



2017 Comprehensive Plan

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Ordinance No. 2017-101

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City of Orting
Ordinance No. 2017-1019

ORIGINAL

CITY OF ORTING
WASHINGTON

ORDINANCE NO. 2017-1019

**AN ORDINANCE OF THE CITY OF ORTING,
WASHINGTON, RELATING TO LAND USE AND ZONING;
ADOPTING AMENDMENTS TO THE COMPREHENSIVE
PLAN; PROVIDING FOR SEVERABILITY; AND
ESTABLISHING AN EFFECTIVE DATE**

WHEREAS, as required by the Growth Management Act (Chapter 36.70A RCW), the City adopted a comprehensive plan for the community on November 29, 2004, (the "Comprehensive Plan"), which is updated frequently; and

WHEREAS, in accordance with RCW 36.70A.130, an adopted Comprehensive Plan shall be subject to continuing evaluation and review, and amendments to the Comprehensive Plan shall be considered no more frequently than once every year; and

WHEREAS, the City Council on July 8, 2015, adopted Ordinance No.2015-967 including amendments to the Comprehensive Plan and development regulations pursuant to state of Washington periodic review requirements; and

WHEREAS, on September 24, 2015, the Puget Sound Regional Council (the "PSRC") notified the City that the Comprehensive Plan would be conditionally certified until the City adopted additional amendments to the Transportation Element including provisions for pedestrian and bicycle uses; and

WHEREAS, on June 28, 2017, the City Council passed Resolution No. 2017-07, which committed the City to address the PSRC requirements in 2017 to achieve full certification of the Comprehensive Plan; and

WHEREAS, in February 2017, the City initiated a review of the Comprehensive Plan to address plan elements that require updating, and requested amendment proposals from citizens; and

WHEREAS, as part of that process, the City prepared a detailed Non-Motorized Transportation Plan that addresses the Puget Sound Regional Council comments, and which is a component of the proposed amended Comprehensive Plan; and

WHEREAS, in accordance with WAC 365-196-630, a notice of intent to adopt the proposed Comprehensive Plan amendments was sent to the State of Washington Department of

Commerce and to other state agencies with acknowledgement by the Department on October 5, 2017, to allow for a 60-day review and comment period; and

WHEREAS, an environmental review of the proposed Comprehensive Plan amendments has been conducted in accordance with the requirements of the State Environmental Policy Act (“SEPA”), and a SEPA threshold determination of non-significance was issued on October 25, 2017; and

WHEREAS, the City has undertaken a public involvement process and provided for early and continuous public participation opportunities including multiple Planning Commission workshops from February 2017 to October 2017, and a public hearing on November 6, 2017 before the Planning Commission; and

WHEREAS, the full text of the amendments was provided to the Planning Commission, posted on the City website, and described at the aforementioned public workshops; and

WHEREAS, on November 6, 2017 the Planning Commission, after considering the public comments received and other information presented at the aforementioned public hearings and public meetings, voted to recommend the adoption of the proposed amendments to the Comprehensive Plan summarized in Exhibit A to this Ordinance to the City Council; and

WHEREAS, on December 13, 2017, the City Council held a second public hearing to take public testimony regarding the proposed amendments to the Comprehensive Plan; and

WHEREAS, having considered, among other things, the public testimony, the minutes of the Planning Commission meetings, the preliminary and final staff reports, and the Planning Commission recommendations, the City Council finds that the proposed amendments to the Comprehensive Plan are consistent with and would serve to further implement the planning goals of the adopted Comprehensive Plan and the Growth Management Act, bear a substantial relation to the public health, safety or welfare, and promote the best long term interests of the Orting community;

NOW, THEREFORE, the City Council of the City of Orting, Washington, do ordain as follows:

Section 1. Incorporation of Recitals. The above stated recitals are incorporated as though fully set forth herein.

Section 2. Adoption of Amendments to Comprehensive Plan. The City Council adopts the proposed 2017 amendments to the Comprehensive Plan, summarized in “Exhibit A”, which is incorporated by reference herein.

Section 3. Severability. Should any section, paragraph, sentence, clause or phrase of this Ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this Ordinance be pre-empted by state


or federal law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this Ordinance or its application to other persons or circumstances.

Section 4. Effective Date. This Ordinance shall be published in the official newspaper of the City, and shall take effect and be in full force five (5) days after the date of publication.

FIRST READING BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF ON THE 13TH DAY OF DECEMBER, 2017.

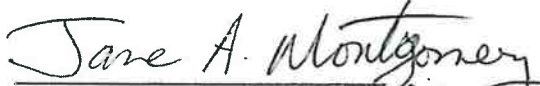
ADOPTED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF ON THE 10TH DAY OF JANUARY, 2018.

CITY OF ORTING




Joshua Penner, Mayor

ATTEST/AUTHENTICATED:



Jane Montgomery, City Clerk
Approved as to form:



Charlotte A. Archer, City Attorney

Filed with the City Clerk: 12.05.17
Passed by the City Council: 01.10.18
Ordinance No.2017-1019
Date of Publication: 01.12.18
Effective Date:01.17.18

Exhibit A

2017 Comprehensive Plan Amendments

Comprehensive Plan Chapter	Summary of Proposed Amendments
Land Use Element	<p>Alignment of Policy LU 3.2 to reflect Pierce County Urban Growth Area policies and procedures;</p> <p>Change of Policy LU 3.3 to “encourage” infill development;</p> <p>Elimination of Policy LU 5.3 to eliminate the Residential Suburban (RS) Zone, which was changed to Residential Conservation (RC) in 2015;</p> <p>Added “day cares” as an allowed use in the Mixed Use – Town Center Zone in Policy LU 7.2;</p> <p>Changed Goal LU 6 and LU 8 to add “higher density residential” opportunities to the mixed use zones;</p>
Transportation Element	<p>Added reference to the new Nonmotorized Transportation Plan that is incorporated into the Appendix;</p> <p>Changed Policy T 4 to “encourage” connectivity “where feasible”;</p> <p>Changed Policy T 15 to “Implement a program to improve pedestrian and bicycle use of existing streets;</p> <p>Clarification of transportation Level of Service Standards;</p> <p>Changed Policy T 38 to add “school bus routes” and delete “multifamily housing and commercial areas” as priorities;</p> <p>Changed Policy T 43 “Work to implement related non-motorized transportation recommendations in the Orting Parks, Trails and Open Space Plan and the Shoreline Master Program;</p> <p>Changed Policy T 47 to “Engage in joint planning for regional trail improvements with Pierce County, WSDOT, and adjacent communities;</p>
Capital Facilities Element	<p>Added reference to addition of School and Library plan updates in the Appendix;</p> <p>Changed Policy CF 1.2 (d) to “Reducing the potential for drastic rate Increases through effective fiscal management that reflect the LOS and CIPs;</p> <p>Changed Policy CF 2.2 to add the provision for “emergency warrants” funding when required for funding;</p> <p>Changed Policy CF 3.9 to include water quality maintenance of the Puyallup River;</p> <p>Changed Policy CF 6.4 to “Improve” the network of parks, open space and trails for pedestrians, bicycles and equestrians. ., and (b) maintaining and improving the accessibility, usability, and safety of Orting’s sidewalks, parks, and trails;</p>

Land Use Appendix

Updated population, land use and land capacity information and forecasts;
Increased information on natural hazards mitigation and mapping;
Added more specific description of the adopted Center of Local Importance;

Housing Appendix

Updated current housing characteristics, forecasts, growth rates, and an assessment of affordable housing conditions

Transportation Appendix

Added reference to the new Non-Motorized Transportation Plan and included portions of the analysis, conclusions, and recommendations for improvements including cost estimates and identification of funding sources ;
Updated conclusions of recent WSDOT study of SR162;
Updated Collision Records information;
Updated reference to the 6-year Transportation Improvement Plan and the 2030 Improvement Program project list;
Minor updating to the Appendix to reflect the recent improvements and anticipated future projects.

Capital Facilities Appendix

Updates to current inventories, functional plan consistency for water, sanitary sewer, and storm water;
Updated the facility plans for Schools & Libraries; ,
Updated Police & Fire information;
Updated the 20-Year Capital Facility Needs project listing with reference to the sale of the Public Safety Building to the Fire District, subsequent relocation of the Police Department, development of a new Public Works Building, and potential renovation of City Hall and Multi-purpose Center

INTRODUCTION

STRUCTURE

The Orting Comprehensive Plan (Plan) is composed of three basic parts:

1. **Introduction**, including implementation and amendment policies and procedures;
2. **Comprehensive Plan Elements**, including goals and policies; and
3. **Appendices** for each of the Comprehensive Plan elements.



This Introduction section includes a description of the requirements of the Growth Management Act (GMA) and the framework the Act established for planning in the State and Pierce County. The Implementation and Amendments section describes how the City is to implement and amend existing policies contained in the Comprehensive Plan. It also describes the requirements of the Regulatory Reform Act (ESHB 1724) as they relate to the Plan. This section also provides some important GMA language regarding concurrency.

Each **Element** provides goals and policies for the following:

- Land Use
 - Includes the Comprehensive Land Use Map
- Housing
- Transportation
 - Includes goals and policies from the *Orting Transportation Plan*
- Economic Development
- Shoreline Management
 - Includes goals and policies from the *Shoreline Master Program*
- Capital Facilities
 - Includes information and project needs identified in the Parks, Trails & Open Space Plan, the Transportation Plan, and the Water, Sewer, and Stormwater Comprehensive Plans
- Utilities

Each element begins with a general discussion of its purpose, relationship to the GMA, and the issues identified through public involvement. Goals and policies that address those issues follow.

The Land Use Element presents the foundation for assumptions in all other elements. The Comprehensive Land Use Map gives geographic form to the Comprehensive Plan's land use policies by designating appropriate land use categories for the various areas within the City.

The **Plan Element Appendices** include current and forecast data, needs assessments or analyses, and conclusions and as appropriate, references to other source materials or policy documents.

WHAT IS A COMPREHENSIVE PLAN?

In 1990, the Washington State Legislature adopted the Growth Management Act (GMA) to provide a basis for local, regional and state solutions to growth pressures. Since 1990, the GMA has been amended several times. Orting is required to review its Plan and update for consistency with the GMA every eight years. More frequent annual reviews are allowed.

A Comprehensive Plan indicates how the community envisions the City's future, and sets forth strategies for achieving the desired vision. A plan has three characteristics. First, it is **comprehensive**: the plan encompasses all the geographic and functional elements that have a bearing on the community's physical development. Second, it is **general**: The plan summarizes the major policies and proposals of the City, but does not usually indicate specific locations or establish detailed regulations. Third, it is **long range**: the plan looks beyond the current pressing issues confronting the community, to the community's future. Although the planning time frame for this plan is twenty years, many of its policies and actions will affect the City of Orting well beyond that horizon.

WHY IS A COMPREHENSIVE PLAN NEEDED?

Many of the day-to-day decisions made by City officials can have a significant impact on how the community develops and functions. A comprehensive plan coordinates and guides individual decisions in a manner that moves the community towards its overall goals.

RCW 36.70A.020 outlines the goals with which this plan must comply. They are as follows:

1. **Urban growth.** *Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.*
2. **Reduce sprawl.** *Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.*
3. **Transportation.** *Encourage efficient multi-modal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.*

4. **Housing.** *Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.*
5. **Economic development** *Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.*
6. **Property rights.** *Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.*
7. **Permits.** *Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.*
8. **Natural resource industries.** *Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.*
9. **Open space and recreation.** *Retain open space, enhance recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities.*
10. **Environment.** *Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.*
11. **Citizen participation and coordination.** *Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.*
12. **Public facilities and services.** *Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time of occupancy and use without decreasing current service levels below locally established minimum standards.*
13. **Historic preservation.** *Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.*

In addition to the state goals, the Plan must also be consistent with the Pierce County-wide Planning Policies (CPP), another GMA mandate. CPP provide the regional framework for population forecasting and allocation; maintaining an inventory of buildable lands; coordinating level of service standards; and considering how urban growth areas are sized, located, and developed.

FUNCTIONS OF A COMPREHENSIVE PLAN

A comprehensive plan serves many purposes, including policy determination, policy implementation, and communication/education.

- **Policy Determination** - First, it encourages City officials to look at the big picture, to step away from current pressing needs to develop overriding policy goals for their community. Second, it creates an environment for the City Council to guide its decision-making openly and democratically. The plan serves to focus, direct, and coordinate the efforts of the departments within City government by providing a general comprehensive statement of the City's goals and policies.
- **Policy Implementation** - A community can move more effectively toward its goals and implement its policies after they have been agreed to and formalized through the adoption of a Comprehensive Plan. The Comprehensive Plan is a basic source of reference for officials as they consider the enactment of ordinances or regulations affecting the community's physical development (such as a zoning ordinance or a particular rezone), and when they make decisions pertaining to public facility investments (such as capital improvement programming or construction of a specific public facility). This ensures that the community's overall goals and policies are accomplished, by those decisions.

The Plan also provides a practical guide to City officials as they administer City ordinances and programs. This ensures that the day-to-day decisions of City staff are consistent with the overall policy direction established by the Council.

- **Communication/Education** - The Comprehensive Plan communicates to the public and to City staff the policy of the City Council. This allows the staff, the public, private developers, business people, financial institutions, and other interested parties to anticipate what the decisions of the City are likely to be on any particular issue. As such, the plan provides predictability. Everyone is better able to plan activities knowing the probable response to their proposals and to protect investments made on the basis of policy. In addition, the Comprehensive Plan can educate the public, the business community, the staff, and the City Council itself on the workings, conditions, and issues within their City. This can stimulate interest about the community affairs and increase the citizen participation in government.

PUBLIC PROCESS AND VISIONING

Orting began planning under the GMA in 1990. The early process included a community workshop and survey that resulted in a vision statement. Then, as technical analyses were completed, the Planning Commission worked on goals and policies and incorporated implementation actions and strategies that came together in the Plan that was adopted January 11, 1996.

The first comprehensive GMA update was completed in 2004, the process of which included open houses and workshops to solicit public outreach and foster communication. Since then, annual updates have occurred in addition to the creation of a Downtown Orting Vision Plan, an update of the Parks, Trails and Open Space Plan, and an update to the Shoreline Master Program. The planning process behind each involved extensive public outreach. The 2015 update process further built upon this existing foundation of public engagement with open houses and a public opinion survey.

THE ORTING VISION

Orting is a cohesive rural community nestled in the Orting valley. Its distinctive natural features include two river corridors and a spectacular view of Mount Rainier. Orting's downtown is its historic center. It should be enhanced as a vital center where all residents come to transact daily commerce and to meet for social activities. Orting should expand its employment base so that young people can choose to live and work in the community. Orting should preserve its pastoral heritage which is rooted in its open spaces, undisturbed ridges, and small-scale agricultural establishments. It should preserve the distinctive qualities of its natural amenities, which should be linked through scenic corridors of green along its rivers. Foremost, Orting should preserve its small town character. It should remain a place that is free of urban pressures; where people know their neighbors, take time to tend a garden, and have mutual respect for their fellow citizens.

VISION GOALS

The vision statement is amplified with the following over-arching goals that direct the more specific goals and policies of the plan elements.

- Preserve open space and the character of the rural landscape
- Preserve critical environmental resources
- Preserve important agricultural lands
- Encourage the retention & establishment of vital businesses within the downtown
- Provide a variety of housing choices for new residents
- Foster a financially sound development pattern
- Preserve a reasonable use of the land for all landowners
- Reduce reliance on the auto & encourage establishment of pedestrian and bicycle-oriented development
- Provide affordable housing
- Provide a place where citizens can both live and work

In 2008, the community engaged in a downtown visioning process to create more specific goals for increasing economic development opportunities and amenities. This is also intended to define public investment strategies for a new library, and

possibly a new city hall and community center. The vision also addresses future street improvements and other amenities that will help to make the downtown a destination. Goals include:

- Develop a downtown center with public facilities, gathering places, and private retail attractions
- Locate new downtown parking facilities to support public and business uses
- Increase safe, attractive pedestrian ways linked to the Foothills Trail and parks
- Facilitate the development of new housing in mixed use projects
- Leverage Orting’s historic character and tourism attractions to create opportunities for business

In the fall of 2013, the City began the 2015 GMA update process by creating an online public opinion survey to check in with the community on local issues, values, and strategies. Just over 120 community members participated, and 86-percent found the existing vision statement was still relevant. While 63-percent of participants would rate Orting’s quality of life as “excellent” or “above average”, participants shed light on local issues requiring attention, such as public safety, education, smart growth, and traffic. Strategies to mitigate these issues have informed the current update, and the revision of goals and policies.

PLAN SUMMARY

The Comprehensive Plan is informed by the following major findings:

- The Plan is intended to guide Orting’s growth between 2015 and 2035, although the Plan references a 2030 planning horizon. This is due to the fact that Pierce Countywide Planning Policies established population and employment targets for all jurisdictions for 2030. The analyses and conclusions regarding land use, transportation and capital facilities capacities are consistent with the City’s view, particularly since it is likely that Orting will achieve substantial build out much earlier. As subsequent annual updates are prepared, more consistency will be provided with the evolving 20-year view.
- Orting residents want the City to retain its small rural town and rural character as it grows. Residential development should remain predominantly single-family, with some multi-family development in the mixed-use town center and in close proximity to services.
- The Plan establishes the following development pattern: a central core of mixed use development in the downtown commercial area of Orting, surrounded by single-family residential development at moderate densities. Other commercial uses and light industrial development may be allowed or encouraged along major arterials and in future urban growth area(s).
- The mix of land uses in the town center includes small scale retail, restaurants, offices, community facilities and housing in a pedestrian friendly environment.

- Community health is very important to the City. The City employed the Tacoma-Pierce County's Healthy Community Planning tools during the 2015 periodic update to increase the Plan's focus on community health, particularly goals and policies related to physical activity and healthy food.
- The Plan calls for a system of recreational trails and parks. A non-motorized system of trails is recommended which link the Foothills Trail in the center portion of the City with more local trails throughout town and along the Carbon and Puyallup Rivers.
- The Plan promotes the benefits of urban agriculture, including maintaining open spaces, providing a source of local food, building social connections, providing recreation opportunities, establishing rural character, preserving view corridors, and providing employment opportunities for the residents of Orting.
- Transportation needs in Orting range from potential future traffic volumes on the existing roadways, to the configuration of the future roadway system, to the feasibility of transit in the Orting area. The Transportation Element addresses transportation issues and links them into a cohesive assessment of Orting's transportation options and future.
- To maintain the City's existing small town character, the Plan adopts a level of service standard C/D for its roadway facilities and services.
- The Plan promotes a diversity of housing options within the community, including single-family homes, mixed use housing, manufactured homes moderate to high priced homes. This diversity of housing types is intended to meet Orting's affordable housing needs.
- The Plan recommends level of service standards for transportation, water, stormwater, sewer facilities, and parks, trails and open space. The Plan also recommends service goals for police and fire protection. New development must be served by adequate public facilities and cannot cause the level of service to be degraded below these adopted standards.
- The Plan directs growth for the next twenty years to areas within the City limits, to encourage the provision of adequate public facilities and services concurrent with development.
- The Plan is intended to work consistently with the City's critical areas ordinance. If a conflict should arise, the most restrictive provisions shall prevail.

PLAN ELEMENTS

LAND USE ELEMENT

The future land use policies establish the pattern of development in Orting for years to come. The City's overall planning goals provide guidance for the development of these policies. Specifically, the goals highlight preservation of open space and the character of the rural landscape, promotion of urban agriculture as a community

resource, retention and expansion of the City's employment base, and protection of vital environmental resources.

By 2030, the City is projected to grow to 7,570.¹ The Plan seeks to preserve the small rural town character of the City, while fostering the town center. In the areas within or adjacent to the town center, the Element promotes pedestrian oriented, mixed use development that allows for a diversity of land uses including housing, small-scale shopping, civic facilities, recreation, and employment.

Surrounding the town center, the Plan designates neighborhoods that allow for a mix of less intense uses and accommodate a range of housing types and densities. They are predominantly composed of single family homes of mixed densities, and designate a small portion of the City in proximity to commercial services and transportation facilities for multi-family development.

Expanding opportunities for residents to work and live in the community is another principle of the Land Use Element.

The Plan encourages Planned Unit Developments (PUDs), which use flexible lot sizes and development standards to encourage creativity and avoid cookie-cutter subdivisions that do not fit within the character of the landscape. With flexible lot sizes, common greens, community gardens and active recreation areas could be set aside for the benefit of the residents of the development.

The City has plans and programs in place to address future impacts of potential natural hazards. The City is a participant in the Pierce County Forum's development of the Region 5 All Hazard Mitigation Plan process. That plan contains an extensive City-specific mitigation strategy for avoiding and/or addressing impacts of natural hazards including floods, lahars, storms and other events. The City has implemented some of these strategies through the completion of setback levees, and the on-going planning for the Carbon River Evacuation Bridge (Bridge for Kids). In addition, the City manages public education and involvement activities related to the strategies. Maps showing areas subject to natural hazards are included in the Appendix.

HOUSING ELEMENT

As growth occurs within and around Orting, there will be an ever increasing need for more housing that is affordable and desirable. Remaining developable land within the City is slated for residential, mixed use, or public facilities development. The City's challenge will be to ensure that the pattern of development provides a diversity of housing options and economic development opportunities while maintaining the desired character of the community.

¹ Puget Sound Regional Council, Land Use Baseline Total Population Forecasts for Jurisdictions. April 1, 2013.

TRANSPORTATION ELEMENT

The Transportation Element uses a detailed assessment of current conditions, forecasts of future growth, and local and state standards to form a framework of policies and a determination of project needs. This complex picture includes facilities for which the City is responsible as well as county and state facilities. The analyses consider capacity, safety, and multi-modal performance as well as pedestrian, non-motorized, and public transportation. Orting's dependency upon SR 162 for regional connections is an over-riding problem that can only be solved by a coordinated partnership of the City, Pierce County and the state.

The Element seeks to maintain level of service (LOS) C/D. The community is accustomed to high service standards, but the travel forecasts indicate that service levels could drop significantly, depending on how the growth patterns and the transportation facilities are developed. With a standard ranging from LOS C to LOS D, the City has flexibility in meeting the high standards that the community's expectations while changing from a rural community to an suburban community.

ECONOMIC DEVELOPMENT ELEMENT

An economic "baseline" study (summarized in the Economic Development Appendix) assessed Orting's strengths, weaknesses, opportunities and threats. Strengths include the recent strong population growth; Orting's physical setting; availability of underdeveloped land and utility capacity; and the established downtown. Weaknesses include Orting's isolation; and limited accessibility. Opportunities include increasing the mix of local-serving business to recapture retail sales "leakage"; increasing leverage of tourism; and increase in demand for shopping and services as the surrounding area grows. Threats include strong retail competition from Bonney Lake and Puyallup's South Hill as well as eventual economic development in Tehaleh that could weaken Orting's ability to attract employers.

The Element contains goals and policies that provide a foundation for action to diminish the weaknesses and threats and take advantage of the strengths and opportunities.

SHORELINE ELEMENT

In response to state Department of Ecology changes to the Shoreline Master Program (SMP) guidelines, and GMA direction to coordinate comprehensive plans and shoreline plans, the City conducted a comprehensive update of the SMP in 2007. The update included a significant inventory and characterization of the shoreline conditions along the Carbon and Puyallup Rivers. In particular, "opportunity sites" for potential shoreline restoration and increased public access were identified. A minor update of the SMP was adopted in 2013.

The Shoreline Element includes the goals and policies of the SMP. There is no Shoreline Appendix, as the detailed analysis is found in the SMP. Shoreline development regulations are also included in the SMP. All of the shorelines within the City have been designated Urban Conservancy. No development except for

limited public facilities is allowed within the first 150 feet of the shoreline jurisdiction along the Rivers.

CAPITAL FACILITIES & UTILITIES ELEMENTS

The two major issues addressed in the Capital Facilities and Utilities Elements are the implementation of the "concurrency" requirement and the status of the City's water and sewer facilities. In compliance with state law, the Orting Plan requires that adequate public facilities be in place concurrent with the impacts of new development. This concurrency requirement means that improvements or strategies must be in place at the time of the development or that a financial commitment must be in place to complete the improvements or strategies within six years.

In order to determine whether or not public services are adequate to serve the forecasted population growth for the City, the Capital Facilities Element establishes level of service standards for water, sewer, stormwater, police, fire, parks, trails and open space, and transportation. New development must demonstrate that its impact will not degrade these facilities below the level of service standards adopted in the plan.

IMPLEMENTATION OF THE COMPREHENSIVE PLAN

PURPOSE & RELATIONSHIP TO GMA

A comprehensive plan is implemented through the goals and policies it identifies to guide and coordinate local decision making. The plan's policies shape the course of action taken by the community as it begins to implement the plan. The Growth Management Act encourages innovative implementation methods that are both regulatory and non-regulatory. Regulatory actions may include the adoption of a zoning ordinance or other land use regulations, while non-regulatory actions include implementation of the capital facilities plan, economic development strategies, and promotion of affordable housing development. Some actions may involve a complicated series of related steps which themselves may need to be carefully planned (for example, improvements made to a major utility system). This section will describes these actions, plans, and measures necessary to implement this Plan.

REGULATORY MEASURES

The Growth Management Act requires that local governments enact land development regulations that are consistent with, and implement the Comprehensive Plan. In order to accomplish this, the development regulations should be regularly reviewed to ensure consistency with the comprehensive plan in order to identify the need for amendments.

In particular, the zoning code and zoning map must be consistent with the future land use map and policies established in the plan. The future land use map and land use policies in the Comprehensive Plan establish the use, density, and intensity of future development within the City. As part of the update of the land use regulations, Orting is also obligated by ESHB 1724 adopted by the 1995 Legislature to combine project

permitting and environmental reviews; consolidate appeals processes; and clarify the timing of the development of the review process.

CONCURRENCY MANAGEMENT

Comprehensive plan policies also meet the GMA requirements for concurrency by establishing level of service (LOS) standards for capital facilities. The concurrency management system sets forth the procedures to be used to determine whether public facilities have adequate capacity to accommodate a proposed development. And, the concurrency management system also identifies the responses to be made by the City when it is determined that the proposal will exceed the level of service established, and therefore exceed the defined capacity, failing to maintain concurrency. The includes the criteria the City uses to determine whether development proposals are served by adequate public facilities, and establishes monitoring procedures to enable periodic updates of public facilities and services capacities.

Under the GMA, concurrency management must be established for transportation and capital facilities; however, jurisdictions may establish concurrency for any public facilities for which they have established level of service standards in their comprehensive plan. Level of service standards may be established for fire and emergency facilities, police, schools, sewer and water, transportation, and parks and recreational facilities and services.

SIX-YEAR CAPITAL IMPROVEMENT PLAN

Another major implementation tool of the Plan is the six-year schedule of capital improvements. The Capital Improvements Plan, or CIP, sets out the capital projects that the City must undertake within the next six years in order to implement the Plan. The six-year schedule is updated annually, with the first year of the schedule acting as the capital budget for the fiscal year. During the annual updating of the six-year schedule, the cost estimates and funding sources listed are updated and revised to reflect any additional information that the City has received. The CIP schedule is also be revised to include any additional capital projects that are needed to maintain the City's adopted level of service standards.

COORDINATION WITH PIERCE COUNTY

Through the County-wide Planning Policies (CPPs), the City is a partner with Pierce County and the other cities in shaping regional policies and actions. This includes updating the CPPs; discussing methods for maintaining the record of buildable lands; and evaluating UGA issues. More specifically, Orting and the County have a discrete set of common interests including future land use controls in the rural portions of the Orting Valley; transportation; shoreline management; hazard mitigation and the provision of services.

Orting's lack of annexation area and environmental growth constraints will limit the City's abilities to be a significant participant in county-wide plans for accommodating future residential growth and low-income housing.

ADMINISTRATIVE ACTIONS

The Plan includes a number of policies that should be carried out through administrative actions, such as interlocal agreements, revised development and review procedures, and public involvement programs. Development and review procedures must be revised to implement concurrency and to ensure that new development complies with the performance standards established.

PUBLIC INVOLVEMENT

In order for the Plan to remain alive, the citizens of the community must remain in touch with its implementation. As the Plan is tested by development, there will be the need for ongoing amendments to respond to changing conditions. As the community matures, the vision of the future will change and new needs and priorities will emerge. The City is obligated to coordinate many aspects of the Plan with adjacent jurisdictions, which will also generate changes. Continued public involvement and communication is crucial to keeping the process fresh and engaging so that the planning "wheel" does not have to be reinvented every few years.

AMENDING THE COMPREHENSIVE PLAN

PURPOSE AND RELATIONSHIP TO GMA

For the Plan to function as an effective decision making document, it must be flexible enough to accommodate changes in public attitudes, developmental technologies, economic forces and legislative policy, yet focused enough to insure consistent application of development principles. The Growth Management Act requires that the City establish a public participation program that identifies the procedures and schedules to be used to update or amendments the comprehensive plan.

TYPES OF AMENDMENTS

Other than the 7-year review and update process, the GMA limits comprehensive amendment cycles to no more frequently than annually. In addition, proposed amendments must be reviewed relative to the plans of adjacent jurisdictions, and all proposed amendments proposed in any one year must be considered concurrently so that the cumulative effect of the various proposals can be determined. Under certain circumstances, the following types of amendments may be considered more frequently than once per year:

- The initial adoption of a subarea plan;
- The adoption or amendment of a shoreline master program;
- The amendment of the Capital Facilities Element of the plan that occurs concurrently with the adoption or amendment of the city budget; and
- To resolve an appeal of a comprehensive plan filed with a Growth Management Hearings Board or with the court.

ANNUAL PLAN REVIEW AND AMENDMENT

This process addresses site-specific requests and minor policy changes. In some cases, amendments to the Plan may be necessitated by amendments to the GMA or Countywide Planning Policies or changes in federal or state legislation. These types of plan amendments or development regulations may be undertaken once a year, and may be recommended by the City Council, Planning Commission, City Staff, or any citizen.

The City requests that Comprehensive Plan amendment proponents provide the following information in their application for amendment:

- A statement of what is proposed to be changed and why;
- A statement of the anticipated impacts of the change, including geographic area affected and issues presented; and
- A description of any changes to development regulations, modifications to capital improvement programs, subarea, neighborhood, and functional plans required for implementation so that regulations will be consistent with the Plan.

REVIEW AND PLAN AMENDMENT PROCESS

The annual review and plan amendment process provides an opportunity to refine and update the Comprehensive Plan and to monitor and evaluate the progress of the implementation strategies and policies incorporated therein. During the review and amendment process, the Planning Commission and City Council shall consider current development trends to determine the City's progress in achieving the economic, land use, and housing goals established in the Plan.

Information to be considered may include vacant land absorption, residential versus economic development, amounts and values of non-residential construction, number and types of housing units authorized by building permit, the effect of changes to adopted functional plans in the community, as well as activity levels in such processes as subdivision approvals, annexations, and building permits. Other information that may be relevant to consider includes the current capacity status of major infrastructure systems for which levels of service have been adopted in the Plan (transportation, and parks and trails) and the levels of police and fire services being provided by the City.

The process may also include monitoring of overall population growth and relative comparison with the forecast growth projections contained in the Plan (and the inclusion of updated projections where appropriate).

The annual review and amendment process requires public participation, both through community meetings to familiarize the public with the amendment proposals, as well as a formal public hearing before the City Council. Proposed plan amendments must be submitted to the State Department of Commerce for review at least 60 days prior to final City Council adoption.

POLICIES

The following policies guide the annual plan review and amendment process:

- Policy I 1 The City shall schedule an annual review of the Comprehensive Plan, to consider the need for amendments. At that time, both City-initiated, and private party or developer-initiated amendment requests will be considered.
- Policy I 2 All Comprehensive Plan amendments shall be processed together with any necessary zoning, subdivision or other ordinance amendment, to ensure consistency.
- Policy I 3 Amendment procedures shall be fully outlined in the City's land development regulations.

ANNUAL PLAN REVIEW AND AMENDMENT SCHEDULE

The plan amendment process is designated to be flexible to accommodate unique conditions such as the nature, complexity, or amount of plan amendment requests in a single year. The annual "window" of plan amendment submittals from the public will be open throughout the year (that is, the public can submit requests for amendments at any time). However, they will only be "processed" in accordance with the adopted regulations. The timing of the annual update process is represented by the following generalized schedule:

- First Quarter City accepts initial public requests for comprehensive plan amendments (docket).
- Second Quarter Planning Commission reviews the docket and forwards its recommendations to the City Council for consideration. City Council decides which proposed amendments should be considered and establishes a plan amendment schedule.
- Third Quarter Planning Commission evaluates the proposed amendments and forwards its final recommendation to the City Council. Environmental and state agency review is conducted.
- Fourth Quarter City Council reviews the recommendation, holds a public hearing, and decides on adoption of the proposed amendments.

All amendment proposals shall be considered concurrently by the Planning Commission and the City Council so that their cumulative impacts can be determined.

EMERGENCY PLAN AMENDMENT CONSIDERATION

The Comprehensive Plan may be amended outside the normal schedule if findings are adopted (by City Council resolution) to show that the amendment was necessary, due to an emergency of a neighborhood or citywide significance. Plan and zoning amendments related to annexations may be considered during the normal annexation

process and need not necessarily be coordinated with the annual plan amendment schedule. The nature of the emergency shall be explained to the City Council, which shall decide whether or not to allow the proposal to proceed ahead of the normal amendment schedule.

Land Use Element

LAND USE ELEMENT

PURPOSE

This Land Use Element contains the goals and policies necessary to support the City's responsibility for managing land resources and guiding development through implementing regulations, guidelines and standards. It is maintained in accordance with the Growth Management Act (RCW 36.70A.070) to direct land use decisions over the next 20 years.

The Appendix to the Land Use Element contains the data and analysis that are used to describe the physical characteristics of the City and to define and explain the basis for the following goals and policies.

GOALS & POLICIES

GENERAL

- Goal LU 1 Be true to the vision for Orting by encouraging the expansion of its economic base while preserving its agricultural heritage and enhancing its future potential for urban farming.**



Village Green Single Family Residences; Ofarrell Ln NW.

- Pol. LU 1.1 Encourage higher residential density and more intensive commercial development and human activity within Orting's downtown core to create a vibrant city center, reduce reliance on the automobile, and to provide opportunities for affordable housing.
- Pol. LU 1.2 Provide for adequate land for commercial and light manufacturing uses to meet the needs of the City of Orting.
- Pol. LU 1.3 Protect local historic, archeological, and cultural sites and structures through designation and incentives for the preservation of such properties.

- Pol. LU 1.4 The Future Land Use Map adopted in this plan (see **Figure LU-1**) shall establish the future distribution, extent, and location of generalized land uses based on the intent of the goals and policies of this plan.
- Pol. LU 1.5 Strive to assure that basic community values and aspirations are reflected in the City, while recognizing the rights of individuals to use and develop private property in a manner that is consistent with City regulations. Private property shall not be taken for public use without just compensation having been made.
- Pol. LU 1.6 Establish and maintain a vision that effectively attracts economic activities which best meet the needs and desires of the community.
- Pol. LU 1.7 The Orting Downtown Vision Map adopted in this plan (see **Figure LU-2**) shall establish the primary elements of the 2008 Vision Plan maximize the potential of the downtown core as the Orting Valley Town Center.
- Pol. LU 1.8 Designate the **Center of Local Importance (COLI)** including the downtown area, school campus, and Gratzner Park as Orting's core for future major transportation improvements.
- Pol. LU 1.9 Recognize and promote the benefits of agricultural land, for maintaining open space, establishing rural character, preserving view corridors, enhancing wildlife habitat, and providing employment opportunities for the residents of Orting.
- Goal LU 2 Preserve the small town rural service center character of Orting.**
- Pol. LU 2.1 Require new development to be sited so as to have the least visual and environmental impact on the landscape.
- Pol. LU 2.2 Support inter-jurisdictional programs to address problems or issues that affect the City and larger geographic areas.
- Pol. LU 2.3 Protect single-family neighborhoods from intrusion of incompatible land uses.
- Pol. LU 2.4 Provide incentives for land uses that promote agricultural uses including adding value to farm products.

URBAN GROWTH AREA

- Goal LU 3 Encourage urban growth in areas that can be served by adequate public facilities and services and protect natural resources and environmentally sensitive lands, within the urban growth area.**
- Pol. LU 3.1 Monitor growth in conjunction with adopted Pierce County population

projections and cooperative planning with Pierce County to anticipate future urban growth area needs.

Pol. LU 3.2 Coordinate with Pierce County to consider future Urban Growth Area expansion based on the Pierce County Countywide policies:

Pol. LU 3.3 Urban growth areas must be of sufficient size to accommodate the urban growth projected to occur over the succeeding 20-year planning period taking into account sensitive areas; agricultural land; open space; fully contained communities; existing proposed development; existing land use patterns and development character; and existing parcel boundaries. Encourage infill development within the city limits and existing urbanized unincorporated areas.

Pol. LU 3.4 Development shall take place only if it does not cause the public facility level of service to degrade below the City's adopted level of service standards. Orting shall encourage the following techniques:

- a. Conservation Easements
- b. Transfer of Development Rights
- c. Purchase of Development Rights
- d. Cluster Development

Pol. LU 3.5 The boundary of the urban growth area shall be evaluated during mandated GMA updates and in conjunction with coordinated planning with Pierce County based on the following criteria:

- a. Expansion of the service area or demand for municipal facilities and services;
- b. Maintaining land supply sufficient to allow market forces to operate; and precluding the possibility of a land monopoly, but no more than is essential to achieve this purpose;
- c. Accommodation of essential public facilities or unique opportunities for economic development;
- d. Designation of the UGA expansion as a receiving area for development rights transfer from agricultural resource lands in the Orting Valley.

RESIDENTIAL LAND USE

Goal LU 4 Provide a variety of housing choices for new residents.

Pol. LU 4.1 Promote residential areas that offer a variety of housing densities,

types, sizes, costs, and locations to meet future demand.

- Pol. LU 4.2 Encourage development that provides affordable housing through incentives.
- Pol. LU 4.3 Conserve the City's existing housing stock through code enforcement, appropriate zoning, and participation in rehabilitation programs.
- Goal LU 5 Residential development shall be of high quality design and shall be consistent with the character of Orting.**

*Discussion: The land use plan establishes a variety of residential land use categories to accommodate growth within the urban growth area. The **Residential Multi-Family (RMF)** land use category is intended to provide for moderate to high density residential development which may include a mix of office and governmental uses. The **Residential-Urban (RU)** category is intended to provide for vital residential neighborhoods in a moderate to low-density single-family setting. The **Residential-Conservation (RC)** land use category is intended for areas that are suited for low-density residential development that is compatible with critical area constraints along the Puyallup and Carbon River shorelands.*

- Pol. LU 5.1 Residential development within the **Residential Multi-Family (RMF)** land use district shall be served by community improvements and facilities normally associated with urban area development. The maximum density of development in the RMF district shall be eight units per acre.
- Pol. LU 5.2 The **Residential-Urban (RU)** land use category is intended for areas that are suitable for residential development with the provision of full services. It includes existing exclusively residential subdivisions that have been platted at an average density of six units per acre. The maximum density of development in the RU district shall be six units per acre except that one additional unit may be allowed on a lot that is at least 150% larger than the minimum lot area.
- Pol. LU 5.3 The **Residential-Conservation (RC)** district is located in areas that are within the Carbon and Puyallup Rivers' shoreline management jurisdictions. Within the RC district, the maximum gross density shall not exceed one dwelling unit per 2 acres. Development should be clustered outside the floodway and above the 100-year floodplain, if possible.
- Pol. LU 5.4 Planned Unit Development (PUD) is encouraged in areas conducive to densities greater than otherwise provided for if those units are properly planned, designed, serviced and reviewed in a public forum.

Discussion: The PUD approach provides the City with an alternative form of

residential development which would promote flexibility and creativity in the layout and design of new residential development.

- Pol. LU 5.5 Approved PUDs should result in:
- a. Adequate active open space;
 - b. Protection of natural features and sensitive areas;
 - c. Appropriate site design including, relative placement of structures, circulation systems, landscaping, and utilities that minimize land alteration or degradation; provisions for a variety of dwelling unit types, including multi-family; scale and design to reduce the bulk of structures; and innovation in design including, features such as clustering and zero lot line;
 - d. Pedestrian orientation;
 - e. Adequate provision of public facilities and amenities;
 - f. Compatibility with surrounding uses.

Pol. LU 5.6 Ensure that the City's development regulations require new development to be in the best interest of the surrounding property, the neighborhood, or the City as a whole, and generally in harmony with the surrounding area.

Pol. LU 5.7 Planning Commission review of residential developments should be focused on the height of structures, noise and lighting impacts and providing adequate open space.

MIXED USE

Goal LU 6 Provide attractive, conveniently located economic development that creates employment, retail and service business and higher density residential opportunities within the City.

Pol. LU 6.1 New commercial and office development shall be limited to the mixed use land use districts, except that home occupations may be located in all residential land use districts, in accordance with the Orting Zoning Ordinance.

