

## **TRANSPORTATION (11/17/10)**

Clackamas County's transportation system is an extensive network of public and private transportation facilities, including roads, railways, airports, waterways and trails. The system is intended to allow people to get where they need to go safely and efficiently, whether they travel by foot or by automobile, bus, train, airplane or bicycle. The system also is intended to provide for the efficient movement of goods, whether by truck, barge, train or pipeline. It is expected to serve a multitude of public needs without sacrificing air and water quality or creating noise pollution.

In recent years, rapid population growth and, ironically, the strong economy, have challenged the ability of the transportation system to balance those goals. Funding levels for roads, the backbone of the transportation system, have not kept pace with the proliferation of motor vehicles, housing and businesses, which increase the demand for road miles. The backlog of needed road maintenance and construction projects has grown larger.

At the same time, factors including the jobs/housing imbalance in the tri-county region have encouraged single occupant vehicle commuting. Given these conditions, relieving traffic congestion and protecting the environment will require strategic low-cost fixes.

This Plan focuses primarily on the County's responsibilities, 1,435 miles of road and 165 bridges. The cities and the State also own and maintain roads and bridges within Clackamas County. All land-based modes of travel, except rail and pipeline, must share the public rights-of-way. This includes autos, trucks, buses, bicycles, and pedestrians. Safety considerations apply to travelers by all modes, and public rights-of-way must be improved and maintained to make travel safe for all. Clackamas County is also challenged by the responsibility to maintain and develop a safe and functional road network in rural areas and the need to expand a formerly rural road network to a full service urban transportation system in urban areas.

Many agencies and public and private providers as well as developers are involved in building and maintaining the County's transportation system. Metro, the region's governing body, coordinates transportation financing for many projects, sets priorities for expenditures, and sets standards for the operation and design of regional elements of the transportation system. The County coordinates with its 16 cities, transit providers and the State of Oregon. One product of that coordination is the County's Capital Improvement Plan (20-year) and a detailed 5-year program for improvement of County-owned roads and bridges.

## **ISSUES**

- Providing transportation infrastructure to support changing land uses, and population and employment growth, while being sensitive to neighborhood needs and concerns.
- Balancing the need for maintenance and management of existing facilities with the need for building new facilities to accommodate increased trip demand.
- Monitoring the effects of transportation on employment and economic activity, especially the relationship of transportation to economic development and the ways transportation can be used as a tool to stimulate economic development.
- Improving roads to perform all the necessary functions.
- Balancing the need for mobility (through movement of traffic) with the need for access to property.
- Taking environmental needs and concerns into account.
- Balancing regional transportation needs with the need for local circulation and access.
- Providing mobility for those who choose not to drive, or who cannot drive.
- Sharing public and private costs for transportation facilities and services.
- Developing facilities for alternative modes of travel, and improving safety for travelers by all modes.
- Conserving energy.

## **SUMMARY OF FINDINGS AND CONCLUSIONS**

1. An increasing population, a growing labor force, a strong economy and our own travel habits have increased the demand for transportation facilities, while costs for these facilities continue to rise.

2. Greater reliance on transit, bicycles, foot traffic, carpools, and other transportation modes will be necessary, along with decreased average trip length, in order to decrease energy consumption and road congestion. Use of alternative modes will decrease the need for costly road construction projects and improve air quality, neighborhood livability, and access to goods, services, and employment.
3. An improved relationship between land uses and transportation is necessary to decrease reliance on automobiles. Some ways to improve this relationship are to: alter the site design of new construction at or near major transit stops, increase connectivity in transportation systems, provide better pedestrian and bicycle facilities, use land more efficiently and encourage mixed use developments.
4. Improved east/west transportation connections are needed in the urban part of the County.
5. Money for transportation projects is limited, therefore the County must make the best possible use of existing funds and existing rights-of-way in order to efficiently provide transportation to the greatest number of people.
6. The northwest urban area of the County is within a designated Air Quality Maintenance Area (AQMA). Presently the AQMA meets state and federal air quality standards. Federal law requires the region to implement measures that will allow the region to maintain federal air quality standards. Federal law prohibits significant degrading of air quality in the Mt. Hood Wilderness area.
7. Transportation related noise is a significant problem, especially in residential areas adjacent to major roads.
8. Elderly, disabled and low-income residents -- a significant proportion of the County's population -- require better access to public transit and/or special transportation services.
9. The County's Capital Improvement Plan (CIP) contains the list of needed capital improvement projects that should be completed within 20 years in order to accommodate projected population and employment growth.
10. The County considered Metro's Roadway Design types and will apply them where appropriate.
11. Rural roads should be safer and improved to standard.

