary and at the discretion of the elected representatives.

**Programming and Development Review**

Recognizing that many types of transportation improvements are defined by law as land use decisions, the County has adopted a specific land use review process and standards for review of transportation improvements within unincorporated Washington County. The review procedures and standards are included in the Community Development Code (CDC). Transportation development application notice requirements to the public and service providers are also listed in the CDC.

The CDC implements the Washington County Comprehensive Plan through the adoption and coordination of planning and development regulations which provide for the health, safety and general welfare of the citizens of Washington County. Standards and requirements of the Community Plans, the Rural/Natural Resource Plan, and the TSP that are applicable to development applications, including, but not limited to, urban land divisions, are specified in the CDC.

In general, Article V of the CDC identifies those public facilities and services that are necessary at a minimum level to accommodate development, including transportation facilities. Land within incorporated areas of Washington County may also be subject to Article V requirements, depending on the location of the development, and if access to county roadways is contemplated.

Article VII of the CDC identifies public transportation improvements authorized by the TSP that are subject to development review, and establishes the standards and procedures for such review. A Project Review Committee consisting of Washington County Department of Land Use & Transportation (DLUT) staff evaluates applications for completeness and provides a recommendation to the DLUT Director and/or Hearings Officer.

## Goal 9: Coordination

*Implement the Transportation System Plan by working with the public, community groups, transit providers, cities and other government agencies.*

**Objective 9.1 Improve the effectiveness of the planning process, by providing opportunities for the public to participate in the planning and development of transportation plans, processes and projects.**

Strategy 9.1.1 Obtain a broad representation of public input and feedback on transportation system-related planning, capital improvement programming and project selection pursuant to Washington County's Citizen Involvement Program, by:

A) Proactively undertaking community visioning.
B) Engaging citizens early and throughout the planning process.
C) Utilizing Citizen Participation Organizations and the Committee for Citizen Involvement as the primary ongoing citizen outreach forums.
D) Participating in and soliciting feedback from transportation-related interest groups.

Strategy 9.1.2 Utilize input from the Urban Road Maintenance District Advisory Committee (URMDAC) and the Rural Roads Operations and Maintenance Advisory Committee (RROMAC). Identify needs for advisory committee membership and fill the positions.

Strategy 9.1.3 Utilize existing information programs, newsletters, and media outreach. Investigate and incorporate new technological solutions to improve public participation.

Strategy 9.1.4 Seek to involve and incorporate feedback from populations that are historically underserved by the existing transportation system or underrepresented in transportation planning in a culturally relevant and equitable manner.

Strategy 9.1.5 Ensure the availability and transparency of transportation related data resources as appropriate.

**Objective 9.2 Improve internal consistency and coordination with other Washington County plans and regulations.**

Strategy 9.2.1 Utilize the development review process to review development applications, apply transportation related standards (including parking and other requirements)~~,~~ and require transportation related improvements and/or right-of-way dedication.

Strategy 9.2.2 Resolve conflicts between the TSP and transportation elements of Community Plans or the Rural/Natural Resource Plan in favor of the TSP.

Strategy 9.2.3 Involve Project Review Committee in the project development and design process~~,~~ as appropriate~~,~~ and exempt from review those types of improvements which generally do not have significant impacts or which involve final engineering, design, construction, operation, maintenance, repair or preservation decisions.

Strategy 9.2.4 Require that project development and development review procedures are consistent with the goals of the TSP.

Strategy 9.2.5 When amending the TSP, utilize text in the Implementation section and use the land use ordinance process as described in Chapter X ~~(ten)~~ of the Washington County charter~~,~~ to engage the public in the Planning Commission and County Board of Commissioners hearing process.

**Objective 9.3 Coordinate with cities and agencies of Washington County as well as regional agencies to cooperatively plan and operate a seamless network of transportation systems and services.**

Strategy 9.3.1 Work with the Washington County Coordinating Committee (WCCC) and the County Board of Commissioners for countywide transportation coordination with cities in Washington County as needed.

Strategy 9.3.2 Work with cities and other agencies to plan for transportation systems that account for Urban and Rural Reserves. For Urban Reserves, coordinate concept plans to provide transportation systems for these areas, including finance strategies to implement these plans. Coordinate the transportation planning of the urban area to avoid and or limit impacts on Rural Reserves areas.

Strategy 9.3.3 Coordinate with cities and other agencies on the development of concept plans prior to annexation.

Strategy 9.3.4 Work with cities and agencies to operate the transportation system in a manner that is seamless to the traveling public. This includes, but is not limited to, design standards, the implementation of the advanced transportation control systems, operation and coordination of signal systems, signage, maintenance schedules and procedures~~,~~ and repairs.

Strategy 9.3.5 Coordinate with the cities to resolve conflicts and transfer roads to the appropriate jurisdiction as urban unincorporated areas are annexed and urban expansion occurs.

Strategy 9.3.6 Where appropriate, facilitate the annexation of Neighborhood Routes and Local Roads to cities~~,~~ by designating these roads as “local access” routes.

Strategy 9.3.7 Participate in the regional technical and policy decision-making processes.

Strategy 9.3.8 Coordinate with Metro to develop, update~~,~~ and comply with the Regional Transportation Plan and the Regional Transportation Functional Plan requirements.

**Objective 9.4 Ensure consistency with state and federal guidelines, and coordinate planning activities, as appropriate, with state and federal agencies.**

Strategy 9.4.1 Work jointly with Oregon Department of Transportation (ODOT) to identify and resolve state/county issues.

Strategy 9.4.2 Coordinate with ODOT and Department of Land Conservation and Development and others to comply with the requirements of the Oregon Statewide Planning Goals, other state requirements~~,~~ and review all plan amendment requests for consistency with the applicable provisions of the Transportation Planning Rule as set forth in OAR 660-12-060.

# Goal 10: Funding

*Seek adequate and reliable funding for transportation.*

The Transportation System Plan (TSP) reflects that transportation needs appear likely to outstrip available funding resources. The challenge then is two-fold: 1) to make the best use of existing resources~~,~~ and 2) generate the interest and support necessary to provide additional resources to implement the transportation systems and services that Washington County residents and businesses desire. The other sections of the TSP generally review the use of revenue sources; while this goal is generally focused on the revenue programs themselves.

**Current Countywide Transportation Funding Strategy**

Washington County's transportation system funding currently uses a variety of different measures. The main principle of these measures has been the creation of a sustainable funding program to implement improvements over time. The graphic below illustrates the current countywide transportation funding structure and recent program revenue streams.