Pol. LU 6.2 Orient nonresidential uses toward the pedestrian. Encourage retail uses on the ground floor to prevent blank walls with little visual interest for the pedestrian. Locate parking lots behind retail uses to allow for pedestrian window shopping. Encourage offices and/or residential units above ground floor retail.

Goal LU 7 The Mixed Use-Town Center Land Use Categories (MUTC and MUTCN) are intended to foster vibrant, pedestrian-oriented centers for Orting's commercial and high density residential activity.

Discussion: *Two MUTC areas are established: MUTC, and MUTC North.*

Pol. LU 7.1 The **Mixed Use-Town Center (MUTC)** land use category is intended for areas that are suitable for pedestrian-oriented development. In recognition of the growing need for a downtown that provides goods and services for the community; serves tourists and travelers; and maintains a strong sense of history, the City is committed to promoting development and re-development through partnerships with the business community that will leverage existing public and private assets into an active center featuring public facilities and spaces and more intensive private development.

Pol. LU 7.2 The **Mixed Use-Town Center (MUTC)** land use district includes a diversity of housing types, shopping, civic facilities, recreation, and employment. A variety of land uses are allowed, including:

- a. Residential
- b. Office
- c. Retail and food sales
- d. Personal, Professional and Business Services
- e. Bed and breakfast establishments
- f. Cultural Facilities
- g. Parks
- h. Churches
- i. Schools
- j. Restaurants
- k. Shared parking
- l. Day cares

Pol. LU 7.3 To ensure the visual appeal and pedestrian-orientation of the land uses, the land development regulations will include performance standards for:

- a. Signage

- b. Open space
- c. Land coverage
- d. Placement of parking to the rear or side of buildings, or on lots developed or improved to provide shared parking for all downtown uses.
- e. Building placement
- f. Setback or build-to lines
- g. Landscaping
- h. Building height and bulk
- i. Impact on adjacent properties
- j. Streetscape improvements

Pol. LU 7.4 Development strategies and generalized locations for improvements within the MUTC zone are included in the Downtown Vision Plan map, addressing the following elements

- a. Principal routes through town
- b. Streets for pedestrian amenities
- c. Gateway locations and ideas
- d. Redevelopment opportunities
- e. Existing trails & landmarks
- f. Existing anchor uses

Goal LU 8 Mixed Use – Town Center North is intended to take advantage of the large lots and land area between Orting High School and Rocky Road NE for development of new economic opportunities – including retail, office, urban agricultural and light manufacturing uses that support a sustainable community by providing jobs and increasing the tax base. Higher density residential uses are allowed as described below.

Discussion: Town Center North is a 65.6 acre area located east of Washington Ave N, south of Rocky Road NE, west of the Carbon River, and north of the Orting High School property. Development of this area is expected to include at least 370,000 square feet of retail, service business, or light manufacturing space with related parking and site improvements. Residential development may be multifamily units on upper floors of

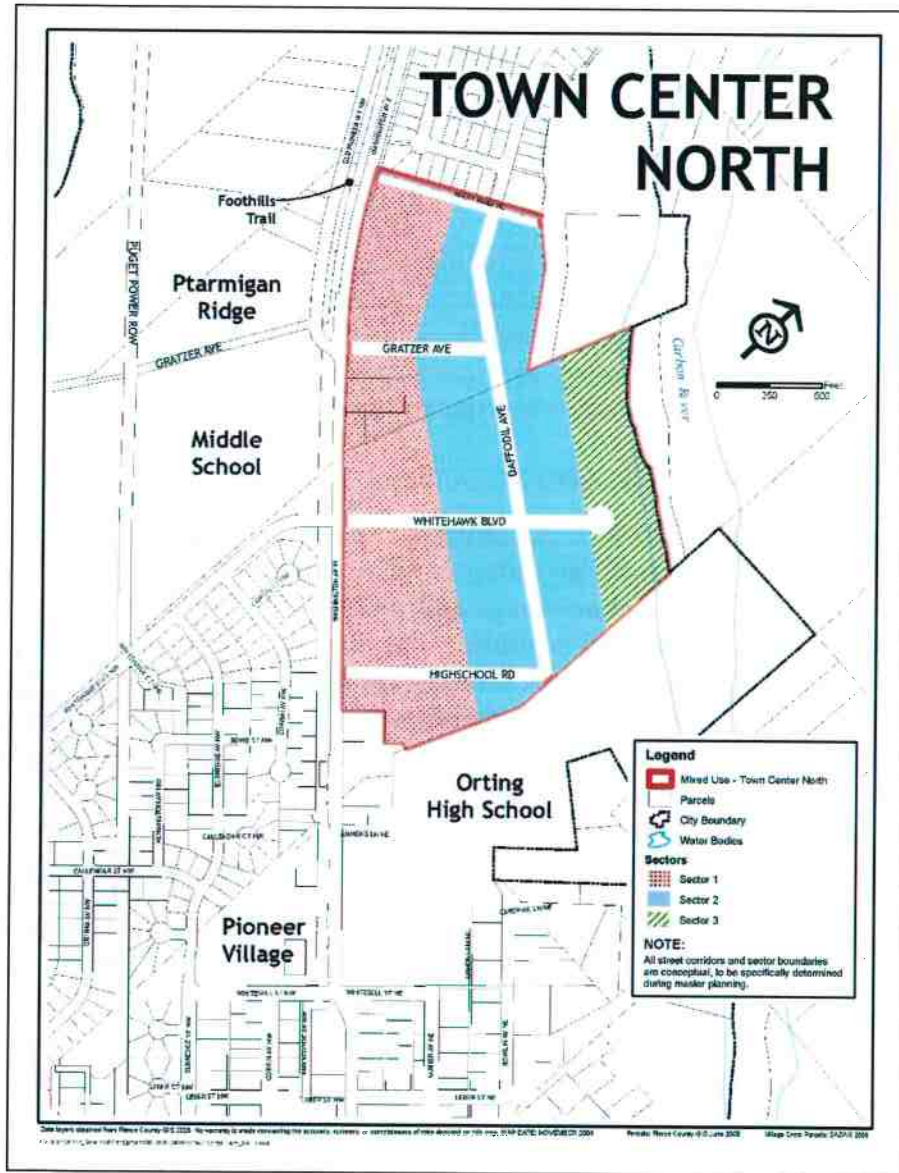
buildings with ground floor commercial uses, single-purpose multifamily buildings, or attached ground-related units within the sectors as provided in the development code. The maximum residential density shall be 10 dwelling units per gross acre.

The type of development in the MUTCN will depend on land uses proposed within the sectors. Development in Sector 1 will focus on pedestrian-oriented retail and other commercial uses. Development in Sectors 2 and 3 may be larger in scale, and may include light manufacturing, urban agricultural, residential, or office uses. The basic site concept for the area is illustrated by the figure. Street alignments and sector boundaries are illustrative, with final street alignments and sector boundaries to be determined through the master planning process.

Pol. LU 8.1 Development in Town Center North shall be planned according to the following principles:

- a. Access should be consistent with adopted city policies and strategies. Access from SR 162 (Washington Ave N) should be limited to locations where intersections can be designed to handle increased traffic and turning movements.
- b. Internal vehicular and pedestrian circulation throughout the area should be organized by a street grid that connects with the highway intersections and the residential neighborhood to the north, and also enables connections between different development projects and phases. This will also provide corridors for utilities. Development project approvals will include dedication of new public street rights-of-way in Town Center North.
- c. Blocks created by the street grid can simplify planning and permitting for development, particularly when phasing is anticipated.
- d. Pedestrian amenities can be located and designed within the blocks and coordinated throughout the area as development plans are drafted.

Pol. LU 8.2 All development in Town Center North shall be approved through either the Planned Unit Development or Binding Site Plan processes and will be subjected to Architectural Design Review as prescribed by the Orting Municipal Code. The City shall adopt specific Town Center North design guidelines and standards for public improvements and private developments in the area.



MANUFACTURING

Goal LU 9 The Light Manufacturing (LM) land use district is intended to provide for an area where low impact industrial activities can be concentrated and where traffic congestion, visual, and other impacts on the surrounding neighborhood can be minimized.

- Pol. LU 9.1 The **Light Manufacturing (LM)** district is for areas devoted exclusively to light industrial development, including non-objectionable manufacturing, processing or storage of products including manufacturing, processing, canning or bottling of food or beverages; production of goods from materials that are already refined or from raw materials that do not need refining; and other uses that do not involve the use of materials, processes or machinery likely to cause undesirable noise, air quality or other impacts on nearby residential or commercial property.
- Pol. LU 9.2 **Light Manufacturing (LM)** uses shall provide a vegetated buffer to screen the development from adjacent non-industrial properties and from adjacent roadways.
- Pol. LU 9.3 The land development regulations will include performance standards for industrial uses. Lighting from light manufacturing uses will not interfere or conflict with adjacent properties. Signage shall be controlled and limited to informational types. Curb cuts should be minimized and sharing of access encouraged.

OPEN SPACE AND RECREATION

Goal LU 10 The Recreation\Open Space Land Use Category is intended to acknowledge and protect the City's public parks and open spaces through public and private initiatives including incentives, transfer of development rights, public land acquisition, greenways, conservation easements, and other techniques.

Discussion: The adopted Parks, Trails, and Open Space Plan provides direction for the establishment of strategies, standards, and actions to ensure that adequate recreation space and facilities are available to the citizens of Orting in concert with growth.



Foothills Rails to Trails Kiosk; Calistoga St W and Van Scoyoc Ave SW.

- Pol. LU 10.1 The Recreation/Open Space district is for areas devoted to public recreational facilities such as parks and trails and areas that have been preserved as open spaces through a variety of open space programs.
- Pol. LU 10.2 Recognize the important recreational and transportation roles played by regional bicycle trail systems, and support efforts to develop a coordinated system of greenway trails throughout the region.
- Pol. LU 10.3 Promote the use of property tax reductions as an incentive to preserve

desirable lands as a public benefit and encourage and support the participation of community-based non-profit organizations offering options and alternatives to development in the interest of preserving desirable lands as a public benefit.

CRITICAL AREAS

Goal LU 11 Protect the City's critical areas.

- Pol. LU 11.1 All development activities shall be located, designed, constructed and managed to avoid disturbance of and minimize adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.
- Pol. LU 11.2 Prohibit the unnecessary disturbance of natural vegetation in new development, in accordance with the Critical Areas Ordinance.
- Pol. LU 11.3 Where there is a high probability of erosion, grading should be kept to a minimum and disturbed vegetation should be restored as soon as feasible. In all cases, appropriate measures to control erosion and sedimentation shall be required.
- Pol. LU 11.4 Seek to retain as open space wetlands, river and stream banks, ravines, and any other areas that provide essential habitat for endangered or threatened plant or wildlife species.
- Pol. LU 11.5 Protect wetlands to enable them to fulfill their natural functions as recipients of floodwaters and as habitat for wildlife through the critical areas ordinance.
- Pol. LU 11.6 Alternative domestic waste systems are discouraged, and must meet Pierce County Department of Health standards for soil suitability and location.
- Pol. LU 11.7 Agricultural land uses within the Carbon and Puyallup River floodplains shall use Best Management Practices as recommended by the U.S.D.A. Soil Conservation Service to minimize the use of chemicals that may later be released into surface waters and to minimize erosion of soil into surface waters.
- Pol. LU 11.8 The City shall consider the impacts of new development on water quality as part of its review process and require any appropriate mitigating measures. Impacts on fish resources shall be a priority concern in such reviews.
- Pol. LU 11.9 The City Shoreline Master Program shall govern the development of all designated Shorelines of the State within Orting. Lands adjacent to these areas shall be managed in a manner consistent with that program.

Permit existing small scale farming, horticulture and other agricultural uses to continue when appropriate critical area protections are employed. Maps showing Critical Areas including flood-prone and lahar areas are included in the Land Use Appendix

PUBLIC FACILITIES AND SERVICES

Goal LU 12 The Public Facility Land Use Category is intended to acknowledge areas devoted to public uses.

Pol. LU 12.1 The Public Facility district is for areas devoted to public facilities such as schools, water and wastewater facilities, city buildings, state and federal properties, city-owned parking lots and to acknowledge and reserve sites that have been planned for public purposes.



Orting City Hall; 110 Train St SE.

Goal LU 13 Ensure that those public facilities and services necessary to support development shall be adequate to serve the development without decreasing current service levels below adopted level of service standards.

Pol. LU 13.1 Coordinate new development with the provision of an adequate level of services and facilities, such as schools, water, transportation and parks, as established in the capital facilities element.

Pol. LU 13.2 Ensure that new development does not outpace the City's ability to provide and maintain adequate public facilities and services, by allowing new development to occur only when and where adequate facilities exist or will be provided.

Pol. LU 13.3 The City will coordinate concurrency review. Developers shall provide information relating to impacts that the proposed development will have on public facilities and services. The City shall evaluate the impact analysis and determine whether the development will be served by adequate public facilities.

- Pol. LU 13.4 The City shall permit the development of essential public facilities in accordance with the provisions of the County-Wide Planning Policies.

URBAN AGRICULTURE

Goal LU 14 Preserve prime agricultural land and promote farming and related agricultural activities that support the local food industry and tourism, such as increasing access to healthy foods and food products.

- Pol. LU 14.1 Work with Pierce County to engage in joint planning for future UGA expansions that include farms and agricultural activities.

- Pol. LU 14.2 Work with surrounding property owners to engage in planning that supports economic benefits to both parties including increasing merchandising farm products, promoting value-added production of food and nursery items, and home businesses that are located on farms.

- Pol. LU 14.3 Seek federal, state, and foundation grant funding that can support the formation of farm cooperative organizations, community-based marketing programs, and local educational and tourism activities.

Figure LU-1

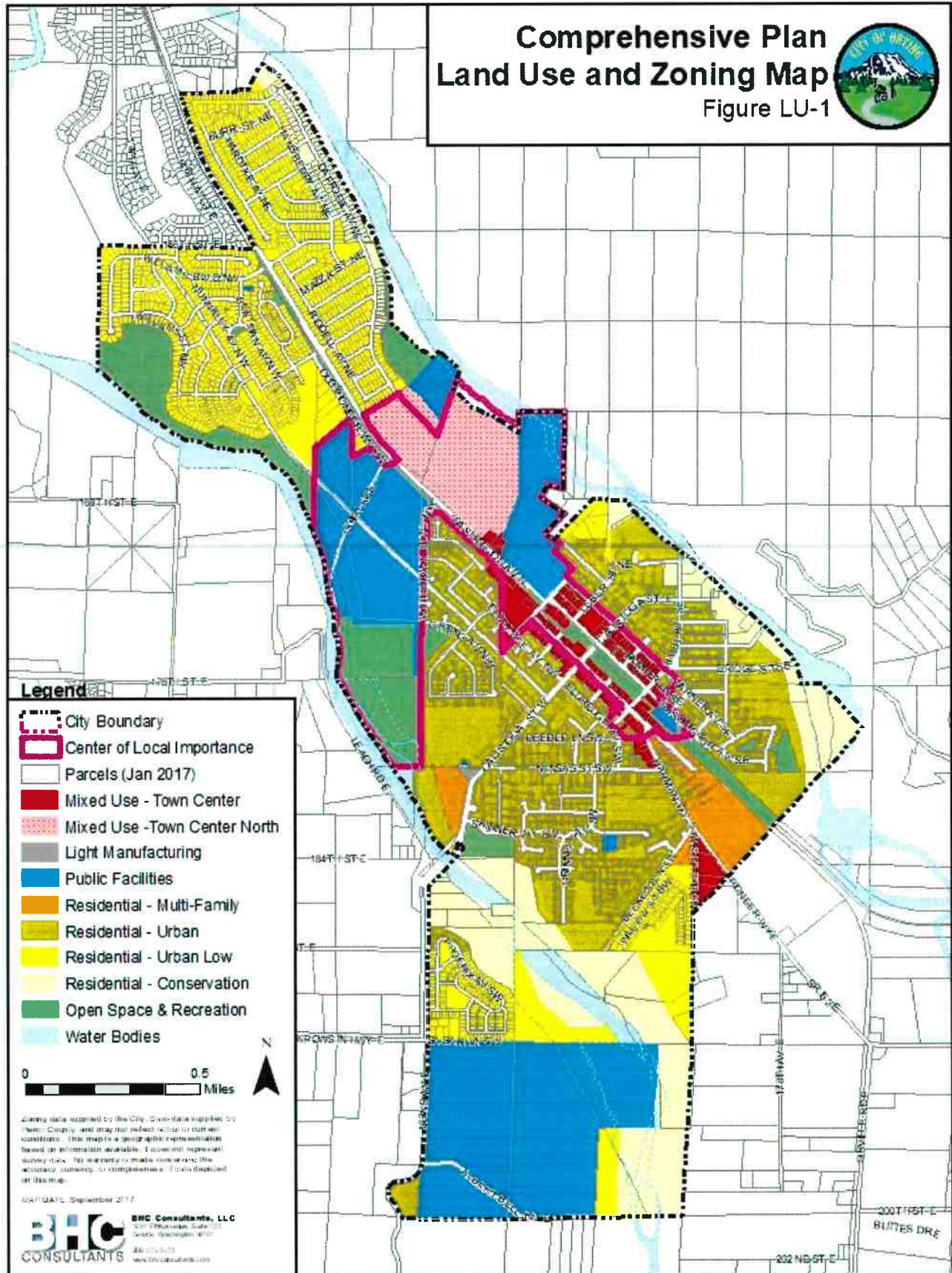


Figure LU-2

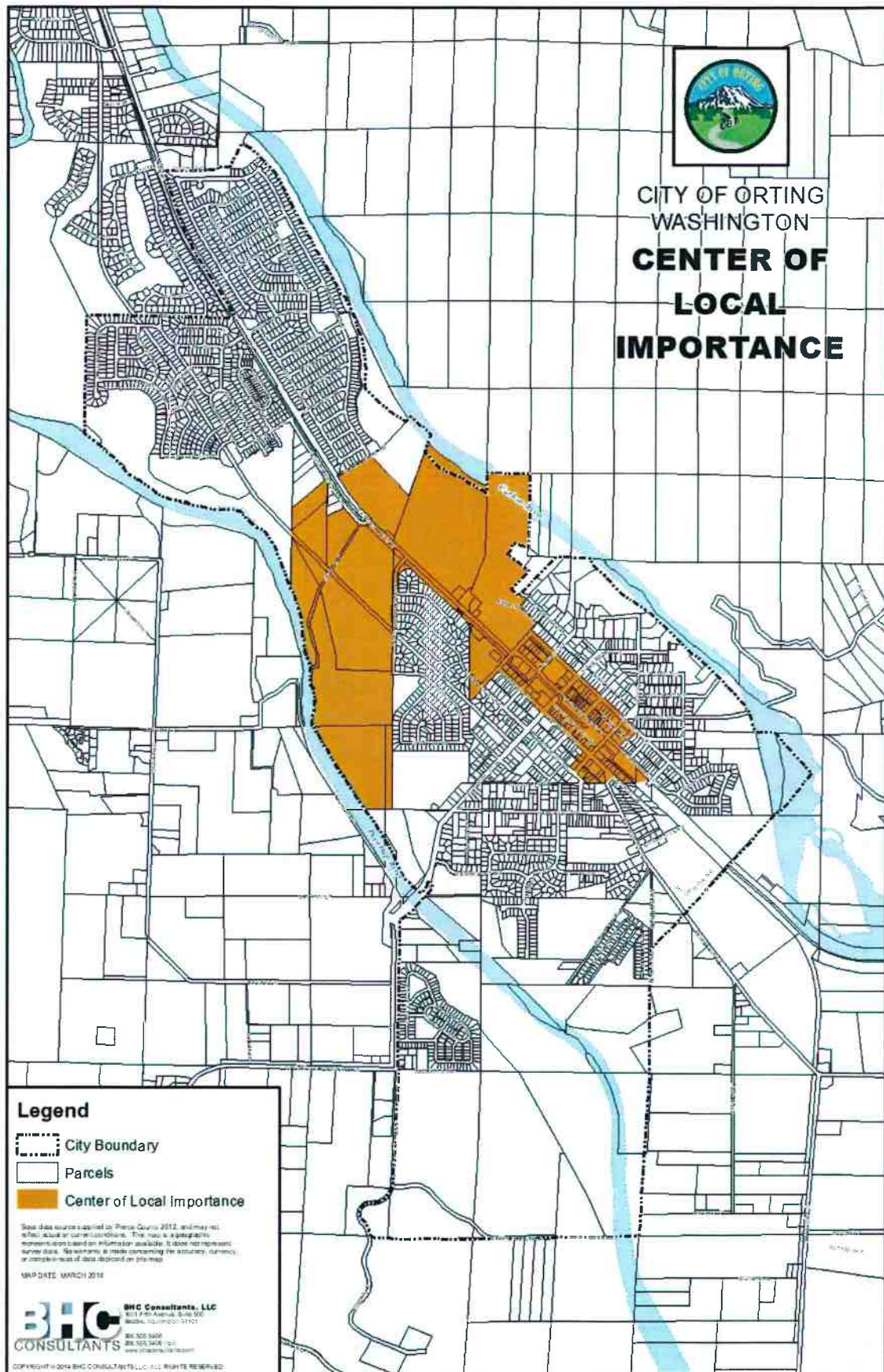
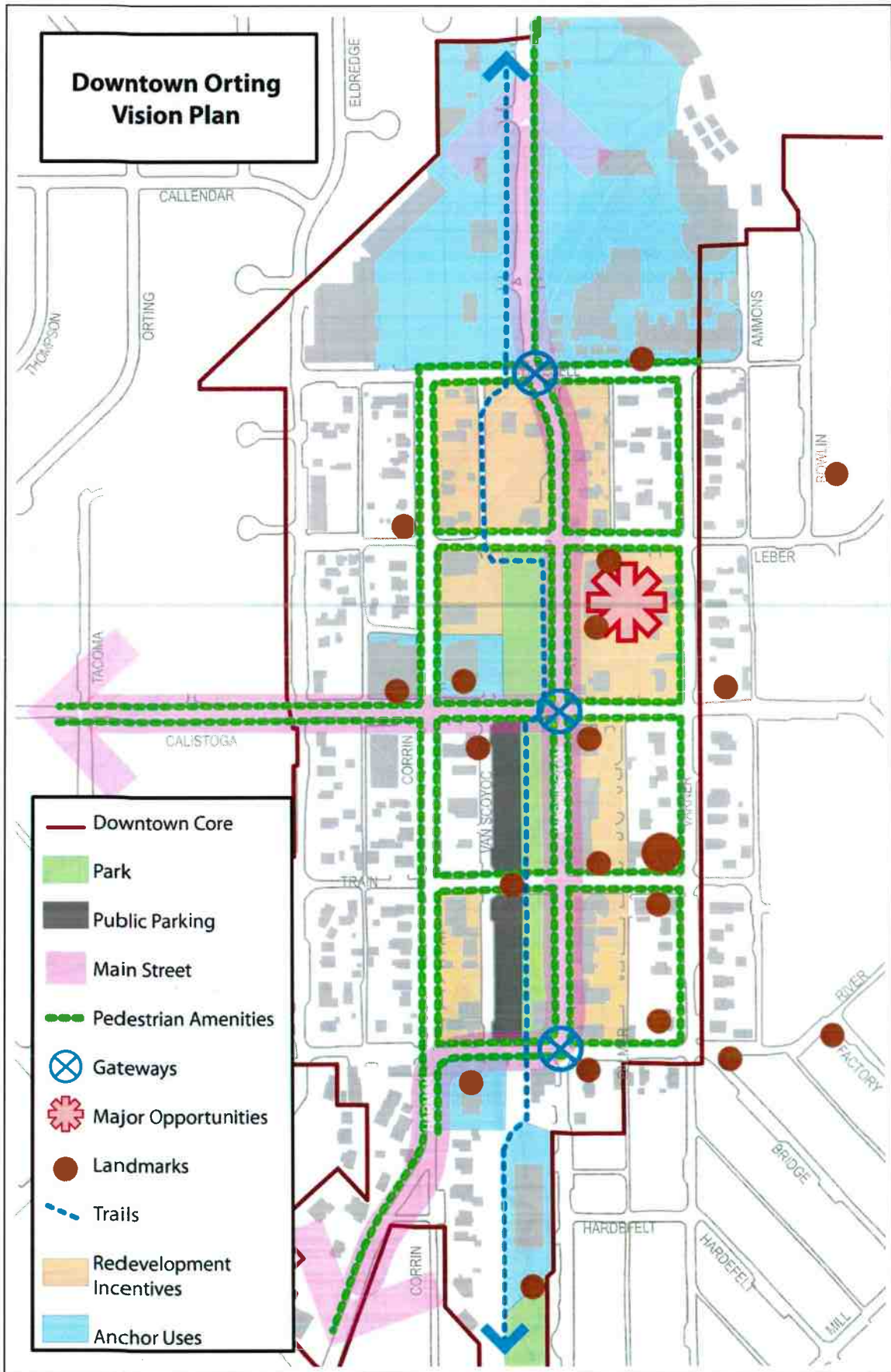


Figure LU-3



Housing Element

HOUSING ELEMENT

PURPOSE

This Housing Element provides the policy basis for directing the development of new housing that is compatible with the character of the city. The Housing Appendix provides further information describing the inventory and analysis of housing and forecasts future demands as well as implementation strategies for achieving the goals.

1. The Growth Management Act states that the Housing Element of the Comprehensive Plan must recognize "the vitality and character of established neighborhoods" and must provide that it:
 2. Includes an inventory and analysis of existing and projected housing needs.
 3. Includes a statement of goals, and policies for the preservation, improvement, and development of housing.
 4. Identifies sufficient land for housing, including, but not limited to government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities.
 5. Makes adequate provisions for existing and projected needs of all economic segments of the community.



Orting single family residences.

As Orting grows, and new residents arrive, new neighborhoods are created and existing neighborhoods change. This results in different expectations for the character of the city. In addition, the demand and supply of housing types and styles broadens as the market adapts to the demographics of the population. In order to address these factors, the Comprehensive Plan provides the basis for monitoring development trends and assessing the city's capacity to accommodate future growth.

The supply of vacant land that is suitable for residential development is limited. Critical areas such as the floodways, wetlands and the shoreline areas inhibit development capacity along the rivers. Development of the remaining vacant - and former farmland - inside the city will result in the loss of visual open spaces, but will maintain the single-family character of the community. Some future growth within the city will depend upon infill development and redevelopment of parcels that are

not built to their full capacities. This type of development usually results in higher density.

MAJOR ISSUES

In formulating the Element, the following major issues have been considered:

1. Balancing the rural character vision with the satellite rural town center role.
2. Providing a balanced range of housing types, styles, and affordability.
3. Providing opportunities for housing for its citizens with special needs.
4. Addressing the conservation of existing housing.

GOALS AND POLICIES

Goal H 1 **Ensure adequate housing for all current and future residents of Orting by achieving and maintaining high quality housing and neighborhoods.**



Village Green single family residence.

Pol. H 1.1 Provide for a variety of housing types and densities in appropriate areas.

Pol. H 1.2 Conserve the existing housing stock through code enforcement, appropriate zoning, participation in rehabilitation programs, and protection of neighborhood integrity.

Pol. H 1.3 Ensure appropriate levels of service for public facilities in areas that are designated for higher densities.

Pol. H 1.4 Support private sector efforts to fund, plan and develop housing for the elderly and other citizens with special needs.

Pol. H 1.5 Maintain non-discriminatory zoning regulations for group homes, consistent with the Federal Fair Housing Act.

Pol. H 1.6 Encourage the protection of historically significant housing sites, neighborhoods and structures, including those that represent the design themes important to Orting's history.

Pol. H 1.7 Accommodate Orting's fair share of the County's housing needs through the designation of adequate residential land for development and the achievement of the city's housing policies.

Goal H 2 **Encourage the availability of a wide range of affordable housing to meet the needs of households with varying economic status.**



Five-plex Building; Corrin Ave SW and Bridge St SW.

- Pol. H 2.1 Ensure that development regulations provide opportunity for a variety of housing densities and types, including mixed use in the downtown
- Pol. H 2.2 Encourage creative design and development of denser, urban housing in and near the downtown.
- Pol. H 2.3 Guide sensitive development of accessory dwelling units in all residential zoning classifications.
- Pol. H 2.4 Provide information to assist both low- and moderate-income families in finding adequate housing and to assist non-profit developers in locating suitable sites for affordable housing.
- Pol. H 2.5 Encourage public agencies, private and non-profit associations and joint public-private partnerships to provide low- and moderate-income housing.
- Pol. H 2.6 Encourage project proponents' participation in housing assistance programs that provide home ownership opportunities to low and moderate income families.
- Pol. H 2.7 Maintain development standards and regulations, permit processing procedures, and concurrency management that do not result in inequitable housing cost increases.
- Pol. H 2.8 Monitor housing demand and the achievement of these housing policies in conjunction with the Pierce County buildable lands program.

Transportation Element

TRANSPORTATION ELEMENT

PURPOSE

The Transportation Element (including the goals and policies and the appendix) is intended to provide the legislative framework for all City decisions pertaining to infrastructure and the management of the transportation system consistent with the GMA and County-wide Planning Policies. The Transportation Element addresses existing conditions of the facilities, street classification, level of service, transit service, pedestrian and bicycle needs, travel demand management, and facility improvements needed to support future travel needs and potential funding strategies.

The GMA specifies the types of information that must be included in the Element and requires that the Transportation Element be consistent with the Land Use Element. A travel demand forecast model which anticipates growth through 2030 within the City and surrounding areas has been prepared. Specifically the Element must include:

- An inventory of facilities by transportation mode
- Level of service standards for all arterials and transit routes used to evaluate the performance of the transportation system
- Identification of deficiencies
- Proposed actions to bring the deficiencies into compliance
- Traffic forecasts of at least ten years based on the adopted land use plan
- Identification of system expansion needs to meet current and future travel demands
- Funding analysis for needed improvements as well as possible additional funding sources
- Identification of intergovernmental coordination efforts
- Identification of demand management strategies
- Development of concurrency policies and ordinance

Finally, as one of the jurisdictions in Pierce County, Orting's Transportation Element must be consistent with the Countywide Planning Policies. In general, the Countywide Planning Policies direct local jurisdictions to provide a balanced transportation system using all modes of transportation as efficiently as possible. It directs state, regional, county, and local cities to coordinate effectively when planning transportation improvements.

GOALS

- Goal T 1** Maintain a transportation system that accommodates the separation of through and local traffic, provides adequate internal circulation, and interconnects effectively to the regional highway, non-motorized, and public transportation systems is responsive to the mobility needs of City businesses and neighborhoods, and guides future developments.
- Goal T 2** Coordinate with local, regional, state, and federal agencies in the development and operation of the transportation system. In particular, support City, County, and state implementation of comprehensive solutions to capacity, safety, and circulation problems with SR 162.
- Goal T 3** Establish a safe and convenient pedestrian and bicycle circulation system linking residential communities with key destinations.
- Goal T 4** Fund transportation facility improvements with federal, state, and local public and private sources.
- Goal T 5** Realize the vision for Washington Ave N/S as Orting's main street, providing high quality aesthetic design in conjunction with multi-modal mobility, pedestrian safety, and infill economic development.
- Goal T 6** Meet federal and state air quality requirements and work with state, regional and other local agencies to develop transportation control measures and/or mobile source emission reduction programs that may be warranted to attain or maintain air quality requirements.

VEHICULAR TRANSPORTATION POLICIES

STREET NETWORK

- Pol. T 1** Periodically update traffic forecasts and levels of service analysis on all arterials in the City.
- Pol. T 2** Provide adequate, system-wide capacity on arterial streets to avoid diversion of excess traffic from congested arterials to neighborhood streets.
- Pol. T 3** Maintain truck routes on Principal Arterials and enforce truck use accordingly.
- Pol. T 4** Develop the local street system to encourage connectivity between

adjacent developments where feasible, and provide connections to arterials from neighborhood collectors.

- Pol. T 5 Existing non-through (dead-end) streets shall be linked together whenever practical.
- Pol. T 6 Minimize the use of cul-de-sacs, dead-end streets and other designs that reduce connectivity between neighborhoods.
- Pol. T 7 Protect street rights-of-way from encroachment by structures, fences, retaining walls, landscaping, or other obstructions to preserve the public's use of the right-of-way, and to ensure safety and mobility.

STREET CLASSIFICATION

- Pol. T 8 Establish a consistent classification of streets as Principal, Minor, and Collector Arterials, Neighborhood Collector Streets and Local Streets according to function, based on federal, state, and regional guidelines so that needed traffic capacity may be preserved and planned street improvements will be consistent with those functions.



Washington Ave S.

- Pol. T 9 Limit the number of residences that can be served by a dead end/ cul-de-sac street.

STREET DESIGN STANDARDS

- Pol. T 10 Maintain a comprehensive street improvement plan for city streets that implements the desired streetscape for each functional classification. Arterial street standards shall provide guidance on the width of lanes, driveway access, right-of-way width, sidewalks median treatments, setbacks, lighting, pedestrian facilities, landscaping, or other improvements.
- Pol. T 11 Design street improvements to fit the character of areas they serve.
- Pol. T 12 Maximize and maintain the capacity of arterial streets through the provision of turn lanes and other auxiliary lanes rather than street widening solutions.

- Pol. T 13 Encourage shared use of driveways served by arterials.
- Pol. T 14 Use street design standards to minimize pavement widths while accommodating on-street parking, and allowing cars to pass, thereby slowing the speed of vehicles on local streets, improving pedestrian safety and allowing for landscaping.
- Pol. T 15 Require safe, attractive sidewalks on all new streets. Implement a program to improve pedestrian and bicycle use of existing streets.
- Pol. T 16 Provide comprehensive street lighting, including lights for pedestrians on sidewalks and trails, using such factors as adjacent land uses, hazardous street crossings, transit routes, schools, and parks.

TRAFFIC SAFETY

- Pol. T 17 Monitor traffic accidents, citizen input/complaints, traffic violations, and traffic growth to identify and prioritize locations for safety improvements.

- Pol. T 18 Consider the use of devices that increase safety of pedestrian crossings such as flags, in-pavement lights, raised crosswalks, colored and textured pavements.



Kansas St SW and Calistoga St W.

- Pol. T 19 Consider the use of devices that increase safety of bicycle crossings such as signage, in-pavement lights, visibility improvements and textured pavements.

NEIGHBORHOOD TRAFFIC CONTROL

- Pol. T 20 Consider design options for application of neighborhood traffic calming devices such as median barriers, speed humps, speed tables, raised crosswalks, raised intersections, traffic circles, roundabouts, chicanes, chokers, neck-downs, and textured pavements on local streets where traffic and pedestrian safety is of concern. Neighborhood Collectors shall receive the first priority followed by other local streets. Installation of neighborhood traffic control devices shall be avoided on arterials.

PROPERTY ACCESS

- Pol. T 21 Minimize local property access on Principal and Minor arterials.
- Pol. T 22 Consolidate existing access driveways on arterials when street improvements are implemented, or redevelopment proposals are made.

ENVIRONMENTAL

- Pol. T 23 Participate in regional efforts to improve air quality by promoting alternatives to the single occupant vehicles; use of cleaner fuels; implementing transportation demand management goals and policies and maintaining or improving the operating efficiency of the transportation system.
- Pol. T 24 Mitigate noise impacts when designing future roadway improvements.
- Pol. T 25 Reduce the amount of impervious surfaces (e.g., streets, driveways) to the extent practicable.
- Pol. T 26 Minimize harmful pollutants generated by transportation-related construction, operations, and maintenance activities from entering surface and groundwater resources.

LEVEL OF SERVICE

- Pol. T 27 Maintain intersection level of service (LOS) according to the following standards:
 - a. LOS D on all arterial intersections
- Pol. T 28 Transportation improvement projects, strategies and actions needed to serve new developments shall be in place at the time new development occurs or be financially committed and scheduled for completion within six years of permit approvals.

LAND USE/TRANSPORTATION

- Pol. T 29 Consider the effect of the City's growth and transportation improvement programs on other adjacent jurisdictions through coordination with county, state, and regional agencies.

DEVELOPMENT IMPACT MITIGATION

- Pol. T 30 Maintain and apply standardized transportation impact mitigation procedures and strategies.

- Pol. T 31 Require dedication of right-of-way as a condition of development approval when the need for such right-of-way is determined in the permit approval process
- Pol. T 32 Maintain a right-of-way use permit process to minimize environmental and traffic impacts during construction.

PEDESTRIAN AND BICYCLE POLICIES

- Pol. T 33 Promote pedestrian and bicycle networks that safely access commercial areas, schools, transit routes, parks, and other destinations within Orting and connect to adjacent communities, regional destinations and routes.



Foothills Trail.

- Pol. T 34 Require new development to ensure safety, comfort and convenience of pedestrians and bicyclists.
- Pol. T 35 Designate and construct segregated internal pedestrian circulation systems in new or redeveloping commercial-retail districts. Provide connectivity using sidewalks, landscaping, covered walkways, or other treatments.
- Pol. T 36 Promote a comprehensive and interconnected network of pedestrian and bike routes within and between neighborhoods.
- Pol. T 37 Require trail routes and/or sidewalks where appropriate in PUD, plat and short plat approvals.
- Pol. T 38 Work progressively to provide and maintain sidewalks in established neighborhoods. Priority shall be given to school bus routes, schools and parks, and gaps in the existing sidewalk system.
- Pol. T 39 Provide striped, on-street bicycle facilities on arterial streets on paved shoulders or within wide curb lanes to ensure safety for bicyclists.
- Pol. T 40 Ensure that sidewalks meet requirements of the Americans with Disabilities Act.
- Pol. T 41 Identify non-motorized facility improvements on school walk routes to increase pedestrian safety.

- Pol. T 42 Require secure (racks and lighting) bicycle parking at commercial and institutional facilities along with automobile parking.
- Pol. T 43 Work to implement related non-motorized transportation recommendations in the Orting Parks, Trails, and Open Space Plan and the Shoreline Master Program.

REGIONAL AND LOCAL COORDINATION POLICIES

- Pol. T 44 Ensure coordination and consistency with state, regional and local transportation plans.
- Pol. T 45 Coordinate the Six-Year Transportation Improvement Program with adjacent jurisdictions' where City projects have regional implications.
- Pol. T 46 Participate in regional transportation planning to ensure that the City's interests are reflected appropriately.
- Pol. T 47 Engage in joint planning for regional trail improvements with Pierce County, WSDOT, and adjacent communities.

FUNDING AND IMPLEMENTATION POLICIES

FUNDING

- Pol. T 48 Maintain a street utility for the purpose of supporting preservation and ongoing maintenance and operations of its transportation systems pursuant to RCW 82.80.
- Pol. T 49 Maximize outside funding from regional, County, State, or Federal sources.
- Pol. T 50 Emphasize multimodal enhancements to the transportation system in funding transportation programs.
- Pol. T 51 Ensure the adopted impact fee rate schedule reflects the current land use and transportation forecasts and needs.
- Pol. T 52 Update the six-year Transportation Improvement Program (TIP) annually to implement the Long-Range Capital Facility Plan.

IMPLEMENTATION

- Pol. T 53 Maintain and monitor a scheduled street maintenance program including regular street sweeping to ensure that all arterial and neighborhood collector streets shoulders and/or designated bike lanes

and trails are clear of sand, glass, and debris.

SYSTEM AIR QUALITY POLICIES

- Pol. T 54 The City's transportation system shall conform to federal and state Clean Air Acts by maintaining conformity with the Metropolitan Transportation Plan of the Puget Sound Regional Council and by following the requirements of Chapter 173-420 of the Washington Administrative Code.
- Pol. T 55 Travel in modes other than single-occupant vehicles shall be encouraged. Transportation demand management strategies will be employed to discourage the use of single-occupant vehicles and to encourage non-motorized transportation.
- Pol. T 56 Consider air quality effects of future development when considering annexations, amendments to the Comprehensive Plan and development regulations, and during project review processes.
- Pol. T 57 Establish standards for the control of particulate matter on paved public roads.



Washington Ave N and Whitesell St NE/NW.

Economic Development Element

ECONOMIC DEVELOPMENT ELEMENT

PURPOSE

This Economic Development Element provides the policy basis for supporting economic development that would improve the tax base and create local jobs that are compatible with the character of the city. The Economic Development Appendix provides further information describing the city's profile and the city's competitive position, including its retail, office, and industrial market potential. The GMA was amended in 2002 to require local comprehensive plans to contain economic development elements. While this requirement will not be enforced until state funding is made available, the City of Orting has moved ahead with compliance to address the following:

An economic development element establishing local goals, policies, objectives, and provisions for economic growth and vitality and a high quality of life. The element shall include: (a) A summary of the local economy such as population, employment, payroll, sectors, businesses, sales, and other information as appropriate; (b) a summary of the strengths and weaknesses of the local economy defined as the commercial and industrial sectors and supporting factors such as land use, transportation, utilities, education, work force, housing, and natural/cultural resources; and (c) an identification of policies, programs, and projects to foster economic growth and development and to address future needs.

