

Memorandum



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To: Marc Butorac
From: Joe Dills, AICP
Copies: Larry Conrad
Date: October 26, 2011
Subject: Technical Memorandum 9.2: 172nd–190th Avenue
Corridor Management Plan – County Plan and
Ordinance Amendments

Project No.: 15343 – Task 9.2

Otak reviewed Chapter 5, Transportation, of the Comprehensive Plan and Section 1007 of the Clackamas County Zoning and Development Ordinance. The focus of this review was to identify potential amendments required to implement the draft 172nd–190th Corridor Management Plan (CMP). Attached are track change edits and comments from the review. The attached amendment and comments were ideas provided to the County on September 20, 2011. The County's feedback is noted below.

As annotated, the primary intent of the proposed Plan and Code amendments are to:

- a. Ensure adequate and coordinated incorporation of the CMP into the County's Transportation System Plan.
- b. Provide regulatory authority to implement the CMP.
- c. Edit specific elements (e.g., project citations) so they are consistent with specific elements of the CMP.
- d. Ensure specific implementation tools, such as dedication of right-of-way, are provided in the Plan and Code.

The following are the key amendments and issues. These are working recommendations, so questions and commentary have been included in the attached track change documents.

The working recommendations are:

1. Adopt the CMP, by reference, as part of the TSP. A new section has been added at the end of Chapter 5, with a Policy adopting the CMP by reference. Note: As feedback to this memorandum, the County indicated they would proceed with this adoption by reference.

2. Add general references to “Corridor Management Plans and special area plans” in several sections of Chapter 5. This edit is suggested as a generalized way to cite plans/standards for specific areas which may modify or supplement Chapter 5, without having to cite them individually and repeatedly. Note: As feedback to this memorandum, the County indicated they would finalize the details of this recommendation and may use another name for “Corridor Management Plans and special area plans.”
3. Update the 172nd – related projects in the TSP. There are some options for this item. One approach is to list the corridor as a single project, as has been done in the past. Another approach is to update the description of Project 65 in Table V-1 and add a new project called Project 65A – 190th Connector, so they are two projects. Michael Walter indicated he liked this option. A third option is to break the corridor into three projects (two parts of 172nd, and the 190th Connector). The County and Happy Valley TSPs should both use the same approach to project definition so the documents and project references are consistent. Note: As feedback to this memorandum, Clackamas County and Happy Valley agreed to structure the projects as follows:
 - SE 172nd Avenue (Sunnyside Road to 172nd – 190th Connector)
 - SE 172nd Avenue (172nd – 190th Connector to Cheldelin Road)
 - SE 172nd – 190th Connector (172nd Avenue to Foster Road)
4. The 5 Year CIP list needs to be checked for whether any edits are needed at this time regarding the 172nd CMP. Otak does not have this document. It has an important legal role as cited in ZDO 1007.09 regarding the “timely” standard for concurrency. Note: As feedback to this memorandum, the County indicated this recommendation would be addressed in the TSP Update.
5. Kittelson should advise on the “Operating Standards” policies on page V-10 of Chapter 5. Note: As feedback to this memorandum, the County indicated this recommendation would be addressed in the TSP Update.
6. Very few edits are suggested to ZDO 1007. As noted in the commentary:
 - ZDO 1007 cites a requirement for consistency with Chapters 5 and 10 of the Comprehensive Plan. This is good. By adopting the 172nd CMP by reference in Chapter 5, as described above, the CMP is then applicable through the ZDO as well. I have added just a few edits to increase the direct linkage to Chapter 5.
 - The County’s authority for dedications and improvements is strong and clear in 1007.03.

- ZDO 1007.10 addresses Fee in Lieu of Construction. It is tailored to smaller developments and specific situations. From the language, it looks like there is specific policy intent that underlies the limitations. As we do not have new policy direction on this topic, I would recommend leaving this section as written - new ideas for it can be discussed in the larger TSP process.

Note: As feedback to this memorandum, the County indicated that ZDO amendments will be addressed in the TSP process. At that time, they will re-assess whether the above-cited issues require amendments.

7. Maps updates that are needed include (all minor):

- Map V-1a, 20 Year Projects – An update is needed to update the line work for the 172nd–190th alignment, and cite Projects 65 and 65A separately (if the County agrees).
- Map V-2a, Functional Classification – An update is needed to update the line work for the 172nd–190th alignment, and classify the roads. A question is whether the Major Arterial (for the five-lane section) and Minor Arterial (for the three-lane sections) are the appropriate classes.
- Map V-3, Regional Street Design Types – An update is needed to update the line work for the 172nd–190th alignment as Regional Boulevard.
- Map V-7a, Planned Bikeway Network – An update is needed to update the line work for the 172nd–190th alignment.
- Map V-8, Essential Pedestrian Network – An update is needed to update the line work for the 172nd–190th alignment and designate the corridor as part of the Essential Pedestrian Network.

Note: In feedback to this memorandum, the County noted they intend to prepare the above updates.

Overall, the recommendations are selected, and relatively minor, amendments that comprise an “interim” update of the TSP and ZDO 1007 to achieve the objectives cited above. The broader Clackamas County TSP will provide a more comprehensive update.

TRANSPORTATION

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. The system also is intended to integrate with sustainable land use patterns and policies. It is expected to serve a multitude of public needs without sacrificing air and water quality or creating noise pollution.

Comment [j1]: Not strictly required for 172nd, but reflective of current County policy and one of the key benefits of the CMP.

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.

[Amended by Board Order 2000-140, 6/29/00]

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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.
- Implementing County plans and policies

[Amended by Board Order 2000-140, 6/29/00]

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.

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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, with additional north/south connections needed in selected urban corridors-
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.

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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.

14. The County and Happy Valley, Gresham and Damascus have identified the 172nd-190th Corridor as an area that will benefit from a coordinated Corridor Management Plan.

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[Amended by Board Order 2000-140, 6/29/00; Amended by Ord. ZDO-225, 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.

[Amended by Board Order 2000-140, 6/29/00]

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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.

[Added by Board Order 2000-140, 6/29/00]

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.
- Protect the function and operation of the interchange(s) and the local street network within each Interchange Management Area.
- Ensure that any changes to the Comprehensive Plan land use designations in the Interchange Management Areas are consistent with the IAMPs.
- Implement Corridor Management Plans and special area plans adopted by the County.

[Amended by Board Order 2000-140, 6/29/00; Amended by Ord. ZDO-225, 11/17/10]

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Comment [j2]: This is the first of several references to CMPs and special area plans. This is suggested as a handy way to reference the 172nd CMP broadly, as well as other adopted plans that may not fully qualify as Design Plans adopted into Chapter 10.

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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.