**Figure 6: Three Legged Stool**

**Table 5: Countywide Transportation Funding Programs**

| Source | Use | 2013 Estimated Amount |
|---|---|---|
| State and County Gas Tax | For maintenance and operation of Arterials and Collectors | $23 million annual |
| Urban Road Maintenance District (URMD) | For maintenance and operation of unincorporated neighborhood and local streets, plus minor safety improvements | $3.7 million annual property tax |
| Major Streets Transportation Improvement Program (MSTIP) | To meet existing deficiencies on Arterials, Collectors and other major system improvements as determined by the Board of County Commissioners | $35 million annual property tax (enacted ~~3~~three (3) times, due to state law changes is now part of the general fund). |
| Transportation Development Tax (TDT) | For future capacity primarily on Arterials, Collectors and other major system improvements. | Tax on new development, used for future needs. Varies based on amount of development. |
| Special District Funding Sources | Dedicated funding for specific improvements within~~,~~ or that directly benefit the special district. | varies |

Capital improvement projects may be funded from a variety of federal, state and local funding programs. There are also instances where private sector funding contributes. The ongoing countywide transportation funding programs, such as the Gas Tax, Urban Road Maintenance District (URMD)~~,~~ and Major Streets Transportation Improvement Program (MSTIP) are consistent sources of revenue that can be programmed over a period of time.

The MSTIP is an innovative pay-as-you-go program that is a key piece of Washington County's transportation funding strategy. MSTIP has been praised across the state as a smart and balanced response to transportation needs. By 2013, MSTIP will have built 111 multi-modal projects (totaling $555 million) that county residents and businesses rely upon every day. The program began as a series of serial levies (1986, 1989 and 1995), and statewide ballot measures rolled it into Washington County's fixed tax rate in the late 1990s.

The Transportation Development Tax (TDT), which replaced the previous charge known as Traffic Impact Fee (TIF) in 2009, is another voter-approved countywide program. This program collects charges from new development to help address the impacts of growth. The TDT is based on the estimated traffic generated by each type of development. The amount of TDT revenue generated varies by the amount and type of development that occurs during any given time frame. Revenue is held in a dedicated account and allocated toward transportation capital improvements as revenue becomes available.

The capital improvements must be designed to accommodate growth. Eligible projects are on major roads, including sidewalks and bike lanes, as well as transit capital projects (such as bus shelters).

New development not only pays the TDT, but also is responsible for improvements that serve the development. Such improvements often include new connections within and/or adjacent to the development, the frontage improvements along major roadways, and safety improvements within the vicinity.

The North Bethany Transportation Funding Strategy is a special case. This funding strategy calls for a mixture of existing and new revenue sources to assure the funding for a complete transportation system for the North Bethany Subarea.

In addition to the countywide transportation funding programs, there are a number of dedicated programs within Washington County specifically targeted towards local improvements. Frequently, Local Improvement Districts (LIDs) are established to make improvements or changes to identified streets. These districts become part of the property tax dedicated to fund the improvements identified. These districts are often needed for paving or to otherwise maintain or preserve existing or new roadways. Such LIDs have been implemented in several areas to install or improve traffic management devices within neighborhoods.

Federal, state and other funding programs are often discretionary, and targeted toward specific types of eligible improvements. Washington County continues to seek out these sources of funding. Often the allocation of these funds is targeted toward a specific improvement. This type of funding tends to be unpredictable from year-to-year. Local funding programs, such as TDT, are often used as matching funds for these types of programs.

## Goal 10: Funding

*Seek adequate and reliable funding for transportation.*

### Objective 10.1 Preserve existing transportation assets by providing adequate maintenance.

Strategy 10.1.1 Look for opportunities to reduce maintenance costs through cooperative partnerships with other agencies and private enterprises, as well as periodic reviews and evaluations of best practices.

Strategy 10.1.2 Consider long-term maintenance liabilities when planning and designing new transportation facilities.

Strategy 10.1.3 Recognizing that recent declines in Gas Tax revenue are expected to continue, seek new or enhancement of existing funding sources for maintenance.

**Objective 10.2 Promote equitable, sustainable and fiscally responsible transportation system funding.**

Strategy 10.2.1 Strive to distribute funding so that it is balanced between the various needs of the community, including modal and geographic considerations.

Strategy 10.2.2 When considering the TSP or amendments to the plan, evaluate potential transportation system options with consideration for reasonable funding levels~~,~~ given existing and anticipated future funding sources.

Strategy 10.2.3 Regularly provide transparent reports on transportation funding sources and related investments.

Strategy 10.2.4 ~~As appropriate, p~~Prior to allowing urban development within urban growth boundary expansion areas, develop and implement financing strategies that provide adequate funding for the transportation systems and services necessary for the anticipated urban development as appropriate.

**Objective 10.3 Monitor revenue sources~~,~~ to meet transportation system needs.**

Strategy 10.3.1 Monitor Road Fund and Urban Road Maintenance District (URMD) revenue to anticipate the occurrence and magnitude of potential funding shortfalls.

Strategy 10.3.2 Monitor the Transportation Development Tax (TDT) and the proportion of the future growth needs being met by development related revenue and credits.

Strategy 10.3.3 Continue the commitment of the Major Streets Transportation Improvement Program (MSTIP) revenue to fund transportation needs.

Strategy 10.3.4 Rely upon the Road Fund to continue to maintain and operate the Arterial and Collector roadway system, as appropriate.

**Objective 10.4 Strategically invest in the transportation system to accomplish the other goals within the TSP.**

Strategy 10.4.1 Seek to establish new and/or enhance existing funding mechanisms to adequately support the capital and maintenance needs identified in the TSP.

Strategy 10.4.2 Work with regional and state partners to investigate alternatives to or enhancements of the Gas Tax, as appropriate.

Strategy 10.4.3 Seek non-traditional funding alternatives and sources to enhance the transportation system.

Strategy 10.4.4 Seek funding for active transportation projects and improvements (including off-street trails) from all appropriate sources of available funding.

Strategy 10.4.5 All funding decisions should be consistent with the TSP goals.

**Objective 10.5 Seek adequate funding for transportation improvements that benefit Oregon as well as the Portland metropolitan region.**

Strategy 10.5.1 Work with state, regional and local agencies and elected officials to leverage and increase state funding for transportation projects within Washington County.

Strategy 10.5.2 Coordinate with the Oregon Congressional Delegation to pursue adequate federal transportation funding for Oregon and the Portland metropolitan region.

Strategy 10.5.3 Seek funding for transportation projects in Washington County through the Metro Transportation Improvement Program (MTIP) and Oregon Department of Transportation's (ODOT) Statewide Transportation Improvement Program (STIP).

Strategy 10.5.4 Coordinate with other agencies and organizations to establish adequate, uniform and equitable methods for funding local transportation system needs.

# Goal 11: Maintenance

*Adequately maintain Washington County's transportation facilities.*

Preserving Washington County's investment in its transportation infrastructure is the fundamental purpose of maintenance. However, competing interests and limited funds present a challenging task for those who are charged with maintaining a complex network of static and dynamic features. The Operations & Maintenance Division (OPS) strives to apply the appropriate level of resources at the right time to provide the cost-effective use of available funds while achieving the best overall condition of our transportation system assets. Adequate maintenance is critical; it is much less expensive in the long run to maintain assets in a deliberate manner than to allow them to fail and be replaced prematurely. A well-maintained transportation system is also essential for the safety of its users.