12. In 1999, 60% of Clackamas County residents commuted to work outside the County. The relative shortage of jobs within the County contributes to the County's transportation problems.
13. The County and the Oregon Department of Transportation (ODOT) have identified Interchange Management Areas, as shown on Map V-12, and developed an Interchange Area Management Plan (IAMP) for each Area. The intent of an IAMP is to coordinate land use and transportation facilities and protect the public's investment in the expressway/freeway interchange, which is a key component of the transportation system. (11/17/10)

### **GENERAL TRANSPORTATION GOALS**

- Create a safe, efficient and effective transportation system -- with multiple modes -- that balances the needs of the economy, protection of the environment, conservation of natural resources, and protection of neighborhoods.
- Work in partnership with neighboring and affected agencies in transportation planning to ensure effective and efficient results.
- Prepare a financial plan to fund the projects included in the Capital Improvement Plan (CIP).
- Use all financial means possible and take the lead in developing new funding sources to construct needed projects.
- Work to maximize dollar return from state, regional and federal sources for County transportation projects.
- Schedule transportation system improvements to coincide with the needs of new development.

## **ROADWAYS**

The County's roadway system, not including State highways and city streets, is an asset that, if built today (1999), would cost in excess of \$1 billion. This investment, mostly an endowment from previous generations, permits the movement of goods and people across the landscape, using the mode of our choice. Roadways provide access to virtually all property. They support old communities and serve new development. They connect rural communities and urban neighborhoods. Roadways give structure to our urban form, define our commuting patterns and influence our perceptions of what is far away or close at hand.

### **GOALS**

- Create and maintain a safe, continuous County-wide road system, which accommodates movement by all travel modes.
- Meet the future transportation demands of the County.
- Complement the transportation networks of cities, other counties and the State.
- Implement Interchange Area Management Plans (IAMPs) developed jointly by the County and ODOT and adopted as part of the Oregon Transportation Plan by the Oregon Transportation Commission. (11/17/10)
- Protect the function and operation of the interchange(s) and the local street network within each Interchange Management Area. (11/17/10)
- Ensure that any changes to the Comprehensive Plan land use designations in the Interchange Management Areas are consistent with the IAMPs. (11/17/10)

### **POLICIES**

#### **Efficiency and Finance**

- 1.0 Consider strategies for using the existing road system and its capacity most efficiently before building new roads or adding new capacity to existing roads. Transportation System Management techniques are a set of strategies that shall be used to make roadways operate more efficiently.

Transportation System Management (TSM) strategies include;

- Access Management

- Alternative/Modified Standards (Performance and/or Design Standards)
  - Intelligent Transportation System (ITS) applications
  - Operational Improvements
  - Parking Standards.
- 2.0 Emphasize maintenance of existing roadways, with improvements where appropriate, to improve traffic flow and safety at a reasonable cost.
  - 3.0 Determine roadway maintenance needs and priorities and develop an effective and efficient roadway maintenance program.
  - 4.0 Preserve as much as possible the efficient function of the regional roadway system in development of any new roads.
  - 5.0 Investigate and cooperate with other jurisdictions in establishing a transportation financing plan.
  - 6.0 Coordinate with the Oregon Department of Transportation (ODOT) in implementing the Oregon Transportation Plan (OTP), Oregon Highway Plan (OHP), Statewide Transportation Improvement Program (STIP), and with other state, local and regional jurisdictions in their roadway planning efforts.

### **Needed Roadway Improvements**

- 7.0 Fund and build the roadway improvement projects needed to accommodate and appropriately manage future traffic demands for the next 20 years. The list of these projects follows as Table V-1. Maps illustrating their locations are included as Maps V-1a and V-1b.
  - 7.1 Designate the Sunrise Corridor along a new alignment of Highway 212 in rural Clackamas County as a future, planned highway corridor.
  - 7.2 Pursuant to OAR 660, Division 12 that requires an exception to Statewide Planning Goal 3 (Agricultural Lands), Goal 11 (Public Facilities and Services) and Goal 14 (Urbanization) for constructing new arterial roads on EFU lands, an exception has been taken to allow for the Arndt Road improvement listed as project numbers 265 and 266 on Table V-1. For findings of fact and statement of reasons, see File ZDO 194. (April 17, 2003)
  - 7.3 Pursuant to OAR 660, Division 12 that requires an exception to Statewide Planning Goal 3 (Agricultural Lands), Goal 11 (Public Facilities and Services) and Goal 14 (Urbanization) for

constructing new arterial roads on EFU lands, an exception has been taken to allow for the Arndt Road improvement listed as project numbers 266 and 267 on Table V-1. For findings of fact and statement of reasons, see File ZDO 195. (June 26, 2003)

- 8.0 Maintain a current and complete 5-year Capital Improvement Program. It shall contain needed future transportation projects in priority order, with estimated costs and assigned responsibility for funding. It should be updated and adopted periodically by the Board of County Commissioners.