[Amended by Board Order 2000-140, 6/29/00]

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

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Comment [j3]: 1.The 172nd Ave project in Table V-1 needs to be updated. There are some options for this item. One approach is to list the corridor as a single project, as has been done in the past. Another approach is to update the description of Project 65 in Table V-1 and add a new project called Project 65A – 190th Connector, so they are two projects. Michael Walter indicated he liked this option. A third option is to break the corridor into three projects (2 parts of 172nd, and the 190th Connector). The County and Happy Valley TSPs should both use the same approach to project definition so the documents and project references are consistent.

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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.
- 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.

- 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.

[Added by Board Order 2000-140, 6/29/00; Amended by Ord. 09-2003, 4/17/03; Amended by Ord. 10-2003, 6/26/03]

Comment [j4]: This list needs to be checked for whether it has 172nd on it and whether any changes are needed. The 5-Year CIP has an important legal role as applied in ZDO 1007.09 C and F, related to the timeliness of concurrency.

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, Corridor Management Plans and special area plans.
- 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.
- 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

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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.

[Amended by Board Order 2000-140, 6/29/00; Amended by Board Order 2002-52, 3/14/02]

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. Where access management standards are adopted by the County in Corridor Management Plans and special area plans, those standards shall apply.
- 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.
- 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.

[Amended by Board Order 2000-140, 6/29/00; Amended by Ord. ZDO-225, 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. Where roadway standards are adopted by the County in Corridor Management Plans and special area plans, those standards shall apply.

~~17.0~~

- 18.0 Require development to be served by adequate roadway facilities.

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- 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.
- 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

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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.

[Amended by Board Order 2000-140, 6/29/00; Amended by Board Order 2002-52, 3/14/02; Amended by Board Order 2002-54, 3/14/02; Amended by Ord. ZDO-225, 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 Arterials and collectors 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.
 - a. Review of high-employment developments shall use a performance evaluation operating standard of Level-of-Service "E".
 - 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.
 - c. Segments of 82nd Avenue, Sunnyside Road, and Johnson Creek Boulevard located within the Clackamas Regional Center Area shall be evaluated for performance to standards adopted in Chapter 10, "Clackamas Regional Center Area Design Plan," Section XII Roads and Streets System Policies.
- 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.

Comment [j5]: KAI should review this text: does this section require an edit to sync with performance objectives for the CMP?

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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.

[Amended by Board Order 2000-140, 6/29/00; Amended by Board Order 2002-52, 3/14/02; Amended by Board Order 2005-91, 4/28/05; Amended by Board Order 2007-60, 1/25/07; Amended by Ord. ZDO-225, 11/17/10; Amended by Ord. ZDO-226, 3/7/11]

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.

[Amended by Board Order 2000-140, 6/29/00]

Scenic Roads

39.0 Implement a County Scenic Road System.

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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, 37th, 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

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- 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.

[Amended by Board Order 2000-140, 6/29/00]

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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.

[Added by Board Order 2000-140, 6/29/00]

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.

[Added by Board Order 2000-140, 6/29/00]

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.

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- 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:

2040 Design Type	Non-SOV Modal Target
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%

[Added by Board Order 2000-140, 6/29/00]

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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.

[Added by Board Order 2000-140, 6/29/00]

GOAL

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

[Amended by Board Order 2000-140, 6/29/00]

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.
- ~~40.0~~ 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. Where parking standards are adopted by the County in Corridor Management Plans and special area plans, those standards shall apply.
- 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

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driveway curb cuts.

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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.

[Amended by Board Order 2000-140, 6/29/00]

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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.

[Added by Board Order 2000-140, 6/29/00]

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.

[Amended by Board Order 2000-140, 6/29/00]

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

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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

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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.

[Amended by Board Order 2000-140, 6/29/00]

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.

[Amended by Board Order 2000-140, 6/29/00]

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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:

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.
5. "Well-planned", properly designed facilities will encourage people to make trips by non-motorized modes.
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.

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:

[Amended by Board Order 2000-140, 6/29/00; Amended by Ord. 16-2003, 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.

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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.

- 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.
- 3.0 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, and as adopted in Corridor Management Plans and special area plans.
- 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.
- 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.

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- 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.
- 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.
- 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.
- 12.0 Coordinate the implementation of pedways and bikeways with neighboring jurisdictions and jurisdictions within the county.
- 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.
- 16.0 Support continuation of current (or equivalent) federal, state, and local funding mechanisms to construct county pedestrian and bicycle facilities.
- 17.0 Develop dedicated funding sources to implement the Clackamas County Pedestrian and Bicycle Master Plans.
- 18.0 Develop routine maintenance standards and practices for pedestrian facilities and on-road and off-road bikeways, including traffic control devices.
- 19.0 Inform the public of their responsibilities for sidewalk and bikeway maintenance.
- 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.

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- 21.0 Encourage the provision of street lighting for the purpose of increasing the visibility and personal security of pedestrians and bicyclists.
- 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.
- 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.
- 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.

[Amended by Board Order 2000-140, 6/29/00; Amended by Ord. 16-2003, 3/17/04; Amended by Board Order 2006-89, 4/13/06]

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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.

[Added by Board Order 2000-140, 6/29/00]

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.

[Amended by Board Order 2000-140, 6/29/00]

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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.

[Amended by Board Order 2000-140, 6/29/00]

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.

[Amended by Board Order 2000-140, 6/29/00]

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.
 - 9.2 Locate new public use airports at least one mile away from urban residential areas.

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- 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.
- 10.0 The County will adopt ordinance provisions to implement regulations consistent with applicable statutes and administrative rules.
- 11.0 Recognize airports in Clackamas County, classified as shown on Map V-11.

[Amended by Board Order 2000-140, 6/29/00; Amended by Board Order 2001-256, 11/1/01]

Pipelines

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

[Added by Board Order 2000-140, 6/29/00]

Water Transportation

- 13.0 Maintain land transportation access to docks, boat ramps and shippers using waterways for transportation.

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14.0 Support efforts to minimize negative impacts on water quality caused by river transportation.

[Amended by Board Order 2000-140, 6/29/00]

[Editor's Note: Chapter 5 was amended as part of the adoption of the Rural Transportation System Plan by Board Order 2001-107, effective May 24, 2001. Specific changes to the content of Chapter 5 made as part of that process are not able to be confirmed using readily available records.]

CORRIDOR MANAGEMENT PLANS AND SPECIAL AREA PLANS

The County conducts special transportation planning in order to address specific local and regional needs, integrate land use, promote sustainable development, implement varied County goals, gain community involvement, and coordinate with other governmental agencies. Such plans often modify or supplement the Transportation System Plan, so it is important to adopt and implement them as the prevailing policies, plans and standards that apply to transportation improvements, future planning and development review. This section of Chapter 5 lists those plans that are adopted by reference and therefore made part of the Comprehensive Plan.