With nearly 1300 centerline miles of paved and gravel roads, almost 200 bridges, over 3000 culverts, close to 900 miles of drainage ditches and numerous miles of roadside vegetation to maintain, achieving the best overall condition of our transportation system is a balancing act requiring cooperation, creativity, and collaboration. To help achieve this balance for roadway maintenance, OPS utilizes a variety of tools including policies, empirical analysis, professional judgment and citizen involvement to make decisions regarding road maintenance activities.

One of the important services that any transportation agency can provide is an efficient and well-maintained transportation system that serves the needs of its citizens including residents, businesses, commuters~~,~~ and tourists. This is a challenging task and civic leaders must often make difficult choices that are sometimes unpopular. Washington County's situation of an aging infrastructure coupled with a reduced revenue stream is not unique. In fact, the difficulties facing DLUT are similar to other transportation agencies throughout the region and across the country.

Washington County's road and bridge maintenance budget is being strained by a number of competing factors. New construction and added programs are being pitted against the preservation and preventative maintenance of existing assets. Furthermore, Gas Tax revenue continues to diminish as fuel prices increase, drivers are ~~being~~ encouraged to reduce their vehicular trips and cars are becoming more fuel efficient.

The maintenance goal of this TSP and DLUT is to protect public safety and personal property, make effective use of available funds, and preserve the public and private investments in the transportation system. In addition, DLUT also strives to preserve and protect the natural environment.

## MAINTENANCE PRIORITIES

There are four different types of priorities associated with maintenance.

1) **Emergencies/Hazards** Work related to abating or managing an immediate threat to public safety, private property, or environmental resources. These occurrences may cause a road to become impassable, or an operator of a vehicle to lose control. These occurrences may require prompt action in order to protect human life or welfare and/or access.

2) **Mandated** Work related to regulatory or legislative requirements that require the agency to perform certain activities. The specific authorization may vary by the type of activity.

3) **Essential** Work that maximizes the efficiency of the transportation system but is not required, by law, to be performed. This can include general maintenance and preventative activities required to keep a road or other facility in good condition.

4) **Non-Essential** Work that is typically for aesthetic or non-functional enhancements as it relates to the movement of vehicles, bicycles and/or pedestrians. This can include both minor improvements and reconstruction. Minor improvements may go beyond general maintenance, but can be completed in conjunction with general maintenance activities. Reconstruction projects rebuild substandard or deteriorated facilities; such projects may be considered a comprehensive form of maintenance.

A long-standing tool used for selecting road maintenance activities has been the *Road Maintenance Priority Matrix* shown in Table 6. This guideline has been in place since adoption of the 1988 Transportation Plan and focuses on the functional classification of the roadway for the selection process.

**Table 6: Road Maintenance Priority Matrix**

Road Classification / Priority*

| Activity | Arterial | Collector | Rural Resource Route** | Neighborhood Route | Local Road |
|---|---|---|---|---|---|
| Emergencies / Hazards | 1 | 1 | 1 | 1 | 1 |
| Mandated | 1 | 1 | 1 | 1 | 1 |
| General Maintenance | 2 | 3 | 4 | 5 | 8 |
| Minor Improvements | 6 | 7 | 11 | 13 | 14 |
| Reconstruction | 9 | 10 | 12 | 15 | 16 |

* "1" is the highest priority; "16" is the lowest.

** Resource Routes are an identified network of rural local roads important to the economy and connectivity. Their designation may be adjusted periodically as needed as part of the Board-adopted annual maintenance program.

**Target Service Levels**

Each year DLUT develops the Road Maintenance Program. The County Board of Commissioners evaluates the transportation system based on available resources and risks and adopts the Road Maintenance Program. This program becomes DLUT's plan for scheduled work during the fiscal year and focuses on preservation of the existing transportation assets and safety. The target service levels provide a guideline to use when establishing the Road Maintenance Program, responding to emergencies and service requests, selecting projects and developing budgets. The target service levels supplement the Maintenance Priority Matrix to improve the process for selecting maintenance activities. The major assets that represent the foundation of the transportation system generally fall into the following categories:

1. **Bridge:** A structure that typically consists of vertical supports and horizontal members connecting at least two segments that allows safe and efficient passage over an obstacle such as a body of water, a road~~,~~ or a railway. In some instances, large culverts are considered bridges.

2. **Culvert:** A structure underneath the roadway used to pass stormwater through a roadway fill section.

3. **Pavement**: The hard surface of a road or other facility. The pavement can be made of bituminous material (asphalt or chip seal) or Portland cement concrete.

4. **Gravel Road**: A facility that has crushed aggregate material as the wearing surface.

5. **Ditch:** An open channel adjacent to a roadway used for the collection and conveyance of storm runoff.

6. **Landscaped Area:** A region in the right-of-way with planted trees, shrubs~~,~~ and/or ground cover intended to provide erosion control, environmental mitigation, traffic calming~~,~~ and aesthetic value.

The target service levels are intended to provide staff with formal guidance associated with planning work on the transportation system. The target service levels are intended to be the nexus between the maintenance budget and the Road Maintenance Program to ensure the goals and priorities of the County Board of Commissioners are being realized. It is also important to note that the service levels identified are merely "targets" and not intended to imply that they are mandates.

# Goal 11: Maintenance

*Adequately maintain Washington County's transportation facilities.*

**Objective 11.1 Preserve the public's investment in transportation facilities.**

Strategy 11.1.1 Inspect the transportation system as necessary to identify current and future roadway maintenance and reconstruction needs.

Strategy 11.1.2 Prioritize road maintenance and reconstruction expenditures using the Road Maintenance Priority Matrix as a guide, to be reviewed and approved by the County Board of Commissioners.

Strategy 11.1.3 Implement an asset management program to maintain an accurate inventory and condition rating of pavements (including sidewalks and bike lanes), bridges, culverts, gravels roads, roadside drainage facilities and landscape areas.

Strategy 11.1.4 Design projects considering future maintenance needs and costs, including landscaping.

Strategy 11.1.5 Evaluate best maintenance practices for financial efficiencies.

Strategy 11.1.6 Employ a right-of-way permitting program to protect and restore road assets to full functionality and service life thereby conserving maintenance dollars.

**Objective 11.2 Program maintenance activities through the annual Washington County Road Maintenance Program.**

Strategy 11.2.1 Utilize the asset management system to systematically select maintenance activities based on adopted service levels.

Strategy 11.2.2 Review maintenance service levels and Annual Road Maintenance Program with and seek feedback from the Urban Road Maintenance District Advisory Committee (URMDAC) and the Rural Roads Operations and Maintenance Advisory Committee (RROMAC).

Strategy 11.2.3 Annually program transportation maintenance expenditures~~,~~ as adopted by the County Board of Commissioners.