### **Functional Classifications and Roadway Standards**

- 9.0 Designate and develop roadways according to the functional classifications and guidelines listed in Tables V-2 and V-3 while allowing flexibility to accommodate characteristics of terrain, scenic qualities, and existing development.
- 10.0 Designate freeways, arterials, collectors and connectors as shown on Maps V-2a and V-2b. Roadways that do not presently exist but are shown on these maps are shown in approximate locations.
- 11.0 Limit zone change approvals to those that will not require a roadway as planned in the Capital Improvement Plan to be redesigned or increased to a higher functional classification in order to maintain the minimum acceptable performance evaluation Level-of-Service standard. State transportation facilities shall be evaluated according to the Oregon Highway Plan. (3/14/02)
- 12.0 The County shall consider the Regional Street Design Type Guidelines, as shown on Table V-4, when designing new county roads or redesigning existing county roads prior to construction or reconstruction. Map V-3 shows which roads are designated by each Design Type.
- 13.0 Design arterials and collectors to allow safe and convenient passage of buses in urban areas and, where necessary, rural areas.

### **Access Standards**

- 14.0 Plan and control access onto roads within the County, as shown on Table V-5, for urban areas and according to the American Association of State Highway and Transportation Officials (AASHTO) guidelines for rural areas, for both new and existing uses, and coordinate with the Oregon Department of Transportation for access control on state highways. Access standards need to be applied in a flexible manner that maintains reasonable access to property when access cannot be

denied.

- 15.0 Support the implementation of state access management standards (OAR Chapter 734, Division 51, as amended, and the Oregon Highway Plan) on state highway facilities within the Interchange Management Areas. (11/17/10)
- 16.0 Improve highway operations and safety by supporting construction of public roads that provide reasonable alternative access within Interchange Management Areas. When reasonable access is provided, support the elimination of direct access to state highway facilities. (11/17/10)

### **Improvements to Serve Development**

- 17.0 Require right-of-way dedication, on-site improvements to the applicable roadway standard as shown on Tables V-2 and V-3, and off-site improvements for new developments and land divisions necessary to handle expected traffic loads and travel by alternative modes.
- 18.0 Require development to be served by adequate roadway facilities. (3/14/02)
- 19.0 Require implementation of a local street network for undeveloped sites illustrated on Map V-4. Existing streets shall be extended to provide a direct, connected street system.
- 20.0 Developers of new developments and land divisions that will require construction of new streets shall provide the County with a conceptual street plan map and street cross sections responding to the other requirements of this section, and full street connections at intervals of no more than 530 feet. Exceptions may be made when a full street connection is prevented by barriers such as topography, railroads, freeways, pre-existing development or environmental constraints such as streams and wetlands.
- 21.0 Before an exception is granted to the above requirement, it shall be determined if, at a minimum, an accessway for pedestrians, bicyclists or emergency vehicles may be constructed at intervals of 330 feet. Those accessways shall be constructed unless prevented by barriers or environmental constraints.
- 22.0 Assess anticipated off-site traffic impacts caused by new developments and land divisions. The developer or subdivider may be required to participate financially or otherwise in the provision of off-site improvements, dedications or other requirements. (3/14/02)

- 23.0 Where appropriate, develop and implement neighborhood traffic circulation plans intended to improve circulation while minimizing neighborhood disruption and environmental problems.
- 24.0 Encourage a relationship between land use and roadways which decreases average trip length.
- 25.0 Discourage through trips on local, connector and collector roadways.
- 26.0 Develop neighborhood traffic calming policies that will enable the County to address inappropriate travel patterns and speeds.
- 27.0 Allow flexible roadway criteria and standards for local streets that are less than 200 feet in length, are expected to carry very low traffic volumes, and are not capable of being extended.
- 28.0 Private streets may be appropriate in areas with topographic constraints that make construction of a road to County standards not feasible. Private roads are not classified as local streets and are not maintained by the County, and don't necessarily provide connectivity.
- 29.0 Require that changes to the Comprehensive Plan land use designations within the Interchange Management Areas identified on Map V-12 must be consistent with Oregon Administrative Rules 660-012-0060. If the land uses allowed by the new Comprehensive Plan land use designation would cause the interchange mobility standards to be exceeded, the change either shall be denied, or improvements shall be made such that the mobility standards are met. (11/17/10)