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POLICIES

1.0 The ^{172nd}-^{190th} Avenue Corridor Management Plan is adopted by reference as part of Chapter 5 of the Clackamas County Comprehensive Plan.

Comment [j6]: Note, this title citation should be checked.

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TABLES & MAPS

Table V-1	20 Year Capital Improvement Needs
Table V-2	Roadway Classifications and Guidelines
Table V-3	Roadway Classifications and Guidelines (Continued) [Amended by Board Order 2008-05, 1/17/08]
Table V-4	Regional Street Design Types
Table V-5	Access Requirements by Functional Classification, Urban Areas Only
Map V-1a	Transportation System Plan – 20 Year Projects - Urban
Map V-1b	Transportation System Plan – 20 Year Projects - Rural
Map V-2a	Functional Classification – Urban [Amended by Board Order 98-259, 10/8/98]
Map V-2b	Functional Classification - Rural
Map V-3	Regional Street Design Types
Map V-4	Undeveloped Sites Larger Than 5 Acres
Map V-5	Scenic Roads
Map V-6	Urban Area Transit Routes & Designated Transit Centers
Map V-6b	Rural Area Transit Routes & Designated Transit Centers
Map V-7a	Planned Bikeway Network, Urban
Map V-7b	Planned Bikeway Network, Rural
Map V-8	Essential Pedestrian Network
Map V-9	North Clackamas Neighborhood Trails
Map V-10	Urban Area Freight Routes

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1007 ROADS AND CONNECTIVITY

[The title of Section 1007 changed by Ord. ZDO-224, 5/31/11]

1007.01 PURPOSE

Section 1007 is adopted to:

- A. Provide for safe, efficient, convenient, and economical movement of vehicles, freight, transit, bicycles, and pedestrians on a balanced and sustainable transportation system network;
- B. Implement the provisions of Chapters 5 and 10 of the Comprehensive Plan pertaining to the design and construction of necessary transportation system improvements required in conjunction with new development;
- C. Protect public safety through functional, efficiently designed improvements addressing the impact of new development upon the roadway system;
- D. Support sustainable development by efficient utilization of land and resources;
- E. Facilitate and encourage the use of non-auto modes of transportation, such as transit, walking, and bicycling;
- F. Provide a highly interconnected transportation system with suitable access and route choices for pedestrians, bicyclists, and drivers;
- G. Support improved public health by providing safe and attractive pedestrian and bicycle facilities;
- H. Reduce vehicle miles traveled;
- I. Create walkable centers, corridors, and neighborhoods with pedestrian, bicycle, and vehicular connections within and between destinations;
- J. Reduce impacts from the transportation system on vegetation, natural features, neighborhoods, and public facilities; and
- K. Recognize and support the importance of streets and streetscapes as an ubiquitous aspect of the public realm in our landscape, and build streets that support and enhance community interaction.

[Amended by Ord. ZDO-224, 5/31/11]

1007.02 APPLICABILITY

Section 1007 applies to the design of new and reconstructed transportation improvements in public rights-of-way, private roads, and accessways required through development permit approvals that are subject to Section 1007.

[Added by Ord. ZDO-224, 5/31/11]

1007.03 GENERAL PROVISIONS

- A. The location, alignment, design, grade, width, and capacity of all roads shall be planned, coordinated, and controlled by the Department of Transportation and Development and shall conform to Section 1007, Chapters 5 and 10 of the Comprehensive Plan, and the Clackamas County Roadway Standards. Where conflicts occur between Section 1007, the Comprehensive Plan, and the Clackamas County Roadway Standards, the Comprehensive Plan shall control.
- B. Right-of-way dedications and improvements shall be required of all new developments, including partitions, subdivisions, multifamily dwellings, two- and three-family dwellings, condominiums, single-family dwellings, and commercial, industrial, and institutional uses, as deemed necessary by the Department of Transportation and Development and consistent with Section 1007, Chapters 5 and 10 of the Comprehensive Plan, and the Clackamas County Roadway Standards.
- C. New developments shall have access points connecting with existing private, public, county, or state roads.
 - 1. Intersection spacing and access control shall be based on Comprehensive Plan Table V-5, *Access Requirements by Functional Classification, Urban Areas Only*; Comprehensive Plan Map V-4, *Undeveloped Sites Larger Than 5 Acres*; Chapters 5 and 10 of the Comprehensive Plan; and the Clackamas County Roadway Standards.
 - 2. Access control shall be implemented pursuant to Chapter 5 of the Comprehensive Plan and the Clackamas County Roadway Standards considering best spacing for pedestrian access, traffic safety, and similar factors as deemed appropriate by the Department of Transportation and Development.
 - 3. Approaches to public and county roads shall be designed to accommodate safe and efficient flow of traffic and turn control where necessary to minimize hazards for other vehicles, pedestrians, and bicyclists.

Comment [j1]: This section adequately links the ZDO to Chapter 5. With the 172nd CMP adopted by reference in Chapter 5, it applies here.

Comment [j2]: Dedication and improvement authority is clear here, and linked to Chapter 5.

Fee-in-lieu authority is provided in 1007.10

Comment [j3]: This makes the 172nd CMP applicable.

4. Joint access and circulation drives utilizing reciprocal easements shall be utilized as deemed necessary by the Department of Transportation and Development.
 5. Access to state highways shall require a road approach permit issued by the Oregon Department of Transportation pursuant to Oregon Revised Statutes Chapter 374.
- D. Street alignments, intersections, and centerline deflection angles shall be designed according to the standards set forth in Chapters 5 and 10 of the Comprehensive Plan and the Clackamas County Roadway Standards.
 - E. All roads shall be designed and constructed to safely accommodate vehicles, pedestrians, and bicycles according to Chapters 5 and 10 of the Comprehensive Plan and the Clackamas County Roadway Standards.
 - F. Roadways shall be designed to accommodate transit services where transit service is existing or planned and to provide for the separation of motor vehicles, bicycle, and pedestrian traffic, and other modes as appropriate.
 - G. The needs of all modes of transportation shall be balanced to provide for safe and efficient flow of traffic. Where practical, pedestrian crossings shall be minimized and the road system shall be designed to provide frequent pedestrian connections.