**Objective 11.3 Maintain transportation facilities, within funding limitations, to adequately protect public safety, private property and the environment~~,~~ and to provide a system that is structurally sound and reliable.**

Strategy 11.3.1 Utilize URMDAC to assist in evaluating the cost effectiveness and efficiency of the Urban Road Maintenance District.

Strategy 11.3.2 Utilize RROMAC to assist with identifying and evaluating the cost effectiveness and efficiency of maintenance program activities in the rural area.

Strategy 11.3.3 Consult with both URMDAC and RROMAC to establish appropriate service levels for pavements (including sidewalks and bike lanes), bridges, culverts, gravel roads, roadside drainage facilities and landscape areas.

Strategy 11.3.4 Continue the practice of vegetation removal by county crews to address vegetation-related hazards and protect public safety.

Strategy 11.3.5 Strive to limit soil disruption and/or damage to drainage tiles when conducting maintenance activities in rural agricultural areas.

**Objective 11.4 Monitor the efficiency and cost effectiveness of transportation maintenance procedures, and revise as needed, to provide effective use of available maintenance funds.**

Strategy 11.4.1 Where practicable, limit construction maintenance related administrative costs.

Strategy 11.4.2 Where practicable, implement efficient and cost effective maintenance operations by efforts to:

A) Consolidate maintenance activity geographically.
B) Monitor, identify and correct failures.
C) Determine cause, and modify practices.
D) Take advantage of opportunities to leverage resources through cooperative arrangements with other agencies, regional utilities, HOAs, adopt-a-road groups and local businesses.

**Objective 11.5 Distinguish between countywide and local maintenance responsibilities. Address transportation system maintenance needs through mechanisms that recognize the primary responsibility of system users.**

Strategy 11.5.1 Confine countywide road maintenance and reconstruction program (i.e. Road Fund) activities to roads that have been formally accepted as "County Roads". Limit expenditures on non-county roads (i.e. local access or public roads) to those prescribed by the Oregon Revised Statutes and the direction of the County Board of Commissioners.

Strategy 11.5.2 Where appropriate, finance the reconstruction, minor improvement or maintenance of Neighborhood Routes and Local Streets through localized funding mechanisms, such as the Urban Road Maintenance District (URMD) or Local Improvement Districts (LIDs).

**Objective 11.6 Work with partner jurisdictions and property owners to adequately maintain facilities intended for non-auto use.**

Strategy 11.6.1 When and where appropriate, maintain elements of the transportation infrastructure intended for non-auto use by:

A) Incorporating the non-auto facilities within the right-of-way into the regular maintenance program.
B) Integrating pedestrian and bicycle improvements with road maintenance projects, such as resurfacing or shoulder widening, to take advantage of cost-sharing opportunities.

Strategy 11.6.2 Consider a maintenance program to keep pedestrian facilities along County roads in adequate condition.

Strategy 11.6.3 Consider developing supplemental funding sources for the maintenance of the non-auto system facilities.

Strategy 11.6.4 Encourage new development to form an HOA or other group with the responsibility to maintain landscaping frontage abutting Arterials and Collectors.

# Glossary

Definitions

**2040 Growth Concept** – A long-range regional growth management and urban form concept adopted by Metro in 1995. The concept classifies land into ten urban form categories, including intensely developed centers and corridors, open spaces and rural reserves intended for preservation, and neighborhood areas that will remain mostly unchanged. Local comprehensive plans must demonstrate compatibility with the concept.

**Access** – The ability to have direct ingress and egress to or from a specific property or other location along a roadway. Local Streets providing direct access to individual properties generally have better access than Arterial roads or Freeways, whose primary purpose is to serve through travel. Access can also apply to non-roadway facilities such as trails.

**Accessibility** – The relative ease with which a given destination or land use can be reached by one or more modes of travel. Locations that can be accessed by many people using a variety of modes of transportation generally have high accessibility.

**Access management** – Measures that regulate or restrict access to roadways from private driveways, parking lots or other roadways. Measures may include but are not limited to restrictions on the siting and quantity of driveways, restrictions on the spacing and traffic control of intersections, and use of physical devices such as medians and traffic signals to reduce the impacts of traffic intersecting or approaching the main facility.

**Accessway** – A paved pathway that provides pedestrian and bicycle access when a full street connection is not practicable.

**Active transportation** – Human powered travel, including walking, bicycling, skateboarding and the use of mobility devices such as wheelchairs (including motorized wheelchairs). Active transportation is considered to include public transit because accessing transit stops typically involves walking or bicycling.

**Adaptive signal control** – An intelligent transportation system technology that uses real-time traffic information collected from camera or other sensors to coordinate and optimize signal timing at multiple signalized intersections in a corridor. The primary goal of adaptive signal control is to reduce congestion, delay and travel times.

**Advanced Traffic Management System (ATMS)** – Traffic management techniques that use computer processing and communications technologies to optimize performance of motor vehicle, freight and public transportation systems.

**American Community Survey** – An ongoing statistical survey administered by the US Census Bureau that samples a small percentage of the population every year to provide demographic, socio-economic and other community information. Transportation-related data includes travel modes and travel times for the commute to work.

**Americans with Disabilities Act (ADA)** – Federal civil rights legislation enacted by Congress in 1990 that mandates equal opportunity for people with disabilities in employment, transportation, public accommodation, public services and telecommunications. Transportation implications of ADA include the design of sidewalks and curb cuts, accommodation of mobility devices on transit vehicles, provision of door-to-door paratransit service~~,~~ and availability of parking spaces for the disabled.

**Arterial** – A functional class of roadways intended to provide general mobility for travel within the region. Correctly sized Arterials at appropriate intervals allow through trips to remain on the Arterial system thereby discouraging use of Local Streets for cut-through traffic. Arterials link major commercial, residential, industrial and institutional areas.

**Average daily traffic (ADT)** – The number of motor vehicles that pass through a particular point on a roadway during an average day. ADT is a relatively generic term that may refer to one of several federally-defined traffic volume indicators~~,~~ including annual average daily traffic (AADT) and annual average weekday daily traffic (AAWDT). Because a true 365-day, 24-hour counting process is not practical in most cases, ADT is typically sampled over the course of one or more days and repeated annually or on a regular basis.

**Bicycle** – A vehicle having two tandem wheels (a minimum of 14 inches in diameter) propelled solely by human power~~,~~ upon which a person or persons may ride. A three-wheeled adult tricycle is considered a bicycle. In Oregon, a bicycle is legally defined as a vehicle. Bicyclists have the same right to the roadways and must obey the same traffic laws as the operators of other vehicles.

**Bicycle facility** – A general term denoting improvements and provisions made to accommodate or encourage bicycling, including on-street bikeways, multi-use trails, bicycle parking facilities~~,~~ and devices that allow bicycles to brought on transit vehicles.