The following goals and policies are supported by the analyses and strategies included in the Appendix:

GOALS AND POLICIES

- Goal ED 1 Support economic growth through core business retention, expansion, and formation consistent with the Comprehensive Plan vision and the other elements.**
- Pol. ED 1.1 Prepare and maintain as assessment of Orting's business strengths, weaknesses, opportunities, and threats (SWOT).
- Pol. ED 1.2 Coordinate City investment in capital facilities projects with related business, employment, and economic development opportunities.
- Pol. ED 1.3 Promote local shopping.
- Pol. ED 1.4 Coordinate with state, county and adjoining local government bodies to promote economic development.
- Goal ED 2 Promote the creation of family-wage jobs that will serve the residents of Orting.**

Pol. ED 2.1 Promote the development of corporate and medical office space.

Pol. ED 2.2 Ensure continued zoning of commercial space for light industrial applications and office space.

Goal ED 3 Promote the installation of telecommunications and power capacity technology throughout the City in order to provide universal access to citizens, businesses, and institutions that is secure, reliable, and affordable.

Pol. ED 3.1 Participate in seeking grant funding for improvement of infrastructure to support economic development.

Pol. ED 3.2 Identify long-term infrastructure needs that support economic sustainability.

Pol. ED 3.3 Ensure providers of telecommunication and power are aware of City commercial needs and have plans to meet that need.

Goal ED 4 Create public-private partnerships that will nurture entrepreneurship, innovation, and business growth.

Pol. ED 4.1 Encourage economic sectors that:

- a. Pay higher-than-average wages;
- b. Bring new capital into the local economy;
- c. Can be sustained in the City;
- d. Maintain sound environmental practices;
- e. Diversify the economic base; and
- f. Encourage new business models.

Pol. ED 4.2 Ensure that City licensing and permitting practices and procedures are coherent, fair and expeditious. Where specialized industry requirements call for the inspection by government agencies, coordinate with those agencies to eliminate duplication of efforts.

Pol. ED 4.3 Promote the infill and redevelopment of the downtown to enhance the sense of community, encourage pedestrian/bicycle mobility, and reduce the number and length of motorized shopping trips by working with property and business owners to market Orting, and provide parking solutions.

Pol. ED 4.4 Create anchor projects with public gathering places, and support the development of mixed use retail, office and residential projects.

Goal ED 5 Encourage diverse job options and entrepreneurial opportunities for people interested in full-time and part-time employment or desiring to own their own business.

Pol. ED 5.1 Home-based businesses that are compatible with the character of adjoining properties and neighborhoods will be accommodated.

Goal ED 6 Promote business practices that protect the City's natural beauty and environmental health.

Pol. ED 6.1 Encourage the use of "green" materials and techniques in all types of construction.

Pol. ED 6.2 Encourage public sector solid waste reduction and recycling.

Goal ED 7 Encourage a variety of affordable housing choices so that people who work in Orting can live here.

Pol. ED 7.1 Continue to monitor the progress in implementing the Housing Element and evaluate new ways of providing affordable housing.

Pol. ED 7.2 Ensure permitting and utility facility charges are equitable.

Goal ED 8 Promote tourism.

Pol. ED 8.1 Promote the Foothills Trail as a source of biking, running, walking, and healthy living.

Pol. ED 8.2 Promote road related scenic tours that include travel through Orting.

Pol. ED 8.3 Promote Orting as the gateway to camping, hiking and rock climbing through the Carbon River entrance to Mt. Rainier.

Pol. ED 8.4 Coordinate with other cities and communities in east Pierce County to develop tourism opportunities and promotion.

Pol. ED 8.5 Promote Orting as a destination for fishing.

Pol. ED 8.6 Promote Orting as a gateway for hunting.

Pol. ED 8.7 Promote agricultural tourism in the Orting Valley.

Goal ED 9 Promote and support agriculture in Pierce County.

Pol. ED 9.1 Support the establishment of a food hub in City limits.

Pol. ED 9.2 Work with Pierce County government and the farming community to brand Orting as the urban service center for agriculture.

Pol. ED 9.3 Continue to provide city wide events that support farming.

Shoreline Management Element

SHORELINE MANAGEMENT ELEMENT

PURPOSE

This Shoreline Management Program Element provides the policy basis for directing development to be compatible with the natural attributes of Orting's shorelines. Shorelines help define the city's boundaries, provide recreational opportunities, offer views, and create habitats for wildlife and natural vegetation. These goals and policies apply to the shorelines of the Puyallup and Carbon Rivers and their associated wetlands.

SHORELINE ENVIRONMENT DESIGNATION

These designations establish the geographic coverage for specific policies guiding development within shoreline areas. Based on scientific analysis and the state of the shorelines, a single environment designation – Urban Conservancy has been applied to the following areas as defined under the Shoreline Management Act, shoreland areas or shorelands are:

“... those lands that extend landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are of a size large enough to be subject to the provisions of (the Shoreline Management Act); the same to be designated as to location by the Washington Department of Ecology. Any county or city may determine that portion of a one-hundred-year-flood plain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred (200) feet there from.”

As defined in this Shoreline Master Program, the Orting shorelands extend two hundred (200) feet from the ordinary high water mark (OHWM) and floodways associated with the Carbon and Puyallup Rivers, and include any wetlands associated with these two rivers.

URBAN CONSERVANCY

The following policies describe the purpose of the Urban Conservancy environment; the criteria used to designate the environment; and management policies specific to the environment.

PURPOSE

The purpose of this designation is to protect and preserve the shoreline by restricting intensive development along shorelines and provide habitats between the river and the adjacent residential and public service areas. This creates a regulatory framework leading to restoration of ecological functions of open space, the flood plain and other sensitive lands where they exist in urban and developed settings, while allowing for compatible uses.

SHORELINE ENVIRONMENT DESIGNATION POLICIES

- Pol. SM 1 The City shall designate as Urban Conservancy those shoreline areas meeting one or more of the following criteria:
- Pol. SM 2 They are suitable for water-related or water-enjoyment uses;
- Pol. SM 3 They are open space, floodplain or other sensitive areas that should not be more intensively developed; They have potential for ecological restoration; They retain important ecological functions, even though partially developed; or
-
- Pol. SM 4 They have the potential for development that is compatible with ecological restoration.
- Pol. SM 5 The shorelines of the Carbon and Puyallup Rivers within the city limits of Orting shall be designated as the Urban Conservancy shoreline environment.
- Pol. SM 6 All shorelines of the Carbon and Puyallup Rivers annexed to the City from its urban growth area shall be automatically assigned the Urban Conservancy shoreline environment designation until redesignated through a shoreline master program amendment.
- Pol. SM 7 New development should be limited to water-related or water-enjoyment uses.
- Pol. SM 8 Non water-related or non water-enjoyment development should not be permitted in the Urban Conservancy environment.
- Pol. SM 9 Residential development may be allowed when self-contained or when supporting public facilities such as sewer, water, and power are available, and where allowing such development will not lead to higher densities in the future.
- Pol. SM 10 Critical areas, such as wetlands should be protected through vegetation management, maintenance, and erosion control regulations.
- Pol. SM 11 The use regulations for the Urban Conservancy shoreline environment shall be as indicated by Chapters 5, 6, and 7 of the City of Orting's

Shoreline Master Program. Uses that preserve the natural character of the area or promote preservation of open space, floodplain or sensitive lands either directly or over the long term should be the primary allowed uses.

GOALS AND POLICIES

The following goals and policies are taken from the full SMP and reflect the City's priorities for shorelands uses, protection and restoration. More detailed policies are included in the SMP. Shorelands development regulations are adopted in the Orting Municipal Code in Title 5, Chapter 4. The numbering of the goals and policies in the following are not the same as the SMP numbering.

SHORELINE USES & ACTIVITIES

- Goal SM 1 Maintain, restore and improve the quality of our shorelines.**
- Pol. SM 1.1 Ensure that activities and facilities are located on the shorelines in such a manner as to retain or improve the quality of the environment as it is designated for that area.
- Pol. SM 1.2 Preserve shorelines in a manner that assures a balance of shoreline uses with minimal adverse effect on the quality of water, life, or environment.
- Pol. SM 1.3 Preference should be given to those uses or activities which enhance the natural amenities of the shorelines and which depend on a shorelines location or provide public access to the shoreline.
- Pol. SM 1.4 Proposed shoreline uses and activities that have the potential of being objectionable due to noise or odor or otherwise offensive or unsafe conditions should be mitigated before approval is granted.
- Pol. SM 1.5 Ensure that proposed shoreline uses are distributed, located and developed in a manner that will maintain or improve the health, safety and welfare of the public.
- Goal SM 2 Promote reasonable and appropriate use of the shorelines, while recognizing and protecting private property rights consistent with the public interest.**
- Pol. SM 2.1 Public access should be maintained and regulated.
- Pol. SM 2.2 Ensure that proposed shoreline uses do not infringe upon the rights of others or upon the rights of private ownership.

- Pol. SM 2.3 Ensure that all planning, zoning and other regulatory and nonregulatory programs governing lands adjacent to shoreline jurisdiction are consistent with one another, the goals and policies of the Shoreline Management Act and the regulations and the provisions established in the Orting Shoreline Master Program.

ECONOMIC DEVELOPMENT

Goal SM 3 Ensure healthy, orderly economic growth by allowing those economic activities within the shorelands of Orting that will be an asset to the economy of the area and protect the quality of the shoreline environment.

- Pol. SM 3.1 Promote recreational uses of the shorelines to contribute to the economic attractiveness of the community.
- Pol. SM 3.2 Proposed economic development in the shoreline should be consistent with Orting's comprehensive plan and development regulations. Conversely, upland uses on adjacent lands outside of immediate SMA jurisdiction (in accordance with RCW 90.58.340) should be consistent with the purpose and intent of this Master Program as they affect the shoreline.

CIRCULATION

Goal SM 4 Provide safe, reasonable and adequate access and circulation systems to shorelines that have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

- Pol. SM 4.1 Emphasis should be placed on pedestrian and bicycle paths, rather than roads.
- Pol. SM 4.2 Parking facilities on shorelands are discouraged.
- Pol. SM 4.3 Shoreline trails, parks and public access points along the Carbon and Puyallup Rivers shall be integrated with the City's trail system.
- Pol. SM 4.4 Public access shall be sensitive to the unique characteristics of the shoreline and the natural character and quality of the environment and adjacent wetlands.
- Pol. SM 4.5 Locate vehicular circulation facilities as far upland as possible to reduce interference with natural shoreline resources and other more appropriate shoreline uses. Where possible, avoid creating barriers

between adjacent uplands and the shorelines.

Pol. SM 4.6 Discourage shoreline uses that curtail or reduce physical and visual access to the water and shoreline area.

Goal SM 5 Increase and improve public access to shoreline areas provided that private rights, public safety, and the natural shoreline character are not adversely affected.

Pol. SM 5.1 Public right-of-way to and along the shoreline should provide pedestrian access.

RECREATION

Goal SM 6 Provide additional water-oriented recreation opportunities that are diverse, convenient and adequate to support active, passive, and contemplative uses while protecting the integrity and character of the shoreline.

Pol. SM 6.1 Recreational fishing should be supported and maintained.

Pol. SM 6.2 Water-related recreational activities including accessibility to the shorelines edge and provisions of passive and active recreational uses should be encouraged. Policy SMP 6.3 Encourage recreational uses that are compatible with adjacent uses.

Pol. SM 6.3 Encourage state agencies and other local governments to acquire additional property for public recreational use.

Pol. SM 6.4 Integrate recreational elements into federal, state and local public access and conservation plans.

CONSERVATION

Goal SM 7 The resources and amenities of all shorelines within Orting are to be protected and preserved for use and enjoyment by present and future generations.

Pol. SM 7.1 Erosion and pollution should be prevented.

Pol. SM 7.2 Shoreline development should result in no net loss of shoreline environmental resources, such as water circulation, sand and gravel movement, erosion and accretion.

Pol. SM 7.3 Reclaim and restore areas which are biologically and aesthetically

degraded while maintaining appropriate use of the shoreline.

- Pol. SM 7.4 Unique, rare and fragile natural and man-made features as well as scenic vistas and wildlife habitats should be preserved and protected from degradation or interference.
- Pol. SM 7.5 Public access to unique or fragile geological or biological areas such as wetlands should be limited.
- Pol. SM 7.6 Development of shorelines that are identified as hazardous or sensitive should be discouraged.
- Pol. SM 7.7 Spawning grounds for steelhead and salmon should be protected, improved, and, if feasible, enhanced.

HISTORIC & CULTURAL RESOURCES

Goal SM 8 Protect, preserve and/or restore important archaeological, historical, and cultural sites located in the shorelands of Orting for educational, scientific, and enjoyment of the general public.

- Pol. SM 8.1 Acquire historic/cultural sites to ensure their protection and preservation with available funding.
- Pol. SM 8.2 Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management and environmental conservation.
- Pol. SM 8.3 Ensure that access to such sites does not reduce their cultural attraction or degrade the quality of the environment.

PUBLIC AWARENESS

Goal SM 9 Increase public awareness of its responsibility to maintain the quality of the environment and the intent of the Shoreline Management Act.

- Pol. SM 9.1 The City should develop standardized markers to inform the public of shoreline access routes, parking, and allowable activities in each area.
- Pol. SM 9.2 The City should promote ways to educate citizens on tools and techniques that minimize adverse impacts on water quality.
- Pol. SM 9.3 The City should coordinate with local schools on providing programs on the adverse impacts of littering, clearing brush, and off-road vehicle traffic on shorelines and water quality.

HABITAT RESTORATION & ENHANCEMENT

- Pol. SM 10.1 Native plant communities within and bordering shorelines, wetlands, creeks, and side channels should be protected and maintained to protect the ecological functions of the shoreline environment.
- Pol. SM 10.2 Shoreline restoration projects should, wherever feasible, use soil bioengineering techniques to minimize the processes of erosion, sedimentation, and flooding.
- Pol. SM 10.3 Aquatic weed management should involve usage of native plant materials wherever possible in soil bioengineering applications and habitat restoration activities. Where removal of aquatic vegetation is necessary, it should be done only to the extent necessary to allow water-dependent activities to continue. Removal or modification of aquatic vegetation should prevent adverse impacts to native plant communities and salmonid habitat. Weed management and removal should include appropriate handling or disposal of weeds and weed seedlings.
- Pol. SM 10.4 The design and usage of native vegetation for prevention and control of shoreline erosion should be encouraged where:
- a. The length and configuration of the shoreline will accommodate the proposed design;
 - b. Such protection is a reasonable solution to the needs of the specific site; and
 - c. Shoreline restoration will accomplish the following objectives:
 - d. Recreate natural shoreline conditions and habitat;
 - e. Reverse otherwise erosional conditions; and
 - f. Enhance access to the shore, especially to public shores.
- Pol. SM 10.5 The following best management practices should be incorporated into vegetation management activities:
- a. Avoid use of herbicides, fertilizers, insecticides, and fungicides near water bodies within the City.
 - b. Limit the amount of lawn and garden watering to reduce surface runoff.
 - c. Dispose of grass clippings, leaves, or twigs properly; do not sweep these materials into the street, into a body of water, or near a storm drain.

WILDLIFE HABITAT

- Pol. SM 11.1 The City encourages aggressive efforts to protect and enhance salmonid habitat because of its importance to the aquatic ecosystem and the local economy.
- Pol. SM 11.2 Non-water dependent or non-water-related uses, activities, structures and fills should not be located in salmonid habitats.
- Pol. SM 11.3 Where new non-water-dependent uses, activities, and structures must locate in salmonid habitats, impacts on these areas shall be lessened to the greatest extent possible. Significant unavoidable impacts should be mitigated by creating in-kind replacement habitat near the project where feasible. Where in-kind replacement mitigation is not feasible, rehabilitation of degraded habitat is required.
- Pol. SM 11.4 Proposed development that have the potential to significantly affect salmonid habitat shall develop mitigation measures in consultation with the City of Orting, the State Department of Fish and Wildlife, the U.S. Army Corps of Engineers, the Washington State Department of Ecology and the Muckleshoot Indian Tribe.
- Pol. SM 11.5 For proposed development, the City prefers full spanning structures without center support piles for crossing salmonid habitat.
- Pol. SM 11.6 Proposed structures and uses that create significant impervious surfaces shall include stormwater treatment systems.
- Pol. SM 11.7 Review of proposals for new impervious surfaces shall be guided by the City's adopted stormwater regulations in conjunction with the impervious surface and stormwater treatment requirements of the most recent version of Stormwater Management Manual for the Puget Sound Basin. This review shall apply except that the Orting Shoreline Administrator or his/her designee shall have authority to waive compliance with these guidelines for proposals with total impervious surface areas less than five thousand (5,000) square feet if the impact of the proposal does not warrant runoff treatment. Proposals for new impervious surface areas greater than five thousand (5,000) square feet shall adhere to the Stormwater Management Manual for the Puget Sound Basin regulations.
- Pol. SM 11.8 The City of Orting encourages and supports Adopt-A-Stream programs and similar efforts to protect and rehabilitate salmonid spawning, rearing, feeding, refuge, and migration habitat.

WATER QUALITY

- Pol. SM 12.1 The City should prevent impacts to water quality and stormwater quantity that would result in a net loss of shoreline functions, or a significant impact to aesthetic qualities, or recreational opportunities.
- Pol. SM 12.2 The City of Orting should ensure that there is mutual consistency between shoreline management provisions and other regulations that address water quality and storm water quantity, including public health, storm water, and water discharge standards. The regulations that are most protective of ecological functions should apply.

FLOODPLAIN MANAGEMENT

- Pol. SM 13.1 The City shall coordinate with outside public agencies, including the U.S. Army Corps of Engineers, other appropriate interests to seek solutions to flooding. The City shall support projects that have a positive environmental benefit.
- Pol. SM 13.2 The City shall emphasize long-term solutions over short term solutions.

PUBLIC ACCESS

- Pol. SM 14.1 Public access to the Orting shorelines does not include the right to enter upon or cross private property, except for dedicated public easements. Public access provisions should be incorporated into all private and public developments, except for individual single family residences.
- Pol. SM 14.2 Development uses and activities on or near the shoreline should not impair or detract from the public's visual or physical access to the water.
- Pol. SM 14.3 Public access to the shoreline should be sensitive to the unique characteristics of the shoreline and should preserve the natural character and quality of the environment and adjacent critical areas.
- Pol. SM 14.4 Where appropriate, public access should be provided as close as possible to the water's edge without adversely affecting a sensitive environment.
- Pol. SM 14.5 Shoreline areas that hold unique value for public enjoyment should be purchased for public use, and public access areas should be of sufficient size to allow appropriate access, passage and enjoyment of the water.

- Pol. SM 14.6 Public access should be designed to provide for public safety and to minimize potential conflicts with private property and individual privacy. This may include providing a physical separation to reinforce the distinction between public and private space, achieved by providing adequate space, through screening with landscape planting or fences, or other means.
- Pol. SM 14.7 Public views of the shoreline should be enhanced and preserved. Enhancement of views should not be construed to mean excess removal of vegetation.
- Pol. SM 14.8 Public access facilities should be constructed of environmentally friendly materials and support healthy natural processes, whenever financially feasible and possible.
- Pol. SM 14.9 Public access facilities should be maintained to provide a clean and safe experience and protect the environment.

ECONOMIC DEVELOPMENT

The Orting Comprehensive Plan includes a citywide Economic Development Element that calls for protecting Orting's quality of life; its role in economic development; and strategies for encouraging economic development appropriate for the City and the region.

Certain shoreline uses are more dependent on, or have a more direct relationship with the shoreline than others. The Shoreline Management Act requires that shoreline master programs give preference to water-dependent uses, water-related uses, water-enjoyment uses (i.e., uses that provide an opportunity for substantial numbers of people to enjoy the shoreline), single-family residential uses, and shoreline recreation. Policies in the Shoreline Master Program give preference to such uses.

MANAGING SHORELINE DEVELOPMENT AND ACTIVITIES

Orting's shorelines are mostly single-family residential and public use lands. To protect valuable shoreline resources, the Shoreline Master Program limits the extent and character of a number of land uses and activities. Policies are designed to protect water quality, shoreline vegetation and buffers, fish habitat, open space, wildlife habitat, and shoreline hydrology. Land use policies are also designed to minimize impacts to visual access, aesthetic qualities, scenic view corridors, and physical public access. Shoreline policies provide for a range of reasonable uses within the shoreline, while establishing limits to protect these shorelines and adjacent uses.

The Orting Comprehensive Plan contains a Land Use Element with policies applicable to all areas of the City, including shorelines. In addition to Shoreline Master Program policies and regulations, the character, density and quality of shoreline development is currently addressed in sections of the Orting Municipal

Code. These regulations manage landscaping, tree protection, and clearing and grading standards for the City. Some of the Orting Shoreline Master Program policies related to landfills, dredging, shoreline recreation, shoreline protective structures, transportation and circulation, and utilities are summarized below.

LANDFILLS, EXCAVATION AND DREDGING

- Pol. SM 15.1 Fill (in a river or wetland) should be prohibited and only allowed when necessary to support the design and construction of a shoreline restoration or environmental enhancement project that is beneficial to the Puyallup and/or Carbon Rivers.
- Pol. SM 15.2 Dredging waterward of the ordinary high water mark for the primary purpose of obtaining fill material should not be allowed, except when the material is necessary for the restoration of ecological functions.
- Pol. SM 15.3 Dredging and dredge material disposal should be located and conducted in a manner that minimizes damage to existing ecological values and natural resources of the area to be dredged and of the disposal site.
- Pol. SM 15.4 Dredging operations should be planned and conducted to minimize adverse impacts to other shoreline uses, properties and values.
- Pol. SM 15.5 Dredge material disposal in water bodies should be discouraged, except for habitat improvement or where depositing dredge material on land would be more detrimental to shoreline resources than deposition in water areas.
- Pol. SM 15.6 Dredging and dredge material disposal operations should be periodically reviewed for consistency with the Shoreline Master Program.
- Pol. SM 15.7 New development siting and design should avoid the need for new and maintenance dredging.

SHORELINE RECREATION

- Pol. SM 16.1 The coordination of local, state, and federal recreation planning should be encouraged so as to mutually satisfy recreational needs. Shoreline recreational developments should be consistent with all adopted park, recreation, and open space plans.
- Pol. SM 16.2 The location and design of shoreline recreational developments should relate to local population characteristics, density and special activity demands. Acquisition priorities should consider these needs, demands, and special opportunities as well as public transit access and access for the physically impaired, where planned or available.

- Pol. SM 16.3 Recreational developments should be located, designed and operated to be compatible with, and minimize adverse impacts on, environmental quality and valuable natural features as well as on adjacent and surrounding land and water uses. Favorable consideration should be given to proposals which compliment their environment and surrounding land and water uses, and which leave natural areas undisturbed and protected.
- Pol. SM 16.4 Shoreline areas with a potential for providing recreation or public access opportunities should be identified for this use and acquired by lease of purchase and incorporated into the City's parks, trails and open space plan.
- Pol. SM 16.5 The linkage of shoreline parks, recreation areas and public access points with nonmotorized linear systems, such as hiking paths, bicycle paths and easements should be encouraged through cooperative programs and policies. Planning of shoreline parks, public access points and linear systems should be coordinated with the City's nonmotorized transportation plan.
-
- Pol. SM 16.6 Recreational developments should be located and designed to preserve, enhance, or create scenic views and vistas.
- Pol. SM 16.7 The use of shoreline street ends and publicly owned lands for public access and development of recreational opportunities should be encouraged.
- Pol. SM 16.8 The use of off-road vehicles and other motorized recreational vehicles should be prohibited in all shoreline areas.
- Pol. SM 16.9 All recreational developments should make adequate provisions for:
- a. Vehicular and pedestrian access, both on-site and off-site;
 - b. Proper water supply and solid and sewage waste disposal methods;
 - c. Security and fire protection;
 - d. The prevention of overflow and trespass onto adjacent properties, through, but not limited to, landscaping, fencing and posting of property; and
 - e. Design of such development to avoid conflicts with adjacent private property or natural habitat areas.

SHORELINE PROTECTIVE STRUCTURES

- Pol. SM 17.1 Levees should be located, designed, constructed and maintained so that they will not cause significant damage to adjacent properties or valuable resources, and so that the physical integrity of the natural shore process is maintained.
- Pol. SM 17.2 Levees should be permitted only when the purpose or primary use being protected is consistent with this program and when they can be developed in a manner compatible with the multiple use of the floodway and associated resources, such as wildlife habitat, water quality, aesthetics, recreational resources and public access.
- Pol. SM 17.3 Subdivision of land shall be regulated to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur.
- Pol. SM 17.4 Shoreline stabilization structures should be limited to the minimum size necessary.
- Pol. SM 17.5 Public access should be required as part of publicly financed shoreline erosion control measures.
- Pol. SM 17.6 Bulkheads are prohibited in the Orting shoreline jurisdiction.
- Pol. SM 17.7 Dikes and levees and revetments shall only be authorized by conditional use permit unless they are solely for the purpose of shorelands restoration, and shall be consistent with all flood control management plans and regulations adopted by the City of Orting
- Pol. SM 17.8 New levees shall be limited in size to the minimum height required to protect adjacent lands consistent with FEMA certification.
- Pol. SM 17.9 Dikes, levees and revetments shall be placed landward of the floodway, OHWM, or channel migration zone (whichever is further landward) except as current deflectors necessary for protection of bridges and roads, provided that flood hazard reduction projects may be authorized if it is determined that no other alternative to reduce flood hazards to existing development is feasible.
- Pol. SM 17.10 If an armored revetment is proposed, the siting and design of revetments shall be performed using appropriate engineering principles, including the usage of guidelines from both the Natural Resources Conservation Service and the U.S. Army Corps of Engineers and the following design criteria shall be met:
- a. The size and quantity of the material shall be limited to only that necessary to withstand the estimated energy intensity of the hydraulic system;

- b. Filter cloth must be used to aid drainage and help prevent settling;
- c. The toe reinforcement or protection must be adequate to prevent a collapse of the system from river scouring or wave action; and
- d. Fish habitat components, such as large boulders, logs, and stumps must be considered in the design subject to Hydraulic Project Approval by the Washington Department of Fish and Wildlife, NOAA Fisheries, U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers.

Pol. SM 17.11 All new projects shall include and provide improved access to public shorelines whenever possible.

TRANSPORTATION AND CIRCULATION

Pol. SM 18.1 New roads, railroads and bridges in the Urban Conservancy environment should be minimized, and allowed only when related to and necessary for the support of permitted shoreline activities. New roads and bridges in the Urban Conservancy environment are prohibited, except when related to and necessary for the support of permitted shoreline activities. Major new highways should be located out of shoreline jurisdiction.

Pol. SM 18.2 New roads should be planned to fit the topographical characteristics of the shoreline such that minimum alteration of natural conditions results. New transportation facilities should be located and designed to minimize the need for shoreline protection measures and minimize the need to modify natural drainage systems. The number of waterway crossings should be limited to the minimum number possible.

Pol. SM 18.3 Trail and bicycle paths should be encouraged along the Puyallup and Carbon River in places where they are compatible with the natural character resources and ecology of the shoreline, such as in areas where there is a potential for a nonmotorized transportation linkage to existing public access area.

Pol. SM 18.4 Joint use of transportation corridors within shoreline jurisdiction for roads, utilities and motorized forms of transportation should be encouraged.

Pol. SM 18.5 Abandoned or unused road or railroad rights-of-way which offer opportunities for public access to the water should be acquired and/or retained for such use.

UTILITIES

- Pol. SM 19.1 Utilities should utilize existing transportation and utility sites, rights-of-way and corridors whenever possible, rather than creating new corridors. Joint use of rights-of-way and corridors should be encouraged.
- Pol. SM 19.2 Utilities should be prohibited in wetlands, critical wildlife areas or other unique and fragile areas unless no feasible alternatives exist.
- Pol. SM 19.3 New utility facilities should be located so as not to require shoreline protection works.
- Pol. SM 19.4 Utility facilities and corridors should be located so as to protect scenic views. When possible, new utilities should be placed underground or alongside or under bridges.
- Pol. SM 19.5 Utility facilities and rights-of-way should be designed to preserve the natural landscape and to minimize conflicts with present and planned land uses.
- Pol. SM 19.6 New solid waste disposal activities and facilities should be prohibited in shoreline areas.

CAPITAL FACILITIES ELEMENT

PURPOSE

The Growth Management Act requires cities to prepare a capital facilities element consisting of:

1. An inventory of current capital facilities owned by public entities, showing the locations and capacities of the public facilities;
2. A forecast of the future needs for such capital facilities;
3. The proposed locations and capacities of expanded or new capital facilities;
4. At least a six-year plan that will finance capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes, and;
5. A requirement to reassess the land use element if probably probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent.

ORGANIZATION

The Capital Facilities Element establishes the level of service standards the City is obligated to provide, along with strategies for maintaining those standards. The Element is based on the goals and policies of the other elements, and incorporates the facilities needs and standards identified in the Transportation Element. The Capital Facilities Appendix provides detailed information on the inventory of facilities and projected future needs that the Plan must anticipate over the next 20 years.

MAJOR ISSUES

With recent improvements to the wastewater treatment plant and water system, major utility issues now involve continued resolution of the sewer collection system inflow and infiltration problems as financial resources permit. Transportation issues are described in the Transportation Element. Other capital facilities issues revolve around the need maintain effective concurrency management to ensure that utility capacity is available to match the demands of growth and development.

GOALS AND POLICIES

- Goal CF 1 Assure that capital improvements necessary to carry out the comprehensive plan are provided when they are needed.**

Capital Facilities Element

CAPITAL FACILITIES ELEMENT

PURPOSE

The Growth Management Act requires cities to prepare a capital facilities element consisting of:

1. An inventory of current capital facilities owned by public entities, showing the locations and capacities of the public facilities;
2. A forecast of the future needs for such capital facilities;
3. The proposed locations and capacities of expanded or new capital facilities;
4. At least a six-year plan that will finance capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes, and;
5. A requirement to reassess the land use element if probably probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent.

ORGANIZATION

The Capital Facilities Element establishes the level of service standards the City is obligated to provide, along with strategies for maintaining those standards. The Element is based on the goals and policies of the other elements, and incorporates the facilities needs and standards identified in the Transportation Element. The Capital Facilities Appendix provides detailed information on the inventory of facilities and projected future needs that the Plan must anticipate over the next 20 years. The Appendix incorporates capital facilities plans for the Orting School District and for the Pierce County Library.

MAJOR ISSUES

With recent improvements to the wastewater treatment plant and water system, major utility issues now involve continued resolution of the sewer collection system inflow and infiltration problems as financial resources permit. Transportation issues are described in the Transportation Element. Other capital facilities issues revolve around the need maintain effective concurrency management to ensure that utility capacity is available to match the demands of growth and development.

GOALS AND POLICIES

- Goal CF 1** **Assure that capital improvements necessary to carry out the comprehensive plan are provided when they are needed.**

Pol. CF 1.1 The City shall coordinate its land use and public works planning activities with an ongoing program of long-range financial planning, in order to identify fiscal resources necessary to implement the capital facilities plan.

Pol. CF 1.2 Management of capital facilities should emphasize the following concepts:

- a. Providing preventive maintenance and cost-effective replacement of aging elements
- b. Planning for the orderly extension and upgrading of capital systems while recognizing that system extensions associated with new development should be the responsibility of those desiring service;
- c. Inspecting systems to ensure conformance with design standards; and,
- d. Reducing the potential for drastic rate increases through effective fiscal management and rate structures that reflect the LOS and CIP's.



City Hall; 110 Train St SE.

Pol. CF 1.3 Determine which services are most cost-effectively delivered by the city and which services should be contracted out to be delivered by other jurisdictions. Where appropriate, joint facilities with adjacent service purveyors should be used to provide the most efficient and cost-effective service to customers.

Goal CF 2 Ensure that the continued development and implementation of the Capital Improvement Program (CIP) reflects the policy priorities of the City Council.

Pol. CF 2.1 High priority of funding shall be accorded projects which are consistent with the adopted goals and policies of the City Council.

Pol. CF 2.2 Projects shall be funded only when incorporated into the City budget, as adopted by the City Council, unless emergency warrants funding.

Pol. CF 2.3 Capital projects that are not included in the six-year Capital Facilities Plan and which are potentially inconsistent with the comprehensive plan shall be evaluated by means of the comprehensive planning process prior to their inclusion into the City's annual budget.

Pol. CF 2.4 The six-year Capital Facilities Plan shall be updated annually prior to the City budget process.

Pol. CF 2.5 All City departments shall review changes to the CIP and shall participate in the annual review.

Goal CF 3 Manage growth and the related development of city facilities and services to direct and control land use patterns and intensities.

Pol. CF 3.1 Development shall be allowed only when and where all public facilities are adequate and only when and where such development can be adequately served by essential public services without reducing levels of service elsewhere.

Pol. CF 3.2 The City shall continue upgrading the sanitary sewer system to ensure adequate capacity for future growth and development.

Pol. CF 3.3 The following level of service guidelines shall be used to evaluate whether existing public facilities are adequate to accommodate the demands of new development:

Water (Source Capacity and Reliability) LOS: Maintain the existing source capacity of approximately 1.73 MGD for adequate household use and fire protection. The minimum fire flow requirements are based on Pierce County's Ordinance No. 17C.60:

<u>Development Classification</u>	<u>Minimum Fire Flow Requirement</u>
Residential	750 gpm for 45 minutes
Commercial & Multi-Family	1500 gpm for 60 minutes
Industrial	2,000 gpm for 120 minutes

Water Quality LOS: The water system quality shall be in compliance with Washington Administrative Code requirements for water quality.

Sewer LOS: Maximum month average daily flows for the City's wastewater gravity collection system and wastewater treatment facility shall not exceed the Washington Department of Ecology's MGD limit.

Stormwater LOS: Stormwater management shall comply with the Washington Department of Ecology's requirements.

Fire LOS: Design – Coordinate land use planning, development review and fire protection facility planning to ensure that: a) adequate fire protection and emergency medical service can be provided; and b) project designs minimize the potential for fire hazard.

Fire LOS: Rating – Orting Valley Fire and Rescue (Pierce County Fire District 18) shall maintain and make efforts to improve its current insurance rating of "7".

Police LOS: Design – Coordinate land use planning, development review, and police protection facility planning to ensure that: a) adequate police protection can be provided; and b) project designs discourage criminal activity.

Police LOS: Response Time – The Orting Police Department shall have as a goal to maintain a 3 to 4 minute response time for emergency calls.

Parks, Trails and Open Space LOS: The following level of service standards shall apply to land and facilities:

- Total Park Land – 8 acres per 1,000 population
Consisting of:
 - Mini-Parks – 1 acre per 1,000 population
 - Neighborhood Parks – 2 acres per 1,000 population
 - Community Parks – 5 acres per 1,000 population
- Fields/Courts – 1 per 1,000 population
- Trails – 1 mile per 1,000 population
- Natural Resource Areas – 14 acres per 1,000 population

Transportation LOS:

Pol. CF 3.4 Transportation and land use planning should be coordinated so that adequate transportation facilities can be built concurrent with growth. The following level of service standards should be used to evaluate whether existing transportation facilities are adequate to accommodate the demands of new development:

The transportation system shall function at a service level of at least C/D.

Pol. CF 3.5 A development shall not be approved if it causes the level of service on a capital facility to decline below the standards set forth in CF Policy 3.3 and 3.4, unless capital improvements or a strategy to accommodate the impacts are made concurrent with the development for the purposes of this policy. "Concurrent with the development" shall mean that improvements or strategy are in place at the time of the development or that a financial commitment is in place to complete the improvements or strategies within six years.

Pol. CF 3.6 If adequate facilities are currently unavailable and public funds are not committed to provide such facilities, developers must provide such facilities at their own expense, or pay impact fees in order to develop. If the probable funding falls short of meeting the capital facility needs

of the anticipated future land uses and population, the type and extent of land uses planned for the City must be reassessed.

- Pol. CF 3.7 Require that development proposals are reviewed by the various providers of services, such as school districts, sewer, water, and fire departments, for available capacity to accommodate development and needed system improvements.
- Pol. CF 3.8 New or expanded capital facilities should be compatible with surrounding land uses; such facilities should have a minimal impact on the natural or built environment.
- Pol. CF 3.9 Maintain the water quality of the Carbon and Puyallup Rivers by complying with Washington Department of Ecology guidelines.
- Goal CF 4 Ensure that financing for the city's needed capital facilities is as economical, efficient, and equitable as possible.**
- Pol. CF 4.1 The burden for financing capital facility improvements should be borne by the primary beneficiaries of the facility.
- Pol. CF 4.2 General Fund revenues should be used only to fund projects that provide a benefit to the entire community or to accommodate unmet facility needs beyond those created by new growth.
- Pol. CF 4.3 Long term borrowing for capital facilities should be considered as an appropriate method of financing large facilities that benefit more than one generation of users.
- Pol. CF 4.4 Where possible, special assessment, revenue and other self supporting bonds and grants will be used instead of tax supported general obligation bonds.
- Goal CF 5 Provide the most cost-effective and efficient water, stormwater and sewer service to residents within Orting and its service area.**
- Pol. CF 5.1 Expansion of sewer service shall be coordinated among Orting, the Washington State Department of Ecology, and Pierce County, and shall give priority to infill within the city limits and existing urbanized unincorporated areas within the urban growth area.
- Pol. CF 5.2 Phasing of sewer expansion shall follow the city's urban growth area established in the comprehensive plan, unless sewer service will remedy groundwater contamination and other health problems or the city arranges to provide services to other urban growth areas established by the Pierce County Comprehensive Plan.

- Pol. CF 5.3 New industrial development shall not be allowed to utilize on-site sewage systems. New industrial development shall be served by the City's treatment facilities.
- Pol. CF 5.4 Require sewage gravity collection system connections for all new development including single-family subdivisions unless otherwise approved by the Council and consistent with the Pierce Countywide policies.
- Pol. CF 5.5 Identify, prioritize and gradually replace existing sewer lines in poor condition to reduce inflow and infiltration to increase the capacity of the sewage treatment system.
- Pol. CF 5.6 Provide an adequate water supply and distribution system for all domestic use, fire flow and fire protection at all times. Fire flow capabilities can be increased and Fire Insurance Rating Classifications improved by upgrading water pipeline sizes, creating additional pipe networks, and increasing water storage capacities. Require transfer of private water rights to the city as part of all development permit approvals.



Mt. Rainer from Whitehawk Park.

- Goal CF 6 Develop a system of parks and recreation facilities that is attractive, safe, and available to all segments of the population.**
- Pol. CF 6.1 Mitigate impacts on parks, trails, and the recreation system from new growth based on impact fees, land dedication, and/or facility donations based on the level of service standards.
- Pol. CF 6.2 Cooperate and coordinate with the school district, other public agencies and private groups through the use of interlocal agreements and contracts to meet the recreation needs of the City.

- Pol. CF 6.3 Support Pierce County development of the Foothills Trail, and related links and parks, for bicycles, pedestrians and equestrians, running through Pierce County to Mount Rainier National Park.
- Pol. CF 6.4 Improve the network of parks, open space and trails throughout the city for pedestrians, bicycles and equestrians, with priority on:
- a. The dedication and development of lands which would link with the Foothills Trail, the downtown parks, the Puyallup and Carbon River waterfront corridors and a linkage across the Carbon River to the Cascadia trail system,
 - b. Maintaining and improving the accessibility, usability, and safety of Orting's sidewalks, parks and trails, and
 - c. Sustaining community-wide efforts to improve public access to the Carbon and Puyallup Rivers at those points along the banks which best fulfill the criteria for education, accessibility and restoration as outlined in the 2009 Shoreline Master Program.

Goal CF 7 Cooperate in the siting of essential public facilities in Orting.

- Pol. CF 7.1 The site selection process for essential public facilities on the list maintained by the Office of Finance and Management shall include the following components:
- a. The state must provide a justifiable need for the public facility and its location in Orting based upon forecasted needs and a logical service area;
 - b. The state must establish a public process by which residents of Orting have an opportunity to meaningfully participate in the site selection process.
- Pol. CF 7.2 Public facilities shall not be located in designated resource lands, critical areas, or other areas where the siting of such facilities would be incompatible.
- Pol. CF 7.3 Multiple use of corridors for major utilities, trails, and transportation rights-of-way is encouraged.
- Pol. CF 7.4 Siting of public facilities shall be based upon criteria including, but not limited to:
- a. Specific facility requirements (acreage, transportation access, etc.);
 - b. Land use compatibility;

- c. Potential environmental impacts;
- d. Potential traffic impacts;
- e. Fair distribution of such public facilities throughout the County;
- f. Consistency with state law and regulations.

Pol. CF 7.5 City plans and development regulations should identify and allow for the siting of essential public facilities. Design standards shall be required to ensure compatibility with adjacent land uses and mitigate any adverse impacts. The City's siting process may include requirements that facilities provide amenities or incentives to the neighborhood as a condition of approval. At least one public hearing shall be required to ensure adequate public participation.