[Renumbered and amended by Ord. ZDO-224, 5/31/11]

1007.04 VEHICLE ACCESS

[Moved to Subsections 1007.03 and 1007.04 and amended by Ord. ZDO-224, 5/31/11]

1007.04 PUBLIC AND PRIVATE ROADWAYS

- A. All roadways shall be developed according to the classifications, guidelines, tables, figures, and maps in Chapters 5 and 10 of the Comprehensive Plan and the provisions of the Clackamas County Roadway Standards.
 1. Development along streets with specific design standards specified in Chapter 10 of the Comprehensive Plan shall improve those streets as shown in Chapter 10.
 2. Development along streets identified as Regional or Community Boulevards on Comprehensive Plan Map V-3, *Regional Street Design Types*, shall:

- a. Comply with the design guidelines in Comprehensive Plan Table V-4, *Regional Street Design Types*, or demonstrate why compliance is not feasible;
 - b. Provide pedestrian, bicycle, transit, and visual amenities in the public right-of-way. Such amenities may include, but are not limited to, the following: street trees, landscaping, kiosks, outdoor lighting, outdoor seating, bike racks, bus shelters, other transit amenities, pedestrian spaces and access to the boulevard, landscaped medians, noise and pollution control measures, other environmentally sensitive uses, aesthetically designed lights, bridges, signs, and turn bays as appropriate rather than continuous turn lanes; and
 - c. Strictly control vehicle access and sight distance requirements.
3. Development adjacent to scenic roads identified on Comprehensive Plan Map V-5, *Scenic Roads*, shall conform to the following design standards, as deemed appropriate by the Department of Transportation and Development:
 - a. Road shoulders shall be improved to accommodate pedestrian and bicycle traffic; and
 - b. Turnouts shall be provided at viewpoints or for recreational needs.
4. In centers, corridors, and station communities, as identified on Comprehensive Plan Map IV-8, *Urban Growth Concept*, roads shall be designed to minimize the length of street crossings and to maximize connectivity for pedestrians as deemed appropriate by the Department of Transportation and Development. Other streetscape design elements in these areas include:
 - a. On-street parking;
 - b. Street trees;
 - c. Street lighting;
 - d. Pedestrian amenities; and
 - e. Truck routes shall be specified for deliveries to local businesses.
5. In centers, corridors, and station communities, as identified on Comprehensive Plan Map IV-8, *Urban Growth Concept*, on local streets within the Portland Metropolitan Urban Growth Boundary (UGB), and in

unincorporated communities, when conflicts exist between the dimensional requirements for vehicles and those for pedestrians, pedestrians shall be afforded additional consideration in order to increase safety and walkability. In industrial and rural areas, the needs of vehicles shall take precedence.

- B. The layout of new public and county roads shall provide for the continuation of roads within and between the development and adjoining developments when deemed necessary and feasible by the Department of Transportation and Development.
1. When public access to adjoining property is required, this access shall be improved and dedicated to the County.
 2. Street stubs shall be provided to allow for future access to adjacent undeveloped property as deemed necessary by the Department of Transportation and Development.
 3. These standards may be deviated from when the County finds that safe and efficient alternate designs would better accommodate:
 - a. Sustainable development features such as “Green Streets” as defined in the Clackamas County Roadway Standards;
 - b. Sustainable surface water management solutions such as low infiltration planters and basins, swales, ponds, rain gardens, trees, porous pavement, and minimal disruption to natural drainage systems;
 - c. Preservation of existing significant trees and native vegetation;
 - d. Preservation of natural terrain and other natural landscape features;
 - e. Achievement of maximum solar benefit for new development through orientation and block sizing;
 - f. Existing forest or agricultural uses;
 - g. Existing development;
 - h. Scenic qualities;
 - i. Planned unit developments;
 - j. Local access streets less than 200 feet in length which are not extendible; and

- k. Interior vehicular circulation for multifamily, commercial, institutional, and industrial developments.
- C. New county and public roads terminating in cul-de-sacs or other dead-end turnarounds are prohibited except where natural features (such as topography, streams, or wetlands), parks, dedicated open space, or existing development preclude road connections to adjacent properties, existing street stubs, or existing roads.
- D. Developments shall comply with the intersection sight distance and roadside clear zone standards of the Clackamas County Roadway Standards. In addition:
 - 1. No planting, signing, or fencing shall be permitted which restricts motorists' vision; and
 - 2. Curbside parking may be restricted along streets with visibility problems for motorists, pedestrians, and/or bicyclists as deemed appropriate by the Department of Transportation and Development.
- E. New developments, subdivisions, and partitions may be required to dedicate land for right-of-way purposes and/or make road frontage improvements to existing rights-of-way as deemed necessary by the Department of Transportation and Development and consistent with Section 1007, Chapters 5 and 10 of the Comprehensive Plan, and the Clackamas County Roadway Standards.
- F. Road frontage improvements in the UGB and Mt. Hood urban villages shall include:
 - 1. Surfacing, curbing, or concrete gutters as specified in Section 1007, Chapters 5 and 10 of the Comprehensive Plan, and the Clackamas County Roadway Standards;
 - 2. Pedestrian, bikeway, accessway, and trail facilities as specified in Subsection 1007.06;
 - 3. Transit amenities as specified in Subsection 1007.07; and
 - 4. Street trees as specified in Subsection 1007.08.
- G. Within public and county rights-of-way, the following uses may be permitted, subject to compliance with the Clackamas County Roadway Standards:
 - 1. Solar energy systems owned and operated by a public entity or utility;

2. Electric vehicle charging stations owned and operated by a public entity or utility; and
3. On-street parking within the UGB.

[Renumbered and amended by Ord. ZDO-224, 5/31/11]

1007.05 PRIVATE ROADS AND ACCESS DRIVES

- A. Private roads and access drives shall be developed according to classifications and guidelines listed in Section 1007, Comprehensive Plan Tables V-2, *Roadway Classifications and Guidelines*, and V-3, *Roadway Classification and Guidelines (Continued)*, Chapter 10 of the Comprehensive Plan, and the Clackamas County Roadway Standards, except:
 1. When easements or “flag-pole” strips are used to provide vehicular access to lots or parcels, the minimum width shall be 20 feet, unless a narrower width is approved by the Department of Transportation and Development and the applicable fire district’s Fire Marshal;
 2. Where the number of lots served exceeds three, a wider width may be required as deemed appropriate or necessary by the Department of Transportation and Development consistent with other provisions of Section 1007, the Comprehensive Plan, and/or the Clackamas County Roadway Standards;
 3. Access easements or “flag-pole” strips may be used for utility purposes in addition to vehicular access;
 4. The standards listed above may be deviated from when deemed appropriate by the Department of Transportation and Development to accommodate one-half streets or private common access drives and roads within developed urban areas providing access to not more than seven lots; and
 5. The intersection of private roads or access drives with a public or county road and intersections of two private roads or access drives shall comply with the sight distance and clear zone standards pursuant to Subsection 1007.04(D).