**Bike lane** – A portion of a roadway that has been designated by striping, signing and pavement markings for the use of people riding bicycles. The Washington County Road Design and Construction Standards call for six-foot-wide bike lanes, though exceptions may be granted by the County Engineer for five- or four-foot-wide bike lanes in cases of constricted right-of-way.

**Bikeway** – A bikeway exists on any road that has the appropriate design treatment to accommodate bicyclists based on motor vehicle traffic volumes and speed. The basic design treatments used for bicycle travel on roads are shared roadways, shoulder bikeways and bike lanes. Enhanced versions of bikeways on roads include buffered bike lanes, cycle tracks and neighborhood bikeways (also called neighborhood greenways or bike boulevards). Off-street shared-use paths (also called multi-use trails) are also a type of bikeway.

**County Board of Commissioners (BCC or Board)** – The governing body of Washington County, Oregon, consisting of five elected members, including four district representatives and an at-large chair. Washington County has a council-manager form of government, giving the Board legislative responsibility and designating administrative authority to a Board-appointed professional county administrator. The commissioners also serve as the governing board for Clean Water Services, a public utility providing wastewater, stormwater and other services.

**Boulevard** – A roadway design overlay intended to improve the pedestrian environment in specified locations throughout the metropolitan area. A boulevard may have three or more lanes and may include landscaped medians, on-street parking, landscape buffered sidewalks, enhanced pedestrian crossings and special lighting. These roadways also include bicycle lanes and wide sidewalks that can accommodate transit enhancements such as benches or bus shelters.

**Buffered Bike Lane** – A bike lane that is further separated from automobile traffic by a two- to three-foot wide painted buffer, typically with diagonal hatching. Buffered bike lanes may be appropriate on roadways with 10,000 or more average daily vehicles and speeds of 25 mph or greater.

**Bus Rapid Transit (BRT)** – An enhanced bus system that operates in exclusive lanes, or in mixed traffic with bypassing capabilities, in order to combine the flexibility of buses with the efficiency of rail. By doing so, BRT generally operates at faster speeds, provides greater service reliability~~,~~ and offers additional customer amenities compared to traditional bus service.

**Business Access/Transit (BAT) Lane** – A roadway travel lane with the dual purpose of allowing all vehicles to make turns into adjacent properties or onto intersecting streets allowing transit vehicles – typically buses or BRT vehicles – to proceed in the forward direction along the roadway and bypass traffic queues at intersections.

**Capacity** – The maximum number of vehicles (vehicle capacity) or people (person capacity) that can pass over a given roadway segment, intersection, transit line or pedestrian/bicycle facility in one or both directions during a given period of time under prevailing operating conditions.

**Capital Improvements Program (CIP)** – A document that lists projects to be undertaken in the next five- to ten-year timeframe, the estimated costs and funding sources for those projects. If funding has been committed to a project, a schedule for the funded work, which may be design, right-of-way acquisition, construction~~,~~ or all three, may be included on the project list.

**Carpool/Vanpool** – A group of two or more people who share the use and/or cost of a car or van for transportation to and from a destination.

**Collector** – Collector streets provide both access and circulation between residential, commercial, industrial and agricultural community areas and the Arterial system. Collectors tend to carry fewer motor vehicles than Arterials, with reduced travel speeds and may serve as freight access routes, providing local connections to the Arterial network.

**Community Advisory Committee (CAC)** – A group of community members representing various interests who volunteer (and in some cases are appointed) to advise the county on a specific issue, project or process. This TSP update included an 18-member CAC appointed by the County Board of Commissioners.

**Community Development Code (CDC)** – The component of the Washington County Comprehensive Plan that establishes standards that builders and developers must meet to protect the health, safety and welfare of citizens. Transportation facility standards are a major

component of Article IV (Development Standards), Article V (Public Facilities and Services)~~,~~ and Article VII (Public Transportation Facilities).

**Community Plans** – Reflect the Comprehensive Framework Plan policies and strategies as applied to specific situations for each Community Planning Area. The Community Plans indicate the specific land uses, significant natural and cultural resources and circulation systems~~,~~ which have been determined necessary to meet the community needs.

**Comprehensive Framework Plan for the Urban Area** – The policies and implementing strategies related to citizen involvement, natural resources, urbanization, housing~~,~~ and public facilities and services. This plan is applicable to urban unincorporated areas within Urban Growth Boundaries. (A UGB is a line around the urban area that indicates land that already is or can be developed at urban densities.) Individual Community Plans require provision of necessary "urban" services - primarily sewer, water~~,~~ and a balanced transportation system - for built-up and developing areas outside cities.

**Complete street** – A street that is designed to serve all modes of travel, including bicycles, freight delivery vehicles, transit vehicles and pedestrians of all ages and abilities.

**Corridor study** – A study that is directed toward specifically defining projects and strategies for meeting identified needs in a transportation corridor. Also known as a corridor refinement plan.

**County Road** – A public road under the jurisdiction of Washington County that has been designated as a county road under ORS 368.016.

**Cycle track** – An on-street bikeway facility that provides the safety and comfort of a multi-use path within the road right-of-way. This is accomplished by combining a painted buffer with a physical barrier, a landscaped buffer~~,~~ or a parking lane. The added protection further separates motor vehicles and bicyclists where travel speeds and/or motor vehicle traffic volumes are high. Variations on cycle tracks include raised cycle tracks and two-way cycle tracks.

**Deficiency** – A performance, design or operational constraint that limits travel by a given mode.

**Deficiency area** – A location where certain transportation system elements (usually referring to roadways) are expected to exceed acceptable performance measures and no appropriate feasible solution has been identified. Deficiency areas are identified through evaluation of future travel conditions based upon the projects identified the TSP. Additional strategies to address the movement of people and goods in these areas will be approached on a case~~-~~-by-~~-~~case basis.

**Development review** – The process of reviewing a proposed development action for conformance with the county's Community Development Code (CDC) and the applicable standards and requirements of the Comprehensive Plan as specified by the CDC.

**Director** – The Director of Washington County's Department of Land Use & Transportation.

**Environmental justice (EJ) populations** – People living in poverty, people with low income as determined annually by the U.S. Department of Health and Human Services Low Income Index, including people of color, elderly, children, people with disabilities~~,~~ and other populations protected by Title VI and related nondiscrimination statutes.

**Essential destinations** – Locations where people typically go to meet basic needs~~,~~ including grocery stores, schools, hospitals, medical centers and social service providers.

**Functional classification** – A mechanism for classifying roadways according to the function they perform in the transportation system. Classifications typically range from Arterials, which are intended to facilitate relatively high speed traffic over long distances, to Local Streets, which facilitate access to properties. When properly combined, roadways with different functional classifications provide a system that meets both the access and mobility needs of the communities it serves.

**Gap** – Refers to a missing link or barrier in the transportation network for any mode where a connection would otherwise be expected to exist. A gap functionally prohibits travel or makes it significantly more difficult or less desirable to travel in that location.