Pol. CF 7.6 Cooperatively work with surrounding municipalities including Pierce County during the siting and development of facilities of regional significance. The City shall seek an agreement with neighboring jurisdictions, state or county agencies to mitigate any disproportionate financial and other burdens which may fall on the City due to the siting.

Pol. CF 7.7 Essential public facilities that are county-wide or state-wide in nature (e.g., solid waste and/or hazardous waste facilities), must meet existing state law and regulations requiring specific siting and permitting requirements.

Goal CF 8 Manage stormwater runoff in such a manner as to:

- 1. Protect property from flooding and erosion;
- 2. Protect streams and shorelines from erosion and sedimentation to avoid the degradation of environmental quality and natural system aesthetics;
- 3. Protect the quality of groundwater and surface water; and
- 4. Provide recharge of groundwater where appropriate.

Pol. CF 8.1 Manage the stormwater utility to:

- a. Identify existing and potential problems at the drainage basin level;
- b. Propose solutions to those problems;
- c. Recognize the importance of natural systems and receiving

waters and their preservation and protection;

- d. Set design and development guidelines; and
- e. Provide a strategy for implementation and funding.

- Pol. CF 8.2 Encourage either regional or low impact development approaches to managing stormwater to provide improved performance, maintenance and cost efficiency. Wherever possible, regional facilities should be considered as a multi-functional community resource which provides other public benefits such as recreational, habitat, cultural, educational, open space and aesthetic opportunities.
- Pol. CF 8.3 The City should require new development to provide onsite storm drainage and all off-site improvements necessary to avoid adverse downstream impacts.
- Pol. CF 8.4 Where appropriate and feasible, infiltration of stormwater is preferred over surface discharge to downstream system. The return of precipitation to the soil at natural rates near where it falls should be encouraged through the use of detention ponds, grassy swales and infiltration.
- Pol. CF 8.5 Development should be designed to minimize disruption and/or degradation of natural drainage systems, both during and after construction. Development design which minimizes impermeable surface coverage by limiting site coverage and maximizing the exposure of natural surfaces should be encouraged.
- Pol. CF 8.6 Industries and businesses should use best management practices to prevent erosion and sedimentation from occurring, and to prevent pollutants from entering ground or surface waters.
- Pol. CF 8.7 Sites that have been cleared, graded or filled in violation of current or prior standards should be fully restored before construction permits are issued.

Utilities Element

UTILITIES ELEMENT

GOALS AND POLICIES

- Goal U 1** **Assure that the energy and communication facilities and services to support current and future development are available as needed.**
- Pol. U 1.1 The City does not provide natural gas, electrical or communication services. These facilities and services are currently provided by private companies. To facilitate the coordination of these services, the City should discuss and exchange population forecasts, development plans and technical data with the agencies identified in this plan.
- Pol. U 1.2 New development shall be allowed only when and where all public utilities are adequate, and only when and where such development can be adequately served without reducing level of service elsewhere.
- Pol. U 1.3 Coordinate City actions with the appropriate activities of the Bonneville Power Administration, Puget Sound Energy, CenturyLink, AT&T, MCI, Sprint, and Comcast. These coordination efforts should ensure that these providers of services and utilities rely upon the Land Use Element of this Plan to plan future facilities. .
- Pol. U 1.4 The City of Orting adopts the following level of service guidelines:
- a. Collection service for solid waste shall be available and required for all properties within the City.
 - b. Coordinate land use and facility planning with Puget Sound Energy to allow for siting and construction of electrical transmission and distribution facilities that provide sufficient amounts of power with minimal periods of service interruption.
 - c. Promote the extension of natural gas distribution lines within the City. Coordinate land use and facility planning to allow for construction and replacement of natural gas distribution conduits along roadways which are undergoing reconstruction.
 - d. For telecommunications, including telephone, internet, cellular telephone and cable television, advocate the development and maintenance of facilities necessary to provide services as needed to accommodate population growth and advancements in technology. For cellular telephone service, work with providers to enhance the range of the regional service area.

Goal U 2 Seek to minimize impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties and the natural environment.

Pol. U 2.1 Electric power substations and recycling drop-off boxes should be sited, designed, and buffered (through extensive screening and/or landscaping) to fit in harmoniously with their surroundings. When sited within or adjacent to residential areas, special attention should be given to minimizing noise, light and glare impacts. Visual and land use impacts resulting from electrical system upgrades shall also be mitigated.

Pol. U 2.2 The City shall encourage or require implementation of resource conservation practices and best management practices according to the U.S.D.A. Soil Conservation Service during the construction, operation, and maintenance of utility structures and improvements.

Pol. U 2.3 The City shall establish a process for identifying and siting essential public facilities, such as solid waste or recycling handling facilities and cooperatively work with surrounding municipalities and Pierce County during the siting and development of facilities of regional significance.

Goal U 3 Maintain an adequate and effective solid waste and recycling program which maintains public health, environmental and land use quality.

Pol. U 3.1 Continue work with Pierce County and solid waste haulers to reduce the solid waste stream and maintain or surpass the 50-percent recycling goal.

Pol. U 3.2 Continue existing recycling activities and work with Pierce County and solid waste haulers to expand the local recycling program, including collection of materials not currently collected.

Pol. U 3.3 Support Pierce County in maintaining an information management program which will aid in tracking and evaluating the waste stream and recycling program impacts in the City.

Pol. U 3.4 Encourage private and public sector involvement in recycling programs and in the use of recycled products.

Land Use Appendix

LAND USE APPENDIX

POPULATION TRENDS

Orting is growing. Last year, the City issued 100 single family residential building permits. So far as of the end of June, another 69 have been issued. In 2015 and 2016, preliminary subdivisions creating 70+ lots were approved. Final plats creating 170+ lots were approved. This year, final plats for 80+ lots are scheduled for approval. We don't know how many new homes will be built on any of these, but with the current market, we expect to see quite a few new homes.

The April 2017 population estimate from the state Office of Financial Management shows 7,835 residents. The April 2016 population estimate was 7,535. The following is an updated excerpt from the Comprehensive Plan Land Use Appendix:

POPULATION TRENDS

Between 1999 and 2017 the population of the City of Orting more than doubled in size, increasing from 3,742 to 7,835 people (See **Table LU-1**).

Table LU-1
Population 1999-2017 (Partial)

Year	Population	Annual % change	5-year % change	10-year % change
1999	3,742	-	-	
2000	3,931	5.1%	-	
2001	4,186	6.5%	-	
2002	4,060	-3.8%	-	
2003	4,295	5.8%	-	
2004	4,440	3.4%	18.7%	-
2005	4,820	8.6%	-	-
2006	5,560	15.3%	-	-
2007	5,940	6.8%	-	-
2008	6,075	2.3%	-	-
2009	6,135	1.0%	38.2%	-
2010	6,746	10%	-	-
2011	6,770	0.4%	-	-
2012	6,790	0.3%	-	-

Year	Population	Annual % change	5-year % change	10-year % change
2013	6,930	2.1%	-	-
2014	7,065	1.9%	15.2%	59.1%
2015	7,290	3.2%		
2016	7,535	3.4%		
2017 (half)	7835	4.0%		
Average Annual Growth Rate		4.1%	-	-

Source: Washington State Office of Financial Management

The national economic recession in the mid-2000s had a significant effect on Orting’s growth as shown by the table. Expectations for the next 10 years indicate that this trend has been reversed and the population will increase as new housing is built and occupied.

POPULATION & EMPLOYMENT TARGETS

Under the Growth Management Act (GMA), Pierce County and the City of Orting are required to work collaboratively to determine the projected 20-year population and employment growth targets for the City.

Pierce County Ordinance No. 2011-36s established the 2030 population and employment targets for each jurisdiction. The Pierce County Comprehensive Plan states:

“The basis for the County’s urban population target is a countywide projection range generated by the Washington State Office of Financial Management (OFM). Pierce County and its cities and towns were challenged to identify a 20-year countywide population forecast within the OFM range and then disaggregate the total to individual Urban Growth Areas and the rural area of the County.”

The Puget Sound Regional Council provides a wide range of services to jurisdictions within the 5 counties. This includes population forecasts. The PSRC forecast for Orting is as follows:

	2025	2030	2035	2040
Population	7,965	8,134	8,432	8,843
Households	2,953	3,098	3,254	3,443

While Orting uses the County target baseline and the PSRC forecast, the goals and policies of the Orting Comprehensive Plan are intended to guide growth out to 2035 based on the analysis of current and projected growth described throughout the technical appendices.

Orting has a County 2030 population target of 8,000 and an employment target of 2,370. Subdivisions at various stages of permit approval and construction currently within the City of Orting are expected to add a short-term significant increase in population, resulting in as much as 80-percent of the City’s 20-year population growth target.

The housing breakdown at that time was 2,588 units including single family, multifamily, and manufactured housing. The 2017 housing breakdown shows 2,684 units for a net gain of 96 units. The average household size now is about 3 persons.

The “official” population “target” for 2040 in the regional plan is 8,843 in 3,443 households.

EXISTING LAND USE INVENTORY

Table LU-2 shows the overall land area per current zoning within the City.

Table LU-2
Current Land Areas of Orting Zones*

Zone	Area (Acres)
Residential Conservation	196
Residential Urban	695
Residential Multifamily	36
Mixed Use Town Center	49
Mixed Use Town Center North	68
Light Manufacturing	0.8
Public Facilities	313
Open Space & Recreation	141
Total	1,503

* Does not include public rights-of-way

ENVIRONMENTAL CONSTRAINTS

Environmental constraints to development in the City of Orting are associated with the Puyallup and Carbon rivers and include wetland areas and flood hazard areas. **Figure LU-2** shows the approximate location and extent of these areas. FEMA released new Flood Insurance Rate Maps (FIRMs) in March 2017. Figure LU-2 shows the 2017 special flood hazard areas as outlined by FEMA. The zones on Figure LU-2 are defined as follows:

- Floodway: The floodway is the channel of a stream plus any adjacent areas that must be kept free of encroachment.

Special flood hazard areas (SFHA) are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year; this is also referred to as the base flood or the 100-year flood. Two type of SFHAs are mapped in and near Orting:

- Zone A: special flood hazard area where no base elevation is provided
- Zone AE: special flood hazard area where base elevations are provided. (AE Zone delineations are now used on new FIRMs instead of A# Zones).

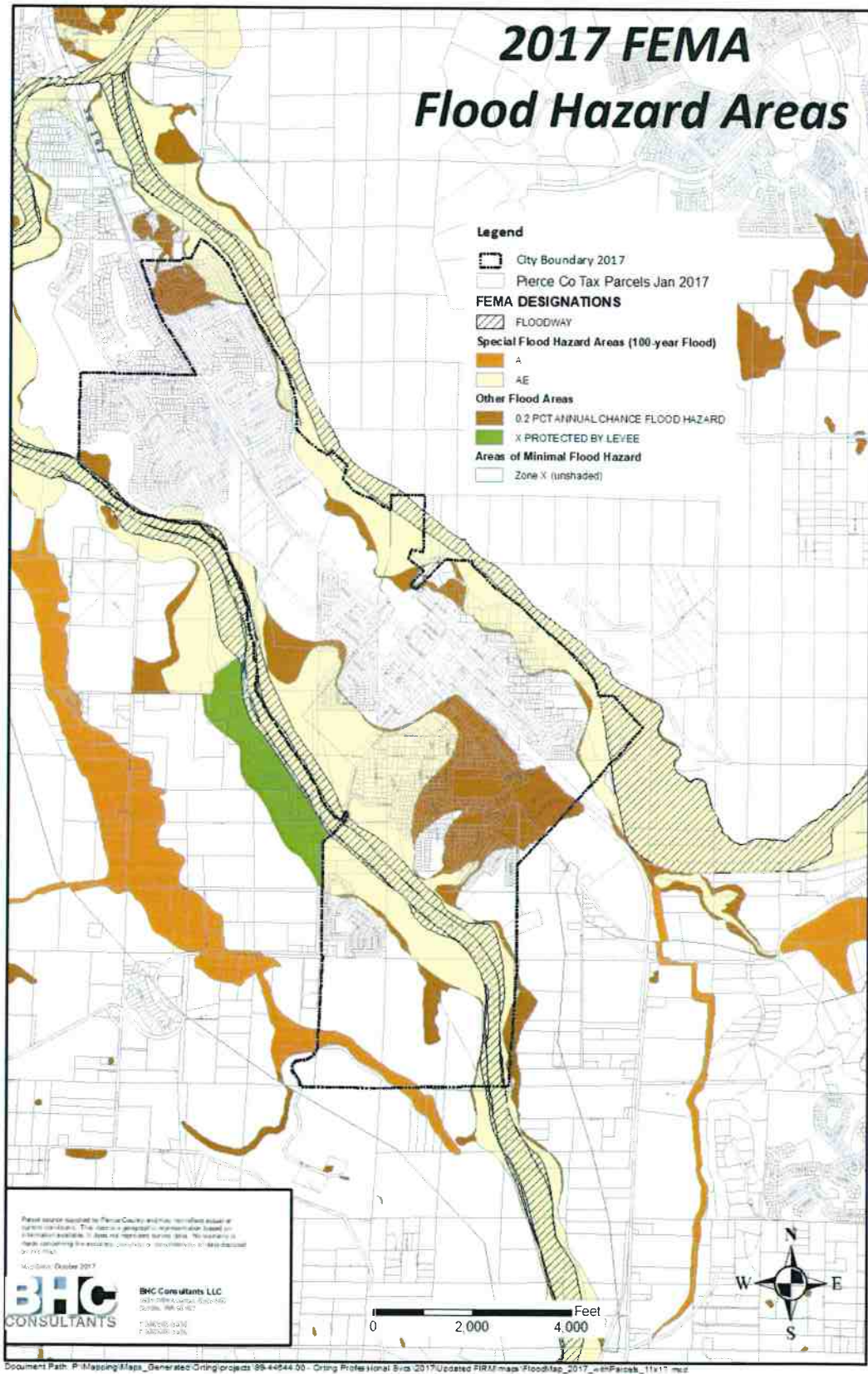
Other Flood Areas are mapped as follows

- 0.2 Percent Annual Chance Flood Hazard (or the 500-year flood)
- Zone X Protected by Levee: areas protected by levees from the 100-year flood

Areas beyond the 500-year floodplain are also depicted on the map as:

- Zone X (unshaded): Areas determined to be outside the 0.2 percent annual chance (or the 500-year) floodplain.

Figure LU-2



Land Capacity Analysis

The following existing developable land use inventory data provides the basis to establish whether the City of Orting currently has enough developable land to satisfy its future (20-year) land use requirements or whether an Urban Growth Area (UGA) expansion will be needed to ensure capacity to accommodate the estimated growth (see **Table LU-2** and **Figure LU-1**). The inventory includes the current acreage of all existing land use and vacant lands within the City, excluding undevelopable areas, such as public right-of-way.

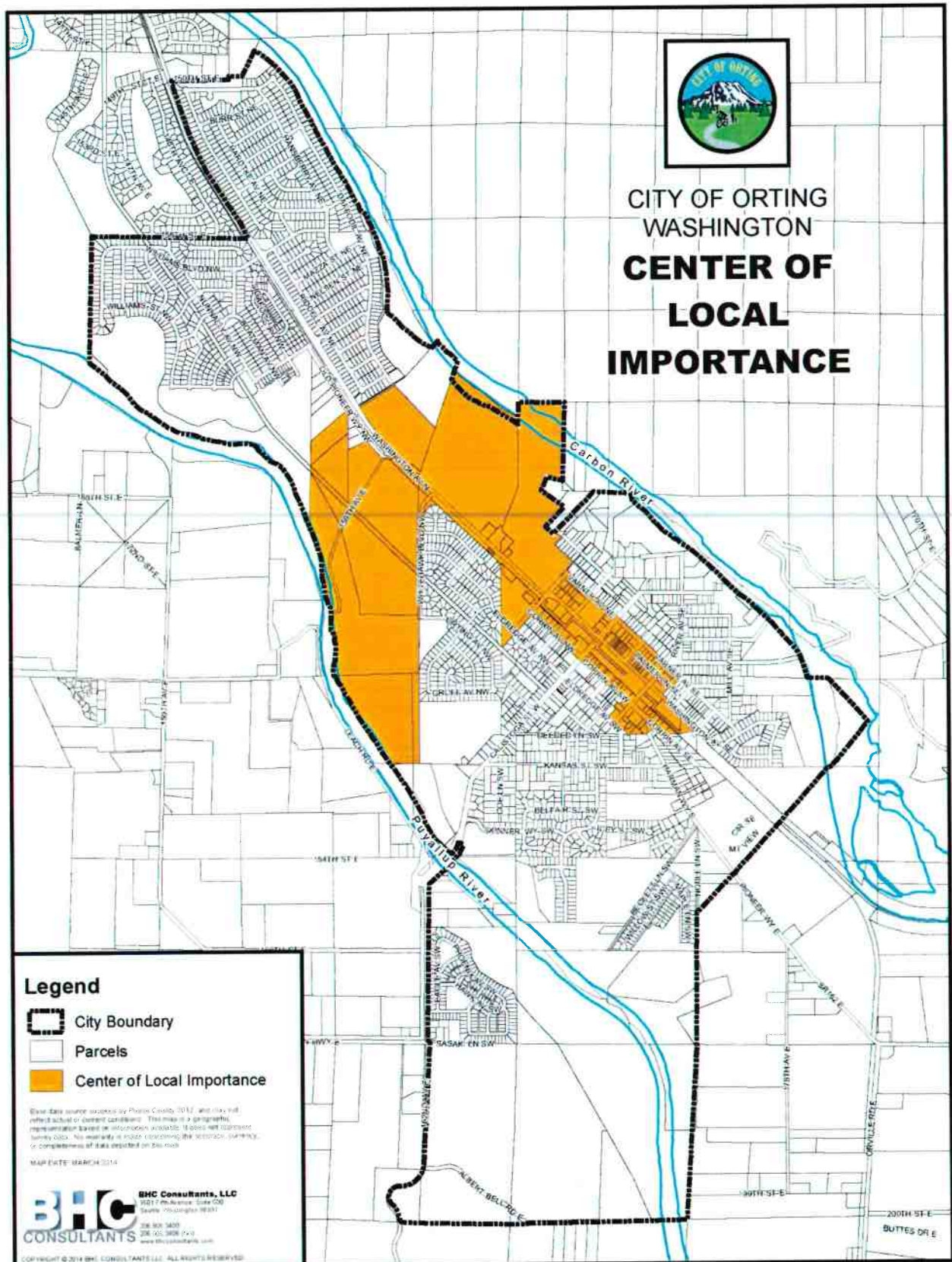
RESIDENTIAL LAND CAPACITY

Nearly all currently undeveloped and developable land within the Orting city limits has received preliminary subdivision, planned development, or binding site approvals. At current rates of finalizing the developments and recording them for building, most of them will be completed within five to ten years. The downtown area (zoned Mixed Use – Town Center) has significant capacity for additional multi-family development in upper stories of buildings that can be developed as mixed use with commercial retail uses. This capacity is subject to the real estate market.

CENTER OF LOCAL IMPORTANCE

Orting has designated the areas zoned Mixed Use Town Center and Mixed Use Town Center North as well as the Orting School District Campus as the Center of Local Importance as authorized in the Pierce Countywide Planning Policies. This designation is an important step for receiving transportation improvement funds through the County and Puget Sound Regional Council distribution of federal funds. **Figure LU-4** illustrates the Center within the City.

Figure LU-4



**Table LU-3
Residential Zones –
Vacant and Underdeveloped Land**

Zone	Total Acreage Zoned	Vacant Acres*	Underdeveloped Acres
Residential Conservation	196	8.2	67.7
Residential Urban	695	95.6	100
Residential Multi-family	36	0	2.9
Mixed Use – Town Center	49	7.1	017.9
Mixed Use – Town Center North*	68		
Total	1,032	178.6	188.5

Source: Pierce County & City of Orting

*Note: A significant amount of the currently vacant land is under development permitting review including 67.7 acres in the MUTCN approved binding site plan.

**Table LU-4
Residential Infill Potential**

Zoning District	Net Acreage	Projected Dwelling Units	Projected Population*
Residential Conservation (1du/2Acre)	17	8-10	24-30
Residential Urban (6 dus/acre)	24.2	140-150	420-450
Residential Multi-family (8 dus/acre)	0.8	6-10	15-25
Mixed Use – Town Center*			
Mixed Use – Town Center North		500-600	1,000-1,200
Total		670-800	1,500-2,000

*MUTC residential capacity is dependent upon future redevelopment densities. Assumed household size of 3.0 for single family and 2.0 for multifamily and mixed use zones.

COMMERCIAL & LIGHT MANUFACTURING LAND CAPACITY

Commercial land use capacity is dependent upon the ultimate development of the MUTCN and redevelopment of the MUTC areas. Existing land for light manufacturing uses in Orting amounts to less than 1 percent of the City’s total land use inventory. The only area of industrially zoned land is located in the southwest portion of the City and includes about 0.75 acres of land. Light manufacturing uses may also be allowed in the MUTCN as permitted in the binding site plan.

DEVELOPMENT FEASIBILITY IN THE DOWNTOWN CORE

Developers, investors, owners, and tenants can only reasonably consider projects which are financially feasible, whether the project includes an expansion of an existing building to

accommodate current businesses, an infill development to create new space for new businesses, or a larger-scale mixed-use project designed for multiple lot developments. This section describes the findings of a general feasibility analysis for the downtown core prepared in 2009, and the following table introduces the characteristics of downtown (See **Table LU-5**).

Table LU-5
2009 Characteristics of Downtown Orting
(Mixed Use Town Center)

Characteristics		Notes
Total Area	40.3 ac	Does not include street right-of-way
Number of Parcels	140	
Largest Parcel	5.83 ac	Pioneer Village; Total project acreage is 7.1 ac
Smallest Parcel	0.03 ac	1,309 sqft
Average Parcel	0.288 ac	12,545 sqft
Total Assessed Land Value	\$11,658,500	\$2,493,300 @ Pioneer Village - \$8.06/sqft
Total Assessed Improvement Value	\$24,595,700	\$6,969,800 @ Pioneer Village
Total Assessed Value	\$31,184,600	\$9,578,300 @ Pioneer Village
Average Parcel Value	\$160,050	Does not include Pioneer Village
Average Land Value	\$6.64/sqft	
Average Total Value	\$17.76/sqft	
Single Family Parcels	59	May include some businesses
Other Residential Parcels	6	
Vacant Parcels	25	Parcels with no improvements – generally, parking lots serving adjacent businesses
Vacant Parcel Area	4.67 ac	Average = 0.19 ac, or 8,137 sqft
Largest Vacant Parcel	0.85 ac	37,026 sqft
Smallest Vacant Parcel	0.03 ac	1,309 sqft
Redevelopable Parcels	44	Improvement value is less than land value
Total Area of Redevelopable Parcels	10.7 ac	466,090 sqft; Includes vacant parcels

- The average parcel developed to current zoning maximum capacity would be result in a 12,000 sqft ground floor leasable space and 24,000 sqft of offices or residences on two upper floors. At an average gross floor area of 750 sqft per dwelling unit, two floors of residences would be about 30 units. Parking requirements for a retail/office building per code or a retail/residential building would be about 100 spaces. This would require about an acre of land, or a total site area of 55,000 – 60,000 sqft
- Development of the vacant parcels would result in a maximum of build out of about 200,000 sqft of ground floor space and 400,000 sqft of upper floor space (office or 200-300 dwelling units). This would generate a need for about 1,600 parking spaces, per code.
- Development of the redevelopable parcels would result in a build out of about 450,000 sqft of ground floor space and 900,000 sqft of upper floor space (office or

1,000-1,500 dwelling units). This would generate a need for about 3,600 parking spaces.

These examples are very general and are not intended to truly reflect actual market demand that will drive actual business decisions. They do illustrate the type of questions that need to be explored for an informed discussion about the future of Downtown Orting.

PROJECT FEASIBILITY ANALYSIS

To analyze the development opportunities in downtown Orting, BHC Consultants and Property Counselors prepared financial feasibility studies (proformas) for 12 vacant and redevelopable properties (properties where the ratio of the value of the building to the value of the land is low). While the properties differed in size, location, and layout, the results showed similar trends among them. This analysis allowed for an identification of the feasibility of development under the current zoning requirements for three different uses:

- Ground floor retail with apartments above,
- Ground floor retail with condominiums above, and
- Ground floor retail with offices above.

Next we analyzed different scenarios that do not meet current zoning requirement for onsite parking and/or building height. These scenarios assumed that the building would cover more of the property because parking would be provided off-site. The scenarios were building heights of two, three, or four stories. Therefore, with three different uses and four development scenarios, there are 12 different development alternatives for each site. We will explain the assumptions used in the proformas for each alternative, the proforma calculations, the results of the proformas, and our conclusions about how the City could act to promote development in downtown Orting.

The most common tool used by developers to assess the feasibility of a project is the proforma. The proforma has two parts: the income proforma and the cost proforma. The income proforma is an estimate of the value (V) of a development based on the income it will produce. The cost proforma is an estimate of the total project cost (TPC) to construct the building. The difference between the value and the total project cost of the development is the profit (P) for the developer ($P = V - TPC$). To get the profit margin (PM), or the return on investment, you divide the profit by the total project cost ($PM = P / TPC$). The profit margin needs to fairly compensate the developer for the risk that he or she is taking. For a development to be feasible, the developer typically wants a profit margin of at least 10-percent.

PROFORMA ASSUMPTIONS

We made a number of assumptions about the rents and construction prices. The assumptions fall into two groups: value and cost shown in the table below. The value assumptions include the income from condo sales and the value of the apartments and office determined by dividing the net operating income (rent minus vacancy and operating expenses) by a capitalization rate (a basic measure for return that is used to determine a property's value). The cost assumptions include the value of the land, the construction costs, and "soft" costs

(design, permitting, financing, developer's fee, marketing, and insurance). Different value and cost assumptions are used for each use.

Value Assumptions	\$ Per Square Foot (except as noted)	\$ Per Unit
Apartment Rent Market	\$17.20	\$1,290.00
Apartment Expenses	\$4.50	\$337.50
Condo Sales Price Market	\$275.00	\$247,500.00
Condo Sales Costs (% of Price)	8.0%	(\$19,800.00)
Retail Rent	\$20.00	
Office Rent	\$20.00	
Capitalization Rate		
Apartments	6.00%	
Retail/Office	7.00%	
Parking Rent		
Apartments (space /mo)	\$50.00	
Cost Assumptions	\$ Per Square Foot	\$ Per Unit
Construction Cost		
Apartments	\$125.00	
Condominiums	\$140.00	
Office	\$180.00	
Retail	\$120.00	
Streetscape (/lineal ft.)	\$750.00	
Surface Parking (/space)	\$2,500	
Soft Costs		
Apartments (% of construction)	28%	
Condominiums (% of construction)	37%	
Retail/Office (% of construction)	31%	
Land Cost	\$15.00	

PROJECT FEASIBILITY CALCULATIONS

After the assumptions were made, we calculated the income (value) proforma and the cost proforma for each use. The income and the costs for each use are added together for a total project value and a total project cost. The land cost was the same for each use at \$15 per square foot of land.

Apartments are assumed to rent for \$17.20 per square foot per year or \$1,290 per apartment per month. The net operating income (NOI) is calculated by taking the gross rents for all units and subtracting the vacancy (5-percent) and expenses (\$4.50 per square foot per year). The NOI is divided by a cap rate of 6-percent to get the apartment's value (approximately \$197 per square foot). The cost of constructing the apartments is \$125 per square foot plus 28-percent of construction in soft cost (\$35 per square foot).

Condominiums are assumed to sell for \$275 per square foot or \$247,500 per unit (minus 8-percent for marketing). The construction cost for condos is \$140 per square foot and the soft cost are 37-percent of construction or \$51.80 per square foot.

Retail is assumed to rent for \$20 per square foot per year. The NOI equals gross rent minus the vacancy (5-percent) and the operating expense (\$1 per square foot per year). This NOI is divided by a cap rate of 7-percent to calculate the value (approximately \$257 per square foot). The costs to construct the retail is \$120 per square foot in construction costs (including tenant improvements), and soft costs are 31-percent of the construction costs or \$37.20 per square foot.

Office is assumed to rent for \$20 per square foot per year. The NOI equals gross rent minus the vacancy (5-percent) and the operating expense (\$1 per square foot per year). This NOI is divided by a cap rate of 7-percent to calculate the value (approximately \$257 per square foot). The costs to construct the office is \$180 per square foot in construction costs (including tenant improvements), and soft costs are 31-percent of the construction costs or \$55.80 per square foot.

After each individual component of the development is analyzed based on its value and its cost, the numbers from each use are totaled to get a total project value and a total project cost. The difference between the two numbers is the profit which can be used to calculate the profit margin for the project.

PROJECT FEASIBILITY RESULTS

One measure for development feasibility is profit margin (profit divided by total project cost). We used the profit margin to compare and contrast the 12 development alternatives for the 12 properties (three examples are shown in the following table). There are a number of trends that emerge from the different development alternatives.

First, development is not feasible under the current zoning requirements based on these assumptions. The profit margins are below the 10-percent that a developer would require as compensation for risk. Some of the scenarios even have a negative profit margin (this means the building would be worth less than the cost to construct it).

Second, retail is the most profitable use based on our assumptions. Retail produces good value at a low construction cost. The higher retail profit margins lifted the profits for the other uses to make the project feasible. That is why in some cases the profit margins declined from a 2-story to a 3-story building because a lower percent of the overall development was retail. One issue is that there might not be a market for all of this retail (one site we looked at could have over 22,000 square feet of retail).

Third, office and apartments are profitable, while condominiums almost never provide at least a 10-percent profit margin. The reason for this is the assumptions that were used. Condo sales were assumed to be \$80 per square foot more than the construction and soft costs. If you include the cost of land, parking, streetscapes, marketing, and other costs, there is no profit. Office and apartments provided some profit, but much of the profit margin was driven by the retail portion of the development.

Fourth, increasing the building height provided some additional return (in most cases) but not that much. A developer can get more revenue from a taller building because he or she has more area to rent (or sell as condos), but this also increases the construction cost and can be

riskier because there is more space to rent or sell. Therefore, increasing the building height limits does not have much impact on the developer's return on investment.

The following are samples of the conclusions of the financial analysis (profit margins):

9,030 Square Foot Site	Condominiums	Apartments	Office
Base Zoning	-2.4%	1.0%	2.3%
Off-site Parking (2-stories)	11.4%	14.6%	13.5%
Off-site Parking (3-stories)	9.4%	13.8%	12.8%
Off-site Parking (4-stories)	2.9%	13.7%	15.2%
11,650 Square Foot Site	Condominiums	Apartments	Office
Base Zoning	-13.5%	-10.4%	-9.0%
Off-site Parking (2-stories)	6.8%	9.7%	9.5%
Off-site Parking (3-stories)	6.2%	10.6%	10.0%
Off-site Parking (4-stories)	2.3%	11.0%	13.2%
24,520 Square Foot Site	Condominiums	Apartments	Office
Base Zoning	-6.3%	-3.1%	-1.9%
Off-site Parking (2-stories)	9.1%	12.4%	11.8%
Off-site Parking (3-stories)	7.8%	12.5%	11.5%
Off-site Parking (4-stories)	5.3%	12.4%	14.5%

PROJECT FEASIBILITY CONCLUSIONS

The analysis provides insight on how developers might consider undertaking projects in downtown Orting. They identify issues that limit the development potential of downtown. There are some things that can be done to make development in Orting more feasible. Some changes that could improve the development climate in Orting would be to reduce or eliminate the on-site parking requirements, expedite or ease the requirements for permits, and reduce impact fees and development exactions.

Perhaps the greatest limiting factor for development is the current parking requirements. For a three story building, approximately 2/3 to 3/4 of the site area must be devoted to parking. This limits the amount of the site that can be used for the building that provides most of the income for the developer. In other cities, underground parking is a solution because of the high cost of land. In Orting, the land values are not high enough to justify spending ten times more for underground parking (as opposed to surface parking).

There are solutions that can help alleviate the impact on developers having to provide on-site surface parking. Each solution has cost and benefits that the community must weigh. These solutions are not independent and can be used in conjunction with each other.

Solution	Costs	Benefits
Eliminate onsite parking requirements	Could overwhelm street parking and severely limit new spaces developed	No cost to developer or city – increases development potential
Reduce onsite parking requirements	Would reduce new space spaces built and could limit availability of street parking	Limit cost to developer with increased development potential
Implement shared parking programs	Developers purchase use of adjacent parking – only good for 15-25% of required space	Make more efficient use of available parking – no cost to city, little cost to developer
Off-site parking fee (purchase shared lot)	Developers pay for off-site parking to be constructed by city	Developers have “full” use of their property
Local Improvement District for parking lots downtown	Downtown landowner or businesses pay for fee to provide parking – no way to opt out if already have parking	Provides parking for all downtown businesses (not just new ones)
Meter downtown parking	Enforcement – upset business owners/residents used to free parking	Increases turn-over of spaces and provides income
Reduce maximum parking times	Enforcement – may upset business owners/residents	Increases turn-over of spaces

Another measure that could increase the feasibility of development in downtown Orting is to reduce the development review timeline. The faster the review, the sooner construction can begin, can be completed, and can earn income. The City should dedicate resources to work with developers to assist them in understanding Orting’s development code review process and application requirements. Often developments get held up because the application is not complete.

One item that has direct cost to the developer is exactions that developers have to pay to help mitigate the negative impacts of the development. The exactions include things like dedication of land for right-of-way, impact fees for traffic, schools, and parks, and street frontage improvements, as well as utility connection fees and street frontage improvements. These exactions can add to the cost of the development without any related increase in income. Limiting the impact fees can reduce the cost of the development which will make development more feasible, but this simply moves the burden of mitigating the impacts to the City.

ORTING DOWNTOWN VISION PLAN

In 2008, the City and Chamber of Commerce conducted a community-wide process to formulate a Vision for a revitalized downtown core. This included gathering public input about through an online survey and during a day-long Vision charette. The charette brought together downtown business owners, property owners, city officials, consultants, and experts in downtown planning, business development, retailing, transportation, and real estate. The group discussed current conditions and potential market demand for Orting’s downtown and performed a SWOT analysis, a discussion of Strengths, Weaknesses, Opportunities and

Threats. The details of the SWOT can be found in the Orting Draft Downtown Vision Plan June 2008 Status Report, but the results of the analysis are listed below

LEVERAGING THE STRENGTHS AND OPPORTUNITIES:

MARKETING/NETWORKING

- Cross marketing and networking of community activities and businesses
- Recruit more core businesses
- Strengthen existing businesses
- Coordinate businesses with special events
- Market and build off of the trail, and active recreation attractions
- More grass roots marketing to the residents (“Buy Orting”)
- Recruit volunteers and include more families and kids – particularly from newcomers
- Use Orting’s history to raise awareness of and market the area

ENHANCE EXISTING ASSETS

- Concentrate on Orting’s natural assets (trails, rivers, Mt. Rainer, etc.) and promote the use of existing facilities for events
- Make our community more inviting
- Provide small business training and assistance programs
- Study the feasibility of and staffing options for a business development coordinator (grants, intern, college students interested in a professional project)
- Partner with Soldier’s Home for tournaments on their ball fields or theater productions on their stage

NEW EVENTS AND BUSINESSES

- Increase tourist activities
- Recruit new businesses such as: hair salon, medical office, specialty/health food store, kid and teen clothing stores, bank or credit union, and hotel or bed and breakfast
- Get families with kids involved through free acting or arts workshops/events for kids

COMMUNITY SURVEY

The 2008 online survey was conducted over the course of three months during the Vision process. The survey was accessible through the City website and was advertised in the local paper. The purpose of the survey was to learn how shoppers and Orting residents use downtown: how often they visit; how they get there; what they like and do not like; and what they would like to see in Downtown. Nearly 120 people responded. The survey responses are summarized below. Please note that this was not a random sampling of Orting residents, so this survey is not valid as a statistical representation of the entire community. More

details about survey demographics can be found in the Draft Downtown Orting Vision Plan June 2008 Status Report.

The most common way of getting downtown is by car. Almost 80-percent of the respondents drive to downtown Orting. Most of the remaining respondents (17-percent) walk to downtown and a few people bike.

The primary reasons why the respondents go downtown (over 50-percent of the responses) are for shopping and errands (groceries, hardware, laundry, services, and pharmacy), dining, and to visit the post office. Other reasons why people go downtown (over 30-percent of the responses) are because they live there or to visit the library. The least popular reasons why respondents go downtown (less than 10-percent of the responses) are for church, entertainment, or to visit a non-medical office. None of the respondents go to downtown for appliances, electronics, and jewelry. Less than 5-percent of the people go downtown for home furnishings, fine dining, office/school supplies, and clothing. Puyallup/Sumner/Bonney Lake area is the other major destination for most these services

Over 40-percent of the respondents go downtown daily and an additional 40-percent go downtown multiple times per week. Almost 90-percent of the respondents visit downtown Orting at least once per week, and 98-percent go downtown at least once a month.

The respondents were dissatisfied with the following aspects of downtown Orting: the traffic flow, the types of businesses, and the variety of business. However, the responses were generally neutral to favorable to the other aspects of downtown: value received, business hours, quality, appearance of streets and the appearance of the building. The respondents were most satisfied with the safety and parking in downtown Orting.

Almost 40-percent of the respondents want a bakery in downtown Orting.¹ At least 25-percent of the respondents want the following types of businesses: clothing store, family dining, other, a book store, and entertainment and nightlife. The types of stores that did not get much support (less than 7.5-percent of the responses) includes: a jewelry store, appliance store, day care, pharmacy, personal care, and convenience store.

Since the 2008 survey was conducted and the Downtown Vision Plan was completed, several new businesses including a bakery and family-oriented restaurant have opened.

MIXED USE-TOWN CENTER PARKING STUDY

A study of parking spaces within the downtown Orting Mixed Use-Town Center Zone was conducted as part of the Vision process. Parking use surveys were not conducted, but during most of the business week, there do not appear to be shortages. The following numbers summarize the results.

- 1,840 spaces total (approx.), including:
 - 710 on-street parking spaces - counted on all streets from Whitesell St NW/NE to Bridge St S via Washington Ave N and from Eldredge Ave SW to

¹ Downtown bakery constructed since 2008 survey.

Varner Ave SE via Bridge St SW/S, both market spaces counted on the ground and unmarked spaces estimated from aerial photos.

- 1,130 off-street parking spaces - counted at 58 different sites including all businesses, senior housing, and government sites; not including the school site, single family homes, or apartment buildings. Ownership breaks down as follows:
 - 270 Government Owned spaces (City buildings, park, post office, library, and school district building)
 - 125 Non-Profit Owned (churches, fraternal organizations)
 - 760 Business Owned

Based on current zoning requirements,

- 710 on-street parking spaces can support:
 - 213,000 sqft retail
 - 284,400 sqft office
 - 355 residential units
- 1,130 off-street parking spaces can support:
 - 338,700 sqft retail
 - 451,600 sqft office
 - 565 residential units

As with most downtowns and malls, parking may not always be available within a short distance of a shopping destination. This is true for Orting and is a function of the “split” configuration of Downtown with businesses located on both sides of the Park. A bigger issue is the code requirement for off-street parking associated with renovation of existing buildings and new development. This creates hardships for smaller projects, since their scale does not make structured parking financially feasible, and surface parking would require too much of the project lot to be devoted to cars. Further, this is a disadvantage for “new” development since many existing businesses do not have enough off-street parking.

FUTURE LAND USE NEEDS

The 2014 Pierce County Buildable Lands Report estimates Orting will need to see 760 new DUs by 2030 to reach a population of 8,000. This growth would occupy about 170 net acres at 4.5 DU/A. This would likely consume more acreage of buildable land after infrastructure is included, leaving less land for further residential growth. While the Report shows the City’s employment target is 2,370 jobs, that is 1,090 new jobs by 2030, the likelihood of achieving this depends upon a wide range of variables. It is clear that the City currently has an extremely limited capacity for economic development. The Orting School District is likely to continue as the City’s major employer for some time.

In summary, Orting is expected to use its remaining land capacity during the next 10-20 years, and probably before. This consumption would be almost entirely attributable to residential uses, resulting in limited growth in commercial and industrial uses. In order to assure that adequate land for all uses is available to accommodate balanced and sustainable growth, the City should plan for a future urban growth area of more than 300 acres of buildable land that can be adequately serviced with city water, sanitary sewer, stormwater management, access, parks, and other facilities as growth occurs over the next 15-20 years.

The City is interested in promoting economic development by leveraging its location and environmental resources to create new opportunities for urban agriculture. This includes potential introduction of an area for community farming and adding value to farm produce by providing facilities for preparing retail food products. In addition, potential future addition of the urban growth area would protect prime agricultural soils and introduce further opportunities for increased production of foods for retail uses and promote agri-tourism.

URBAN GROWTH AREAS – WHERE SHOULD GROWTH GO?