[Added by Ord. ZDO-224, 5/31/11]

1007.06 PEDESTRIAN AND BICYCLE FACILITIES

- A. General Standards: Pedestrian and bicycle facilities shall be developed according to the classifications and guidelines listed in Section 1007, Comprehensive Plan Tables V-2, *Roadway Classifications and Guidelines*, and V-3, *Roadway Classification and Guidelines (Continued)*, Chapters [5 and 10](#) of the Comprehensive Plan, and the Clackamas County Roadway Standards.
- B. Pedestrian and Bicycle Facility Design: Pedestrian and bicycle facilities shall be designed to:
1. Minimize conflicts among automobiles, trucks, pedestrians, and bicyclists;
 2. Provide safe, convenient, and an appropriate level of access to various parts of the development and to locations such as schools, employment centers, shopping areas, adjacent developments, recreation areas and open space, and transit corridors;
 3. Allow for unobstructed movements and access for transportation of disadvantaged persons; and
 4. Be consistent with Comprehensive Plan [Chapters 5 and 10](#), [Comprehensive Plan](#) Maps V-7a, *Planned Bikeway Network, Urban*, V-7b, *Planned Bikeway Network, Rural*, and V-8, *Essential Pedestrian Network*, North Clackamas Parks and Recreation District's Park and Recreation Master Plan, and Metro's Regional Trails and Greenways Map.
- C. Requirements for Pedestrian and Bicycle Facility Construction: Within the Portland Metropolitan Urban Growth Boundary (UGB), sidewalks, pedestrian pathways, and accessways shall be constructed as required in Subsection 1007.06 for subdivisions, partitions, multifamily dwellings, three-family dwellings, attached single-family dwellings where three or more dwelling units are attached to one another, and commercial, industrial, or institutional developments, except that for structural additions to existing commercial, industrial, or institutional buildings, development of such facilities shall be required only if the addition exceeds 10 percent of the assessed value of the existing structure, or 999 square feet.
- D. Requirement for Sidewalk Construction: Within the UGB, sidewalks shall be constructed, as required in Subsection 1007.06(F), for two-family dwellings, detached single-family dwellings, attached single-family dwellings where two dwelling units are attached to one another, and manufactured dwellings outside a manufactured dwelling park.
- E. Sidewalks or Pedestrian Pathways in Unincorporated Communities: In an unincorporated community, either a sidewalk or a pedestrian pathway shall be

constructed on arterial or collector street frontage(s) of a lot upon which a subdivision, partition, multifamily dwelling, three-family dwelling, attached single-family dwelling where three or more dwelling units are attached to one another, or a commercial, industrial, or institutional development is proposed.

- F. Sidewalk Location: Sidewalks required by Subsection 1007.06(C) or (D) shall be constructed on:
1. Both sides of a new or reconstructed road, except that sidewalks may be constructed on only one side of the road if:
 - a. The road is not a through road;
 - b. The road is 350 feet or less in length and cannot be extended; or
 - c. In consideration of the factors listed in Subsection 1007.04(B)(3).
 2. The street frontage(s) of a lot upon which a subdivision, partition, multifamily dwelling, three-family dwelling, attached single-family dwelling where three or more dwelling units are attached to one another, or a commercial, industrial, or institutional development is proposed; and
 3. Local or collector road street frontage(s) of a lot upon which a two-family dwelling, a detached single-family dwelling, an attached single-family dwelling where two dwelling units are attached to one another, or a manufactured dwelling is proposed. This requirement shall be imposed as a condition on the issuance of a conditional use permit, building permit, or manufactured dwelling placement permit, but
 - a. The requirement shall be waived if the dwelling is a replacement for one destroyed by an unplanned fire or natural disaster; and
 - b. The sidewalk requirement shall apply to no more than two street frontages for a single lot.
- G. Pedestrian Pathways: Inside the UGB, a pedestrian pathway may be constructed as an alternative to a sidewalk on a local or collector road when it is recommended by the Department of Transportation and Development; the surface water management regulatory authority approves the design; and at least one of the following criteria is met:
1. The site has topographic or natural feature constraints that make standard sidewalk construction unusually problematic;
 2. No sidewalk exists adjacent to the site;

3. Redevelopment potential along the road is limited; or
4. The road is identified for a pedestrian pathway by the River Forest Neighborhood Plan adopted by the City of Lake Oswego.

H. Sidewalk and Pedestrian Pathway Width: Sidewalks and pedestrian pathways shall be constructed to the minimum widths shown in Table 1007-1, [and be consistent with applicable requirements of Chapter 5 and 10 of the Comprehensive Plan.](#)

Table 1007-1: Minimum Sidewalk and Pedestrian Pathway Width

Street Type	Residential Sidewalk	Commercial or Institutional Sidewalk	Industrial Sidewalk
Local	5 feet	7 feet	5 feet
Connector	5 feet	7 feet	5 feet
Collector	5 feet	8 feet	5 feet
Arterial	6 feet	8 feet	6 feet

1. The entire required width of sidewalks and pedestrian pathways shall be unobstructed.
2. Sidewalks and pedestrian pathways at transit stops shall be a minimum of eight feet wide for a distance of 20 feet centered on the transit shelter or transit stop sign.
3. A sidewalk set back from the curb by at least five feet may be one foot narrower (but not less than five feet) than the standard listed above. This five-foot separation strip shall be landscaped and shall be maintained by the adjacent property owner. The separation strip may contain fixed objects provided that sight distance and roadside clear zone standards are satisfied pursuant to the Clackamas County Roadway Standards.
4. Uses located in the Campus Industrial, Light Industrial, General Industrial, or Business Park District and containing over 5,000 square feet of office

space shall comply with the requirements for Commercial and Institutional uses.

I. Accessways: Accessways shall comply with the following standards:

1. Accessways shall be required where necessary to provide direct routes to destinations not otherwise provided by the road system and where topography permits. Developments shall not be required to provide right-of-way for accessways off-site to meet this requirement. If right-of-way is available off-site, the developer may be required to improve an accessway off-site up to 150 feet in length.
2. Accessways shall provide safe, convenient access to facilities generating substantial pedestrian or bicycle trips, such as an existing or planned transit stop, school, park, church, daycare center, library, commercial area, or community center. Facilities such as these shall be accessible from dead-end streets, loops, or mid-block locations. Where required, accessways shall be constructed at intervals of no more than 330 feet, unless they are prevented by barriers such as topography, railroads, freeways, pre-existing development, or environmental constraints such as streams and wetlands.
3. An accessway shall include at least a 15-foot-wide right-of-way and an eight-foot-wide hard surface. For safety, accessways should be as straight as practicable and visible from an adjacent use if practicable. Removable bollards or other large objects may be used to bar motor vehicular access.
4. So that they may be safely used at night, accessways shall be illuminated by street lights or luminaires on shorter poles. Separate lighting shall not be required if existing lighting adequately illuminates the accessway.
5. Fences are not required, but the height of a fence along an accessway shall not exceed six feet.
6. Ownership and maintenance responsibility for accessways shall be resolved during the development review and approval process.