**High capacity transit (HCT)** – A form of public transit that carries high volumes of passengers quickly and efficiently from one place to another. Other defining characteristics of HCT service include the ability to bypass traffic and avoid delay by operating in exclusive or semi-exclusive rights-of-way, faster overall travel speeds due to wide station spacing, frequent service, transit priority street and signal treatments~~,~~ and premium station and passenger amenities. The transit modes most commonly associated with high capacity transit include light rail transit, bus rapid transit, rapid streetcar and commuter rail.

**High-occupancy vehicle (HOV)** – A vehicle that is carrying two or more persons, including the driver. An HOV could be a carpool, vanpool, transit bus, private charter bus~~,~~ or any other vehicle that meets the minimum occupancy requirements of the specific facility. Some jurisdictions have established HOV lanes on freeways~~,~~ where only vehicles with two or more persons are allowed to occupy the lane during designated hours or at all times.

**Inter-agency Coordinating Committee (ICC)** – A technical committee consisting of representatives from cities in Washington County, Tualatin Hills Park & Recreation District, TriMet, Metro, Port of Portland and Oregon Department of Transportation~~,~~ that provided input and advice during the development of the TSP and considered the policy implications within the jurisdictions they represent.

**Intermodal facility** – A transportation element that allows passenger and/or freight connections between modes of transportation. Examples include airports, rail stations, marine terminals~~,~~ and railyards that facilitate the transfer of containers or trailers.

**Joint Policy Advisory Committee on Transportation** – A committee of elected officials and representatives of agencies involved in transportation that make recommendations to the Metro Council on transportation needs in the Portland metropolitan region.

**Lane numbers** – The maximum number of vehicle travel lanes that can be built without a plan amendment as identified on the Road Lane Numbers Map in the TSP, and as subject to certain exceptions related to turn lanes and auxiliary lanes.

**Level of Service (LOS)** – A qualitative measure describing the operational conditions of a particular transportation facility or service based on the perception of users, and sometimes

supported by quantitative measures. Motor vehicle LOS describes roadway operating conditions in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience and safety. A letter score of 'A' through 'F' is assigned based on these conditions. For motor vehicle LOS, the scores represent the following conditions on a roadway:

A. Virtually free flow; completely unimpeded
B. Stable flow with slight delays; reasonably unimpeded
C. Stable flow with delays; less freedom to maneuver
D. High Density but stable flow
E. Operating conditions at or near capacity; unstable flow
F. Forced flow, breakdown conditions

LOS can be applied to other modes as well, including pedestrian LOS, bicycle LOS and transit LOS.

**Local Access Roads** – A Public Road that is not a County Road, State Highway or Federal Road.

**Local Improvement District (LID)** – A method by which a group of property owners can share the cost of transportation infrastructure improvements such as building sidewalks. LIDs are typically created on a voluntary basis with the agreement of the majority of affected property owners. The cost of the improvements is split among these owners and typically assessed on property tax bills.

**Local Street** – Local Streets primarily provide direct access to adjacent land. While Local sStreets are not intended to serve through traffic, the aggregate effect of local street design impacts the effectiveness of the Arterial and Collector system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the Arterial street network. In the urban area, local roadway system designs often discourage "through traffic movement",; however, in the rural area local roads are sometimes the only facilities available for access to dispersed rural land uses.

**Major bus stop** – Includes most Frequent Service bus stops, most transfer locations between bus lines (especially when at least one of the bus lines is a frequent service line), stops at major ridership generators (e.g., schools, hospitals, concentrations of shopping, or high density employment or employment), and other high ridership bus stops. These stops may include shelters, lighting, seating, bicycle parking, or other passenger amenities and are intended to be highly accessible to adjacent buildings while providing for quick and efficient bus service.

**Major Streets Transportation Improvement Program** – A portion of the Washington County property tax used to construct major transportation improvements countywide. MSTIP projects commonly include road reconstructions to install pedestrian and bicycle facilities and additional travel or turn lanes, as well as new roadways to serve developing areas. MSTIP began as a series of serial levies (1986, 1989 and 1995), and voters rolled it into the county's fixed tax rate in the late 1990s. In 2013 the current installment of MSTIP funds wais known as MSTIP 3d, and will be used to construct transportation improvements through the year 2019. MSTIP 3d also includes an Opportunity Fund that can be used to match grants or other funds for transportation improvements or programs.

**Major transit stop** – Major bus stops, transit centers, light rail stations and commuter rail stations.

**Metro** – The regional government and designated metropolitan planning organization of the Portland metropolitan area. Metro is governed by a 7 (seven)-member Metro Council elected by and representing districts within Metro's jurisdictional boundaries – generally the urban portions of Clackamas, Multnomah and Washington counties. Metro is responsible for the Oregon Zoo, solid waste landfills, the Oregon Convention Center, and the Portland Center for the Performing Arts. Metro also establishes and maintains the Urban Growth Boundary. Metro is responsible for regional transportation planning activities, such as the preparation of the RTP, and the planning of regional transportation projects including High-Capacity Transit.

**Minor Betterments** – A Washington County transportation improvement program funded by an allocation from the Road Fund (gas taxes) and used to fund small-scale interim improvements which are beyond routine maintenance but not large enough to be programmed as capital improvements. Minor Betterment projects are site-specific enhancements to the county's transportation system. The projects are typically interim and are intended to supplement routine maintenance and capital improvements.

**Minor modification** – A minor modification to a roadway including channelization or realignment that does not have significant land use or traffic impacts beyond the immediate neighborhood.

**Mobility** – The ability to move people and goods to destinations efficiently and reliably.

**Mode** – Means of travel, such as driving, walking, bicycling or taking transit.

**Motor vehicle** – This includes automobiles, motorcycles, recreational vehicles and all types of trucks, including those used for freight. It does not include buses as those are considered an element of another mode (transit).

**Multi-modal** – Accommodating or pertaining to multiple means of travel, including walking, bicycling, driving and taking transit.

**Multi-use trail** – A transportation facility that is physically separated from motor vehicle traffic by an open space or barrier for exclusive use by bicyclists and pedestrians, including persons using mobility devices, skates and skateboards. Off-street trails may be located in a road right--of--way or within an independent right-of-way or public property.

**Neighborhood Route** – Neighborhood Routes are in residential neighborhoods and provide connectivity to the Collector and Arterial system. Because traffic needs are greater than a Local Street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are allowed (including devices such as speed humps, traffic circles and other devices). New neighborhood routes may be established via the land development process.

**Neighborhood bikeway** – A low speed, low traffic Non-Arterial Street designated as a facility intended to accommodate bicyclists with a wide range of abilities and levels of experience.

Neighborhood bikeways are also called neighborhood greenways and bike boulevards in other jurisdictions.

**Peak two-hour period** – The highest hour of motor vehicle travel demand on a given facility or segment and the hour immediately following the highest hour of demand. Known more generally as the "peak period," each weekday has a morning (AM) peak and an evening (PM) peak.