### **Operating Standards**

- 30.0 Evaluate capacity needs for regional roadways within Metro's boundaries using the Regional Motor Vehicle Performance Measures. The use of these measures is limited to network analysis, and priorities for funding through Metro; they are not for designing individual road improvements.
- 31.0 All arterials and collectors not in Regional Centers shall be evaluated for performance to Level-of-Service "D" as the acceptable operating standard, except as established below. All capital construction shall be designed to achieve Level-of-Service "D" or better. (4/28/05)
  - a. Review of high-employment developments shall use a performance evaluation operating standard of Level-of-Service "E". (4/28/05)
  - b. Review of developments proposed on property with a

Comprehensive Plan designation of Campus Industrial, Business Park, Light Industrial, General Industrial or Rural Industrial shall use a performance evaluation operating standard of Level-of-Service “E”, except within the Clackamas Industrial Area and Government Camp Village where no performance evaluation operating standard shall apply. (1/25/07)

- 32.0 For state facilities within an Interchange Management Area as identified on Map V-12, implement a mobility standard for the peak two hours of 0.99 v/c at the intersection and of 0.85 v/c at the ramp ends. (11/17/10)
- 33.0 Limit zone change approvals to those that will not reduce the Level of Service of a roadway as planned in the Capital Improvement Plan below the minimum acceptable performance evaluation Level-of-Service standard. State facilities shall be evaluated according to the Oregon Highway Plan. (3/14/02)

### **Building Roads**

- 34.0 County road capital improvement projects outside UGBs may be designed and constructed to improve safety and bring the roads up to County standards. When projects are located within current rights-of-way, no conflicts with Goals 3 or 4 are anticipated. If the design of a project requires expansion of right-of-way into lands planned for Forest or Agricultural use, a goal exception may be necessary.
- 35.0 Road projects located outside UGBs shall be planned to support the existing development pattern and through traffic needs, and are not planned to support or promote urbanization. Such projects will comply with Goal 11 (Transportation) to provide a safe and efficient transportation system meeting the needs of the rural area.
- 36.0 Streets and roads are an allowed use in all zoning districts. All state and County policies relating to roads shall be considered when widening or constructing new roads.
- 37.0 Consider all types of interchange designs when developing a freeway interchange project to maximize traffic flow, safety and efficiency.
- 38.0 Consider all transportation modes when building new roads or widening existing roads to maximize efficiency and safety for all users of the road.

### **Scenic Roads**

- 39.0 Implement a County Scenic Road System.

- 39.1 The Scenic Road designation is intended to protect recreation values, scenic features, and an open, uncluttered character along the roadway. Developments adjacent to scenic roads shall be designed with sensitivity to natural conditions. The following policies are intended to accomplish these ends:
- a. Scenic roads shall have strict access control on new developments.
  - b. Scenic roads should have shoulders wide enough for pedestrians or bicycles.
  - c. Turnouts should be provided where appropriate for viewpoints or recreational needs.
  - d. Design review of developments adjacent to scenic roads shall require visual characteristics and signing appropriate to the setting.
  - e. Buildings should be set back a sufficient distance from the right-of-way to permit a landscaped or natural buffer zone.
  - f. Parking areas adjacent to scenic roads should be separated from the right-of-way by a landscaped buffer.
  - g. Frontage roads, if any, adjacent to scenic roads should be separated by a vegetative buffer.
  - h. Encourage underground placement of utilities.
- 39.2 The following shall be designated scenic roads: (See Map V-5).
- I-205 west of the Willamette River
  - Stafford Road from Lake Oswego to Mountain Road
  - Mountain Road, Canby Ferry, Locust, 37<sup>th</sup>, and Holly Street
  - Schaeffer Road
  - Pete's Mountain Road from Schaeffer Road to Tualatin River
  - Oregon City Bypass-Newell Creek Canyon segment
  - Highway 99E from Oregon City to New Era Road
  - Canby-Marquam Highway from Canby to Highway 211
  - Highway 211 from Canby-Marquam Highway to Estacada
  - Highway 224 from Carver to Barton and from Estacada south
  - Redland Road
  - Clackamas River Drive

- Fischers Mill Road
- Springwater Road from Clackamas River Drive to Hayden Road
- Hayden Road
- Highway 26 east of Sandy
- Highway 35
- Old Highway 35/FS 386
- Timberline Road and West Leg Road
- Marmot/Barlow Trail Road
- Lolo Pass Road
- Salmon River Road
- Still Creek Road
- Wilsonville Road

39.3 Designate that portion of the Mt. Hood Loop in Clackamas County (Dodge Park Road, Lusted Road, Ten Eyck Road, US 26, and OR 35) as an official Oregon Scenic Byway.