J. Bikeways: Bikeways shall be required as follows:

1. Shoulder bikeways, bike lanes, or bike paths shall be included in the reconstruction or new construction of any street if a bikeway is indicated on Comprehensive Plan [Chapters 5 and 10, Comprehensive Plan](#) Maps V-7a, *Planned Bikeway Network, Urban*, or V-7b, *Planned Bikeway Network, Rural*, North Clackamas Parks and Recreation District's Park

and Recreation Master Plan, or Metro's Regional Trails and Greenways Map.

2. Shoulder bikeways, bike lanes, or bike paths shall be considered in the reconstruction or new construction of any other arterial or collector.
3. Within urban growth boundaries, shoulder bikeways, bike lanes, or bike paths shall be constructed from new public or private elementary, middle school, and high school facilities to off-site bikeways to provide continuous bicycle route connections within and between surrounding developments, unless precluded by existing development.

K. Trails:

1. Trail dedications or easements shall be provided and developed as shown on Comprehensive Plan Map IX-1, *Open Space Network & Recreation Needs*, the Facilities Plan (Figure 4.3) in North Clackamas Parks and Recreation District's Park and Recreation Master Plan, and Metro's Regional Trails and Greenways Map.
2. Off-road sections of trails shall have a minimum 30-foot right-of-way or easement width.

[Renumbered and amended by Ord. ZDO-224, 5/31/11]

1007.07 OFFSTREET PARKING REGULATIONS

[Moved to Section 1015 and amended by Ord. ZDO-224, 5/31/11]

1007.07 TRANSIT AMENITIES

All residential, commercial, institutional, and industrial developments on existing and planned transit routes shall be reviewed by Tri-Met or other appropriate transit provider to ensure appropriate design and integration of transit amenities into the development. The design shall not be limited to streets, but shall ensure that pedestrian/bikeway facilities and other transit-supportive features such as shelters, bus pull-outs, park-and-ride spaces, and signing will be provided. The designs shall comply with Tri-Met standards and specifications.

[Renumbered and amended by Ord. ZDO-224, 5/31/11]

1007.08 OFFSTREET LOADING REGULATIONS

[Moved to Section 1015 and amended by Ord. ZDO-224, 5/31/11]

1007.08 STREET TREES

- A. Street trees are required for developments fronting on designated boulevards in the Comprehensive Plan and shall comply with the following standards:
1. Partial or complete exemptions from the requirement to plant street trees may be granted on a case-by-case bases. Exemptions may be granted, for example, if the exemption is necessary to save existing significant trees which can be used as a substitute for street trees, or where trees approved under Subsection 1007.08(A)(2) are to be planted on the property adjoining the street right-of-way.
 2. Street trees to be planted shall be chosen from a County-approved list of street trees (if adopted), unless approval for planting of another species is given by the Department of Transportation and Development.
 3. Location and planting of street trees may be influenced by such conditions as topography, steep terrain, soil conditions, existing trees and vegetation, preservation of desirable views, and solar access.
 4. Planting of street trees shall be coordinated with other uses which may occur within the street right-of-way, such as bikeways, pedestrian paths, storm drains, utilities, street lights, shelters, and bus stops.
 5. Street trees at maturity shall be of appropriate size and scale to complement the width of the street or median area.
- B. Street trees are required for developments in the Clackamas Regional Center Area as shown on Comprehensive Plan Map X-CRC-1, *Regional Center, Corridors, and Station Community*, and shall comply with the following standards:
1. Street trees are required along all streets, except for drive aisles in parking lots.
 2. When determining the location of street trees, consideration should be given to accommodating normal retail practices in front of buildings such as signage, outdoor display, loading areas, and pullout lanes.
 3. Street trees are required along private access streets under the following conditions:
 - a. On both sides when the access point is a signalized intersection;
 - b. On both sides when the street section has four or more lanes at the access point;

- c. On both sides when the private street is developed to comply with building orientation standards;
 - d. On a minimum of one side when the street section has one or two lanes, and the street is not at a signalized intersection or is not used to meet the structure orientation standards of Subsections 1700.03(C) and 1700.04(B); and
 - e. On a minimum of one side of the street when access is shared with adjacent property. Adjoining property shall be required to install trees on its side of the access street when the property is developed.
4. In the Fuller Road Station Community, as identified on Comprehensive Plan Map X-CRC-1, *Regional Center, Corridors, and Station Community*, street trees are required along both sides of all street types, and as shown in Comprehensive Plan Figure X-CRC-11 for Type E pedestrian/bicycle connections. Street trees shall be spaced from 25 to 40 feet on center, based on the selected tree species and any site constraints. Street trees shall otherwise comply with the other provisions of Subsections 1007.08(A) and (B).
- C. In the Business Park District, street trees are required at 30- to 40-foot intervals along periphery and internal circulation roads, except where significant trees already exist.
 - D. In the Campus Industrial District, street trees are required.
 - E. Street trees are required for developments in the Sunnyside Village Community Plan area shown on Comprehensive Plan Map X-SV-1, *Sunnyside Village Plan Land Use Plan Map*, along both sides of all connector and local streets. In addition:
 - 1. One to two street trees are required per interior lot, and two to four for corner lots depending on the canopy of the tree species proposed. If a small canopy (less than or equal to 25 feet in diameter at maturity) is proposed, then two per interior lot and four per corner lot are required. If a larger canopy (greater than 25 feet in diameter at maturity) is proposed, then one per interior lot and two per corner lot are required.
 - 2. As each portion of a project is developed, a specific species of street tree will be chosen for each street. The developer may choose the species of street tree to be planted so long as the species is not known to cause sidewalks to buckle, does not have messy fruits or pods, is not prone to insects or having weak wood, and is not on the list of prohibited trees.

The County will have final approval regarding the type of street tree to be planted.

3. Along connector streets or streets with a higher classification, metal grating, non-mortared brick, grasscrete, or similar material shall be installed at grade over the planting area around street trees, or raised planters shall be constructed to prevent soil compaction and damage to the trunk. Planting strips or tree wells are required along streets with a classification below connector status.
4. The trees listed in Table 1007-2 are prohibited as street trees.