**Pedestrian** – A person on foot, in a mobility device such as a wheelchair or walking a bicycle.

**Pedestrian facility** – An improvement provided for the benefit of pedestrian travel~~,~~ including sidewalks, crosswalks, illumination, signals and benches.

**Pedestrian-scale** – Having a proportional relationship to human dimensions, in reference to elements of the built environment such as buildings, streets and street lights.

**Performance measure** – A measurement derived from technical analysis aimed at determining whether a planning policy is achieving the expected outcome or intent associated with the policy.

**Person trips** – The total number of discrete trips by individuals using any mode of travel.

**Planning Commission** – A nine-member volunteer commission that advises the Board on land use and transportation issues.

**Planning period** – The period to which the Plan applies.

**Placeholder projects** – A "placeholder" project is used as a surrogate for a project that has not yet been defined. Placeholder projects are generally used in study areas~~,~~ and serve primarily as mechanisms for estimating the impacts on the rest of the transportation system of a project that will be identified later as part of study area analysis.

**Public Road** – ~~Is a~~A road over which the public has a right to use that is a matter of public record.

**Principal Arterial** – Principal Arterials (Freeways and Highways) form the backbone of the motor vehicle network. These routes connect over the longest distance (often miles) and are spaced less frequently than other Arterials or Collectors. These highways generally span several jurisdictions and often have statewide importance. At a minimum, highways that are classified by ODOT as Interstate or Statewide Highways are considered Principal Arterials.

**Project Review Committee** – Project Review Committee (PRC) acts in a technical advisory capacity for the review of all public transportation improvement applications for completeness and conformance with the applicable requirements of Article VII of the Community Development Code, the applicable Community Plan or Rural/Natural Resources Plan~~,~~ and the Transportation Plan. The PRC consists of representatives of all affected Department of Land Use & Transportation divisions~~,~~ and may include representatives of other county departments and affected agencies as appropriate. The PRC provides recommendations to the Review Authority.

**Queue** – A line of stopped vehicles in a roadway travel lane, typically delayed by congestion at an intersection, interchange or other element of the roadway system.

**Regional Street Design Overlay** – Identifies Arterial and Collector streets where certain design treatments may be used to enhance pedestrian, bicycle and transit functions while also seeking to provide adequate motor vehicle capacity resulting in safer, modally balanced streets.

**Regional Transportation Functional Plan (RTFP)** – The Regional Transportation Functional Plan codifies the requirements that local plans must comply with to be consistent with the Regional Transportation Plan.

**Regional Transportation Plan (RTP)** – The official intermodal transportation plan that is developed through a regional transportation planning process and adopted by Metro.

**Right-of-Way (ROW)** – ~~This term refers to p~~Publicly-owned land, property or interest therein, usually in a strip, within which the entire road facility (including travel lanes, medians, sidewalks, shoulders, planting areas, bikeways and utility easements) must reside. The right-of-way is usually defined in feet and is acquired for or devoted to multimodal transportation purposes including bicycle, pedestrian, public transportation and vehicular travel.

**Road Design and Construction Standards** – Standards set forth in the Washington County Code. The Road Design and Construction Standards set out engineering standards for road improvements~~,~~ and provide guidance for the design and construction of public roads and associated improvements to the county's transportation system.

**Road Fund** – The State Highway funds generated by the State gasoline tax (currently 30-cents-per-gallon) revenue allocated to unincorporated Washington County, plus the local Washington County gasoline tax (currently one-cent-per-gallon). These funds are used for maintenance of the Arterial and Collector road system.

**Roadway segment** – A portion of a street right-of-way developed for vehicular traffic.

**Rural/Natural Resource Plan** – A plan that guides development outside the UGB. The plan guides conservation and development according to the potential of the land and in accordance with state and regional requirements.

**Rural Reserves** – land reserved to provide long-term protection for agriculture, forestry or important natural landscape features that limit urban development or help define appropriate natural boundaries of urbanization, including plant, fish and wildlife habitat, steep slopes and floodplains.

**Rural Roads Operation and Maintenance Advisory Committee (RROMAC)** – RROMAC works with county staff and advises the County Board of Commissioners on issues related to rural roads.

**Safety Priority Index System (SPIS)** – A method of compiling crash histories for identifying potential safety problems.

**Sidewalk** – A walkway that is separated from the roadway by a curb, planter area or roadside ditch that is built to adopted standards.

**Significant Natural Resource** – Mapped components of the natural and built environments identified in the County's Comprehensive Plan. The mapped components include the Mineral Aggregate Overlay Districts, Water Areas and Wetlands, Wildlife Habitat, Water Areas, Wetland & Fish and Wildlife Habitat, Significant Natural Areas, Historic and Cultural Resources~~,~~ and Scenic Resources.

**Single-occupancy vehicle** – ~~This term refers to v~~Vehicles that are carrying one person.

**Social and Geographic Equity** – Ensuring that the benefits and impacts of transportation projects do not accrue disproportionately on any particular demographic, socio-economic group or particular geographic area.

**Special Area Street** – A sub-category of Collector, Neighborhood Route, Commercial Street and Local Street underlying functional classification designations. Special Area street designations are most frequently applied in transit-oriented overlay districts within RTP 2040 center and station community area designations with good transit service. They are identified on the Special Area Street Overlay Map as well as in the Community Plans. Special Area Street design standards are included in the Washington County Uniform Road Improvement Design Standards.

**State Highway** – Any road or highway designated as such by law or by the Oregon Transportation Commission pursuant to law~~,~~ and includ~~e~~sing both primary and secondary State Highways.

**Study Area** – In general, study areas relate to facilities or areas for which further study is required to determine specifically how an identified need should be met. In these cases the function, proposed alignment, or other specific solution has yet to be identified. Additional analysis will need to occur before solutions to the identified traffic problems can be addressed. The purpose of each study area is defined in the study area descriptions in the modal plans.

**System Development Charge (SDC)** – A uniform framework for the imposition of growth and development charges that may be used for capital improvements.

**Telecommute** – ~~This term refers to a t~~A transportation demand management strategy whereby an individual substitutes working at home for commuting to a work site on either a part-time or full-time basis.

**Traffic calming** – Street design or operational features intended to maintain low motor vehicle travel speed to enhance safety for pedestrians, other non-motorized modes and adjacent land uses.

**Traffic Impact Fee (TIF)** – A former tax on development levied countywide, paid at the time of building permit~~,~~ and used toward traffic improvements. This was the precursor of the Transportation Development Tax.

**Transit** – ~~This term refers to p~~Publicly funded and managed transportation services and programs within the urban area, including light rail, regional rapid bus, frequent bus, primary bus, secondary bus, minibus, paratransit and park-and-ride.

**Travel Demand Management (TDM)** – Actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include, but are not limited to, the use of alternative modes, ride-sharing and vanpool programs~~,~~ and trip-reduction ordinances.