Under the provisions of the GMA, counties must identify Urban Growth Areas (UGAs) around existing cities within the County to accommodate planned growth. A UGA defines the area around the city that is available for its expansion during the 20 year planning period. It is based upon the notion that development that is urban in type and intensity are most appropriate in the city.

UGA LOCATIONAL CRITERIA

The Pierce County Countywide Planning policies state that the location of municipal urban growth boundaries shall be determined with consideration for the following factors:

- Geographic, topographic, and manmade features
- Public facility and service availability, limits and extensions
- Jurisdictional boundaries including special improvement districts
- Location of designated natural resource lands and critical areas
- Avoidance of unserviceable islands of County land surrounded by other jurisdictional entities
- The Vision 2040 Plan
- The carrying capacity of the land considering natural resources, agricultural land and environmentally-sensitive land
- Population and employment projections
- Financial capabilities and urban service capabilities
- Consistency and compatibility with neighborhood, local and regional plans
- The existing land use and subdivision pattern

The City of Orting's goals and policies also establish similar criteria for establishing urban growth area(s).

POTENTIAL ANNEXATION AREAS

The Pierce Countywide Planning Policies establish a process for considering municipal expansion by identifying potential annexation areas where the following factors are evident:

- The Vision 2040 (regional) plan and policies;
- The carrying capacity of the land considering natural resources, agricultural land and environmentally-sensitive lands;
- Population, housing, and employment projections;
- Financial capabilities and urban services capacities;
- Consistency and compatibility with neighborhood, local and regional plans;
- The existing land use and subdivision pattern; and
- Property access and ownership

Orting currently provides urban services (sanitary sewer) outside of the city limits to an area within the County that is developed at urban densities.

UGA EXPANSION STUDY AREAS

The Alderton-McMillen Community Plan process identified potential receiving sites for transfer of development rights from agricultural lands that the City hopes to be considered for a UGA expansion through a joint study with Pierce County which would consider the City's interest in expanding local food production and access to farms for community agricultural activities and agri-tourism.

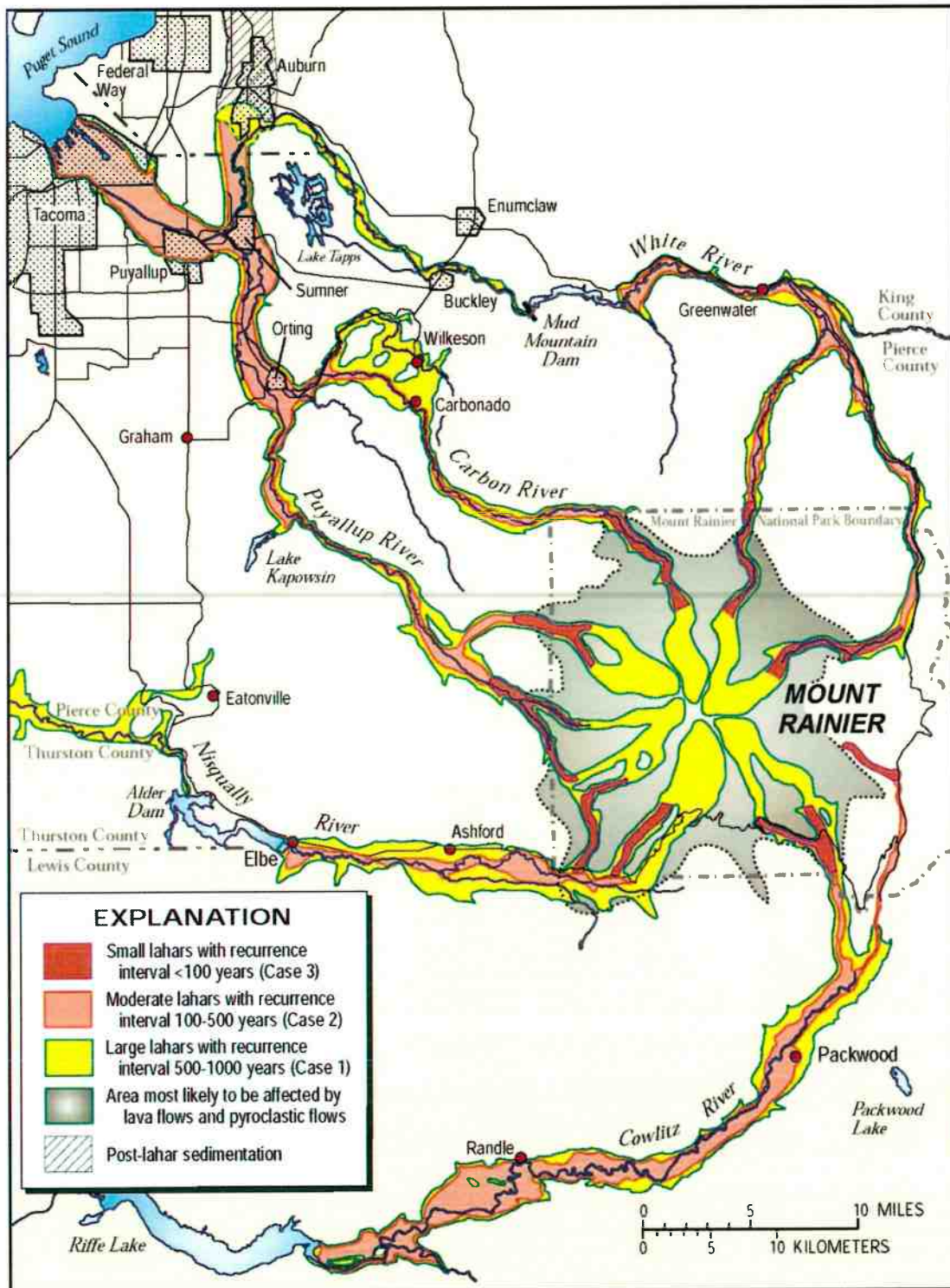
HAZARD MITIGATION PLANNING

The Disaster Mitigation Act of 2000 established a new federal priority for pre-disaster planning and mitigation as opposed to post-disaster assistance. The Federal Emergency Management Administration (FEMA) is leading this program through the provision of planning guidelines and grants. The state of Washington Department of Emergency Services manages the program. Orting adopted a Comprehensive Flood Hazard Mitigation Plan under the program in 2009 and has completed the Calistoga Setback Levee along the Puyallup River between the Calistoga Bridge and Village Green Wetland Park. This project is further described in the Capital Facilities Element. Orting is undertaking the task of updating the 2009 Comprehensive Flood Hazard Mitigation Plan, aiming for adoption of a new plan in 2018. Conducting the update process according to the flood management planning requirements in the most current Community Rating System (CRS) Coordinator's Manual will allow the City to request a Modification review and improve their CRS classification, which could reduce flood insurance rates.

The City is also included in the Pierce County Region 5 Hazard Mitigation Plan, a multi-jurisdictional plan encompassing 72 jurisdictions including municipalities, fire districts, school districts, universities and other special-purpose districts. The Plan is a natural hazard mitigation plan in which all jurisdictions worked together to develop shared goals and a

foundation for mitigation measures. The Plan is maintained by the Pierce County Department of Emergency Management, and is available online.

Figure LU-5



Source: Hazard zones for lahars, lava flows and pyroclastic flows from Mount Rainier (Hoblitt and others, 1998: US Geological Survey Open file Report 98-428, accessed at http://vulcan.wr.usgs.gov/Volcanoes/Rainier/Publications/FS065-97/FS065-97_map.pdf)

MT. RAINIER LAHAR PREPAREDNESS

The greatest hazard from Mt. Rainier is a potential lahar event, also known as volcanic mudflows or debris flows (illustrated in **Figure LU-5**). The City is located on top of the Electron Mudflow pathway, one of three major lahar events from the last 10,000 years. The City is at risk of experiencing future lahar events. The United States Geological Survey (USGS) and Pierce County Emergency Management have taken steps to monitor seismic activity on Mt. Rainier to provide early warning of volcanic activity. A lahar event could result from:

- A Volcanic Eruption causing rapid melting of snow and glaciers (Pyroclastic flows).
- Mobilization of soil sediments as a result of heavy rains.
- Sulfuric breakdown of Mt. Rainier western flanks resulting in a collapse of the western flank.
- Earthquake caused landslides which can occur without forewarning of rising magma.
- Release of debris dammed lakes.

LAHAR EVACUATION

The City is located at the confluence of the Puyallup and Carbon rivers, both of which originate on Mt. Rainier. Any lahar that originates on the north face of Mt. Rainier will flow down the Puyallup River and/or Carbon River valleys. USGS estimates that the City will have approximately 42-minutes to evacuate once a lahar event is confirmed.

The City has instituted the following procedures:

- Lahar Sirens tested monthly.
- Evacuation Signage leading out of the city.
- Annual School District evacuation drills.
- Website and packages to citizens identifying the current pedestrian evacuation to the Peirce County Rock Quarry.

NEEDED EVACUATION ROUTE IMPROVEMENTS

Sensors on Mt. Rainier are intended to warn residents in the valley of a Lahar in progress. The current pedestrian evacuation route leads to Pierce County Rock Quarry. Based on the Orting School District evacuation drills, it takes approximately 74-minutes for a majority of the students to evacuate to this location. Remaining children and seniors are vulnerable with inadequate time to evacuate by foot. The current evacuation plan relies heavily on a motor vehicle based evacuation. The risk of over-reliance on a Motor Vehicle Plan is that the roads will become congested. Pedestrian evacuation is the most reliable way to evacuate people on the valley floor within a short time period.

ORTING EMERGENCY EVACUATION BRIDGE SYSTEM

Founded in 2002, the Bridge for Kids non-profit organization was awarded grant money from the State and Federal Government of nearly \$2.4 million to do a feasibility study and eventually design a more effective evacuation route off the valley floor. Pierce County Public Works administered the design process and funds. The engineering firm, Berger Abam was contracted to design the evacuation route and structures needed to meet ADA compliance and the 40-minute criteria.

The proposed three-component Emergency Evacuation Bridge System as presented in October, 2014, was adopted by the City Council. The project is now identified as the “Orting Emergency Evacuation Bridge System.” It consists of a bridge over the state highway at Rocky Road NE, an evacuation designation of Rocky Road NE, and an ADA compliant Bridge over the Carbon River. Through a stewardship agreement with the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT) retained the approval authority for the final Bridge for Kids Alternative Analysis Report, which the Bridge for Kids Committee played a central role in developing. WSDOT determined that Pierce County had delivered a product meeting the intent of the federal grant funds.

NEXT STEPS

The Bridge for Kids Alternative Analysis Report is the first report of a total of three consultant based efforts to successfully bring this project to 30-percent design, meeting the functional, aesthetic, and environmental requirements. The next project steps will be to proceed towards final design and construction. The City will assume the lead agency role working in joint collaboration with State, County and Federal agencies, seeking out sources of funding to proceed towards the successful completion of the project including: environmental documentation, finalizing design, preparing right of way plans, right of way estimates, and construction of the Bridge System.

Housing Appendix

HOUSING APPENDIX

HOUSING TYPE AND TENURE

The existing housing stock in Orting consists primarily of single-family detached homes. Mobile/manufactured homes, duplexes and apartments make up the remaining portion. One and two family households make up the majority of residential units, particularly in owner-occupied homes. The 2010 Census reported a total of 2,361 units, an increase of 979 or 71-percent over 2000. By April 1, 2017, there were 2,684 units, a 14-percent increase over 2010. This recent growth resulted from the effects of the economic recession during which homebuilding slowed dramatically, then picked up significantly since 2014. The homeownership rate is relatively high in Orting. Between 2000 and 2015, the percentage of owner-occupancy remained steady at 78-percent. **Table H-1** compares the 2010 and 2015 housing figures for the city. The surrounding area including the Orting Valley, South Hill, and the Tehaleh Planning Community have grown, although the agricultural designation of the unincorporated rural area limits growth to preserve the farming industry. Growth in that area generally paralleled the City's rate. A higher percentage of housing in the surrounding area is owner-occupied, but there is a slightly higher vacancy rate.

Table H-1
Number of Units by Housing Tenure

	Total Units		Owner Occupied		Renter Occupied		Vacant	
	2010	2015	2010	2015	2010	2015	2010	2015
Orting	2,361	2,492	1,738	1,794	446	510	177	188

Source: U.S. Bureau of the Census, 2010, American Community Survey, 2015

The April, 2017 housing estimate by the state Office of Financial Management (OFM) shows a total of 2,684 units – 2,371 single family; 143 multifamily units and 170 mobile homes/manufactured units.

Table H-2 shows the composition of housing types in Orting, based on 2010 US Census and AMCS figures. Single-family homes account for approximately 88-percent of the housing in the city and the surrounding area. Mobile/manufactured homes make up approximately 7-percent of the city housing stock and 15-percent of the surrounding areas, and multi-family housing accounts for approximately 6-percent of the city inventory.

Table H-2
Number of Units by Housing Type

	Single Family			Multi-Family			Manufactured Homes		
	2000	2010	2017	2000	2010	2017	2000	2010	2017
Orting	1,188	2,049	2,371	89	143	143	128	169	170
% of Total	84.2	86.8	88.3	4.9	6.1	5.3	10.3	7.2	6.3

VALUE AND COST OF HOUSING

In 2000, nearly 60-percent of the owner-occupied homes in Orting were valued at between \$100,000 and \$150,000 (1999 dollars, 2010 Census). In 2015, only 8-percent of the owner-occupied homes were valued in that range (2015 5-Year American Community Survey). About 12-percent of the remaining homes were valued at less than \$100,000. The remaining 80-percent were valued at more than \$150,000, with 44-percent falling within the \$200,000 to \$300,000 range. The median 2015 value of owner-occupied homes in Orting was \$199,000, a reduction for \$205,300 in 2014. The median monthly 2015 gross rent in Orting was \$1,438.

In 2017, the median home price ranged between \$306,016 – \$336,163 over four months. About 130 homes including new homes and resales were on the market each month. All homes were three bedroom units including 2,000 – 3,000 square on average. According to Zillow, the September 2017 median value for Orting homes was \$268,300. Compared to the overall Pierce County median of \$300,500, Orting homes are affordable.

FUTURE HOUSING NEEDS

The population trends and targets contained in the Land Use Appendix of this plan form the basis for the projections of housing demand. Orting has grown considerably in the past 20 years. Between 1996 and 2006, the population increased by 2,940 new residents, a growth factor of 89-percent. A small portion of this population growth resulted from annexations. Between 2006 and 2014 growth slowed compared to the previous decade, but did not stop. The population increased by 1,505, or 27-percent growth. The average annual growth rate from 1999 to 2014 is 4.6-percent. Between 2014 and 2017, the population increased by 770, an additional 11 percent.

As noted in the Land Use Appendix, the 2030 population “target” for Orting is 8,000. At the recent growth rate, the city could easily reach this population much earlier. This increase will impact the city in several ways, including future housing demand and associated demand for services, community facilities, and other features necessary to sustain the community.

Population growth and housing development are functions of the demographics of the community (household size and age and economic status), as well as the marketability of the area. The population projections give a general indication of the number of new dwelling units needed to accommodate the target population. The estimated number of future dwelling units is based on the community's 2010 average household size of 3.01. While this factor may change in the future, for the next 5-10 years it represents a reasonable basis for calculating housing demand. The 2030 population target is 8,000, but this could be reached as early as 2018 given the historic growth rate. In 2016, the city approved 100 permits for new single family units. In addition, final subdivisions and planned unit developments were approved creating new lots for additional housing. .

Approved preliminary subdivisions and PUDs, as well as the anticipated build out of the Mixed Use – Town Center North, are expected to generate the 1,260 units projected to be necessary to meet the population forecast within the next 5-10 years. Beyond that, there is very little additional opportunity for new housing to be developed in the current city limits. Orting has adopted provisions for cottage housing, accessory dwelling units, and increased density in planned unit developments.

AFFORDABLE HOUSING

The Growth Management Act requires each county and city to identify sufficient land for housing, including but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, group homes, and foster care facilities. These types of housing are often grouped under the term "affordable housing."

Pierce County, and the municipalities, collectively must accommodate the housing demand for all economic segments of the population.

Affordable housing should address one of the following conditions:

- (1) Has an annual rental rate that is less than or equal to 30-percent of 80-percent of the median family income for Orting; or
- (2) Has an annual cost (including property taxes and insurance) after a 10-percent down payment, that is less than or equal to 30-percent of 80-percent of the median family income of Orting.

The median 2015 household income in Orting was \$72,114. Households earning 80-percent of this median earned \$57,700. Nearly 64-percent of Orting's owner-occupied housing units and 40-percent of the renter-occupied units were affordable, with monthly housing costs less than 30-percent of household income. Many young families have recently chosen Orting as an alternative to higher-priced communities that are closer to major employment centers. The city has an adequate supply of housing for its low income residents (average family income of less than 50-percent of the median). Housing values have increased substantially in recent years. New homes are priced up to the low \$400,000 range (2017 \$). The median price of all homes sold in the first half of 2017 was just under \$300,000. The estimated median household income is just over \$73,000. The median income for owner-occupied housing is \$75,000. For renter occupied housing, the median income is about \$50,000. The poverty rate is 12% of all households.. An Orting household with an income of \$73,000 could afford housing valued in the range of \$200,000-\$250,000. "Low Income" households would be limited to housing priced under \$150,000 and "Very Low Income" households would be limited to housing priced under \$100,000. For these two latter income categories, rental housing is likely to be all they can afford. Rents would have to be in the \$700-1,100 range. Orting has a small inventory of rental housing.

FEDERAL, STATE & LOCAL PROGRAMS

There are a number of local, state and federal grant and loan programs that are aimed at fulfilling basic housing needs and expanding homeownership opportunities for low- and moderate-income citizens. The city will support initiatives of project sponsors to gain access to these resources and broaden the housing opportunities consistent with the goals and policies of the Comprehensive Plan and the development regulations. This includes recent amendments that allow increased density in the Mixed Use – Town Center North zone and cottage housing in the Residential Urban and Suburban zones.

MANUFACTURED HOMES & ACCESSORY APARTMENTS

There are a number of other ways that Orting could encourage the development of affordable housing that do not directly involve public financing for the development of housing. Manufactured homes provide an affordable housing alternative so long as the units fit the character and quality of other conventionally-built housing in the city.

Other alternatives provide affordable housing in the city. These include apartments above commercial businesses, especially in the downtown area. Accessory apartments within present single family homes or as separate structures on existing single family lots provide another alternative. This not only provides an affordable place to live, but offers assistance to homeowners concerning their own financial burdens.

GROUP CARE HOMES & FOSTER CARE FACILITIES

The Growth Management Act requires that the housing element of the plan address special housing needs, such as group care homes and foster care facilities. Group homes and foster care facilities are permitted in all Orting residential zones subject to the provisions of the Public Facilities Permit for publicly-sponsored projects and Conditional Use Permits for privately-sponsored projects.

Transportation Appendix

TRANSPORTATION APPENDIX

PURPOSE

The Transportation Element must, among other things, contain travel forecasts, a level of service standard, be regionally coordinated, and meet concurrency requirements. This transportation element for the City of Orting meets the requirements of the GMA and has been certified by the Puget Sound Regional Council. This element contains a description of existing transportation conditions, travel forecasts, service standards and analysis, and transportation recommendations, all of which have been coordinated with the county and the state. The following analysis and conclusions have been taken from the City of Orting 2030 Transportation Plan, August 2004 and transportation analysis and planning since then including preparation of a Non-Motorized Transportation Plan in 2017. The City is currently updating the City of Orting 2030 Transportation Plan for consistency with PSRCs T2040 goals and policies. That report contains further, more detailed information.

OVERVIEW

The City of Orting has a unique configuration with respect to transportation. The community lies in the Orting Valley between the Carbon and Puyallup Rivers. State Route (SR) 162 runs between the two rivers and links Orting with Sumner and Buckley. Orting is a small rural community of almost 8,000 residents – triple the 1990 population. Many of the local city streets are quiet, tree lined, with low traffic volumes. The older portion of the City is laid out on a traditional grid system (**Figure T-1**), and some recent developments feature a circulation curvilinear pattern.

The data, analyses, and conclusions included here are based on an earlier overall city transportation plan. These conclusions are still valid for the next few years. In the meantime the City intends to update the transportation plan to be consistent with the Puget Sound Regional Council 2040 Plan and Transportation 2030 Plan, the Pierce County transportation plan, and state highway plans.

EXISTING CONDITIONS

SR 162 runs north/south through the center of Orting and carries the highest traffic volumes in the area. Another significant arterial in the City is Calistoga St W. This provides an east/west link, crossing the Puyallup River and connecting to the Orting-Kapowsin Hwy E. Orting-Kapowsin Hwy E provides indirect access to other east/west routes, such as SR 702 in south Pierce County. Kansas St SW provides east/west access between Harman Way S and Calistoga St W. A large number of dump trucks traveling to/from area gravel pits, as well as logging trucks traveling to/from Frederikson, utilize this roadway. Other than Calistoga St W, no direct

east/west access to Orting currently exists. All those traveling east or west must head north to SR 410 or south to the more indirect route on the Orting-Kapowsin Hwy E. Pierce County is studying corridors for future development of needed east-west arterials. As Orting grows, the internal street network is being developed. The Comprehensive Plan provides the basis for City/County/State coordination in planning major arterial improvements as well as the continued development of the local street network.

FUNCTIONAL CLASSIFICATION

Classification of streets and highways in the State of Washington is based upon guidelines prepared by the Federal Highway Administration (FHWA) and administered by the Washington State Department of Transportation (WSDOT). Streets are classified based on the degree to which they provide through movement and land access functions. The City of Orting uses four different functional classifications. Based upon the street function, certain land use policies and street standards apply. The design of roads depends upon their functional classification and usage.

- **Principal Arterials** are streets and highways which carry the greatest portion of through or long-distance travel. Such facilities serve the high-volume travel corridors that connect major generators of traffic. The selected routes provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering urban areas. Principal arterials in the City of Orting are SR 162 which is made up of Washington Ave N/S, Bridge St S, Harman Way S, Kansas St SW and Calistoga St W.
- **Minor Arterials** are streets and highways that connect with remaining arterial and collector roads that extend into the urban area. Minor arterial streets and highways serve less concentrated traffic-generating areas, serve as boundaries to neighborhoods and collect traffic from collector streets. Although the predominant function of minor streets is the movement of through traffic, they also provide for considerable local traffic that originates or is destined for points along the corridor. Minor arterials within the City include portions of Corrin Ave NW/SW.
- **Collectors** are streets that provide direct services to residential areas, local parks, churches and areas with similar uses of the land. To preserve the amenities of neighborhoods, they are usually spaced at about half-mile intervals in order to collect traffic from local access streets and convey it to major and minor arterial streets and highways. Collector streets are typically one to two-miles in length. Direct access to abutting land is essential. Collectors in the City include Bridge St SW, Varner Ave NE/SE, Van Scoyoc Ave SW, Eldredge Ave SW/NW, Train St SE/SW, Whitesell St NW/NE, and portions of Leber St NE.
- **Local Access Streets** are the remaining streets that allow access to individual homes, shops, and similar destinations. They provide direct access to abutting

land and to the higher classification of roadways. Through traffic is discouraged.

Figure T-1 illustrates the functional classification of the major streets and highways within the City.

STATE-OWNED TRANSPORTATION FACILITIES & HIGHWAYS OF STATEWIDE SIGNIFICANCE

In 1998, the Washington State Legislature enacted the “Level of Service Bill” (House Bill 1487) which amended the Growth Management Act (GMA) to include additional detail regarding state-owned transportation facilities in the transportation element of comprehensive plans. The Puget Sound Regional Council, in 2003, adopted level of service standards for regionally significant state highways. Regionally significant state highways are state transportation facilities that are not designated as being of statewide significance. Within Orting, no roadways have been designated as a Highway of Statewide Significance (HSS) in WSDOT’s Highway System Plan. SR 162, which links Orting with Sumner and Buckley, is the only state-owned facility within the planning area and is designated as a Regionally Significant State Highway. WSDOT conducted a SR 162 Corridor Congestion Study in 2015 - 2017. The primary conclusion of the study was that “capital investments alone will not eliminate future anticipated congestion.” Rather, the study recommended five strategies including: transportation demand management; operations management; incident management; public transportation; park and ride lots with bicycle and pedestrian improvements; and intersection control improvements. Note that these strategies apply primarily to the corridor outside of the city limits.

LOCAL ROADWAYS

SR 162 runs generally north/south through the center of Orting and carries the highest traffic volumes in the area. Calistoga St W is the other main route in the city, running generally east-west and connecting SR 162 to the Orting-Kapowsin Hwy E. The Orting-Kapowsin Hwy E runs in a north-south direction, providing indirect connections to SR 161 (Meridian) and SR 7 (Mountain Highway). Other than Calistoga St W, no direct east-west access to Orting currently exists.

ROADWAY INVENTORY

- **State Routes** - SR-162 runs generally north-south through the City of Orting, providing the primary connection to SR 512 and Interstate 5. Within the city limits, SR 162 is a two-lane principal arterial with a narrow painted median and paved shoulders. The posted speed limit is 35 mph, reduced to 25 mph in the vicinity of Orting High School, Orting Middle School and Ptarmigan Elementary School as well as downtown. The roadway is known as Washington Ave N within the City limits.

- **Pierce County Roadways** - Orting-Kapowsin Hwy E is a two-lane major arterial, with a posted speed limit of 35 mph along most of its length. Shoulders are gravel, with a walking path along the east side of the road in areas. It runs adjacent to the city limit line for a short distance south of the Puyallup River before turning into Calistoga St. W.
- **Local Transportation System** - SR 162 becomes Washington Ave N/S as it passes through the downtown area of Orting. South of Whitesell St NW/NE, this is a two-lane major arterial with paved shoulders, interrupted sidewalks, and street lighting on the north side of the roadway. Washington Ave N/S has a posted speed limit of 50 mph. At Whitehawk Blvd NW, the posted speed is reduced to 35 mph, and again reduced to 25 mph as the roadway becomes Washington Ave N. Between Calistoga St W and Bridge St S, Washington Ave S has parking on both sides of the road.

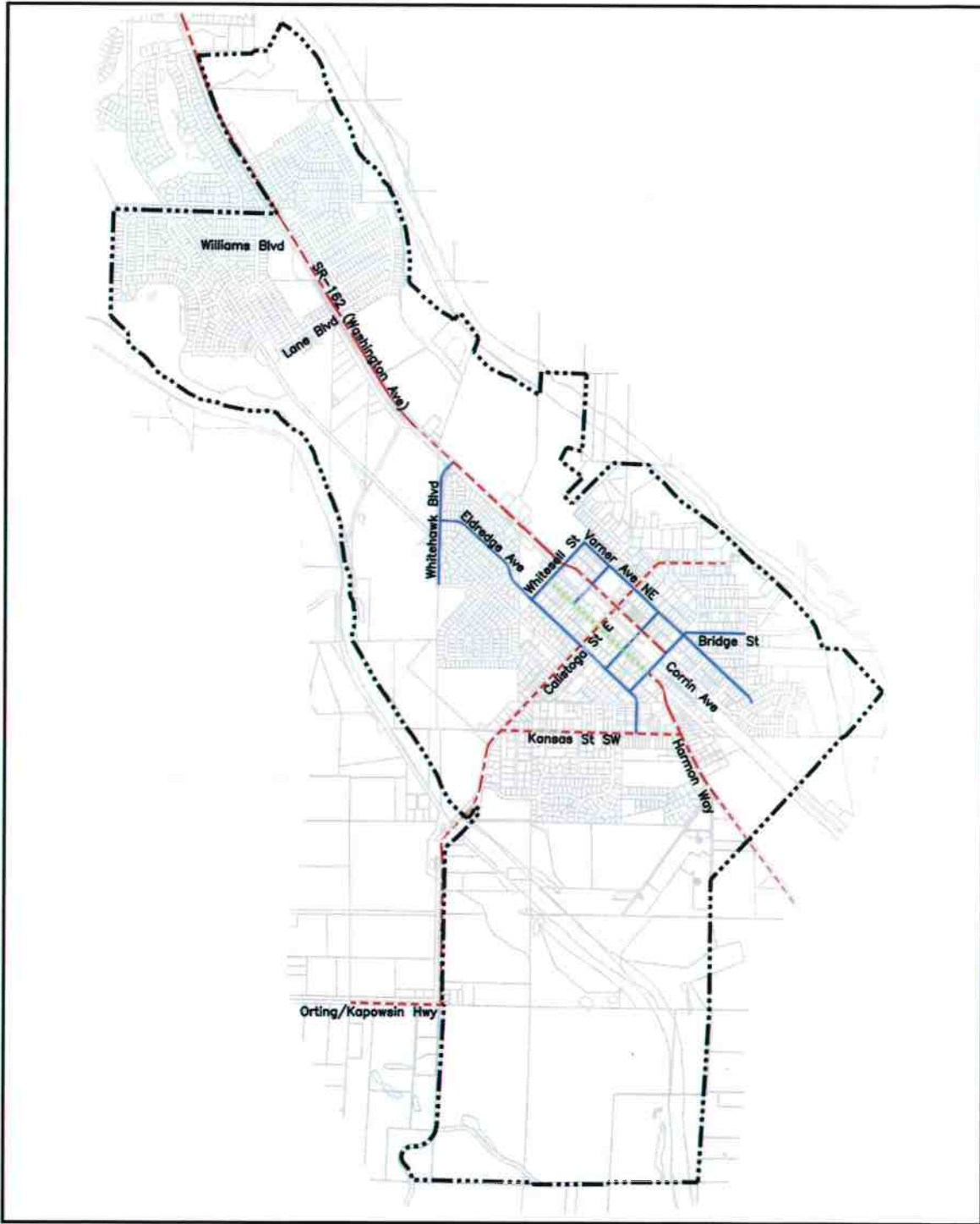
Table T-1 includes an existing conditions inventory of all the roadways in the area, including functional classification, pavement width, shoulder type and width, parking, sidewalks, bicycle lanes, and posted speed limits.

**Table T-1
Roadway Inventory – Existing Conditions**

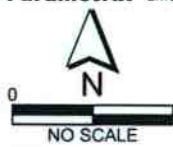
Roadway	Functional Classification	Shoulder	Parking	Sidewalks	Bicycle Lane	Speed Limit (mph)
SR-162	Principal arterial	Paved	No	Interrupted	No	50/35/25
Washington Ave N/S	Major arterial	Paved	Yes	Yes	No	25
Orting-Kapowsin Hwy E	Major arterial	Gravel	No	No	No	35
Varner Ave NE	Collector	Gravel/ Grass	Yes	Yes	No	None posted
Calistoga St W	Principal arterial	Paved/ Gravel	Yes	Yes	No	25
Whitehawk Blvd NW	Minor Arterial	Paved	Yes	Yes	No	25
Eldredge Ave NW	Collector	Gravel/ Grass	Yes	Partial ²	No	None posted
Whitesell St NW	Collector	None	No	One side	No	None posted
Corrin Ave NW/SW	Minor arterial	Paved	Yes ¹	Yes	No	None posted
Bridge St SW	Collector	Gravel/ Grass	Yes	Yes	No	None posted
Kansas St SW	Principal arterial	Paved	Yes	Yes	No	None posted
Harman Way S	Principal arterial	Paved	Yes	Yes	No	None posted

¹ Angle parking downtown.

² Whitesell St N – both sides; Safeway south – one side.



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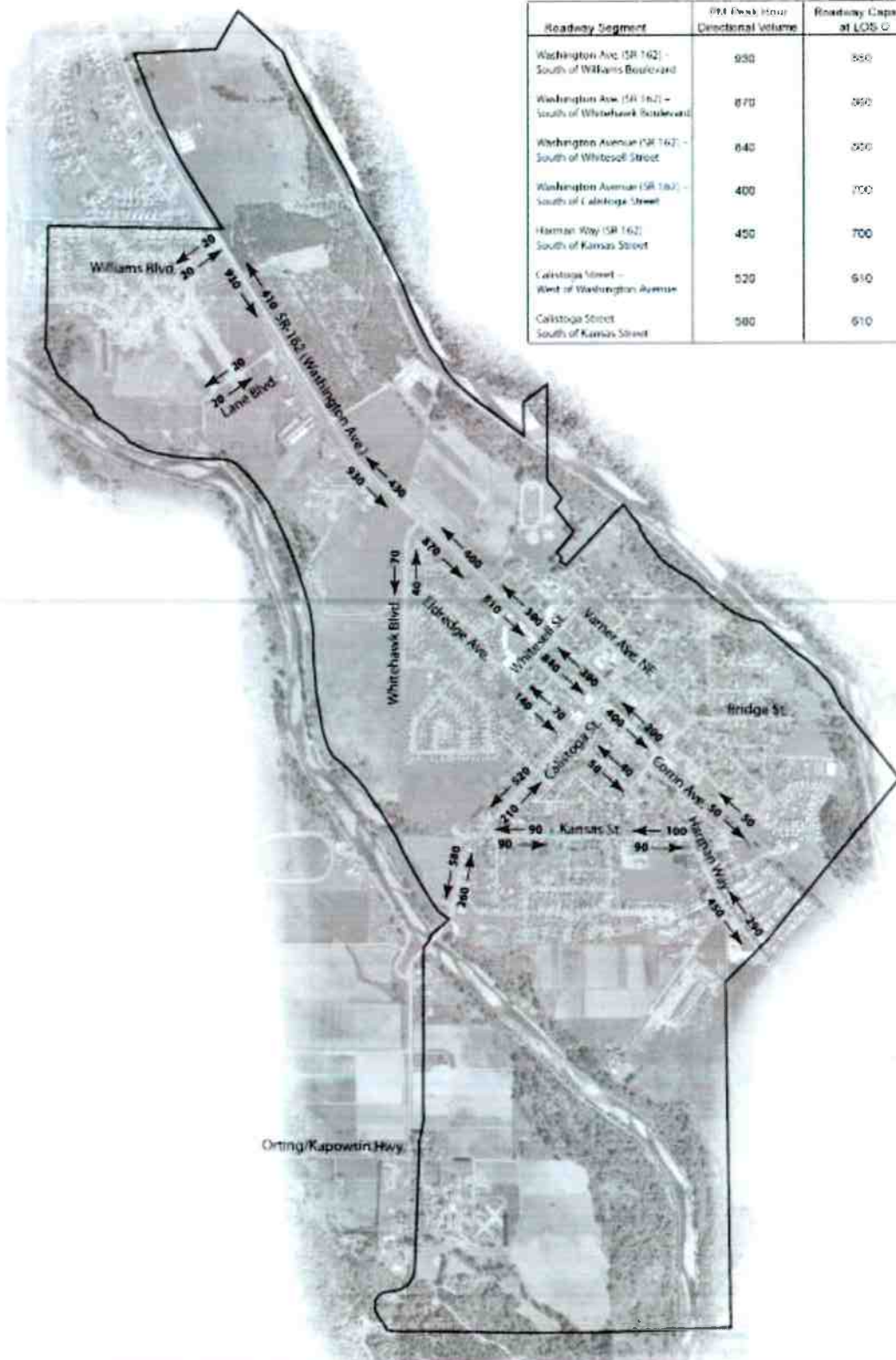


- LEGEND:**
- PRINCIPAL ARTERIAL
 - ... MINOR ARTERIAL
 - COLLECTOR
 - CITY LIMITS

Figure 1
Functional Classification
of Major Roadways

2004 Roadway Segment Levels of Service

Roadway Segment	PM Peak Hour Directional Volume	Roadway Capacity at LOS C	Existing LOS (Four Direction)
Washington Ave (SR 162) - South of Williams Boulevard	930	850	F
Washington Ave (SR 162) - South of Whitehawk Boulevard	870	850	D
Washington Avenue (SR 162) - South of Whitesell Street	640	800	C
Washington Avenue (SR 162) - South of Callisto Street	400	700	B
Herman Way (SR 162) - South of Kansas Street	450	700	B
Callisto Street - West of Washington Avenue	520	610	C
Callisto Street - South of Kansas Street	580	610	C



metrix **EXISTING 2004 PM PEAK HOUR TRAFFIC VOLUMES** Figure 2

TRAFFIC VOLUMES

A comprehensive set of street and intersection traffic counts was collected in February, 2004. Average P.M. Peak Hour weekday traffic volumes are summarized in **Figure T-2**. P.M. peak hour traffic volumes represent the highest hourly volume of vehicles passing through an intersection during the 4:00-6:00 P.M. peak period. Since the P.M. peak period volumes typically represent the highest volumes of the average day, these traffic volumes were used for our base year operations analysis, and as the basis for future year traffic volume projections.

INTERSECTION LEVEL OF SERVICE

Capacity analysis results are described in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from “A” (very little delay) to “F” (long delays and congestion). Level of Service “D” is the concurrency standard adopted by the City of Orting.

Level of service calculations for intersections determine the amount of ‘control delay’ (in seconds) that drivers will experience while proceeding through an intersection. For intersections under minor street stop-sign control, the LOS of the most difficult movement (typically, the minor street left-turn) represents the intersection level of service. The LOS/delay criteria for stop-sign controlled intersections are different than for signalized intersections because driver expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay. For signalized intersections the LOS ranges from “A” with a delay of less than 10 seconds to “F” with a delay of more than 80 seconds. For stop-sign controlled intersections, LOS “A” also has a delay less than 10 seconds, while LOS “F” has a delay of more than 50 seconds.

Table T-2 shows a summary of the operations analysis results for the unsignalized intersections. The 2004 LOS is the LOS of the most difficult movement. Due to the likely impending Vision 2040 transportation plan update, the City has elected to delay updating traffic models at this time.

**Table T-2
2004 Intersection Levels of Service**

Unsignalized Intersection	2004 LOS
Washington Ave N/S & Calistoga St E/W ¹	B
Whitesell St NW/NE & Washington Ave N	D
Washington Ave N & Cardinal Ln NE ¹	F
Bridge St SE & River Ave SE & Varner Ave SE	N/A ²
Calistoga St W & Kansas St SW	C
Williams Blvd NW/NE & Washington Ave N ¹	E
Lane Blvd NW/NE & Washington Ave N	C
Old Pioneer Way NW & Washington Ave N	C
Whitehawk Blvd NW & Washington Ave N	C
Calistoga St W & Corrin Ave SW/NW	C
Calistoga St W & Eldredge Ave SW/NW	C
Whitesell St NW & Eldredge Ave NW	A
Bridge St S/SW & Corrin Ave S & Harman Way S	N/A ²
Kansas St SW & Harman Way S	B
Bridge St S/SE & Washington Ave S/SE	N/A ²

¹ Intersection signalized as of 2014; information to be updated during Transportation Plan update.

² Not available – The intersection configuration not allowed in HCM analysis. The ICU level of service (described later in this report) is provided.

ROADWAY SEGMENT LEVEL OF SERVICE

An additional means of identifying capacity deficiencies is roadway capacity analysis. Each roadway in the city has a theoretical maximum vehicle carrying capacity for a given time frame. The functional classification, number of lanes, presence of traffic signals or turn-lanes are examples of features that affect the volume of traffic a particular roadway segment can handle. For this analysis, the evening peak hour directional volumes were used as the basis for the LOS assessment as shown in **Table T-3**.

**Table T-3
Generalized Level of Service Criteria - Peak Hour Directional Volumes**

Interrupted Flow Arterials - Class I (0 to 1.99 traffic signals per mile)				
	Maximum Traffic Volume at Level of Service			
Number of Lanes	B	C	D	E ¹
Two, Undivided without left-turn lanes	460	660	700	700
Two, Undivided with left-turn lanes	570	820	880	880
Four, Undivided without left-turn lanes	930	1,310	1,390	1,390
Four, Undivided with left-turn lanes	1,180	1,660	1,760	1,760
Four, Divided with left-turn lanes	1,240	1,750	1,850	1,850
Two, Single direction	1,488	2,100	2,220	2,220
Major City/County Roadways				
	Maximum Traffic Volume at Level of Service			
Number of Lanes	B ²	C	D	E
Two, Undivided without left-turn lanes	N/A	350	610	660
Two, Undivided with left-turn lanes	N/A	440	760	830

¹ Volumes are comparable because intersection capacities have been reached.

² Cannot be achieved.

The roadway segment levels of service for key roadways in the area are shown in **Table T-4**.

**Table T-4
2004 Roadway Segment Levels of Service**

Roadway Segment	PM Peak Hour Peak Directional Volume	Roadway Capacity at LOS D	Existing LOS (Peak Direction)
Washington Ave N – South of Williams Blvd NW/NE	930	880	F
Washington Ave N– South of Whitehawk Blvd NW	870	880	D
Washington Ave N – South of Whitesell St S	840	880	D
Washington Ave N – South of Calistoga St W/E	400	700	B
Harman Way S – South of Kansas St SW	450	700	B
Calistoga St W – West of Washington Ave N	520	610	D
Calistoga St W – South of Kansas St SW	580	610	D

SUMMARY OF EXISTING OPERATIONS

Based on the described criteria, most roadways and intersections in the City of Orting have sufficient capacity for current transportation needs. The following roadways and intersections which have potential capacity problems identified are listed and described below.