## **TRANSPORTATION DEMAND MANAGEMENT**

Strategies to achieve efficiency in the transportation system by reducing demand are collectively known as Transportation Demand Management (TDM) techniques. TDM measures can be effective tools in reducing Vehicle Miles Traveled (VMT). Implementation of TDM measures will help meet the County's Transportation Planning Rule requirement for reduction in VMT per capita over the next 20 years. In the long run these strategies can help keep costs down for new transportation facilities and improve air quality.

### **GOALS**

- Reduce single occupant vehicle trips on the roadway network during peak travel demand periods.
- Reduce Vehicle Miles Traveled per Capita by 10% by year 2020 (using year 2000 as a base year).
- Work with businesses in Clackamas County to support their efforts in reducing single occupant vehicle commuting, which in turn will reduce Vehicle Miles Traveled per Capita.

### **POLICIES**

- 1.0 Work with Metro and the state to explore Congestion Pricing (Value Pricing) on appropriate transportation facilities to encourage reductions in VMT.
- 2.0 Encourage employers in Clackamas County to implement a range of TDM policies to help their employees reduce VMT. Examples are, subsidized bus passes, company owned vanpools, preferred parking for carpools and vanpools, bicycle racks, and flexible work schedules.
- 3.0 Coordinate with DEQ and Tri-Met to implement TDM programs and the Employer Commute Options (ECO) rule.
- 4.0 Provide adequate bicycle and pedestrian facilities to employment areas of Clackamas County to encourage use of alternative modes for the commute to work.
- 5.0 Work with Clackamas County employers located in concentrated employment areas to develop Transportation Management Associations (TMAs) to coordinate and support private sector TDM efforts.

6.0 Establish the following Year 2040 Non Single Occupancy Vehicle (SOV) modal split targets for Regional 2040 Design Types:

<b>2040 Design Type</b>	<b>Non-SOV Modal Target</b>
Regional Centers	45%
Town Centers	45%
Main Streets	45%
Station Communities	45%
Corridors	45%
Industrial Areas	40%
Intermodal Facilities	40%
Employment Areas	40%
Inner Neighborhoods	40%
Outer Neighborhoods	40%

## **PARKING**

The setting of parking standards is a Transportation System Management (TSM) technique that is consistent with the Region 2040 Growth Concept, meets the objectives of the Transportation Planning Rule (TPR), and complies with DEQ's Air Quality Maintenance Plan.

### **GOAL**

- Insure that parking is provided in a manner convenient to users of all transportation modes.

### **POLICIES**

- 1.0 Set minimum and maximum limits on allowed off-street parking relative to building size, location and use, and adjacent land uses.
- 2.0 Encourage off-street parking in commercial, industrial, and high density residential areas to be at the sides or rear of buildings where practical, with buildings oriented to the street in a manner that is convenient to pedestrians and aesthetically pleasing to passers-by, but does not interfere with sight distance on the roadway, or preclude road widening.
- 3.0 Existing curbside parking along arterials and collectors may be removed to allow the striping of bike lanes, construction of travel or turning lane improvements or for increasing sight distance.
- 4.0 Allow developments along transit routes to decrease their parking area requirements if they provide pedestrian and transit amenities.
- 5.0 Allow commercial and industrial developments to decrease their parking area requirements if they provide and maintain ridesharing programs.
- 6.0 Allow shared parking where feasible, such as within mixed use development and where adjacent land uses are compatible. Such sharing of parking can be used to help satisfy compliance with parking standards.
- 7.0 Increase on-street parking in residential areas by minimizing the width of driveway curb cuts.
- 8.0 On-street parking may be prohibited in front of schools as needed to assure student safety and school security, and shall be reviewed on a school by school basis.

## **TRANSIT**

Transit service is essential for the mobility of many County residents, and provides an attractive option for others who prefer to use it. Tri Met, transit districts in Wilsonville, Molalla and Sandy, and each of the school districts operate buses on County roads, State highways, and city streets within the County. While the County provides no transit service directly, it has some influence over the type of service provided and the way new developments interface with transit and provide amenities for transit riders.