Table 1007-2: Prohibited Street Trees in the Sunnyside Village Community Plan Area

Scientific Name	Common Name	Reason for Prohibition
Acer macrophyllum	Big-leaf Maple	Leaves block drainage; Roots buckle sidewalks
Acer negundo	Box Elder	Insect prone; Weak wood
Acer saccharinum	Silver Maple	Shallow roots; Weak wood
Aesculus hippocastanum	Common Horsechestnut	Messy fruits
Betulus species	Birches	Insect prone; Weak wood
Carya species	Hickories	Fruits cause litter and safety problems
Catalpa species	Catalpas	Seed pods cause litter problem
Corylus species	Filberts	Fruits cause litter and safety problems
Crataegus species	Hawthorns	Thorns; Fruits cause litter and safety problems
Fraxinus species	Ashes	Seed pods cause litter

		problem
Gleditsia triacanthos	Honey Locust (species, does not include horticultural variants)	Seed pods cause litter problem
Juglans species	Walnuts	Fruits cause litter problem
Morus species	Mulberries	Fruits cause litter and safety problems
Populus species	Poplars	Shallow roots; Weak wood
Robinia species	Locusts	Weak wood; Suckers
Salix Species	Willows	Shallow roots; Weak wood
Ulmus fulva	Slippery Elm	Insect prone; Shallow roots; Weak wood
Ulmus pumila	Siberian Elm	Shallow roots; Weak wood

- F. For additional street tree requirements in the Sunnyside Village Community Plan area shown on Comprehensive Plan Map X-SV-1, *Sunnyside Village Plan, Land Use Plan Map*, see Subsection 1600.03.

[Moved from Sections 601, 606, 1009, 1600, and 1700 and amended by Ord. ZDO-224, 5/31/11]

1007.09 TRANSPORTATION FACILITIES CONCURRENCY

- A. The purpose of Subsection 1007.09 is to ensure that transportation infrastructure is provided concurrent with the new development it is required to serve or, within a reasonable period of time following the approval of new development.
- B. Subsection 1007.09 shall apply to the following development applications: design review, subdivisions, partitions, and conditional uses.
- C. Approval of a development shall be granted only if the capacity of transportation facilities is adequate or will be made adequate in a timely manner. The following shall be exempt from this requirement:
1. Development that is located:

- a. In the Light Industrial, General Industrial, or Business Park District; and
 - b. North of the Clackamas River; and
 - c. West of Highway 224 (south of Highway 212) or 152nd Drive (north of Highway 212); and
 - d. South of Sunnyside Road (east of 82nd Avenue) or Harmony Road (west of 82nd Avenue) or Railroad Avenue (west of Harmony Road); and
 - e. East of Interstate 205 (south of Milwaukie Expressway) or the city limits of Milwaukie (north of the Milwaukie Expressway).
2. Modification or replacement of an existing development (or a development that has a current land use approval even if such development has not yet been constructed) on the same property, provided that an increase in motor vehicle traffic does not result;
 3. Unmanned utility facilities, such as wireless telecommunication facilities, where no employees are present except to perform periodic servicing and maintenance;
 4. Mass transit facilities, such as light rail transit stations and park-and-ride lots;
 5. Home occupations to host events, which are approved pursuant to Section 806; and
 6. Development in the Government Camp Village, as shown on Comprehensive Plan Map X-MH-4, *Government Camp Village Plan Land Use Plan & Boundary*, that is otherwise consistent with the Comprehensive Plan and zoning designations for the Village.
- D. As used in Subsection 1007.09(C), “adequate” means a minimum of Level-of-Service (LOS) D, except:
1. Portions of 82nd Avenue, Sunnyside Road, and Johnson Creek Boulevard located in the Clackamas Regional Center or the Fuller Road Station Community, as identified on Comprehensive Plan Map X-CRC-1, *Regional Center, Corridors, and Station Community*, shall be subject to the following minimums:
 - a. LOS E during the weekday midday peak one-hour period; and

- b. LOS F during the first hour and LOS E during the second hour of the weekday PM peak two-hour period.
- 2. Portions of 82nd Avenue, Sunnyside Road, and Johnson Creek Boulevard located in the Clackamas Regional Center Area but outside the Clackamas Regional Center and the Fuller Road Station Community, as identified on Comprehensive Plan Map X-CRC-1, *Regional Center, Corridors, and Station Community*, shall be subject to the following minimums:
 - a. LOS D during the weekday midday peak one-hour period; and
 - b. LOS E during the first hour and LOS E during the second hour of the weekday PM peak two-hour period.
- 3. Roadways—other than 82nd Avenue and Sunnyside Road—in the Clackamas Regional Center, as identified on Comprehensive Plan Map X-CRC-1, *Regional Center, Corridors, and Station Community*, shall be subject to the following minimums:
 - a. LOS E during the weekday midday peak on-hour period; and
 - b. LOS E during the first hour and LOS E during the second hour of the weekday PM peak two-hour period.
- 4. Except as established by Subsections 1007.09(D)(1) through (3), LOS E shall apply to developments proposed on property in a Campus Industrial, Light Industrial, General Industrial, Rural Industrial, or Business Park zoning district.
- 5. Except as established by Subsections 1007.09(D)(1) through (3), LOS E shall apply to high-employment developments. A high-employment development is one that provides a minimum of 50 FTE per acre. Only jobs where the employee reports to work at the subject property shall be included in this calculation.
- 6. The performance standards identified in the latest edition of the Oregon Highway Plan shall apply to facilities under the jurisdiction of the State of Oregon, with the exception of those facilities identified in Subsections 1007.09(D)(1) and (2).
- E. For the purpose of calculating capacity as required by Subsections 1007.09(C) and (D), the following standards shall apply:
 - 1. Both the method of calculating LOS and the definitions given to the LOS letter designations are established by the Clackamas County Roadway

Standards. The method of calculating capacity on state facilities is established by the Oregon Highway Plan.

2. The minimum capacity standards shall apply to all roadways and intersections within the impact area of the proposed development. The impact area shall be established by the Clackamas County Roadway Standards.
3. Capacity shall be evaluated for motor vehicle traffic only.
4. Except as established by Subsections 1007.09(D)(1) through (3), capacity shall be evaluated for the peak 15-minute period of both the AM weekday and PM weekday peak hours of the transportation system within the impact area. The requirement to evaluate either the AM or the PM peak hour, or both, may be waived if the proposed use will not generate motor vehicle trips during the period(s).

F. As used in Subsection 1007.09(C), “timely” means:

1. For facilities under the jurisdiction of the County, necessary improvements are included in the Five-Year Capital Improvement Program, fully funded, and scheduled to be under construction within three years of the date land use approval is issued;
2. For facilities under the jurisdiction of the State of Oregon, necessary improvements are included in the Statewide Transportation Improvement Plan and scheduled to be under construction within four years of the date land use approval is issued;
3. For facilities under the jurisdiction of a city or another county, necessary improvements are included in that jurisdiction’s capital improvement plan, fully funded, and scheduled to be under construction within three years of the date land use approval is issued.
4. Alternatively, “timely” means that necessary improvements will be constructed by the applicant or through another mechanism, such as a local improvement district. Under this alternative:
 - a. Prior to issuance of a certificate of occupancy for a conditional use or a development subject to design review and prior to recording of the final plat for a subdivision or partition, the applicant shall do one of the following:
 - i. Complete the necessary improvements; or

Comment [j4]: The Five Year CIP should be checked to see if edits are needed to implement the 172nd CMP.