WASHINGTON AVE N (SR 162) FROM NORTH CITY LIMITS TO CALISTOGA ST

This section of roadway has a single lane in each direction with turn lanes at major intersections. The current traffic volumes along this roadway are at or above the upper limit of what can typically be accommodated by a single travel lane. During peak traffic periods vehicles turning onto and off of the major street flow can cause periodic congestion and backups. Two study intersections that were experiencing levels of service below the LOS “D” threshold - Williams Blvd NW/NE and Washington Ave N, and Pioneer Shopping Center Entrance and Washington Ave N have been signalized.

If an isolated stop sign-controlled intersection experiences excessive delay or congestion, it may be appropriate to construct turn lanes or to improve the traffic

control. Traffic control improvements could include implementing all-way stop control or constructing a traffic signal system. These types of isolated improvements are based on site-specific need and are not measures of the overall function of the transportation system. The implementation of intersection improvements is typically addressed in the 6-year planning efforts by the city and in Traffic Impact Analyses prepared for larger developments.

The City is currently constructing intersection improvements at Washington Ave N and Whitesell St NW/NE. This improvement will construct a two way left turn lane between Orting Depot and the High School. There is currently a gap in the turn lane through this intersection. This improvement will move the left hand turn queue from the north/south travel lanes of Washington Ave N into a dedicated lane, greatly reducing backups. Anticipated construction completion is Fall of 2017.

In addition to intersection improvements, there are other improvements that can be constructed to improve the overall safety of city roadways. Potential safety improvements include the following:

- Widening the existing travel lanes
- Improving horizontal and vertical curves
- Constructing or widening shoulders
- Removing obstructions to improve sight distances
- Road surface maintenance
- Constructing turn lanes at intersections
- Constructing sidewalks or bike lanes
- Coordinating signal operations
- Removing mid-block pedestrian crossings
- Increasing lighting at pedestrian crossings
- Adding audio/visual signals at major crosswalks
- Adding street lighting

COLLISION RECORDS

WSDOT provided collision data for Orting for the past 5 years (January 2011 through December 2015). During this time period, there were 183 collisions, six collisions involving nonmotorized users; four collisions with bicyclists and two collisions with pedestrians. Overall, there were three serious injury accidents, 10 “evident injury” accidents, and 42 labeled as “possible injury”. The vast majority of injury accidents occurred at intersections or driveways. All of the collisions with bicyclists occurred at intersections along SR 162, which runs parallel to the Foothills Trail. Left-turning vehicles failed to see bicyclists in all of the collisions and the majority occurred after daylight hours (three out of four collisions). Two of the collisions with bicyclists

occurred at same intersection located at SR 162 and Williams Blvd NW. The two collisions involving pedestrians occurred in residential areas. The collision on Hawk Ave SW occurred near a neighborhood park. The collision on Riddell Ave NE occurred in a cul-de-sac between several pedestrians and a vehicle that was backing out from a driveway.

OTHER MODES

The primary objectives of the ONMTP are to complete the requests of PSRC, and to improve non-motorized transportation planning in Orting. In addition to enhancing mobility, providing travel choice, and reducing emissions that can exacerbate greenhouse gas emissions and climate change, improving non-motorized modes also has the added benefit of improving safety for pedestrians and bicyclists. Therefore, this plan will also consider safety elements identified within the Washington State Department of Transportation (WSDOT) Strategic Highway Safety Plan (2016), also referred to as Target Zero. The primary goal of Target Zero is zero deaths and zero serious injuries by the year 2030. Target Zero addresses everything associated with highway safety: risk behaviors, crash types, road users, decision-making, and performance improvement. The ONMTP will draw upon aspects of Target Zero in terms of planned improvements, because a successful non-motorized plan is also a safe one.

The methods to approach achieving the daunting goal of Target Zero are based around the following categories:

EDUCATION

Give road-users the information to make good choices, such as driving unimpaired, wearing a seatbelt, and avoiding distractions.

ENFORCEMENT

Use data-driven analysis to help law enforcement officers pinpoint and address locations with a high number of behavior-driven fatal and serious injury crashes, such as speeding and impairment.

ENGINEERING

Design roads and roadsides using practical solutions to reduce crashes, or to reduce the severity of crashes if they do occur.

EMERGENCY MEDICAL SERVICES (EMS)

Provide high-quality and rapid medical response to injury crashes.

LEADERSHIP/POLICY

Change laws, agency rules, or policies to support safer roads and driving.

NON-MOTORIZED FACILITIES

This section describes the facilities that are solely intended for pedestrian and bicycle use, including official trails as well as widely used pathways located along the City's extensive levee system.

- **FOOTHILLS TRAIL**

A completed paved section of the Foothills Trail runs parallel to State Route (SR) 162 through Orting, this is the reason for the characterization of road/trail, etc. This is a 12-foot wide non-motorized asphalt trail suitable for bicycles, walking, skating, and wheel chairs. It also has a soft shoulder path for horses. Once completed, the Foothills Trail will extend 26 miles from McMillin through Orting to Buckley. The trail continues to Sumner and Puyallup. From Sumner, the trail connects with the Interurban Trail that now extends through Kent and Auburn. The Puyallup connection will extend west through Puyallup and into Tacoma.

- **LEVEES**

Orting is bordered by two rivers, the Puyallup River and the Carbon River. Although not official nonmotorized facilities, the levees along these two rivers are commonly used as paths to cycle, run, walk, or ride horseback and because of their popularity are included in the ONMTP.

- **EVACUATION ROUTES**

This plan also specifically identifies the City’s evacuation routes, as the chance of a volcanic eruption and subsequent lahar, although rare, is a real possibility in Orting. The City has prepared for an emergency through several evacuation routes (Figure 2-1). These routes are often used in everyday life for other daily activities and should be assessed for both emergency and daily use. The existing primary evacuation route for the schools is through the levee system.

- **TRAILS**

The adopted Orting “Parks, Trails, and Open Space Plan” also establishes other trails throughout the City.

- **CITY STREETS**

Orting has a complete network of streets – most of them include paved sidewalks for pedestrian travel. All new subdivisions within the City built since 1990 have sidewalks and necessary crossings. The older portion of the City has some streets either lacking sidewalks or with sidewalks in poor repair.

LEVEL OF SERVICE ANALYSIS

The Non-Motorized Plan first analyzed the existing Pedestrian, Bicycle, and Evacuation Route in terms of their “level of stress”. This was done using criteria such as:

- Sidewalk/Trail width;
- Sidewalk Buffer width;
- Curb Presence;
- Street Lanes;
- Vehicle Speeds;
- On-street Parking, etc.

This analysis led to the following maps which indicate which existing streets, sidewalks, and trails “good” and which are in need of improvement.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis, the Plan recommends a number improvements to the networks as follows:

PEDESTRIAN FACILITIES

In order to address facilities with high pedestrian levels of stress, the suggested solutions are to complete gaps in the sidewalk and trail systems. The City is currently planning on replacing outdated ADA ramps in Old Town as well as widen sidewalks in Old Town. When these gap improvements and the suggested improvements are made, the resulting conditions should be acceptable.

Other recommendations for the City are to:

- Widen evacuation route along Calistoga Street West towards Soldiers home.
- Widen the sidewalks on Calistoga Bridge.
- Improve City's crosswalk safety.
- Pursue opportunities to work with Pierce County to provide ADA access to the levee system.

Non-motorized improvements could be prioritized in areas where pedestrian and bicycle activity is likely higher and supported by nearby land uses and destinations. This would include schools, parks, downtown and areas with connections to the Foothills trail. These types of land uses and destinations are considered non-motorized generators and generally have a greater potential to encourage non-motorized travel. These areas of higher non-motorized travel could be prioritized for investments in non-motorized improvements and are indicated in red and orange. Areas shown in yellow or green are a lower priority for investment.

See Figure 5-1, Non-Motorized Improvement Area Priority.

BICYCLE IMPROVEMENTS

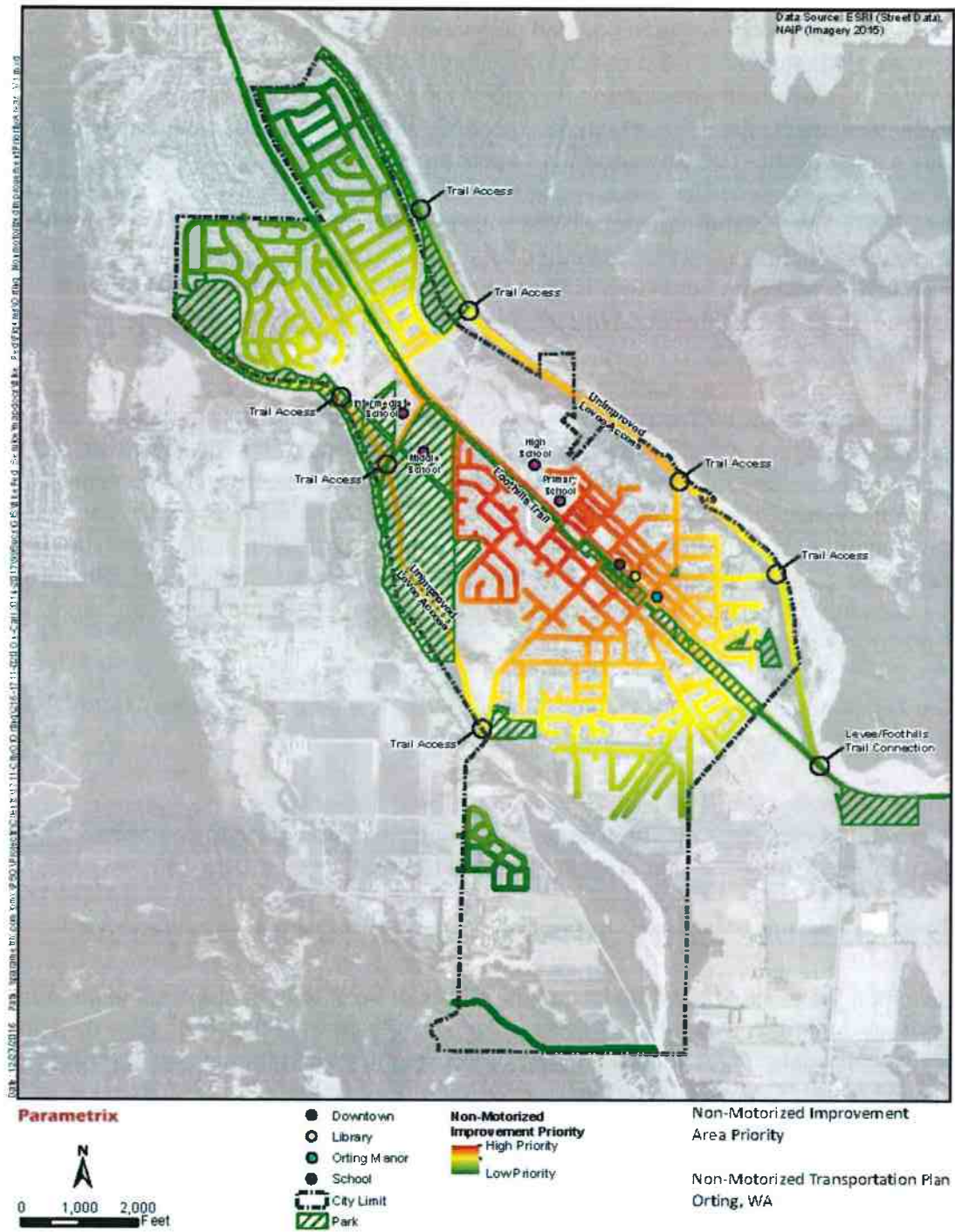
Overall, Orting rated well in the low levels of stress placed on bicyclists, with 87 percent of facilities meeting an acceptable level of stress. The single best way to achieve 100 percent acceptable level of stress for bicycles is to add bike lanes to any roadway with a BLOS of 4 or 5. However, bike lanes may not be desirable or reasonable on every local access or neighborhood road, where low traffic volumes and low speeds already provide a safe condition for non-motorized uses. Old Pioneer Way is an example of a street that scored a BLOS of 5 but will not need improvements because it is paralleled by the Foothills Trail, which is used by non-motorized road users in place of Old Pioneer Way. Programs and policies that promote and enhance bicycle travel should be considered, primarily in places where reasons for poor BLOS have a reasonable explanation, such as on Old Pioneer Way.

A focus on connectivity to the Foothills trail is one way to make bicycle improvements. The Foothills trail is a popular route for bicyclists and providing access points with a low Level of Stress would improve the City's overall BLOS. Non-motorized generators, such as the Foothills trail, are generally a higher priority for improvement. In terms of bicycle use, trail access points in orange or red are areas that would benefit from improvement projects.

- Calistoga Street West

- Kansas Street Southwest
- Consider the addition of bike lanes on Calistoga Street and Kansas Street.
- Consider striping the trail with “fast” and “slow” lanes for bicycle and foot traffic.
- Removing mid-block crossings with Foothills trail.

Figure 5-1, Non-Motorized Improvement Area Priority



EVACUATION ROUTES

Evacuation and emergency planning and preparedness are covered by the City's Emergency Management team under a document called Emergency Preparedness. However, it is worth emphasizing in this ONMTP, to ensure that evacuation route planning also meets the needs of anyone traveling on foot or by mode other than car should a lahar occur. The City currently has several evacuation routes .

The ONMTP is not requiring specific evacuation route improvements, as these are being addressed in other areas of City planning. However, in order to support all modes, particularly during emergencies, it is worth noting a few key projects and areas that should be addressed in the City's hazard mitigation and emergency planning.

Orting Emergency Evacuation Bridge System

The Orting Emergency Evacuation Bridge System is a proposed an evacuation improvement, which was developed from a concerned group of parents. The fear was that in an actual emergency the current evacuation routes would be compact with vehicles slowing the evacuation process for pedestrians and vehicles alike. Out of this concern, a pedestrian only evacuation route, was born. The route is accessible to all four schools in the area and uses Rocky Road to lead pedestrians to higher and safer ground. This project is not currently fully funded, however preliminary design is complete and funding is being actively pursued.

When completed, this system will also extend the recreational trail linkages from Orting to Tehaleh on the east side of the Carbon River.

Sidewalk Gaps/System Repairs

Repair/rebuild elements of current evacuation routes that may need to be improved, such as heavily used sidewalks and bridges along the routes.

RECOMMENDED IMPROVEMENTS AND FINANCIAL STRATEGY

Based upon the existing conditions, and the City's desired level of stress standards for pedestrians and bicyclists, several projects have been identified that will allow the City to achieve their goals. The Table summarizes each recommended improvement project or program, as well as possible funding sources.

Table Error! No text of specified style in document.-1. Non-Motorized Improvement Projects

Project/Program	Description/Timeline	Cost Range	(Potential) Funding Sources
Pedestrian			
Sidewalk Gap Closures and ADA Compliance	Widen sidewalks for ADA acceptable use and replace ADA ramps.	\$2,000 – \$6,000 per ADA ramp \$570 – \$650 per linear foot to construct sidewalks	CBDG (Community Block Development Grant)
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	TAP (Transportation Alternatives Program)
Safe Routes to School	Improve sidewalks and routes to school so that children can walk to school safely *based off of sidewalk improvements listed in the TIP ranging from 5-foot sidewalks to 12-foot sidewalks.	\$570 – \$650 per linear foot to construct sidewalks	Safe Routes to School Grant
Bicycle			
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	
Evacuation			
Orting Emergency Evacuation Bridge System	<i>**This project is included to highlight the importance of evacuation route planning for all modes. This project will likely be funded through multiple sources.**</i>	Phase 1 – \$7 million Phase 2 – \$40 million	Hazard Mitigation Grant
Evacuation Route Improvements	Widen the sidewalks on the current evacuation route. Widen the west side of Calistoga to 8 – 12 feet. Widen the East side of the bridge sidewalk to 8 – 12 feet.	\$287,400 – \$362,000	Grant (EMPG) Emergency Management Performance

AIR AND RAIL SERVICE

There are no public or private airports or rail lines within the City of Orting or the surrounding area.

PUBLIC TRANSIT

Pierce Transit no longer provides services within the City of Orting. Sound Transit offers commuter rail service between Tacoma and downtown Seattle with stops in Puyallup, Sumner, Auburn, Kent and Tukwila.

FREIGHT MOBILITY

Heavy vehicles, defined as those vehicles which equal or exceed 20,000 pounds gross vehicle weight, normally follow main arterial roads and State Routes. WSDOT uses the County Road Freight and Goods Transportation System (FGTS) to classify state highways, county roads and city streets according to the tons of freight that are carried on them each year. Along SR 162, Washington Ave N/S, Bridge St S, Harman Way S, and Calistoga St W are classified as T-2, a roadway carrying 4 million to 10 million tons per year. In 2013, SR 162 carried 4,770,000 tons between SR 410 and the City of Orting. Daily truck volume is 1,100 truck, accounting for 6-percent of the traffic.

NON-MOTORIZED FACILITIES

A completed paved section of the Foothills Trail runs parallel to SR 162 through Orting. This is a 12-foot wide non-motorized asphalt trail suitable for bicycles, walking, skating and wheel chairs. It also has a soft shoulder path for horses. When completed, the Foothills Trail will extend 26 miles from McMillin through Orting to Buckley. The trail continues to Sumner and Puyallup. From Sumner, the trail connects with the Interurban Trail that now extends through Kent and Auburn. The Puyallup connection will extend west through Puyallup and into Tacoma. Aside from sidewalks along the majority of City streets, the Foothills Trail is the only dedicated non-motorized facility in Orting.

Figure T-2 illustrates the location of the foothills trail within Orting City limits.

PLANNED TRANSPORTATION IMPROVEMENTS

PIERCE COUNTY TRANSPORTATION PLAN

The Pierce County Transportation Plan was adopted in December, 1992 and amended in 1997 to include the Pierce County Nonmotorized Transportation Plan. The Plan was updated again in 2009, but was not formally adopted by Pierce County Council. The Draft Transportation Plan Technical Appendix lists recommended roadway and nonmotorized transportation projects, prioritized as Premier, High, Medium, or Low, and depicts the system expansion needs to the year 2010. The projects that impact Orting are listed below.

PREMIER PRIORITY

- Shaw Road E – 122nd Ave E. Corridor: Construct new arterial from SR 410 to Orting-Kapowsin Hwy.
- SR 162 Improvements: Widen from 2 to 4 lanes; geometric and intersection improvements – Orting City limits to SR 410.
- SR 161: Turn lanes, shoulders, alignment, channelization – SR 512 to 224th St.

MEDIUM PRIORITY

- South Hill Connector (Military Rd E - 128th St E corridor): Upgrade to major arterial standards, SR 162 to SR 161.

PIERCE COUNTY 6-YEAR TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The prioritization process for transportation projects in unincorporated Pierce County is implemented through the Pierce County Transportation Improvement Program (TIP). The projects identified in their 2014-2020 TIP that impact the study area are summarized below:

- 176th St E Extension: Construct new roadway 130th Ave E to Calistoga St W.
- Shaw Rd E: Widen and reconstruct roadway to provide additional lane(s). This segment is projected to fail concurrency in 2019.
- Rhodes Lake Rd E/McCutcheon Rd E: Spot safety improvements at intersection.
- Rhodes Lake Rd E: Reconstruct roadway from Falling Water Blvd E to 198th Ave E.
- 128th St E/Cascadia Blvd E/Falling Water Blvd E: Construct a new roadway arterial from SR 162 to Falling Water Blvd E.
- Orting – Kapowsin Hwy E/200th St E: Add traffic signal and provide turn lane(s).

6-YEAR TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The City of Orting's 6-Year Transportation Improvement Program (TIP), 2018-2023, includes regrading, paving, parking, curb/gutter, sidewalks, and water, sewer, and storm improvements to several local streets, including Bridge St SE, River Ave SE, Train St SW/SE, Calistoga St W, Kansas St SW, and Eldredge Ave SW/NW. Additionally, all of the chip seal projects for the City Transportation Improvement Board are included. Additional transportation expansion projects such as the extension of Whitehawk Blvd to Calistoga Street West and the Orting Emergency Evacuation Bridge System are planned but not currently funded. The City is required

to update its TIP annually, and a copy of the current plan can be obtained from the City's Public Works Department.

The TIP is adopted by reference as a part of the Transportation Element of the Comprehensive Plan.

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION IMPROVEMENT PROGRAM

The following project is the only project planned on the SR 162 corridor outside of Orting during the 2015-2018 planning window.

- SR 162/Puyallup River Bridge Replacement – This project constructs a new bridge replacing the existing structurally deficient bridge. (Complete 2016)

ROUTE DEVELOPMENT PLAN – STATE ROUTE 162

Since 1997, Orting has grown substantially and the community's transportation needs have changed. New residential and school development along Washington Ave N between Whitehawk Blvd NW and the north City limits have provided turn and merge lanes at new intersections. Pending development, the Town Center North area is expected to see frontage improvements including an urban configuration of curbs, gutters, sidewalks, and on-street parking along with pedestrian amenities. The proposed "Orting Emergency Evacuation Bridge System" will create a new pedestrian focus on Washington Ave N that will contribute to recreational trail use connections across the Carbon River. The planned Southwest Connector will use a new traffic signal at the Whitehawk Blvd intersection to direct through traffic around downtown Orting to the Calistoga Bridge. The Orting School District's new middle school and stadium will stimulate increased pedestrian connections across Washington Ave N to the high school campus.

The Downtown Vision Plan anticipates that Washington Ave SN from Bridge St S to Whitehawk Blvd NW will serve as Orting's "main street" providing a highly pedestrian-oriented street with lighting, signage, plantings, and other design features that are reflect the historic heritage of the community and promote economic development and tourism.

CONCURRENCY

The City of Orting requires that the capacity of public facilities and services is equal to or greater than the capacity required to maintain the level of service standards established by the City. The test for concurrency is not passed and a proposed project may be denied if the capacity of the public services or facilities is less than the capacity required to maintain the adopted level of service standards (LOS "D") after the impacts associated with the requested permit are added to the existing capacity utilization. The City will prohibit approval of any development that causes the level

of service to fall below adopted standards, unless necessary improvements are made concurrently with the development. Concurrent shall mean at the same time as the development impacts or planned and funded for construction within six years.

Methods for the City to monitor these commitments include:

- Annual monitoring of transportation facilities within updates to the Six-Year Transportation Improvement Program (TIP);
- Assessing level of service;
- Reviewing the comprehensive transportation plan and other related studies for necessary improvements;
- Making appropriate revisions to the Six-Year TIP.

TRAFFIC FORECAST

Traffic forecasting is a means of estimating future traffic volumes based on the expected growth in population and employment within an area. To estimate future traffic volumes resulting from growth, forecasts were prepared using current traffic counts, the Pierce County travel demand forecasting computer model, and estimates of population and employment developed for the City's Comprehensive Land Use Plan. The model is calibrated to a 2002 base and has a future horizon year of 2030. The City of Orting Transportation Plan is set to be updated over the course of 2017-2018. Traffic forecasting for the City will also be updated at that time.

The projected 2030 PM peak hour traffic volumes with planned improvements only is provided on **Figure T-3**. The Level of Service results for the study intersections and roadways are provided using the methods described previously in this report. In addition the LOS calculation called Intersection Capacity Utilization (described below) is provided.

INTERSECTION CAPACITY UTILIZATION (ICU)

Most intersections within the city are under stop-sign control. As traffic on the major streets in the City of Orting increase, turning onto the major streets from a side street will become increasingly difficult. As described earlier, the level of service criteria for stop-sign controlled intersections is typically determined by the minor street left-turn movement. Constructing a traffic signal is a common method for improving the level of service at a stop-sign controlled intersection. However, traffic signals should not be constructed unless certain factors are present such as sufficient traffic volumes over long periods of the day, high levels of pedestrian traffic or preventable accident history.

In a long range plan it is difficult to determine which specific intersections within the City of Orting grid might eventually require traffic signals. The Intersection Capacity Utilization (ICU) is a valuable method for determining the long-term needs of intersections. The ICU method assumes the implementation of a traffic signal system

and provides a general means of determining if the given lane configuration can accommodate the projected traffic demand. Use of the ICU is not to say that every intersection will ultimately be signalized, but an indication that a traffic solution exists within the available lanes.

The ICU LOS reports on the amount of reserve capacity or capacity deficit, whereas the delay-based LOS reports on the average delay experienced by motorists. A brief description of the conditions expected for each ICU LOS is as follows:

- **LOS A, ICU ≤ 55%:** The intersection has no congestion. This intersection can accommodate up to 40-percent more traffic on all movements.
- **LOS B, ICU > 55% to 64%:** The intersection has very little congestion and can accommodate up to 30-percent more traffic on all movements.
- **LOS C, ICU > 64% to 73%:** The intersection has no major congestion and can accommodate up to 20-percent more traffic on all movements.
- **LOS D, ICU > 73% to 82%:** The intersection normally has no congestion and can accommodate up to 10-percent more traffic on all movements.
- **LOS E, ICU > 82% to 91%:** The intersection is right on the verge of congested conditions. This intersection has less than 10-percent reserve capacity available.
- **LOS F, ICU > 91% to 100%:** The intersection is over capacity and likely experiences congestion periods of 15 to 60 consecutive minutes. Sub-optimal signal timings can cause increased congestion.

Figure T-3 shows projected PM Peak Hour traffic volumes for 2030, with planned improvements. Table T-5 below shows the projected intersection level of service for 2030.

**Table T-5
2030 Intersection Levels of Service**

Intersection	HCM LOS	ICU LOS
Signalized Intersections		
Washington Ave N/S & Calistoga St E/W	D	B
Williams Blvd NW/NE & Washington Ave N	E	F
Washington Ave N & Cardinal Ln NE	B	C
Unsignalized Intersections		
Whitesell St NW/NE & Washington Ave N	F	C
Bridge St SE & River Ave SE & Varner Ave SE	N/A ¹	A
Calistoga St W & Kansas St SW	F	D
Lane Blvd NW/NE & Washington Ave N	F	E
Old Pioneer Way NW & Washington Ave N	E	E

**Table T-5
2030 Intersection Levels of Service**

Intersection	HCM LOS	ICU LOS
Whitehawk Blvd NW & Washington Ave N	D	C
Calistoga St W & Corrin Ave SW/NW	F	C
Calistoga St W & Eldredge Ave SW/NW	F	B
Whitesell St NW & Eldredge Ave NW	A	A
Bridge St S/SW & Corrin Ave S & Harman Way S	N/A ¹	B
Kansas St SW & Harman Way S	C	C
Bridge St S/SE & Washington Ave S/SE	N/A ¹	B

¹ Not available – The intersection configuration not allowed in HCM analysis.

The roadway segment level of service for the 2030 horizon with no additional planned improvements is shown in the table below.

**Table T-6
2030 Roadway Segment Levels of Service**

Roadway Segment	PM Peak Hour Peak Directional Volume	Roadway Capacity at LOS D	Existing LOS (Peak Direction)
Washington Ave N – South of Williams Blvd NW/NE	1,600	880	F
Washington Ave N– South of Whitehawk Blvd NW	1,090	880	F
Washington Ave N – South of Whitesell St S	950	880	F
Washington Ave N – South of Calistoga St W/E	560	700	C
Harman Way S – South of Kansas St SW	620	700	C
Calistoga St W – South of Kansas St SW	900	610	F
Calistoga St – West of Eldredge Ave NW/SW	750	610	F

FUTURE TRAFFIC CONDITIONS SUMMARY

Based on the traffic volume projections and the analysis described above, even with the planned roadway and intersection improvements many deficiencies are likely to develop by the 2030 horizon. The following is a description of the identified

deficiencies and strategies to improve the traffic system so that the future traffic loads can be adequately accommodated.

WASHINGTON AVE (SR 162)

This portion of SR 162 is expected to experience a very high level of traffic growth over the next 25 years. Much of the increase is due to development occurring within the north end of the City of Orting. Also, increased traffic cutting through Orting is anticipated – primarily to/from the southwest via Calistoga St W. The roadway segment analysis and intersection analysis indicates that SR 162 is currently operating at or near capacity and will not be able to adequately handle the traffic increases expected. The Recommended Transportation Plan includes strategies to improve the traffic operations on SR 162 primarily focused on:

- Additional turn lanes
- Median barrier or other access restrictions
- New roadways to provide alternative routes to SR 162

These strategies will be discussed more fully in the following section of this report.

CALISTOGA ST WEST OF WASHINGTON AVE N (SR 162)

The roadway segment analysis indicates that Calistoga St will require improvement to accommodate the anticipated increase in traffic demand. Based on the marginal level of service failure it is likely that Calistoga St will not require additional through-lanes, but will need the addition of auxiliary turn lanes at intersections, and possibly a center two-way-left-turn-lane (twl). This improvement could increase the efficiency and safety of the roadway with minimal right-of-way and construction impacts.

Individual intersections along Calistoga St W (Kansas St SW, Eldredge Ave NW/SW and Corrin Ave NW/E) are expected to fail under stop sign-control. The intersections could be improved by implementing turn lanes, but some or all may also require construction of a traffic signal system. The ICU level of service indicates that each of the intersections could accommodate the 2030 traffic loading under traffic signal control.

The proposed Whitehawk Blvd NW extension project will mitigate many of these needed improvements by providing a parallel limited access roadway bypassing many of these intersections.

RECOMMENDED TRANSPORTATION PLAN

As a result of the transportation analysis, a listing of major transportation system improvements necessary to address identified deficiencies in the 2030 analysis year has been established. The GMA requires an assessment of how well a recommended transportation plan meets the requirements of the Act and how well the level of

service goals are met. The City of Orting has a level of service goal of LOS “D” for intersections and arterials.

Based on the traffic volumes and comparative analysis described previously the following list of projects has been selected to address the City of Orting’s long term transportation needs. The recommended improvements are summarized below (see also **Table T-7** and **Figure T-3**).

ROADWAY IMPROVEMENTS

The following roadway capacity improvements are recommended to maintain an acceptable level-of-service (Note that recommended improvements to Washington Ave N (SR 162) will be dependent upon state funding):

- R1:** *Whitehawk Blvd NW Extension* – Construct a two/three-lane minor arterial roadway extending Whitehawk Blvd NW from the current terminus at Orting Circle south to Calistoga St W near Kansas St SW. The existing portion of Whitehawk Blvd NW may need upgrading to minor arterial status.
- R2:** *Washington Ave N (SR 162)* – Widen to 4/5 lanes in each direction between the north city limits and Whitehawk Blvd NW with turn lanes at major intersections.
- R3:** *Washington Ave N (SR 162)* – Construct two-way left turn lane from Whitehawk Blvd NW to Calistoga St W, and right run lane southbound from Whitehawk Blvd NW to Cardinal Ln NE. Scheduled for completion in 2017.
- R4:** *Calistoga St W Corridor Study* – Develop recommendations for capacity and safety improvements to from Corrin Ave NW to Orting-Kapowsin Hwy E.

The following roadway improvements are recommended in order to provide acceptable safety and circulation within the City of Orting:

- R5A:** *Northeast Connector* – Construct a two/three lane collector roadway roughly parallel to Washington Ave N between the proposed Village Crest development and Whitehawk Blvd NW.
- R5B:** *Northeast Connector* – Driveway access to high school.
- R6:** *Washington Ave N (SR 162)* – Widen to 4/5 lanes from Bridge St S to south City limits.
- R7:** *South Orting Access* – Construct new collector roadway to provide access to developable lands adjacent to Orting-Kapowsin Hwy E/Calistoga St W intersection.
- R8:** *Washington Ave N (SR 162)* – Rechannelization and streetscape improvements.

RECOMMENDED INTERSECTION IMPROVEMENTS

The following intersection improvements are recommended:

- I1:** *Whitehawk Blvd NW/ Washington Ave N* – Construct traffic signal (this project would be required as part of construction of the Whitehawk Blvd NW Extension).
- I2:** *Whitehawk Blvd NW Extension* – Skinner Way SW/Calistoga St W – Construct traffic signal (this project would be required as part of construction of the Whitehawk Blvd NW Extension).
- I3:** *Orting-Kapowsin Hwy E/Calistoga St W* – Intersection Realignment.

Several intersections that are currently under stop sign control are expected to experience excessive delay for the minor street movements. As noted previously, construction of a traffic signal can be an appropriate solution to congestion at an unsignalized intersection; however, traffic signals are not necessarily warranted at each location. The following is a list of intersections that should be monitored to determine if traffic conditions develop that warrant constructing a traffic signal. Some of the intersections listed are also listed as part of roadway projects. It is possible that the intersections might require upgrade prior to completion of the roadway projects.

- Whitehawk Boulevard/SR 162 (also included as part of the Whitehawk Boulevard Extension project)
- Kansas St SW/Calistoga St W
- Old Pioneer Way NW/Washington Ave N – The through volumes at this intersection will make minor street movements difficult. The intersection would be particularly sensitive to the level of development that occurs. The proposed connection of Old Pioneer Way NW to Whitehawk Blvd NW will allow additional routes to the area and would improve the Old Pioneer Way NE/Washington Ave N intersection.

SIX YEAR PLAN

The City has identified the key projects that are necessary to meet their growing transportation needs within their currently adopted Six-Year plan. The following is a list of the key projects:

- Kansas Street SW Reconstruction
- Calistoga Street W Re-grade
- Whitehawk Blvd NW/Washington Ave N (SR 162) Intersection Improvement
- Orting Emergency Evacuation Bridge System
- Southwest Connector

- Whitehawk Blvd NW Extension – Orting Circle south to Calistoga Street W at Kansas Street SW

2030 INTERSECTION LEVELS OF SERVICE WITH RECOMMENDED IMPROVEMENTS

The 2030 levels of service at key intersections are shown in **Tables T-5** and **T-6**. The levels of service are based on traffic volumes generated by growth in the area and implementation of the improvements listed in the recommended plan. The capacity analysis shows that the planned improvements will allow each of the study intersections to operate at an acceptable LOS “D” or better.

CAPITAL COSTS FOR RECOMMENDED IMPROVEMENTS

**Table T-7
2030 Improvement Program**

Project	Roadway	Improvement		Cost Estimate (\$000)	Funding Source
		Type	Description		
Roadway					
R1*	Whitehawk Blvd NW Extension	Circulation	Construct 2/3 lane arterial Whitehawk-Calistoga at Kansas	\$1,200	City Private
R2	Washington Ave (SR 162) – North city limits – Whitehawk Blvd.	Capacity	Widen to four lanes, add left turn lane	Unfunded/WSDOT	WSDOT
R3	Washington Ave N – Whitehawk Blvd NW-Cardinal Ln NE	Capacity	Construct Southbound Right Turn lane	Unfunded/WSDOT	WSDOT
R4	Calistoga St W	Capacity	Construct two way left turn lane	Unfunded	City Private
R5A	Northeast Connector	Safety & Circulation	New Roadway (2/3 lanes)	\$1,300	City Private
R5B	Northeast Connector	Safety & Circulation	Driveway Access to High School	\$750	City Private
R6	Harman Way S (SR 162) – Bridge St S to south city limits	Safety & Circulation	Widen to four lanes, add left turn lane	Unfunded/WSDOT	WSDOT
R7	South Orting Access	Circulation/ Access	Construct new collector roadway to provide access	\$650	City Private
Intersection					
I1*	Whitehawk Blvd NW/Washington Ave N	Capacity	Construct signal as part of R1	\$250	City Private
I2*	Whitehawk Blvd NW Extension/Calistoga St W	Capacity	Construct signal as part of R1	\$250	City Private
I3	Orting-Kapowsin Hwy E/Calistoga St W	Safety/ Access	Re-align to four-way	\$250	City Private

* Projects listed in Orting's 2014 Six-Year Transportation Improvement Program, considered high priority.

OTHER IMPROVEMENTS AND STRATEGIES

TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM strategies implemented by the City of Orting will result in fewer vehicles needed for commuters during peak periods, postponing or even eliminating the need to make costly expansions in roadway capacity. Viable travel alternatives help mitigate impacts of growth in vehicular traffic and provide feasible options for more people. TDM strategies include:

- Providing effective public transportation services to help reduce car dependence in the region and serve the needs of people who rely on public transportation;
- Encouraging bicycle and pedestrian travel by providing inviting, safe, convenient and connected routes, education and incentive programs, and support services such as bike racks, showers and lockers;
- Maintaining and improving a network of highways, streets and roads that moves people, goods and services safely and efficiently, minimizes social and environmental impacts, and supports various modes of travel.
- Providing adequate connections and access among all transportation modes

LAND-USE CHANGES

The traffic volume projections used for this analysis are based on the 2030 employment and housing projections for the City of Orting area. The location, type and amount of development has a direct effect on the level of traffic flows and congestion that can occur within the area. Changes to the zoning and development densities allowed within the city can be adjusted to influence the future traffic loadings on the street system. The following land-use strategies may be considered:

Consider future land use changes in the City and in future urban growth areas within the context of the transportation system capacity.

Use mixed-use zoning with housing, shopping and employment within localized areas to encourage short vehicle trips and/or use of other non-motorized modes of travel.

ACCESS CONTROL

The carrying capacity of a roadway is reduced by conflict points that require drivers to adjust to the influence of other vehicles, pedestrians or other distractions. For certain roadways it is appropriate to limit the number or type of accesses allowed along the facility. Access control strategies include:

- Not allowing individual driveway approaches (consolidating the access points for adjacent properties)

- Limiting the number or spacing of minor intersection points
- Increasing separation between vehicle traffic and non-motorized traffic along the roadway
- Separating the opposite directions of flow on the roadway by constructing a raised median barrier
- Limiting minor roadway or driveway intersections to right-turn-only access

In Orting, some access control strategies have already been implemented along Washington Ave N between the north city limits and Whitesell St S. The roadway has limited numbers of cross-street intersection points and a pedestrian/non-motorized trail separated from the roadway.

ACCEPTING LOWER LEVELS OF SERVICE

Within the City of Orting the level of service is a measure of the operation of the street system during the highest traffic volume hour of the day, which typically occurs during the evening commute period. If a roadway or intersection experiences a poor level of service during the highest traffic hour it may still function well throughout the majority of the day. An agency can determine that the expense required to solve a short-term congestion problem might not be the most efficient use of transportation funds.

In some situations when a roadway or intersection falls below acceptable service levels and improvement strategies are not deemed feasible or funds are not available to construct improvements, an option is to lower the accepted level of service standard. By lowering the level of service standard an agency can continue to allow new development traffic while planning toward improvements that will improve the traffic congestion. If an improvement is eventually constructed that improves the roadway level of service, the LOS standard can be changed back to a higher standard.

If an agency adopts a lower LOS standard, it does not limit the ability to require construction of ‘spot’ improvements to maintain safe traffic flow. These types of safety improvements could include turn lanes or construction of a traffic signal.

LEVEL OF SERVICE COMPLIANCE

The 1998 legislation House Bill 1487, known as the “Level of Service” Bill, amended the GMA, Priority Programming for Highways, Statewide Transportation Planning, and Regional Planning Organizations. The combined amendments to these RCWs were provided to enhance the identification of, and coordinated planning for, “transportation facilities and services of statewide significance (TFSS)”. HB 1487 recognizes the importance of these transportation facilities from a state planning and programming perspective. It requires that local jurisdictions reflect these facilities and services within their comprehensive plan. To assist in local compliance with HB 1487, the Washington State Department of Transportation (WSDOT), Transportation

Planning Office, and the Washington State Department of Community, Trade and Economic Development promulgated implementation guidelines in the form of a publication entitled “Coordinating Transportation and Growth Management Planning”.

- In 2003, the Puget Sound Regional Council adopted level of service standards for regionally significant state highways in the central Puget Sound region. Regionally significant state highways (also called non-HSS) are state transportation facilities that are not designated as being of statewide significance. Together with these entities, the City of Orting has worked to compile the best available information to include in the comprehensive plan amendment process.
- ***Inventory of state-owned transportation facilities within the City of Orting:*** SR 162 runs through the City of Orting and provides the primary connection to SR 161, SR 167, SR 512 and Interstate 5.
- ***Estimates of traffic impacts to state facilities resulting from local land use assumptions:*** Figure T-4 provides 20-year traffic volumes for SR 162, which is the only state facility within Orting. The volumes were generated by the Puget Sound Regional Council model, which includes land use assumptions for 2030 for the City of Orting.
- ***Transportation facilities and services of statewide significance (TFSSS) within Orting:*** There are no transportation facilities or services of statewide significance within the City included on the proposed list of TFSSS.
- ***Highways of statewide significance within Orting:*** The Transportation Commission List of Highways of Statewide Significance doesn't list any facilities within the City of Orting or its growth area.
- ***Highways of regional significance within Orting:*** SR 162 is designated as a Regionally Significant State Highway, Tier 2. Tier 2: These routes serve the "outer" urban area - those outside the 3-mile buffer - and connect the "main" urban growth area (UGA) to the first set of "satellite" UGA's (e.g., SR 410 to Enumclaw). These urban and rural areas are generally farther from transit alternatives, have fewer alternative roadway routes, and locally adopted LOS standards in these areas are generally LOS "D" or better. The standard for Tier 2 routes is LOS "D".