### **GOALS**

- Develop an integrated transit system that complements and supports the road, pedestrian, and bicycle system and encourages the use of alternative transportation modes within, to, and from the County's urban areas.
- Encourage transit ridership through development of a transit system that is fast and comfortable at low cost.
- Encourage land use patterns, development designs and street and pedestrian/bikeway improvements that support transit.
- Provide transit for people who cannot use or do not have adequate private transportation. Provide transit that is accessible to people with disabilities.
- Develop a transit system that supports residential, commercial and industrial development to help reduce new investment in roadway capacity.
- Develop a transit system that meets the County's local needs.
- Develop a system of light rail transit (LRT) routes to serve selected corridors in the north urban area of the County.

### **POLICIES**

- 1.0 Work with transit agencies to identify existing transit deficiencies in the County, needed improvements, and park and ride lots to increase the accessibility of transit services.
- 2.0 Major developments or road construction projects along transit routes shall be required to include provisions for transit shelters, pedestrian access to transit and/or bus turnouts where appropriate.

- 3.0 Coordinate with transit providers to achieve the goal of transit service within 1/4 mile of most residences and businesses within the Portland Metropolitan UGB. More frequent service should be provided within Regional Centers and Corridors.
- 4.0 Emphasize corridor or roadway improvements to increase transit speed, convenience and comfort.
- 5.0 Coordinate and cooperate with Tri-Met and other transit agencies to provide transportation to the elderly and people with disabilities.
- 6.0 Promote park and ride lots, bus shelters and pedestrian/bikeway connections to transit.
- 7.0 Emphasize transit improvements that best meet the needs of the County, including more east-west connections and service between the County's industrial and commercial areas and medium to high density neighborhood areas.
- 8.0 Protect neighborhoods, recreation areas and pedestrian/bikeways from transportation related environmental degradation.
- 9.0 Require pedestrian and transit-supportive features and amenities and direct access to transit through the Development Review Process. Such amenities may include pedestrian/bikeway facilities, street trees, outdoor lighting and seating, landscaping, shelters, kiosks, strict standards for signs, and visually aesthetic shapes, textures and colors. Parking should be at the rear or sides of buildings. Buildings measuring more than 100 feet along the side facing the major pedestrian/transit access should have more than one pedestrian entrance.
- 10.0 Coordinate with Tri-Met on all new residential, commercial or industrial developments to ensure appropriate integration of transit into the developments.
- 11.0 Bus routes will be improved and coordinated with financing and implementation of necessary roadway improvements and in cooperation with transit service providers.
- 12.0 Encourage Tri-Met to restructure transit service to efficiently serve local as well as regional needs.
- 13.0 Work with federal, state, and regional agencies to implement high capacity transit in the downtown Portland to Milwaukie (McLoughlin) Corridor, and the Highway 224 Corridor to Clackamas Town Center.

- 14.0 Provide high capacity transit to the Oregon City and Tualatin areas, and in the I-205 corridor including the Gateway Transit Center. The purpose is to relieve traffic congestion, provide for transportation alternatives to the automobile, and to promote the economy of the Oregon City and Tualatin areas and the I-205 Corridor.

**Standards and Criteria for Major Transit Streets and Major Transit Stops**

- 15.0 Major Transit Streets, for the purpose of setting standards for orientation of development to transit, shall be those streets planned for High Capacity Transit and Primary Bus as shown on Map V-6, as well as any other street that receives 20 minute or better service at the PM traffic peak.
- 16.0 Major Transit Stops shall be any transit stop along a Major Transit Street where that stop is within 250 feet of the centerline of an intersection with a public or private street. Orientation of buildings to transit at Major Transit Stops shall be accomplished by siting new commercial buildings as close as possible to transit, with a door facing the transit street or side street, and with no parking between the building and front property lines.
- 17.0 Pedestrian access should be provided connecting transit centers or transit stops on bus routes, with centers of employment, shopping or medium to high density residential areas within one-quarter mile of these routes.

## **PEDESTRIAN AND BICYCLE FACILITIES**

The county completed its transportation systems planning for pedestrian and bicycle modes in 1995, to implement the state's Transportation Planning Rule (TPR). The TPR is grounded by the principles that: (3/17/04)

1. Land use and transportation are intimately related.
2. Over reliance should not be placed on any one transportation mode.
3. Walking and bicycling reduce the number of motorized vehicle trips.
4. Compact, mixed-use development encourages the use of non-motorized modes. (3/17/04)
5. "Well-planned", properly designed facilities will encourage people to make trips by non-motorized modes. (3/17/04)
6. Facilities for these non-motorized modes are essential for people not having access to an automobile, and constitute desirable elements in a well-designed community that are enjoyed by people who can drive, but choose to walk or bicycle. (3/17/04)

These principles underlie the development of the Clackamas County Pedestrian Master Plan and the Clackamas County Bicycle Master Plan, both of which are adopted by reference as supporting documents. Both master plans were prepared under the guidance of the Clackamas County Pedestrian and Bikeway Advisory Committee, which was guided by the following vision: (3/17/04)

### **VISION**

Create an environment which encourages people to bicycle and walk on networked systems that facilitate and promote the enjoyment of bicycling and walking as safe and convenient transportation modes.