**Transportation Development Tax (TDT)** – A System Development Charge (SDC) levied countywide on development that replaced the Traffic Impact Fee, paid at time of building permit~~,~~ and used toward transportation capital improvements.

**Transportation Disadvantaged** – Individuals who have difficulty accessing, using or affording transportation because of their age, income, physical or mental disability.

**Transportation Management Association (TMA)** – ~~This term refers to n~~Non-profit coalitions of local businesses and/or public agencies dedicated to reducing traffic congestion and pollution and improving commuting options for employees.

**Transportation Planning Rule (TPR)** – The implementing rule of statewide planning goal #12 dealing with transportation, as adopted by the state Land Conservation and Development Commission (LCDC). Among its many provisions, the rule includes requirements to preserve rural lands, reduce vehicle miles traveled (VMT) per capita by 20 percent in the next 20 years, reduce the number of parking spaces and to improve mu~~t~~lti-modal transportation systems.

**Transportation System Management and Operations (TSMO)** – Strategies and techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without major new capital improvements. This may include signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response, targeted traffic enforcement and programs that smooth transit operations.

**TriMet** – Tri-County Metropolitan Transportation District, ~~which is~~ the primary transit provider for most urban areas in Clackamas, Multnomah and Washington counties.

**Urban Growth Boundary (UGB)** – The legally defined boundaries adopted by Washington County, Metro or appropriate incorporated cities, and acknowledged by LCDC, which identify and separate urbanized land from rural and natural resource land.

**Urban Reserves** – ~~means l~~Lands outside an urban growth boundary that will provide for: (a) future expansion over a long-term period; and (b) the cost-effective provision of public facilities and services within the area when the lands are included within the urban growth boundary.

**Urban Roads Maintenance District (URMD)** – ~~is a~~A county service district formed to provide road maintenance for Local Streets and Neighborhood Routes in urban unincorporated areas of Washington County. A portion of this fund has been set aside for safety improvements to any roadway with in the district boundary.

**Urban Roads Maintenance District Advisory Committee (URMDAC)** – URMDAC works with county staff and advises the Board of Commissioners on issues related to services provided by the Urban Road Maintenance District (URMD).

**Vehicle Miles Traveled (VMT)** – Automobile vehicle miles of travel. Automobiles, for purposes of this definition, include automobiles, light trucks~~,~~ and other similar vehicles used for movement of people. The definition does not include buses, heavy trucks and trips that involve commercial movement of goods.

**Walkway** – A hard-surfaced transportation facility built for use by pedestrians~~,~~ including persons using wheelchairs, such as a sidewalk, off-street trail, accessway or path.

**Washington County Coordinating Committee** (WCCC) - ~~,~~A committee composed of elected representatives from Washington County and the cities within Washington County. WCCC's primary purpose is to coordinate activities of Washington County local governments and to work toward positions of consensus on regional and state land use and transportation planning matters.

Abbreviations, Acronyms and Initializations

| | |
|---|---|
| **ACS** | American Community Survey |
| **ADA** | Americans with Disabilities Act |
| **ADT** | Average Daily Traffic |
| **ATMS** | Advanced Traffic Management System |
| **BAT** | Business Access/Transit (lane) |
| **BCC** | County Board of Commissioners |
| **BRT** | Bus Rapid Transit |
| **CAC** | Community Advisory Committee |
| **CD** | Collector/Distributor (road) |
| **CDC** | (Washington County) Community Development Code |
| **CIP** | Capital Improvements Program |
| **DEQ** | (Oregon) Department of Environmental Quality |
| **DLCD** | (Oregon) Department of Land Conservation and Development |
| **DLUT** | (Washington County) Department of Land Use and Transportation |
| **EJ** | Environmental Justice |
| **EPA** | Environmental Protection Agency |
| **ESL** | English as a Second Language |
| **FHWA** | Federal Highway Administration |
| **FRA** | Federal Railroad Administration |
| **FTA** | Federal Transit Administration |
| **HCT** | High Capacity Transit |
| **HOV** | High Occupancy Vehicle |
| **I-5** | Interstate 5 |
| **ICC** | Inter-agency Coordinating Committee |
| **ITS** | Intelligent Transportation Systems |
| **JPACT** | Joint Policy Advisory Committee on Transportation |
| **LCDC** | (Oregon) Land Conservation and Development Commission |
| **LID** | Local Improvement District |
| **LIFT** | TriMet's paratransit service (not an acronym) |
| **LOS** | Level-of-Service |
| ~~**LUT**~~ | ~~(Washington County Department of) Land Use and Transportation~~ |
| **MAX** | Metropolitan Area Express (light rail) |
| **MPH** | Miles per Hour |
| **MPO** | Metropolitan Planning Organization |
| **MSTIP** | Major Streets Transportation Improvement Program |
| **MTIP** | Metropolitan Transportation Improvement Program |
| **OAR** | Oregon Administrative Rule |
| **ODOT** | Oregon Department of Transportation |
| **OHP** | Oregon Highway Plan |
| **OPS** | (Washington County) Operations and Maintenance Division |
| **OR** | Oregon |
| **ORS** | Oregon Revised Statute |
| **PMT** | Project Management Team |
| **PRC** | Project Review Committee |
| **RFFA** | Regional Flexible Fund Allocation |
| **ROW** | Right-of-Way |

abcdef Proposed additions
~~abcdef~~ Proposed deletions

| | |
|---|---|
| **RROMAC** | Rural Road Operations and Maintenance Advisory Committee |
| **RTFP** | Regional Transportation Functional Plan |
| **RTP** | Regional Transportation Plan |
| **SDC** | System Development Charge |
| **SDL** | Service District for Lighting |
| **SPIS** | Safety Priority Index System |
| **STIP** | Statewide Transportation Improvement Program |
| **TDM** | Travel Demand Management |
| **TDT** | Transportation Development Tax |
| **THPRD** | Tualatin Hills Park and Recreation District |
| **TIF** | Traffic Impact Fee |
| **TMA** | Transportation Management Association |
| **TPR** | Transportation Planning Rule |
| **TriMet** | Tri-County Metropolitan Transportation District |
| **TSDC** | Transportation System Development Charge |
| **TSMO** | Transportation System Management and Operations |
| **TSP** | Transportation System Plan |
| **TV Highway** | Tualatin Valley Highway |
| **UGB** | Urban Growth Boundary |
| **URMD** | Urban Road Maintenance District |
| **URMDAC** | Urban Road Maintenance District Advisory Committee |
| **US** | United States |
| **V/C** | Volume to Capacity (ratio) |
| **VMT** | Vehicle Miles Traveled |
| **WES** | Westside Express Service (commuter rail) |
| **WCCC** | Washington County Coordinating Committee |
| **WCCC TAC** | Washington County Coordinating Committee Technical Advisory Committee |
| **WTA** | Westside Transportation Alliance |