The City of Orting asserts that proposed improvements to state-owned facilities will be consistent with the Regional Transportation Plan, Destination 2030, and the State Highway System Plan. The City affirms the establishment of LOS “C” for SR 162, a Highway of Regional Significance.

FINANCE AND CONCURRENCY

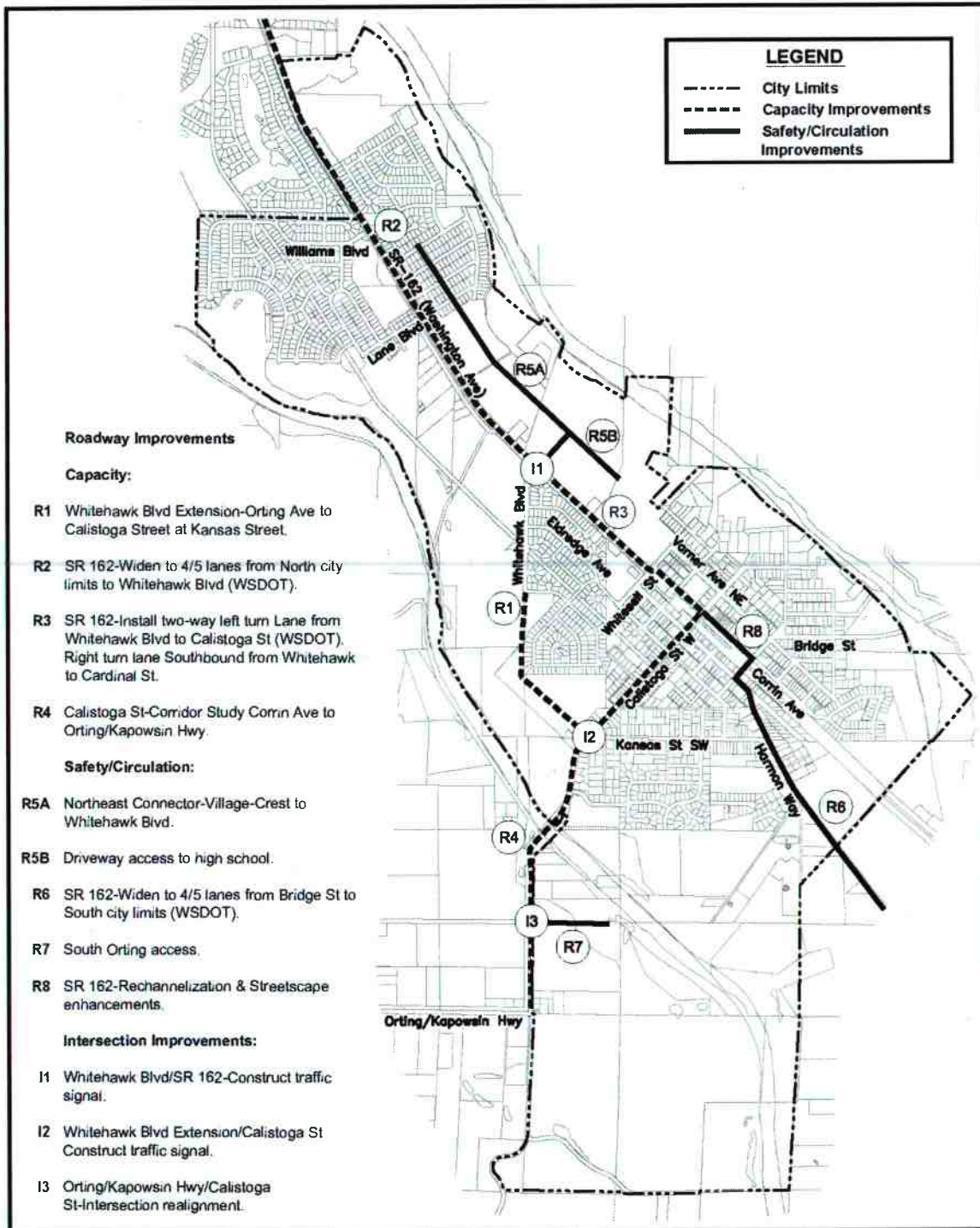
The GMA requires that a jurisdiction’s transportation plan contain a funding analysis of the transportation projects it recommends. The analysis should cover funding

needs and funding resources, and it should include a multi-year financing plan. The purpose of this requirement is to ensure that each jurisdiction's transportation plan is affordable or achievable. If a funding analysis reveals that a plan is not affordable or achievable, the plan must discuss how additional funds will be raised, or how land use assumptions will be reassessed.

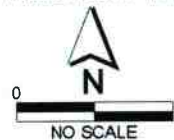
FEDERAL SOURCES

The 1991 Federal Intermodal Surface Transportation Efficiency Act (ISTEA) reshaped transportation funding by integrating what had been a hodgepodge of mode- and category-specific programs into a more flexible system of multi-modal transportation financing. For highways, ISTEA combined the former four-part Federal Aid highway system (Interstate, Primary, Secondary, and Urban) into a two-part system consisting of the National Highway System (NHS) and the Interstate System. The National Highway System includes all roadways not functionally classified as local or rural minor collector. In 1998, the Transportation Efficiency Act for the 21st Century (TEA-21) continued this integrated approach, although specific grants for operating subsidies for transit systems were reduced.

To receive TEA-21 funds, cities must submit competing projects to their designated Regional Transportation Planning Organization (RTPO) or to the state DOT. Projects which best meet the specified criteria are most likely to receive funds. Projects which fund improvements for two or more transportation modes receive the highest priority for funding.



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**Figure 4
Planned Transportation
Improvement Projects**

Economic Development Appendix

ECONOMIC DEVELOPMENT APPENDIX

INTRODUCTION

This appendix includes a summary of analysis and strategies that support the goals and policies in the Economic Development Element. The source of this information is the City of Orting Economic Baseline Study prepared by Property Counselors in 2014. The appendix fulfills the City's obligations under the GMA to include an economic development element in the Comprehensive Plan.

BACKGROUND

The following is based on the Economic Baseline Analysis. Orting has long understood that it has very limited resources to support economic development that can improve the tax base and create local jobs. Orting is an attractive community in many ways, and hundreds of new homes have developed over the last decade. This, in turn, has produced significant demand for community-serving retail and personal service business, parks and schools, and generated new traffic demands on the few arterials that connect the City with the region.

The Economic Baseline Analysis provides a description of the strengths, weaknesses, opportunities, and threats affecting the City's ability to serve residents and grow the existing business community, attract new business, and compete with neighboring communities. It identifies potential markets that the City should be serving, and strategies that the City should employ to accomplish our objectives.

This report provides a summary of the results of the economic baseline analysis. It is organized in six sections.

- City Profile
- City Competitive Position
- Retail Market Potential
- Office and Industrial Market Potential
- Tourism Market Potential
- Economic Strategies

CITY PROFILE

POPULATION

The City of Orting has an estimated population of 7,065 as of April 1, 2014. The City has experienced very rapid population growth over the past 25 years.

**Table ED-1
City of Orting Population**

Year	Population	Avg. Ann. Gr.
1990	2,106	-
2000	3,931	6.4%
2005	4,820	4.2%
2010	6,746	7.0%
2014	7,065	1.2%

Source: US Census Bureau; Washington Office
of Financial Management

Population growth has slowed since 2010, but the average annual rate of 1.2-percent since 2010 exceeds the average rate of 0.8-percent for the county as a whole.

Orting serves a large market area that extends north past McMillin, east toward South Prairie, south and west toward Graham along the Orting Kapowsin Highway. This area corresponds generally to the boundaries of Pierce County Fire District 18. The basis for this trade area determination is described in the retail section provided later in this report. The population of this larger trade area is estimated to be 13,600. While this area does not correspond to any designated census tract, it has also experienced rapid growth over the past 15 years.

Orting is part of the Puget Sound Regional Council Forecast Analysis Zone (FAZ) 705. This FAZ includes Orting and Prairie Ridge north of the Puyallup River. This area is projected by PSRC to grow at an average annual rate of 2.8-percent over the period 2010 to 2030. Much of the growth is in the area north of the Puyallup River, and is not part of the City’s natural trade area given current transportation links. However, the area to the south and west of Orting, FAZ 506, is projected to grow at an average rate of 2.2-percent per year, and a large portion of this growth is in the Orting trade area.

The characteristics of the City of Orting population can be compared to those of Pierce County as a whole. **Table ED-2** provides a comparison of several demographic characteristics. The demographic characteristics differ from those of the county as a whole in several respects:

- The average household size is much larger at 3.01, and a much larger percentage of total households have members less than 18 years of age. The average age is much lower as well.
- A much greater percentage of housing units are owner occupied rather than rented.
- Almost 90-percent of the population is white by race.

Overall, Orting is a strongly family-oriented community with only moderate racial diversity.

**Table ED-2
Comparison of Demographic Conditions
Orting vs. Pierce County 2010**

	Orting	Pierce County
Population		
Total Population	6,746	795,225
Population in Households	6,568	777,280
Population in Families	5,646	625,123
% of Population in HH	97.4%	97.7%
% of Population in Families	83.7%	78.6%
Households		
Total Households	2,184	299,918
Avg Household Size	3.01	2.59
% of Households with < 18 yrs.	48.4%	35.3%
Age		
Median Age	32.7	35.9
% of Population 65+	10.2%	11.0%
% of Population < 18	30.7%	24.9%
Housing Units		
Total Housing Units	2,361	325,375
% Occupied	92.5%	92.2%
% Owner-occupied	73.6%	58.1%
% Renter-occupied	18.9%	34.1%
Population by Race		
White	5,927	590,040
Black or African American	103	53,998
American Indian	95	10,879
Asian	87	47,501
Pacific Islander	33	10,588
Other	163	27,872
Two or More Races	338	54,347
Total	6,746	795,225
Population by Race % of Total		
White	87.9%	74.2%
Black or African American	1.5%	6.8%
American Indian	1.4%	1.4%
Asian	1.3%	6.0%
Pacific Islander	0.5%	1.3%
Other	2.4%	3.5%
Two or More Races	5.0%	6.8%
Total	100.0%	100.0%

Source: US Census 2010 Summary File 1.

HOUSING

The population growth in Orting is reflected in the level of new housing activity in the City.

**Table ED-3
City of Orting
Building Permit Activity**

Year	Single Family		Two Family		Three/Four Family		Five/More Family		Total	
	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units
2000	14	14	0	0	0	0	0	0	14	14
2001	53	53	0	0	0	0	0	0	53	53
2002	112	112	1	2	0	0	0	0	113	114
2003	36	36	0	0	1	4	1	5	38	45
2004	133	133	0	0	0	0	0	0	133	133
2005	267	267	0	0	0	0	0	0	267	267
2006	204	204	2	4	0	0	0	0	206	208
2007	116	116	1	2	0	0	0	0	117	118
2008	46	46	1	2	0	0	0	0	47	48
2009	19	19	0	0	0	0	0	0	19	19
2010	8	8	0	0	0	0	0	0	8	8
2011	17	17	0	0	0	0	0	0	17	17
2012	48	48	0	0	0	0	0	0	48	48
2013	72	72	0	0	0	0	0	0	72	72
Total	1,145	1,145	5	10	1	4	1	5	1,152	1,164

Source: U.S. Census Bureau, 2000.

Pierce County estimates the City has capacity for additional 1,285 units. Tehaleh, the state's largest master planned community, has commenced development on the plateau north and east of Orting, outside the city limits. This 5,000-acre project will ultimately encompass more than 6,700 homes, 626 acres of business and industrial park, a 219-acre resort quality-hotel with conference faculties, a golf course, parks and open space. Initial access will be to Bonney Lake on the north, with additional access planned to the west toward Orting. Tehaleh is in the process of revising that master plan subject to Pierce County approval in 2015.

Employment has increased in Orting over the past 10 years at a rate comparable to population growth.

**Table ED-4
City of Orting Employment**

	2000	2004	2006	2008	2010	2012
Construction/Resource	11	*	*	*	*	*
Finance, Insurance, Real Estate	16	16	24	20	23	25
Manufacturing	*	*	*	*	*	*
Retail	45	42	43	36	51	46
Services	125	358	385	421	377	360
Wholesale Transportation Utilities	*	11	12	8	3	3
Education	197	287	223	230	248	251
Government	34	233	284	304	318	306
Total	450	954	1,019	1,085	1,070	1,000

* Not disclosed because 2 or fewer employers.

Source: PSRC Covered Employment Estimates

The fastest growth occurred between 2000 and 2004. Most of the growth was in the services and government sectors. Even with the job growth between 2000 and 2004, Orting still has only 0.15 jobs per capita compared to 0.32 for Pierce County and 0.46 for the region as a whole. The largest single employer in Orting is the Orting School District. Hobart Baking Systems, located east of Orting is the largest private employer. Other major employees include Safeway and the High Cedar Golf Club (north of the City).

INCOME

The US Census Bureau estimates the median household income in Orting to be \$71,553 compared to \$59,105 for Pierce County as a whole for American Community Survey 2008 - 2012.

TRANSPORTATION

State Route 162 is the major arterial in the Orting area. Available daily traffic count data as of 2013 for this highway as well as Highway 410 through Bonney Lake to the north are summarized in **Table ED-5**.

**Table ED-5
Average Daily Traffic Volume**

Arterial	Location of Count	Average Daily Traffic Volume
State Route 162	At State Route 410	19,000
State Route 162	South of junction w/ Pioneer Way E	19,000
State Route 162	North of junction w/ Military Rd E	17,000
State Route 162	South of junction w/Whitehawk NW	15,000
State Route 162	South of junction w/ Orville Rd E	6,800
State Route 162	West of junction w/ State Route 165	5,500
State Route 410	East of junction w/ State Route 162	48,000
State Route 410	West of junction w/Veterans Memorial	48,000

Arterial	Location of Count	Average Daily Traffic Volume
State Route 410	East of junction w/ Veterans Memorial	39,000
State Route 410	West of junction w/ South Prairie	43,000
State Route 410	East of junction w/ South Prairie	29,000
State Route 410	West of junction w/ 214 th Ave E	26,000
State Route 410	East of junction w/ 214 th Ave E	21,000
State Route 410	West of junction w/ State Route 165	17,000

The road network in the Orting area favors access to and from downtown Orting to the northwest and southeast along SR 162, as well as to the south along the Orting-Kapowsin Hwy N. Principal barriers to travel in the Orting area consist of vast tracts of undeveloped land that lack roads. Such areas are located north, east, and west of the city. In addition, the Puyallup and Carbon Rivers, which parallel the city on the west and east, have few road crossings, resulting in other barriers to travel in the area.

Major highway projects that have been discussed but not funded are widening of SR 162 between SR 410 and Orting, and Rhoades Lake Road connecting to the plateau to the east. SR 704, also known as the Cross-Base highway project, is a proposed six-mile-long, multi-lane divided highway commencing at the Interstate 5 Thorne Lane interchange on the west end, connecting to 176th St at SR 7 on the east. With further extension to the east, the project could greatly enhance access to Orting.

BUSINESS MIX

The mix of businesses in Orting can be summarized according to the amount and type of taxable business receipts. **Table ED-6** summarizes the receipts by year over the period 2005 to 2013 and **Figure ED-1** compares the data graphically. The largest sectors are construction, food services, food and beverage, information, and sporting goods/toys/books/music.

Taxable sales are compared on a per capita basis with surrounding communities in **Table ED-7** and **Figure ED-2**. The only categories in which Orting is comparable on a per capita basis are food and beverage stores and sporting goods/toys/books/music. Orting sales are particularly low in the automotive, building materials, and general merchandise categories. The latter categories are ones where small cities have difficulty attracting businesses, because of shopping patterns and retail location preferences.

Specific businesses that serve as anchors for the area include Safeway, Big “J” Sporting Goods, Cope’s Pharmacy, Wild Rose Quilt Store and Retreat, US Post Office, and several restaurants.

Table ED-6
Orting Taxable Retail Sales Trends

Industry	2005	2006	2007	2008	2009	2010	2011	2012	2013
Retail Trade									
Motor Vehicles & Parts	\$376,374	\$230,513	\$257,100	\$289,750	\$210,375	\$41,766	\$147,712	\$118,493	\$131,711
Furniture & Home Furnishing	628,806	1,272,028	573,480	828,163	681,230	909,242	869,423	1,115,422	1,111,741
Electronics & Appliances	516,544	614,118	502,927	654,133	854,673	751,999	803,818	857,305	1,305,151
Building Materials, Garden Equip & Supplies	2,569,395	3,152,926	3,858,069	2,870,964	1,819,404	1,888,230	1,995,843	2,938,763	3,885,178
Food & Beverage Stores	5,271,584	5,826,068	5,784,279	5,827,195	5,786,261	5,912,391	5,784,137	6,076,371	6,365,630
Drug/health Stores	178,416	168,690	171,105	165,200	219,610	232,321	241,842	302,175	252,886
Gas Stations & Convenience Stores									
W/pumps	821,025	1,170,869	1,426,635	1,452,911	1,770,627	1,501,024	1,347,583	1,184,656	1,853,294
Apparel & Accessories	1,253,028	1,627,177	1,875,005	1,894,864	1,860,744	234,022	249,806	282,396	360,708
Sporting Goods, Toys, Book & Music Stores	142,682	187,025	238,334	561,635	573,659	2,174,504	2,478,367	3,111,676	4,155,128
General Merchandise Stores	572,728	412,322	280,119	273,854	411,855	405,289	389,605	291,714	246,065
E-commerce & Mail Order	277,229	284,727	415,111	523,196	562,059	759,271	910,918	1,156,100	1,412,215
Miscellaneous Retailers	1,916,921	2,784,244	3,583,666	3,258,291	3,349,569	2,974,729	2,917,138	3,049,973	3,420,502
Total Retail Trade	14,524,732	17,730,707	18,965,830	18,600,156	18,100,066	17,784,788	18,136,192	20,485,044	24,500,209
Agriculture, Forestry, Fishing			342,741	151,040	87,911	90,969	47,255	57,872	203,532
Mining	219,551	152,493	D	115,739	166,471	17,041	35,406	30,846	129,162
Utilities	D	7,994	6,603	10,089	11,612	10,639	D	D	D
Construction	19,018,647	25,954,960	32,393,522	25,888,650	9,712,561	6,886,639	7,394,840	7,103,904	10,594,568
Manufacturing	558,669	634,913	805,886	528,423	495,718	689,632	537,915	729,498	1,406,880
Wholesale Trade	2,148,603	2,066,474	2,164,298	1,893,904	2,657,293	2,238,241	2,408,545	3,101,445	3,103,836
Transportation & Warehousing	19,521	18,128	96,233	88,828	105,835	293,001	347,265	264,202	254,268
Information	3,295,178	2,988,075	2,975,442	3,034,385	3,148,685	3,316,198	3,483,294	3,611,513	4,193,428
Finance, Insurance	473,305	439,708	457,426	459,269	321,337	412,484	345,170	421,242	456,394
Real Estate, Rental/leasing	1,322,764	1,871,031	2,700,966	6,388,381	1,682,371	2,128,922	1,260,184	1,420,146	1,725,572
Professional, Scientific & Technical Services	367,231	259,428	344,444	773,261	316,631	498,068	426,744	379,180	1,876,983
Management, Education & Health Services	1,914,759	1,970,724	1,946,307	1,509,655	1,163,904	1,193,758	1,439,913	1,335,082	1,519,253
Arts, Entertainment & Recreation	208,859	400,092	426,284	462,112	430,517	413,401	421,712	365,942	347,755
Accommodations									
Food Services	7,067,958	7,999,556	8,731,445	8,512,939	8,456,837	8,477,872	9,094,748	8,636,253	8,518,334
Repair & Maintenance	600,958	739,679	706,842	615,288	362,887	663,651	759,917	940,734	958,632
Personal Services	542,921	534,810	770,545	503,410	431,743	444,396	374,524	320,038	273,639
Religious, Civic & Other	D	1,668	D	3,335	5,559	9,095	2,112	4,295	3,907
Public Administration, Other	19,474	D	D	2,694	D	D	D	1,250	34,328
Non-disclosed	163,651	71,499	45,794	9,684	-	1,092	13,173	8,885	14,776
Total All Industries	\$52,466,781	\$63,841,939	\$73,880,608	\$69,548,548	\$47,660,632	\$45,569,887	\$46,528,909	\$49,217,371	\$60,115,456

Source: Washington Department of Revenue, Quarterly Business Review, Property Counselors.

Figure ED-1

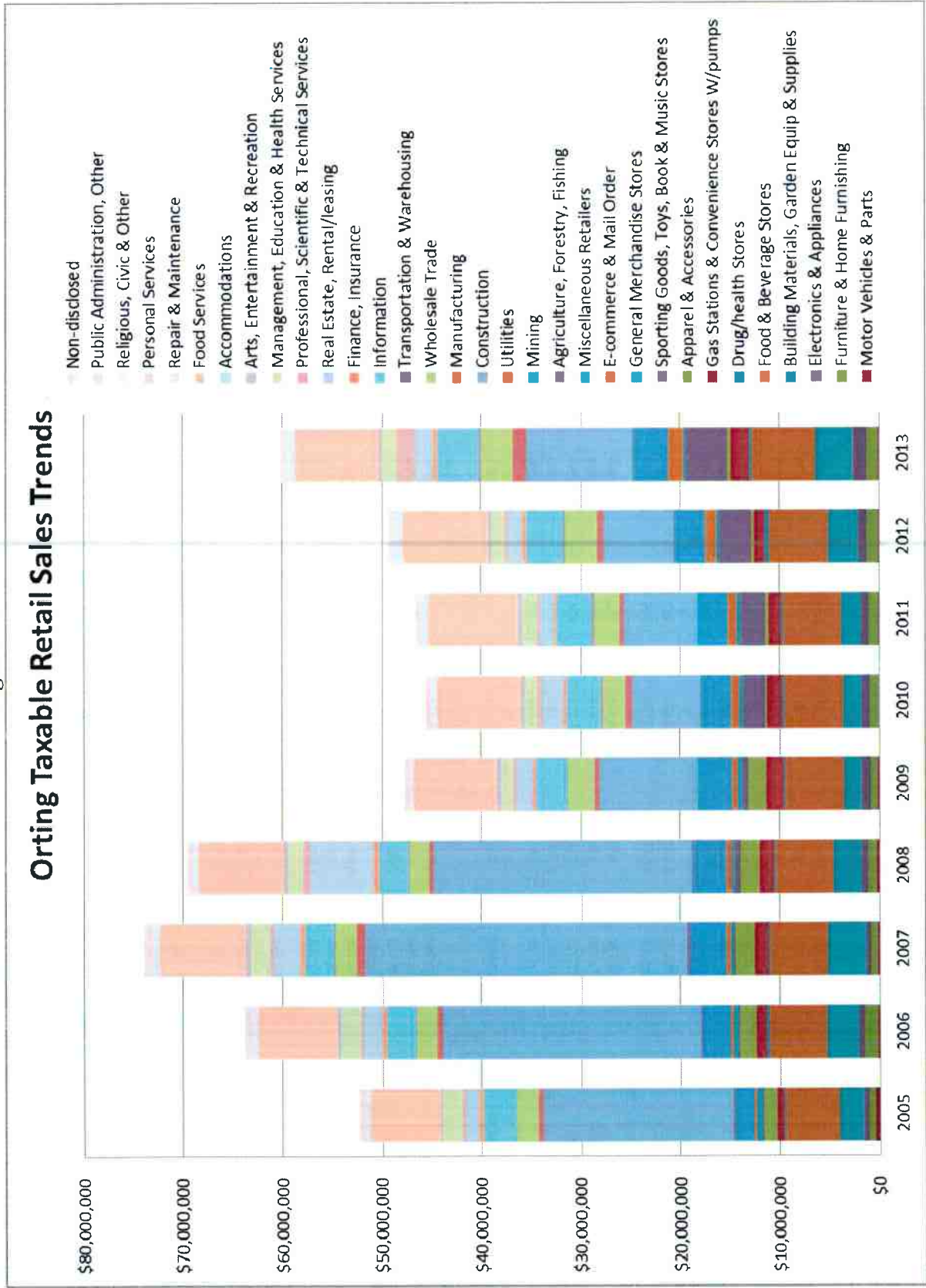


Figure ED-2

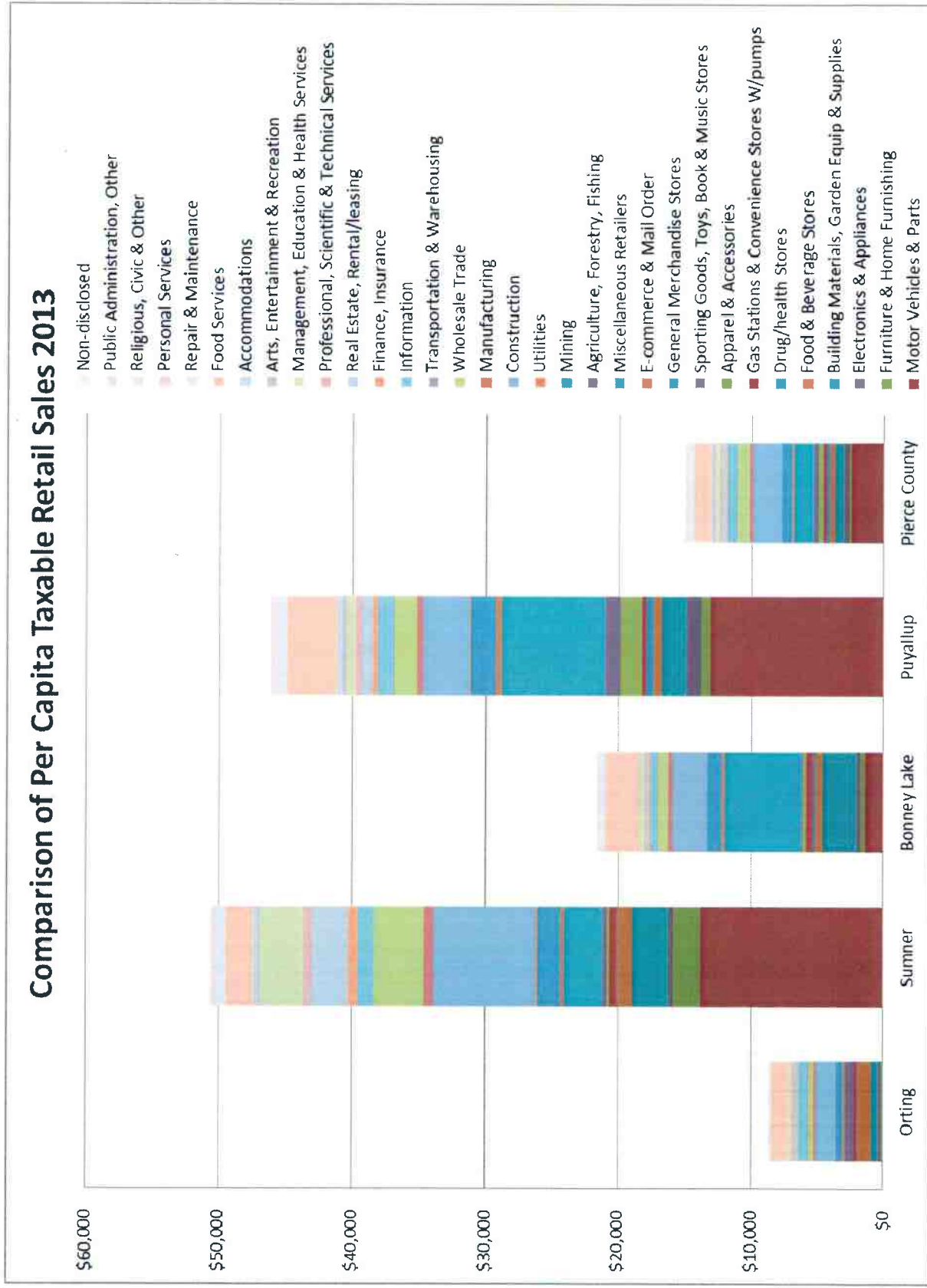


Table ED-7
Comparison of Taxable Retail Sales Orting and Surrounding Communities

	Orting	Sumner	Bonney Lake	Puyallup	Pierce County
Motor Vehicles & Parts	\$19	\$13,831	\$1,319	\$13,169	\$2,441
Furniture & Home Furnishing	160	2,069	376	656	247
Electronics & Appliances	188	350	300	1,082	398
Building Materials, Garden Equip & Supplies	561	2,657	2,672	1,907	680
Food & Beverage Stores	919	1,093	577	557	443
Drug/health Stores	36	62	175	584	217
Gas Stations & Convenience Stores W/pumps	267	594	438	311	248
Apparel & Accessories	52	262	270	1,591	435
Sporting Goods, Toys, Book & Music Stores	600	260	81	1,181	282
General Merchandise Stores	36	2,874	5,785	7,774	1,482
E-commerce & Mail Order	204	254	242	431	188
Miscellaneous Retailers	494	1,765	1,105	1,962	701
Agriculture, Forestry, Fishing	29	8	1	9	6
Mining	19	1		1	12
Utilities		91	3	17	6
Construction	1,529	7,765	2,607	3,512	2,220
Manufacturing	203	681	332	498	284
Wholesale Trade	448	3,773	795	1,668	870
Transportation & Warehousing	37	17	25	68	59
Information	605	1,175	584	1,155	658
Finance, Insurance	66	756	112	481	114
Real Estate, Rental/leasing	249	2,721	158	729	333
Professional, Scientific & Technical Services	271	541	107	424	174
Management, Education & Health Services	219	3,347	393	762	341
Arts, Entertainment & Recreation	50	138	94	246	146
Accommodations	-	289		383	151
Food Services	1,229	2,199	2,464	3,795	1,316
Repair & Maintenance	138	689	409	863	401
Personal Services	39	280	134	280	100
Religious, Civic & Other	1	4	1	27	8
Public Administration, Other	5	4	2	6	7
Non-disclosed	2	-	1	-	-
Total All Industries	\$8,675	\$50,552	\$21,563	\$46,130	\$14,965

Source: Washington Department of Revenue, Quarterly Business Review, Property Counselors.

VISITOR INDUSTRY

Eastern Pierce County is home to several major tourist attractions.

- Mount Rainier National Park attracts 2 million visitors per year for year-round interpretive and recreational activities.
- The Town of Eatonville to the south of Orting offers Northwest Trek and Pioneer Farms (both outside the City).
- Puyallup to the west advertises such attractions as a farmers market, the Meeker Mansion, outdoor art, and antiques.
- The Orting Valley offers several farms and agricultural tourist attractions.

Orting is located in a beautiful natural setting between two rivers with framed views of Mount Rainier. However, the City itself offers few identified attractions to draw visitors. The Foothills Trail is a walking and biking trail linking Orting and McMillin. There is a fish hatchery located at the south end of town.

There are opportunities for communities like Orting to serve the visitor industry. The Travel Industry of America conducted a Rural Tourism Travel Poll in 2001. The survey identified the percentage of travelers to rural areas that participated in various activities.

Table ED-8
Rural Tourism Travel Poll
What do Rural Travelers Like to Do?
(% of Visitors Participating in Activity)

Activity	Percent
Dining	70
Shopping	58
Going to Beach/River/Lake	44
Visit Historical Sites	41
Fishing/Hunting/Boating	32
Attend Festival/Fair	29
Bike Riding/Hiking	24
Attend Religious Service	23
Camping	21
Attend/Participate in Sporting Event	18
Visit Winery/Working Farm/Orchard	15
Gambling/Gaming,	12
Visit Native American Community	11

Source: Travel Industry of America, 2001 Rural Tourism Travel Poll.

Two observations have relevance to Orting.

- Several of these activities are available in or near Orting, particularly shopping and recreational activities.
- Visitors generally participated in more than one activity. A community which can offer a combination of activities can increase its attractiveness.

There is a rule of thumb that the duration of a visitor experience must exceed four times the length of time to travel to it. While the exact factor may be subject to argument, the concept is clearly true. Further, in order to maximize the economic impact of visitor spending, it is important to provide an experience or combination of experiences which can support an overnight stay.

Agri-tourism is an increasingly popular category of visitor activities as people are increasingly interested in what they eat and how it's produced. The Tacoma Pierce County Visitors and Convention Bureau offers a Farm Guide with several sample

itineraries. Orting is featured in the Rhubarb and Daffodil Tour. The Farm Guide lists four farms in Orting among the 21 throughout the county. A fifth farm, Spooner Farm is located within the larger Orting Valley. Orting is well-represented among the opportunities and attractions in the area. The challenge for the city is two-fold: how to capture some of this activity within the city limits, and how to become a center and focus of this activity.

**Table ED-9
Farms in Pierce County**

	Location	Product
Bea's Flowers	Gig Harbor	Flowers and Produce
Blue Willow Lavendar Farm	Gig Harbor	Lavendar
Calendula Farm	Tacoma	Fruits Nuts Flowers Meat
Crying Rock Farms	Orting	Organic Meat
Duris Farms	Puyallup	Cucumbers
Filbert Acres	Puyallup	flowers and Produce
Foxberry Farm	Tacoma	Berries Flowers
Lindo Blueberry Farm	Puyallup	Blueberries
Little Eorthe Farm	Orting	Organic Foods
Maris Farms	Buckley	Pumpkins Corn Maze
Moon Farm and Jam Factory	Puyallup	Berries Jams
Picha Farms	Puyallup	Berries Pumpkiins
Scholtz Farms	Orting	Seasonal Harvest
Spooner Farms	Puyallup	Raspberries Blackberries Corn
Stringtown Farm and Winery	Eatonville	Lavendar Vineyard
Tahoma Farms	Orting	Organic Vegetables
Take Root Farm	Buckley	CSA Produce
Terry's Berries	Tacoma	Organic Berries Produce
The Meat Shop at Tacoma	Tacoma	Organic Meat Poultry
Van Lierop Bulb Farm	Puyallup	Dallodils Irises Tulips
Wilcox Family Farm	Roy	Organic Eggs

Source: Tacoma Pierce County Visitors and Convention Bureau

FISCAL CONDITIONS

Fiscal conditions are the revenue and cost relationships for provision of public services. A strong economy will provide a strong tax base. Quality public facilities and services will make the community attractive to residents, employees, and visitors. The fiscal conditions are presented here in terms of fiscal trends and comparison to similar communities.

Trends in revenues and expenses can be derived from data compiled for local governments by the Washington State Auditor's Local Government Financial Reporting System (LGFRS). The LGFRS data is provided in a standard format with any duplication removed. Operating revenues and expenses are identified for operating funds, defined as the general fund and special revenue funds. Special revenue funds cover regular public services, but are funded by targeted revenue

sources. **Table ED-10** presents operating revenue and expense data for the years 2007 to 2012. These years include the time before the recent recession, the recession, and the subsequent recovery. **Figure ED-3** summarizes the revenue trends graphically. The four largest sources of revenue are general property taxes, business taxes (primarily taxes on utilities), retail sales and use tax, and intergovernmental revenues (revenues shared by the state and federal governments). Total revenues are much lower than pre-recession levels. General property taxes and retail sales tax experienced the greatest decline. These declines were partially offset by an increase in business taxes. The loss in property tax revenue is partly due to the city's transfer of fire service responsibility to Fire District 18 Orting Valley Fire and Rescue, with a commensurate drop in taxing authority.

Figure ED-3

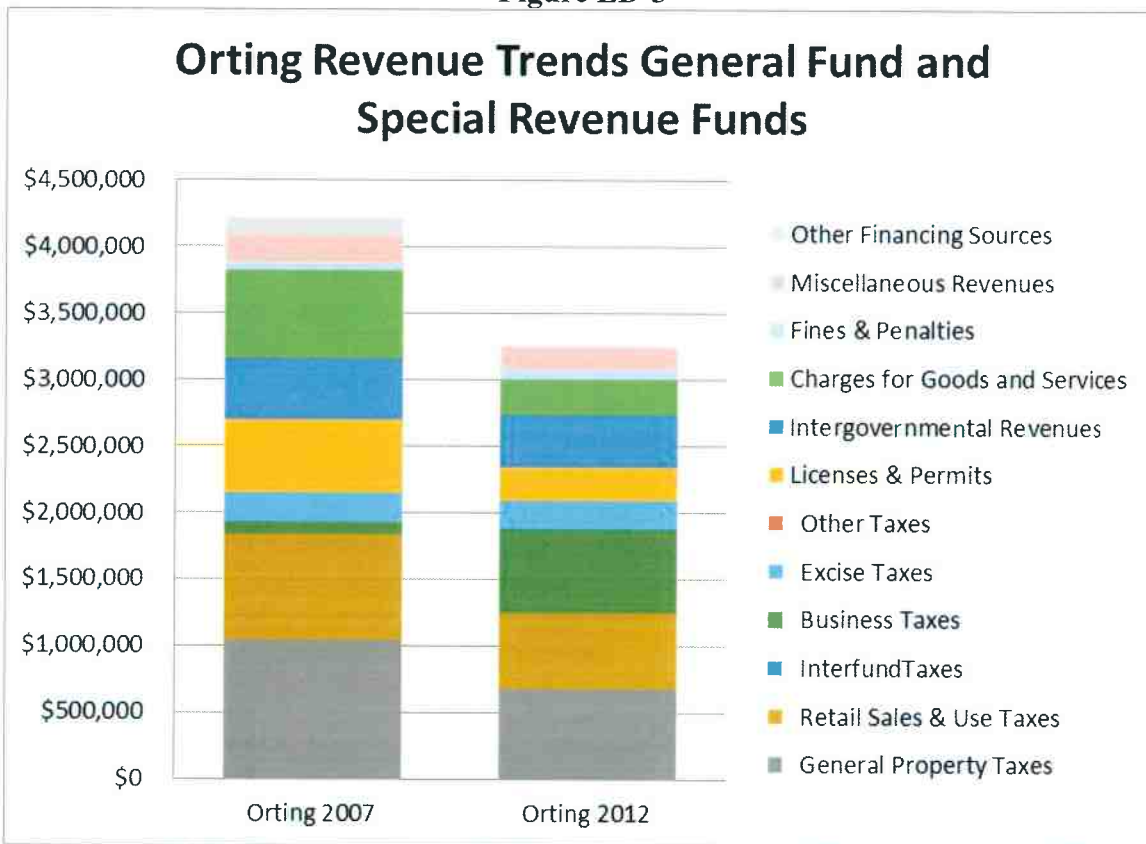


Table ED-10
City of Orting Revenue and Expense Trends
General Fund and Special Revenue Funds

	Orting 2007	Orting 2012
All Revenues		
Taxes		
General Property Taxes	\$1,045,824	\$679,894
Retail Sales & Use Taxes	785,665	563,983
Interfund Taxes		0
Business Taxes	93,999	638,446
Excise Taxes	226,818	211,027
Other Taxes		
Subtotal:	2,152,306	2,093,350
Licenses & Permits	546,710	243,897
Intergovernmental Revenues	459,602	394,194
Charges for Goods and Services	662,785	271,115
Fines & Penalties	54,924	76,543
Miscellaneous Revenues	205,483	160,946
Other Financing Sources	133,000	3,000
Total:	\$4,214,810	\$3,243,045

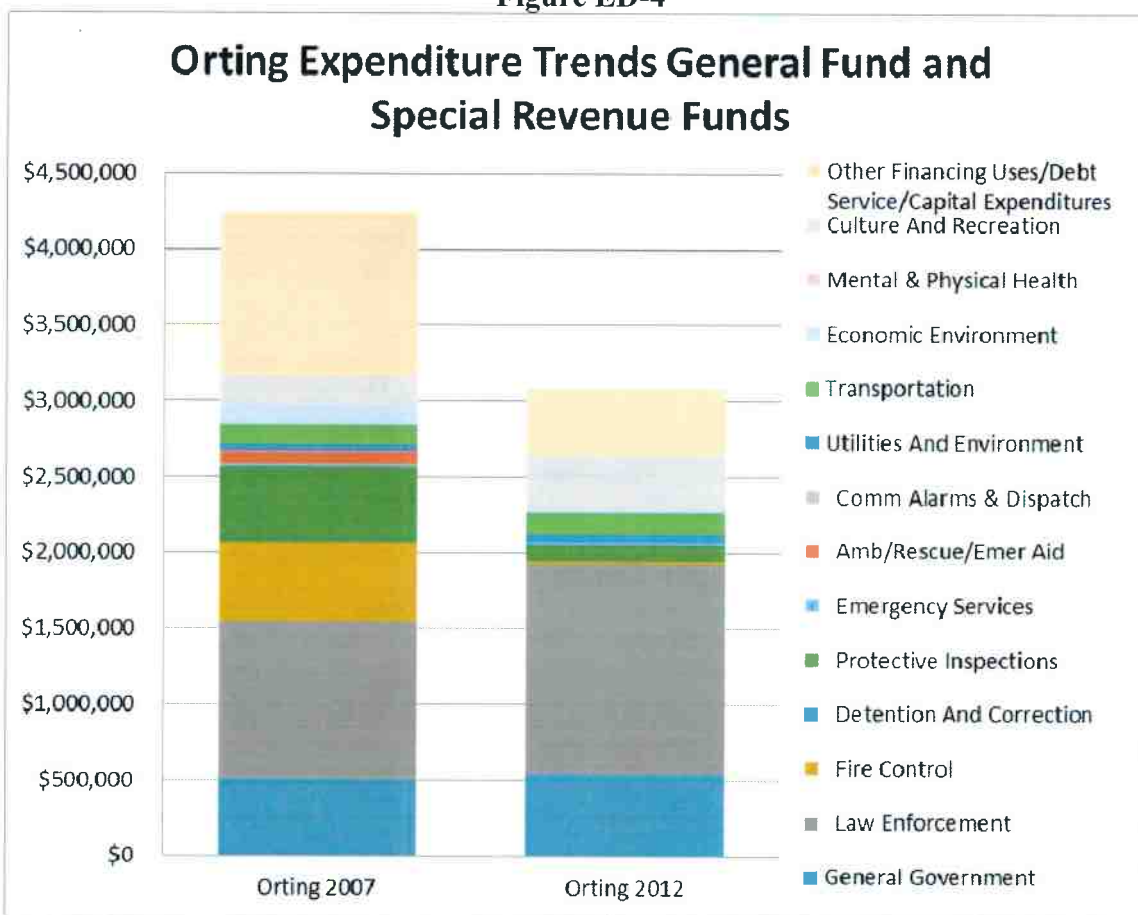
All Expenditures/Expenses

	Orting 2007	Orting 2012
General Government	\$506,928	\$539,906
Public Safety		
Law Enforcement	1,040,914	1,392,332
Fire Control	517,826	16,888
Detention And Correction		0
Protective Inspections	502,473	106,625
Emergency Services	10,423	13,184
Amb/Rescue/Emer Aid	87,040	0
Comm Alarms & Dispatch	0	0
Subtotal:	2,158,676	1,529,029
Utilities And Environment	49,392	46,344
Transportation	133,019	150,208
Economic Environment	124,442	26,033
Mental & Physical Health	1,287	1,615
Culture And Recreation	193,554	348,681
Other Financing Uses/Debt Servi	1,077,694	449,455
Total:	\$4,244,992	\$3,091,271

Source: WA State Auditor, Local Government Financial Reporting System, Property Counselors.