### **POLICIES**

The first five policies below speak to how the envisioned system should be designed. The results of the system design work based on those policies are shown on the Planned Bikeway Network Map V-7a, Planned Bikeway Network Map V-7b, and Essential Pedestrian Network Map V-8. Those pedestrian and bicycle facilities shall be constructed in the course of development, as well as added to existing communities as the Capital Improvement Program allows. Responsibility for construction falls on both the private and public sectors. These facilities shall be constructed to specified standards. Ongoing, unfinished, and project-level planning for pedestrian and bicycle facilities will continue. It will be coordinated with other jurisdictions and integrated with other transportation

modes. (3/17/04)

- 1.0 Provide networked systems of walkways and bikeways connecting neighborhoods, transit stops, commercial areas, community centers, schools, parks, libraries, employment places, other major destinations, regional bikeways and walkways, and other transportation modes.
- 2.0 Identify walkway and bikeway improvements necessary to ensure direct and continuous networks of walkways and bikeways on the county road system. (3/17/04)
- 3.0 Support acquisition and development of multi-use paths on abandoned public and private rights-of-way.
- 4.0 Encourage bicycle and pedestrian access across rivers and other natural barriers.
- 5.0 Promote grid-street development patterns to provide direct routes from neighborhoods to destinations frequented by pedestrians and bicyclists.
- 6.0 Construct all walkways, bikeways, and trails as designated on maps V-7a, V-7b, and V-8. (3/17/04)
- 7.0 Construct all walkways designated in this Plan and any other walkways proposed, according to the current county design standards, the American Association of State Highway and Transportation Officials (AASHTO) standards, and the Americans with Disabilities Act (ADA) standards. (3/17/04)
- 8.0 Construct all bikeways designated in this Plan and any other bikeways proposed, according to the current standards in the Oregon Bicycle and Pedestrian Plan and the American Association of State Highway and Transportation Officials (AASHTO) standards. (3/17/04)
- 9.0 The implementation of bikeways and sidewalks shall be considered in all new collector or arterial construction or reconstruction, even if not designated on Maps V-7a, V-7b, and V-8. (3/17/04)
- 10.0 Require that new development include construction of pedestrian and bikeway connections within the development and between adjacent developments for the purpose of increasing non-motorized mobility. (3/17/04)

- 11.0 Coordinate with pedestrian, bicycle, and trail master plans of the Oregon Department of Transportation, the United States Forest Service, Metro, parks districts, and city parks departments to achieve a safe and convenient off-road trail system connecting to the on-road pedway and bikeway network. (3/17/04)
- 12.0 Coordinate the implementation of pedways and bikeways with neighboring jurisdictions and jurisdictions within the county. (3/17/04)
- 13.0 Support the continuation of the “Bikes on Transit” program on all public transit routes.
- 14.0 Require new development to provide bicycle parking, and initiate a program for adding bicycle parking in areas frequented by bicyclists.
- 15.0 Encourage the provision of appropriate supportive facilities and services for bicyclists, including showers, lockers, bike racks on buses, bike repair and maintenance information/clinics, and secure bicycle parking. (3/17/04)
- 16.0 Support continuation of current (or equivalent) federal, state, and local funding mechanisms to construct county pedestrian and bicycle facilities. (3/17/04)
- 17.0 Develop dedicated funding sources to implement the Clackamas County Pedestrian and Bicycle Master Plans. (3/17/04)
- 18.0 Develop routine maintenance standards and practices for pedestrian facilities and on-road and off-road bikeways, including traffic control devices. (3/17/04)
- 19.0 Inform the public of their responsibilities for sidewalk and bikeway maintenance. (3/17/04)
- 20.0 Ensure an opportunity for representative citizen involvement in the county pedestrian and bicycle planning process by sponsoring the Clackamas County Pedestrian and Bikeway Advisory Committee as a forum for public input. (3/17/04)
- 21.0 Encourage the provision of street lighting for the purpose of increasing the visibility and personal security of pedestrians and bicyclists. (3/17/04)