- ii. For transportation facilities under the jurisdiction of the County, the applicant shall provide the county with a deposit, letter of credit, performance bond, or other surety satisfactory to county staff pursuant to Section 1104. For transportation facilities under the jurisdiction of the state, a city, or another county, the applicant shall comply with the respective jurisdiction's requirements for guaranteeing completion of necessary improvements. This option is only available if the jurisdiction has a mechanism in place for providing such a guarantee.
 - 5. For a phased development, the first phase shall satisfy Subsections 1007.09(F)(1) through (4) at the time of land use approval. Subsequent phases shall be subject to the following:
 - a. At the time of land use approval, necessary improvements shall be identified and the phase for which they are necessary shall be specified.
 - b. Necessary improvements for a particular phase shall either:
 - i. Comply with Subsections 1007.09(F)(1) through (3) at the time of building permit approval, except that the improvements shall be scheduled to be under construction within three years of building permit approval rather than within three years of land use approval; or
 - ii. Comply with Subsection 1007.09(F)(4), in which case the improvements shall be completed or guaranteed prior to issuance of a certificate of occupancy or recording of the final plat for the applicable phase.
- G. As used in Subsection 1007.09(F), "necessary improvements" are:
- 1. Improvements identified in a transportation impact study as being required in order to comply with the adequacy standard identified in Subsection 1007.09(D).
 - a. A determination regarding whether submittal of a transportation impact study is required shall be made based on the Clackamas County Roadway Standards, which also establish the minimum standards to which a transportation impact study shall adhere.
 - b. If a transportation impact study is not required, County traffic engineering or transportation planning staff shall identify necessary

improvements or the applicant may opt to provide a transportation impact study.

- H. As an alternative to compliance with Subsection 1007.09(C), the applicant may make a voluntary substantial contribution to the transportation system.
1. As used in this subsection, “substantial contribution” means construction of a roadway or intersection improvement that is all of the following:
 - a. A complete project or a segment of a roadway identified in the Clackamas County 20-Year Capital Improvement Plan (CIP), the Statewide Transportation Improvement Plan (STIP), or the capital improvement plan (CIP) of a city or another county.
 - i. For a segment of a roadway to qualify as a substantial contribution, the roadway shall be on or abutting the subject property; no less than the entire segment that is on or abutting the subject property shall be completed; and there shall be a reasonable expectation that the entire project—as identified in the Clackamas County 20-Year CIP the STIP or the CIP of a city or another county—will be completed within five years;
 - b. Located within the impact area of the proposed development. The impact area shall be established by the Clackamas County Roadway Standards;
 - c. Estimated to have a minimum construction cost of \$527,000 in year 2004 dollars. The minimum construction cost shall on January 1st of each year following 2004 be adjusted to account for changes in the costs of acquiring and constructing transportation facilities. The adjustment factor shall be based on the change in average market value of undeveloped land, except resource properties, in the County according to the records of the County Tax Assessor, and the change in construction costs according to the Engineering News Record (ENR) Northwest (Seattle, Washington) Construction Cost Index; and shall be determined as follows:
 - i. $\text{Change in Average Market Value} \times 0.50 + \text{Change in Construction Cost Index} \times 0.50 = \text{Minimum Construction Cost Adjustment Factor}$
 - ii. After the adjustment factor is applied to the previous year’s minimum construction cost, the result shall be rounded to the nearest thousand.

2. Prior to issuance of a certificate of occupancy for a conditional use or a development subject to design review and prior to recording of the final plat for a subdivision or partition, the applicant shall do one of the following:
 - a. Complete the substantial contribution; or
 - b. For transportation facilities under the jurisdiction of the County, the applicant shall provide the county with a deposit, letter of credit, performance bond, or other surety satisfactory to county staff pursuant to Section 1104. For transportation facilities under the jurisdiction of the state, a city, or another county, the applicant shall comply with the respective jurisdiction's requirements for guaranteeing completion of necessary improvements. This option is only available if the jurisdiction has a mechanism in place for providing such a guarantee.

[Moved from Section 1022 and amended by Ord. ZDO-224, 5/31/11]

1007.10 FEE IN LIEU OF CONSTRUCTION

For all or part of the road frontage improvements required by Section 1007; located within the Portland Metropolitan Urban Growth Boundary (UGB) and required for a partition, a two- or three-family dwelling (where no more than one such dwelling is proposed), an attached or detached single-family dwelling, or a manufactured dwelling; the developer may elect to pay a fee in lieu of construction as follows. ()

- A. The fee in lieu of construction may be paid if the road frontage improvements are located on a local or collector road that is not identified on Comprehensive Plan Map V-8, *Essential Pedestrian Network*, and payment of the fee is deemed by the Department of Transportation and Development to be an acceptable alternative to construction of the required improvements; or ()
- B. The fee in lieu of construction may be paid if the road frontage improvements are located on a road that is identified on Comprehensive Plan Map V-8, *Essential Pedestrian Network*; payment of the fee is deemed by the Department of Transportation and Development to be an acceptable alternative to construction of the required improvements; and at least one of the following criteria is met:
 1. The improvements are included in the Five-Year Capital Improvement Program;
 2. The improvements are located on a road where significant topographical or natural feature constraints exist; or

Comment [j5]: This section implements the County's fee-in-lieu policy. It is very specifically crafted and limited. It is recommended that it be re-examined as part of the larger TSP process.

3. The improvements are located on a local or collector road where a sidewalk or pathway does not exist within 200 feet of the required improvements.
- C. For a two-family dwelling, a detached single-family dwelling, an attached single-family dwelling where two dwelling units are attached to one another, or a manufactured dwelling, the fee in lieu of construction shall be \$25.00 per lineal foot of frontage. The fee shall be adjusted annually to account for the change in construction costs according to the Engineering News Record (ENR) Northwest (Seattle, Washington) Construction Cost Index. The annual adjustment shall be made in January on the date that the ENR publishes its first index of the year.
 - D. For a partition, a three-family dwelling, or an attached single-family dwelling where three or more dwelling units are attached to one another, the fee in lieu of construction shall be equal to the estimated cost of constructing the required frontage improvements and shall be calculated as follows.
 1. A frontage improvement cost construction estimate acceptable to the Department of Transportation and Development shall be completed by an engineer who is registered by the State of Oregon.
 2. The elements to be considered when calculating the fee shall include, but shall not necessarily be limited to, mobilization/start-up, grading, rock, drainage, asphalt, curb, sidewalk, and retaining wall.
 - E. All fees in lieu of improvements collected, and interest thereon, shall be placed in a "Sidewalk Improvement Fund." Fees shall be spent on sidewalk or pedestrian pathway construction on local or collector roads within the UGB.

[Moved from Subsection 1007.03 (renumbered as 1007.04) and amended by Ord. ZDO-224, 5/31/11]