- 22.0 Monitor and update the Clackamas County Pedestrian and Bicycle Master Plans through data collection, evaluation, and review activities necessary to maintain and expand the programs established in these plans. (3/17/04)
- 23.0 Construct separate multi-use paths in rural areas according to American Association of State Highway and Transportation Officials (AASHTO) standards where travel lanes or wide paved shoulders along roadways may be unacceptable to pedestrians or bicyclists. (3/17/04)
- 24.0 In Unincorporated Communities, construct walkways adjacent to or within areas of development, such as schools, businesses, or employment centers near or along highways. (4/13/06)

## **FREIGHT, RAIL, AIR, PIPELINES AND WATER TRANSPORTATION**

These modes are acknowledged as making significant contributions to the movement of people and goods that improve our quality of life. Clackamas County has a strong job base in the sectors of transportation and wholesale trade. It is important to maintain the advantages of location and transportation infrastructure that ensure leadership in these sectors.

If the County's role in freight movement is to expand within the region and nation, intermodal facilities will require expansion. National and international markets will become increasingly prominent, but the decision to keep business in the County competitive will require local support.

### **GOALS**

- Provide efficient, cost-effective and safe movement of freight in and through the County.
- Maintain and enhance the County's competitive advantage in freight distribution through the efficient use of a flexible, continuous, multi-modal transportation network that offers competitive choices for freight movement.
- Protect and enhance public and private investments in the freight network.
- Encourage better service and inter-modal connections for passenger rail and air travel.
- Continue to use and diversify the rail system in Clackamas County through development of supportive land use, coordination between rail and other transportation modes, and encouragement of passenger rail service.
- Protect residents from safety hazards and environmental degradation caused by rail.
- Locate new airports so as to maximize safety, minimize environmental degradation, and integrate airport location with other transportation networks.
- Minimize conflicts between airports and other uses.
- Encourage freight shipment on the Willamette River while minimizing environmental degradation.

## **POLICIES**

### **Freight Trucking**

- 1.0 Maintain a truck circulation plan, as shown on Map V-10, for movements of freight on arterial roads where minimum impact will occur to neighborhoods, and industrial areas will have the service they need.

### **Rail**

- 2.0 Reduce the number of at-grade crossings from those that currently exist.
- 3.0 On new or reconstructed arterials or urban collectors, prohibit at-grade crossings of heavy rail lines without traffic restrictive safety devices unless train traffic is very low.
- 4.0 Encourage use of the rail system for freight and passenger high speed rail service. Encourage additional stations for heavy rail service.
- 5.0 Work with the private transportation industry, Oregon Economic Development Department, Port of Portland and others to identify and realize investment opportunities that enhance freight mobility and support the County, Regional and State economy.

### **Airports**

- 6.0 Work with the Port of Portland to make the Port's facilities for passenger and freight service more accessible to County residents.
- 7.0 Work with the Port of Portland in the development of the Mulino Airport.
- 8.0 Coordinate with Marion County to implement regulations on development near the Aurora Airport.
- 9.0 Apply the following criteria when reviewing applications for new airports or expansions of existing ones.
  - 9.1 Locate new public use airports within one mile of an arterial roadway. (11/01/01)
  - 9.2 Locate new public use airports at least one mile away from urban residential areas. (11/01/01)
  - 9.3 Prevent air pollution and noise generated by airports from exceeding standards of appropriate regulatory agencies.

- 9.4 Cooperate with regulatory agencies to minimize conflicts between airports and other uses.
- 9.5 Develop appropriate height and clear zone standards for airport facilities.
- 9.6 Encourage establishment of heliports in industrial areas in conjunction with state and federal standards for heliport design and location.
- 9.7 New airports, airport expansions, or expansions of airport boundaries, except those limited to use by ultralights and helicopters, shall have a runway at least 1800 feet long and control at least enough property at the end of each runway through ownership, avigation easement, or long term lease to protect their approach surfaces until they are 50 feet above the terrain. The runway shall be located so as to achieve at least a 20 foot clearance of the approach surface over a county, city or public road. (11/1/01)
- 10.0 The County will adopt ordinance provisions to implement regulations consistent with applicable statutes and administrative rules. (11/1/01)
- 11.0 Recognize airports in Clackamas County, classified as shown on Map V-11.

**Pipelines**

- 12.0 Work with pipeline companies to provide safe, quiet, efficient transport of bulk commodities.

**Water Transportation**

- 13.0 Maintain land transportation access to docks, boat ramps and shippers using waterways for transportation.
- 14.0 Support efforts to minimize negative impacts on water quality caused by river transportation.

# TABLES & MAPS

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