Figure ED-4 presents operating expenditures for the same period. Expenditures dropped over the period, largely due to the transfer of fire control to the fire district. Public safety - primarily law enforcement - represents over half of total operating expenditures. Culture and Recreation grew significantly, General Government expenditures grew somewhat, and Economic Environment-including planning and community development- declined over the period as development activity slowed.

Figure ED-4



Source: Washington State Auditor's Office, Local Government Financial Reporting System, Property Counselors.

LGFRS data can also be used in a comparison of Orting to other communities. The Association of Washington Cities (AWC) has a classification scheme for cities based on size, property value, activity, growth, and geography (west or eastern Washington). Orting is classified as an Urban Outskirt city based on its small size, moderate property value, moderate commercial activity, and moderate growth. **Table ED-11** compares per capita revenues and expenditures for Orting and the Urban Outskirts cluster in western Washington. Orting has relatively low per capita revenues in all revenue categories.

Table ED-11
Comparison of Per Capita Revenue and Expenses for General Fund and Special
Revenue Funds
Orting and AWC Urban Outskirts Western Washington 2012

	Orting	Urban Outskirts-West. WA
All Revenues per Capita		
Taxes		
General Property Taxes	\$100	\$194
Retail Sales & Use Taxes	83	113
Interfund Taxes	0	22
Business Taxes	94	124
Excise Taxes	31	19
Other Taxes	0	1
Subtotal:	308	472
Licenses & Permits	36	29
Intergovernmental Revenues	58	89
Charges for Goods and Services	40	64
Fines & Penalties	11	14
Miscellaneous Revenues	24	21
Other Financing Sources	0	52
Total:	\$478	\$739
All Expenditures/Expenses per Capita		
General Government	\$80	\$143
Public Safety		
Law Enforcement	205	217
Fire Control	2	66
Detention And Correction	0	13
Protective Inspections	16	8
Emergency Services	2	2
Amb/Rescue/Emer Aid	0	18
Comm Alarms & Dispatch	0	10
Subtotal:	225	334
Utilities And Environment	7	18
Transportation	22	61
Economic Environment	4	31
Mental & Physical Health	0	0
Culture And Recreation	51	39
Other Financing Uses/Debt Service/Ca	66	50
Total:	\$455	\$676

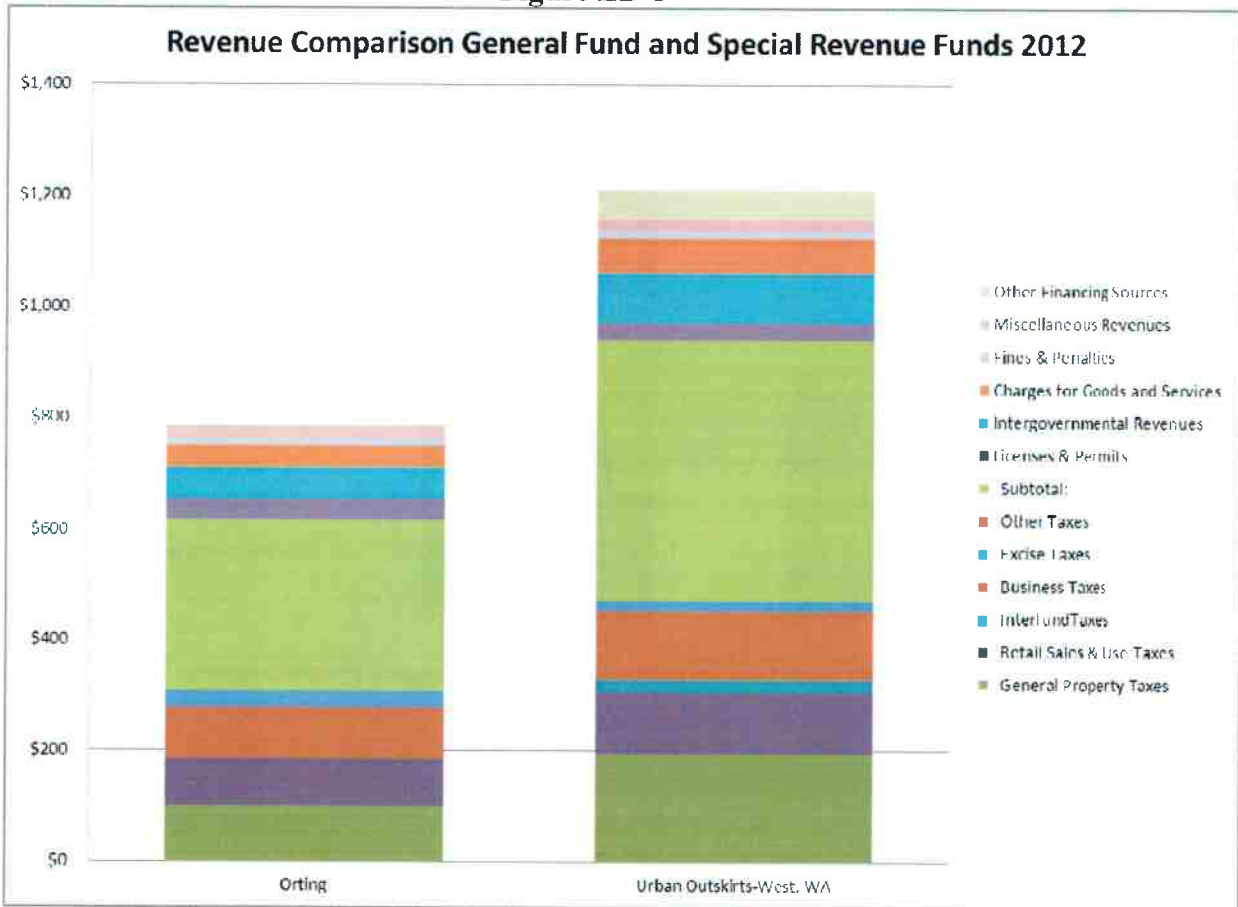
Source: WA State Auditor, Local Government Financial Reporting System, Property Counselors.

On the expenditure side, the City has total per capita expenditures lower than the other urban outskirts. However, some of those cities provide fire protection. Orting

law enforcement expenditures are comparable to the other cities. Culture and recreation expenditures are higher on a per capita basis.

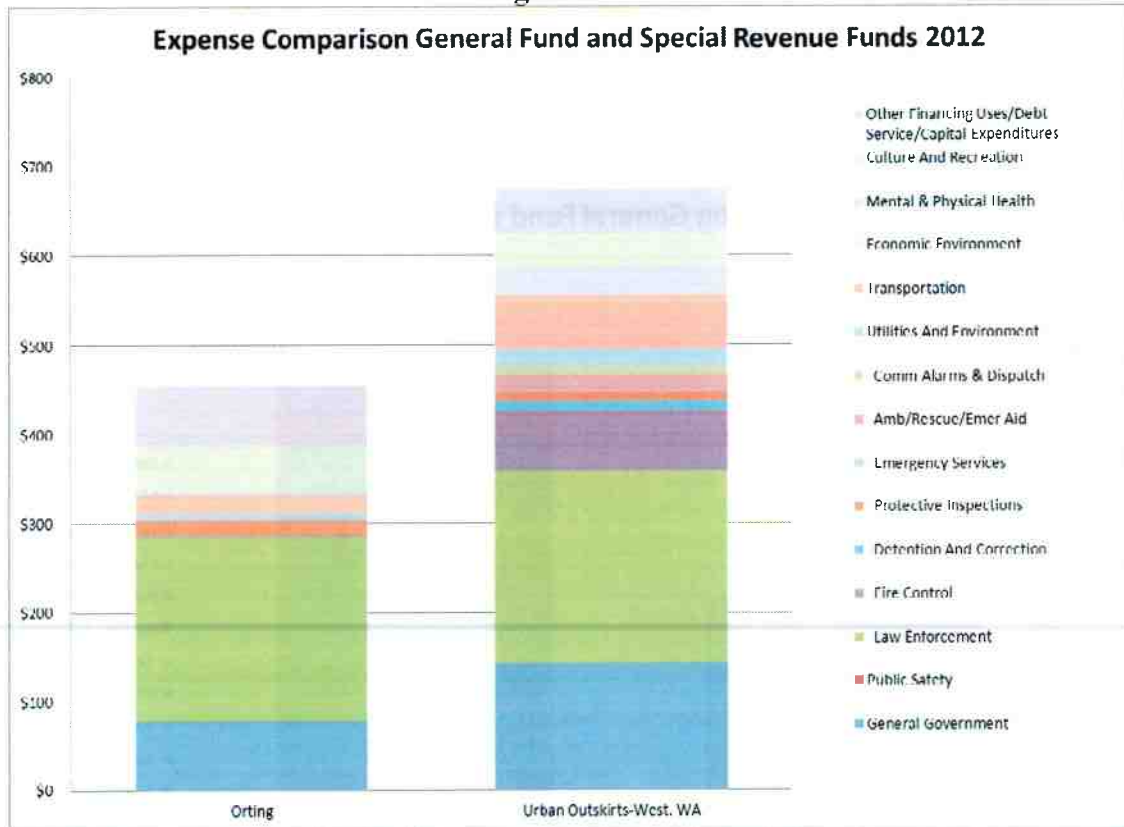
These relationships are shown graphically in **Figures ED-5** and **ED-6** for revenues and expenditures respectively.

Figure ED-5



Source: Washington State Auditor's Office, Local Government Financial Reporting System, Property Counselors.

Figure ED-6



Source: Washington State Auditor's Office, Local Government Financial Reporting System, Property Counselors.

COMPETITIVE POSITION

Given the characteristics of the City described in the preceding profile, the City's competitive position can be summarized in terms of strengths, weaknesses, opportunities and threats.

STRENGTHS

The strong recent population growth can create demand for additional business.

The strong growth in Puget Sound region creates demand for visitor activities and regional business opportunities.

The physical setting of Orting makes it attractive as a place to live, work, and visit.

The City has utility service capacity to serve additional development.

The City has underdeveloped land that can accommodate residential or commercial/industrial growth.

The City has an established Downtown with a clear town center.

The City is surrounded by farms that appeal to the increasing interest in agri-tourism.

WEAKNESSES

There are natural barriers that serve to isolate the City, specifically rivers and plateaus.

Transportation access and capacity is limited, with a two lane arterial through town, and a two lane arterial serving the area to the west.

There are few publicized visitor attractions in the City. The City has a wonderful view of Mount Rainier, but it isn't on any of the main routes to Park entrances.

Few of the agri-tourism attractions are located within the city itself.

OPPORTUNITIES

The City can fill some of the gaps in its businesses mix and recapture lost retail sales.

The City can increase its stature as a visitor destination, particularly as the center of the Orting Valley agricultural hub.

The interest of residents and visitors in pedestrian scale shopping districts enhances the potential for small communities with established downtowns.

Growth and development throughout the region creates demand for development in secondary markets.

Growth and development will strengthen the city's tax base and its ability to fund desired public services and facilities.

Tehaleh, the master planned community on the plateau to the east, will gain increasing attention, and provide a higher profile for Orting, if not additional retail sales.

THREATS

The established retail centers in Bonney Lake and Puyallup South Hill will continue to attract spending activity outside the City.

Tehaleh may attract some of the employers that might otherwise consider Orting.

The small tax base of the city limits the ability to fund desired public services and facilities.

The lahar hazard threat may discourage some investment.

In summary, the City's competitive position is that of a small community offering an alternative to urban settings with scarce land, higher prices, and limited natural amenities.

RETAIL MARKET POTENTIAL

TYPES OF RETAIL DEVELOPMENT

Retail development occurs in stand-alone buildings or shopping centers. Shopping centers fall into several categories, which differ according to the number and type of stores, the amount of space and site area, and the size of the market area, both in terms of population and distance. **Table ED-12** summarizes the characteristics of the major types of shopping centers. Pioneer Village in Orting is an example of a neighborhood shopping center. Fred Meyer in Bonney Lake is an example of a community shopping center. South Hill Mall in Puyallup is a regional mall.

The market area for Orting retail is an area determined by natural boundaries, transportation routes, location of residential development, and location of competition. The market area for Orting is an area that extends beyond city boundaries to the south and west along the Orting Kapowsin Highway to 224th, to McMillin on the north, and to the Puyallup River to the east. The population of this area is estimated to be 13,600 currently as presented in the profile section. With projected growth of 2.2-percent per year over the next 20 years, it could reach 21,200 by 2033. The current population is at the lower end of the range for a neighborhood shopping center. The projected population would fall within the middle of that range.

**Table ED-12
Types of Shopping Centers**

Neighborhood Shopping Center Anchors Supermarket and drug store Number of Stores 10-40 stores Total Retail Space 30,000-100,000 square feet Site Area 3-10 acres Market Area Population 10,000-30,000 people Market Area Radius 1-3 miles	Off-Price Center Anchors Off-price/discount store Number of Stores 20-60 Total Retail Space 100,000-500,000 square feet Site Area 5-15 acres Market Area Population 80,000-250,000 square feet Market Area Radius 6-15 miles
Community Shopping Center Anchors Junior department or discount store Number of Stores 25-80 stores Total Retail Space 100,000-450,000 square feet Site Area 10-30 acres Market Area Population 30,000-75,000 people Market Area Radius 3-8 miles	Specialty Center Anchors Specialty/theme retailer(s) Number of Stores varies widely Total Retail Space varies widely Site Area varies widely Market Area Population varies widely Market Area Radius varies widely
Regional Shopping Center Anchors 1 or 2 full-line department stores Number of Stores 50-100 stores Total Retail Space 300,000-750,000 square feet Site Area 30-50 acres Market Area Population 100,000-250,000 people Market Area Radius 8-15 miles	Outlet Center Anchors Manufacturer's outlet stores Number of Stores 30-100 stores Total Retail Space 200,000-800,000 square feet Site Area 20-50 acres Market Area Population 200,000-600,000 square feet Market Area Radius over 50 miles
Super-Regional Shopping Center Anchors 3 or more full-line department stores Number of Stores 100-300 stores Total Retail Space 600,000-2,000,000 square feet Site Area 40-100 acres Market Area Population 250,000-600,000 people Market Area Radius 12-50 miles	Power Center Anchors Large warehouse/discount retailers Number of Stores 10-20 stores (mainly large retailers) Total Retail Space 250,000-800,000 square feet Site Area 20-50 acres Market Area Population 250,000-500,000 square feet Market Area Radius 12-50 miles
Strip Retail Center Anchors Convenience Grocery Number of Stores 3-20 stores Total Retail Space 10,000-30,000 square feet Site Area 1-3 acres Market Area Population under 20,000 people Market Area Radius under 2 miles	Sources: Urban Land Institute, Dollars and Cents of Shopping Centers Property Counselors

LEAKAGE

Retail leakage is defined as the difference between market area spending and actual retail sales. **Table ED-13** provides a leakage analysis for the city of Orting for retail trade and selected service sectors. As shown, market area spending in these sectors of \$133 million greatly exceeds Orting gross receipts of \$70 million. The difference of \$63 million is net leakage.

The major categories of leakage are motor vehicles and parts, general merchandise, miscellaneous retailers, gas stations/convenience stores, drug/health, apparel/accessories, and food services.

**Table ED-13
Retail Sales Analysis
Retail Sales Analysis – Net Leakage**

	Orting Sales		Est. Orting Resident Spending		Est. 2013 Leakage	
	Taxable 2013	Tax/Gross	Est. 2013 Gross	Per Capita Total		
Retail Trade						
Motor Vehicles & Parts	\$131,711	77.8%	\$169,388	\$2,700	\$18,711,162	\$18,541,774
Furniture & Home Furnishing	1,111,741	91.2%	1,219,194	371	2,571,086	1,351,891
Electronics & Appliances	1,305,151	81.0%	1,610,488	665	4,605,126	2,994,638
Building Materials, Garden Equip & Supplies	3,885,178	93.9%	4,136,217	886	6,142,281	2,006,063
Food & Beverage Stores	6,365,630	24.7%	25,789,102	2,402	16,646,533	(9,142,569)
Drug/health Stores	252,886	30.1%	839,207	928	6,430,133	5,590,927
Gas Stations & Convenience Stores						
W/pumps	1,853,294	15.4%	12,013,280	1,721	11,927,883	(85,398)
Apparel & Accessories	360,708	81.7%	441,768	830	5,749,880	5,308,112
Sporting Goods, Toys, Book & Music Stores	4,155,128	85.7%	4,849,678	433	2,998,329	(1,851,350)
General Merchandise Stores	246,065	47.2%	521,293	3,721	25,784,129	25,262,836
E-commerce & Mail Order	1,412,215	52.7%	2,679,194	554	3,842,231	1,163,037
Miscellaneous Retailers	3,420,502	73.7%	4,642,973	1,248	8,647,478	4,004,505
Total Retail Trade	\$24,500,209	41.6%	\$58,911,784	\$16,458	\$114,056,250	\$55,144,467
Selected Services						
Arts, Entertainment & Recreation	\$347,755	93.1%	\$373,391	\$217	\$1,501,602	\$1,128,211
Accommodations	0	95.4%	-	-	0	
Food Services	8,518,334	96.3%	8,842,367	1,862	12,900,287	4,057,920
Repair & Maintenance	958,632	84.0%	1,141,875	530	3,672,514	2,530,639
Personal Services	273,639	92.1%	297,050	178	1,234,167	937,117
Total Selected Services	\$10,098,360	94.8%	\$10,654,683	\$2,786	\$19,308,570	\$8,653,887
Total Retail Trade and Selected Services	\$34,598,569	49.7%	\$69,566,467	\$19,245	\$133,364,820	\$63,798,353

Source: WA State Department of Revenue Quarterly Business Review, Property Counselors.

RETAIL INVENTORY

The retail inventory of Orting and surrounding area consists of a mix of shopping centers, a concentration of individual buildings, highway-oriented strip development, and stand-alone facilities. **Tables ED-14 and ED-15** summarize the characteristics of existing shopping centers in Orting and the surrounding area, respectively.

Table ED-14 Retail Centers in Orting

	Type of Center	Year Built	Size (sq. ft.)	Anchor Tenant	Vacancy	Asking Rent /sq. ft.
Pioneer Village	Neighborhood	2000	71,500	Safeway	16%	\$20 to \$22
Orting Depot	Strip	2006	5,764	Fast Food	28%	\$24

Source: Commercial Brokers Association, Property Counselors

**Table ED-15
Retail Centers in Surrounding Communities**

	Address	Type of Center	Year Built	Size	Anchor Tenant
Sumner					
Fred Meyer	E. Main St.	Community	2003	186,000	Fred Meyer
Winco Center	166th & SR 410	Neighborhood	2009	98,036	Winco
Bonney Lake					
Grocery Outlet	166th & SR 410	Neighborhood	1955/1990	25,914	Grocery Outlet
Target	192nd & SR 410	Community	2004	121,842	Target
Market at Lake Tapps	192nd & SR 410	Community	1989/1992	172,000	Walmart
Lowe's	198th & SR 410	Community	2008	119,327	Lowe's
Fred Meyer	211th & SR 410	Community	1996	120,000	Fred Meyer
Home Depot	214th & SR 410	Community	2006	115,000	Home Depot
Bonney Lake Village	214th & SR 410	Community	1989	150,000	Safeway Ben Franklin
Bonney Lake Center	198th & SR 410	Neighborhood	2001	99,000	Albertsons (closed)
Graham					
Graham Towne Center	224th & SR 161	Community	1984/2000	128213	Safeway Ace Hardware

Source: Commercial Brokers Association, Pierce County Assessor, Property Counselors.

The primary retail center in Orting is the Pioneer Village, a 71,500 square foot center anchored by Safeway. Bonney Lake to the north features three community scale retailers within 10 miles of Orting: Fred Meyer, Wal-Mart and Target. Puyallup South Hill Mall features the same community scale retailers, as well as the anchor tenants of the South Hill Mall. The presence of this competitive development in close proximity has hurt Orting's ability to attract this type of tenant.

PROJECTED DEMAND

Future growth in retail levels will come from recapture of leakage, increased trade area resident spending, and increased visitor spending. The method for estimating increased resident spending involves the following assumptions.

- Trade area population growing to 21,200 by 2033.
- Per capita spending estimated at average levels for State with 1-percent real growth per year. Increases in capture rates by Orting businesses in food and beverage, drug and health, sporting goods/toys/books/music, and food services.
- Retail development estimated from sales per square foot factors for each sector.

Visitor spending is estimated from average daily visitor spending factors updated from the State's 1997 Visitor Profile.

Restaurants	\$16.65 /visitor/day
Groceries	4.60
Transportation	10.25
Recreation	6.65
Shopping	20.00
Other	.50
Total	\$58.65

The number of annual visitors could vary over a wide range. Mount Rainier attracts 2 million visitors per year, with most visitors entering from the Nisqually River entrance. The City of Leavenworth attracts an estimated one million visitors per year. For purposes of this analysis, 500,000 annual visitors is considered a useful benchmark for estimating potential visitor spending. Assuming three-fourths of those are new visitors who don't currently shop in Orting, the average visitor spending factors above can be applied to 375,000 new visitors.

The projected increase in spending, sales, and supportable retail development is summarized in **Table ED-16**. As shown, the assumed increased sale would support 241,000 square feet of new development, approximately 300-percent of the amount of space in Pioneer Village. Total potential spending of \$296 million is made up of increased trade area spending (70-percent), leakage recapture (22-percent), and increased visitor spending (8-percent). The City is projected to capture 27-percent of the total.

Table ED-16
Orting Market Area
Summary of Retail Potential

	Recapture Leakage	Resident Spending Grwth 2013-2033	Growth Visitor Spending	Total Potential Spending	Projected Sales Capture 2013-2033	Supportable Development 2013-2033
Retail Trade						
Motor Vehicles & Parts	18,541,774	29,519,925	-	48,061,699	153,014	153
Furniture & Home Furnishing	1,351,891	4,056,309	-	5,408,201	1,101,343	4,405
Electronics & Appliances	2,994,638	7,265,341	-	10,259,979	1,454,813	5,819
Building Materials, Garden E	2,006,063	9,690,455	-	11,696,518	3,736,397	12,455
Food & Beverage Stores	(9,142,569)	26,262,635	1,725,000	18,845,065	28,774,290	47,957
Drug/health Stores	5,590,927	10,144,589	-	15,735,516	1,561,985	5,207
Gas Stations & Convenience	(85,398)	18,818,190	3,843,750	22,576,543	14,695,786	58,783
Apparel & Accessories	5,308,112	9,071,378	-	14,379,490	399,065	1,596
Sporting Goods, Toys, Book	(1,851,350)	4,730,355	-	2,879,005	4,667,430	18,670
General Merchandise Stores	25,262,836	40,678,691	-	65,941,527	470,903	1,884
E-commerce & Mail Order	1,163,037	6,061,750	-	7,224,787	2,420,214	
Miscellaneous Retailers	4,004,505	13,642,815	7,500,000	25,147,319	11,694,168	46,777
Total Retail Trade	55,144,467	179,942,433	13,068,750	248,155,649	71,129,407	203,705
Selected Services						
Arts, Entertainment & Recreaz	1,128,211	2,369,023	2,493,750	5,990,984	2,530,795	12,654
Food Services	4,057,920	20,352,318	6,243,750	30,653,987	7,248,171	24,161
Repair and Maintenance	2,530,639	5,793,994		8,324,633	113,288	566
Personal Services	937,117	1,947,100	-	2,884,217	36,035	180
Subtotal	8,653,887	30,462,434	8,737,500	47,853,821	9,928,289	37,561
Total Retail and Selected Ser	63,798,353	210,404,867	21,806,250	296,009,470	81,057,696	241,267

The amount of supportable space would be greater if the City could capture greater market share in any of the categories. In general, a trade area of 21,200 is not large enough to support community scale retail development (such as Fred Meyer or Target). Until the City can support that type of development, it will continue to achieve similar market shares as the current ones. If there were a convenient transportation link across the river to the east to connect with Cascadia, the trade area population could support additional growth.

Generally, the type of retail development that is supportable includes:

- Grocery: another major grocer
- Gas and Convenience; several such businesses
- Misc. Retail and Apparel: various specialty retail businesses
- Food Services: a variety of local and national restaurant outlets

OFFICE AND INDUSTRIAL MARKET POTENTIAL

OFFICE MARKET CONDITIONS

The office market in Orting primarily houses local-serving office tenants. Tenants such as doctors and dentists, finance, insurance, real estate offices, and various business services locate near the population they serve. However, Orting is also part of the larger Tacoma/Fife and regional office markets that may provide additional opportunities for growth over time. The office market in Pierce County is stronger at this time than in the recent past as the Tacoma CBD has successfully backfilled some large vacant spaces. The Puyallup submarket also has higher occupancy than in the past. Rents are somewhat lower than the total submarket, but there has been absorption in the past year.

Table ED-17
Puget Sound Region Office Market Conditions
First Quarter 2014

	Building Sq. Ft.	Vacancy	Asking Rent \$ / sq. ft. /yr*	Last 4 Quarters Absorption
Downtown Seattle	43,583,080	12.8%	\$33.69	972,196
Seattle Close-In	5,318,422	20.1%	\$27.54	(35,920)
Southend	10,044,951	21.0%	\$22.13	(25,716)
Eastside	29,956,081	13.8%	\$30.61	(75,301)
Northend	4,469,646	20.7%	\$24.28	70,789
Tacoma/Fife				
Tacoma CBD	2,856,552	13.1%	\$24.82	288,943
Tacoma Suburban	1,186,039	8.7%	\$21.85	38,980
Fife	213,994	11.8%	\$24.00	5,067
Puyallup	456,997	12.7%	\$22.54	64,592
Dupont	364,020	0.0%		-
Subtotal	5,077,602	11.1%	\$24.18	397,582
Total	98,449,782	14.6%	\$29.97	1,303,630

* Fully serviced, landlord pays expenses.

Source: CBRE Research, First Quarter 2014.

General office space and medical/dental office space in Orting and the nearby area is summarized in **Table ED-18**.

**Table ED-18
Area Office Buildings**

Office	Address	Year Built	Size Sq. Ft.	Space Available	
				(Sq. Ft.)	Asking Rent*
Lake Place Professional Business Center	8412 Myers Rd. Bonney Lake	2000	16104	11418	\$16.00
Rainier Professional Plaza	182nd & SR 410 Bonney Lake	2003	32448	3183	\$17.00
Armada Plaza	Bonney Lake	2006	7061	2553	\$16.50
Bonney Lake Medical Office Building	10004 204th E. Bonney Lake	2011	59468	1725	\$31.00
Windermere Building	180th & SR 410 Bonney Lake	2000	12275	2000	\$22.80
Gaham Business Center	21723 103rd Ct E. Graham	2004	15000	2250	\$11.00

* Net Rent, Tenant pays expenses.

Source: Commercial Brokers Association, Loopnet.

With the exception of the Medical Office Building and the Windermere Building, the buildings shown are asking for rents that are well below the average for Tacoma/Fife, and well below the levels necessary to support the cost of new construction. There are no new office buildings in Orting to house the businesses supporting the increased local population.

INDUSTRIAL MARKET CONDITIONS

The industrial market in Orting is part of the larger North Pierce County and South King County industrial markets. Current market conditions in Pierce County are summarized in **Table ED-19**. Overall vacancy rates are low and absorption has been strong over the last year, particularly in Pierce County.

Rents vary by type of space. Hi Tech space captures the highest rents, followed by Office/Showroom, and Manufacturing/Warehouse/Distribution.

Table ED-19
South King and North Pierce County Industrial Market Conditions –
First Quarter 2014

	Building Sq. Ft.	Vacancy	Last 4 Quarters Absorption	Average Net Rental Rate, \$ / sq. ft. / mo.*			
				Hi tech	Manufacturing	Office Showroom	Warehouse Distribution
South King County							
SeaTac	3,333,577	10.2%	(34,252)			\$0.79	\$0.53
Tukwila	12,329,507	8.9%	(112,100)	\$2.50		\$0.62	\$0.51
Renton	14,750,603	2.0%	455,705		\$0.30	\$0.66	\$0.43
Kent	42,810,388	9.7%	345,287		\$0.46	\$0.63	\$0.37
Auburn	25,972,742	4.8%	(378,041)		\$0.35	\$0.45	\$0.39
Subtotal	99,196,817	7.2%	276,599	\$2.50	\$0.42	\$0.63	\$0.40
North Pierce County							
Sumner	11,796,843	7.8%	722,593			\$0.48	\$0.37
Puyallup	8,204,122	3.5%	284,482	\$1.33	\$0.25		\$0.44
Fife/Milton	10,223,820	8.2%	(139,107)		\$0.37	\$0.73	\$0.49
Subtotal	30,224,785	6.8%	867,968	\$1.33	\$0.33	\$0.63	\$0.38
Total	129,421,602	7.1%	1,144,567	\$1.36	\$0.40	\$0.63	\$0.40

* Net Rent, Tenant pays expenses.

Source: CBRE Research, First Quarter 2014.

The market for industrial land mirrors the market for industrial buildings. The industrial areas along the major freeways have traditionally experienced strong industrial demand. The Frederickson area between Orting and Tacoma developed more slowly, largely because of its distance from the Port and the freeways. The area has been attractive to large industrial users needing rail. Major tenants in the area include Boeing, Toray Composites (which provides materials to Boeing) and several building materials suppliers. The other major industrial area in eastern Pierce County is off SR 167 in Sumner. There are industrial parcels available off SR 410 in Bonney Lake and SR 161 in Graham.

There is industrial development in the Orting area as shown in **Table ED-15**. These industrial tenants demonstrate that relatively remote sites can be attractive for large development, particularly if they are served by rail as is the case with the McMillin Park of Industry. There is a 19.3 acre site available in McMillin. 10.8 acres are usable, but can only be used as construction storage. The asking price for this property is \$3.00 per square foot.

**Table ED-20
Area Industrial Facilities**

Identification/Location	Site Area (acres)	Year Built	Size (sqft)
McMillin Park of Industry SR-162 and 136 th St.			
Commencement Bay Corrugated	19	1985	222,089
Tubular Steel	20	2001	72,000
Morrow Equipment	3	1974	15,680
Hobart Bakery Systems – Baxter	20	1972/97	132,000
19220 SR-162			

Sources: Property Counselors, MetroScan, Commercial Brokers Association

POTENTIAL DEMAND

The potential demand for office and industrial development is affected by several factors:

- The growth in population, as it affects demand for local serving office.
- The increased scarcity of large industrial sites in the County.
- The attractive natural setting of Orting, as a draw for back office functions that don't need to be in expensive urban settings.

The magnitude of this demand can be estimated.

Local Serving Office – The existing service sector employment in Orting could support 72,000 square feet of office development. Over time this demand could support 3,600 square feet of new local serving office space per year assuming growth and replacement. This space could be located throughout the City in retail complexes, Downtown buildings, or new commercial sites.

Regional Serving Office – Location of such businesses is often a serendipitous event, as the CEO of a company desires to be close to his home or a recreation site. Otherwise, the location decision is the result of a competitive selection process, as in the case of several call centers or back office operations in the region.

Industrial Sites – Large industrial parcels that are served by highway and rail are scarce resources in this region. Orting would be a suitable candidate for industrial uses requiring large sites, but truck and rail access within the city itself are limited. Such development would attract high wage jobs, but the number would be 11 or fewer per acre.

TOURISM MARKET POTENTIAL

The City could serve as the center of agricultural tourism and recreation in the Orting Valley. Such a role requires that the City and its businesses provide facilities and

programs to serve and promote the agricultural and recreational resources within the entire valley. In the case of recreation, such a role could include bicycle and other equipment rentals, organized tours, and events. In the case of agri-tourism, such a role could be centered on a facility that offers a focus and complementary services to existing farms and related attractions.

21 Acres Center for Local Food and Sustainable Living in Woodinville is an example of an enterprise that coordinates and serves a variety of activities within the agri-tourism sector. The 21 Acres Center for Local Food and Sustainable Living in Woodinville, Washington is a nonprofit organization and facility that serves as a learning center and living laboratory focusing on organic agriculture, sustainable living and green building technologies. There are multiple programs and facilities in the Center:

- Certified organic food production
- Year-round indoor farm market and retail store featuring on-site production and processed offerings as well as products from other small local farms.
- Commercial kitchen provides a variety of services and products for the community.
- Learning Center and Education Program
- Festivals and events
- Facilities for rent.

The 12,000 square foot Leadership in Energy and Environmental Design (LEED) certified platinum building provides classroom, market, kitchen and event space. 21 Acres serves as an example of an enterprise that provides a focus of attention as well as a service to the surrounding agricultural community. 21 Acres was a grass-roots effort that involved partnerships with a variety of private businesses as well as agencies and other non-profit organizations. In the case of Orting, the partners would include growers, retailers, other visitor-related businesses, and manufactures like Hobart who might contribute equipment to a community kitchen.

ECONOMIC STRATEGIES

The results of the preceding analysis suggest three general categories of economic opportunities for the City:

- Expand Tourism
- Expand Local Retail and Service Sectors
- Attract Regional Industrial and Office Development

The remainder of the section identifies several broad strategies for each category.

EXPAND TOURISM

As presented earlier, the City does not have a high profile as a visitor destination.

SHORT-TERM STRATEGIES

1. Establish list of existing visitor attractions and events.
 - Local farms and food providers.
 - Foothills Trail
 - Fish hatchery
 - Fishing opportunities
 - Historic sites and exhibits
 - Unique stores and restaurants
 - Community events and festivals
 - Access to Mount Rainier
 - Others
2. Identify several visitor itineraries based on combination of activities.
 - 2 hour
 - 4 hour
 - all day
3. Prepare brochures with list of attractions, and a map.
4. Solicit coverage by local travel writers.
5. Continue to participate in the Tacoma Pierce County Convention and Visitors Bureau. Participate in local marketing efforts and publicize local resources in Bureau brochures and website.
6. Organize and promote events and festivals with local themes. Such themes might be agriculture-related such as a public market, Mount Rainier-related, such as a lahar festival, or something related to local history.
7. Coordinate with Mt. Rainier National Park and other gateway communities to identify potential events and marketing efforts.

INTERMEDIATE TERM STRATEGIES

1. Solicit visitor-related facilities and private businesses:
 - Non-profit food production and product center.
 - Recreation, equipment sales, rental, and programs.
 - Arts and crafts studios and galleries.
 - Restaurants and food-related processing.
2. Solicit operators of overnight accommodations: motel, RV park or campground.

3. Invest in signage to provide way-finding and unified appearance.
4. Identify potential new visitor attractions such as lahar interpretive center.
5. Develop recreation facilities along rivers to provide access and gathering spaces.

EXPAND LOCAL RETAIL AND SERVICE SECTORS

As presented earlier, the City experiences a large amount of leakage of trade area residential spending to other communities.

SHORT-TERM STRATEGIES

1. Identify suitable sites in the City. Suitable sites are those with highway visibility and access, ten or more acres (for shopping center or large retailer) or distinctive location on the park.
2. Zone suitable property for such use, subject to overall market demand and City priorities.
3. Compile information on available sites: ownership, zoning, availability of utilities, traffic counts, and trade area demographics.
4. Work with local businesses to facilitate their expansion.
5. Organize members of local business community to solicit potential new businesses. It's often productive to solicit owners of businesses in the region (or elsewhere in the County) to open a second store in a nearby community. Local businesses are often familiar with the businesses and owners and can make these contacts.
6. Work with local end real estate brokerage community to promote sites. These representatives have the best contacts with regional retail developers, and regional/national retail businesses.

INTERMEDIATE TERM STRATEGIES

1. Promote regional development of major transportation routes such as the cross base highway and widening of SR 162. Such transportation links can effectively expand the trade area by facilitating traffic movement into Orting.

ATTRACT REGIONAL OFFICE INDUSTRIAL EMPLOYERS

As presented earlier, there is an increasing scarcity of large sites (20 acres or greater) for industrial and large office employers. Communities that previously were considered too far from population centers and highway routes are now more attractive.

SHORT-TERM STRATEGIES

1. Identify suitable sites in the City or nearby. Suitable sites are those 5 acres or greater with few development constraints and available utilities.

2. Zone suitable properties for such use, subject to overall market demand and City priorities.
3. Compile information on available sites: ownership, zoning, availability of utilities, transportation access, financial terms, and map or aerial photos.
4. Coordinate with Port of Tacoma and Washington Department of Community Trade and Economic Development to make site information available to potential users. Include site data in Choose Washington Database. Work with Port of Tacoma economic development staff to identify leads.
5. Organize local business community response team to pursue inquiries regarding economic opportunities. Members of this team may identify unique opportunities such as current or past residents who have enterprises that they would like to locate in an attractive small community like Orting.

INTERMEDIATE TERM STRATEGIES

1. Promote regional development of major transportation routes such as the cross base highway and widening of SR 162. These projects have the potential to significantly improve the desirability of the local area for major office and industrial sites.

Capital Facilities Appendix

CAPITAL FACILITIES APPENDIX

WATER

SERVICE AREA

Orting's water system is described as a small Group A system. It has four service areas, Harman and Wingate Springs, Central Business District, Northend and west of the Puyallup River along the Orting Kapowsin Highway.

WATER DEMAND

CURRENT WATER DEMAND

As of November 2014, there were 3,176 metered connections in the City's water system. For water demand calculations, the metered connections are converted to Equivalent Residential Units (ERUs) to account for non-residential services. The 3,176 connections are equivalent to 3,376 ERUs. In addition to the metered connections, unaccounted water in Orting's system is estimated to be 600 ERUs. One ERU is equivalent to 238 gallons per day per connection for average use and 524 gallons per day per connection during peak day events. Community water usage exceeds 1,800,000 gallons per day during peak events.

PROJECTED WATER DEMAND

Future water demands are calculated by multiplying projected population estimates from the land use element by system ERUs for average and peak day demands. Because the types and extent of anticipated land uses do not differ substantially from the existing types of land uses, it is assumed that future water use patterns will not differ substantially from existing demands. **Table CF-1** presents projections of future water demand.

Table CF-1
Projection of Future Water Demands

Year	Projected Household (Equivalent Residential Connections) ¹	Average Daily Water Demand (gallons per day)	Maximum Daily Demand (gallons per day)
2014	3,376	803,500	1,769,000
2019	3,548	844,500	1,859,000
2024	3,729	887,500	1,954,000
2029	3,919	933,000	2,054,000

¹ Population based on County-wide allocation, and on a 2.5-person household size.

WATER SUPPLY

Table CF-2 describes the proposed improvements to water sources for each service area. Based on the allowable capacity of the sources (the lesser of physical source capacity or water rights), the City's

sources are currently capable of delivering instantaneous flow of up to 2,957 gpm and annual flow of up to 2,161 acre-feet. The current system allowable capacity is adequate for the current and projected population through the year 2029. Year 2029 demand projections anticipate an instantaneous flow rate of 1,426 gpm and an annual flow of 1,045 acre-feet, both of which are far below the source capacity. **Table CF-3** illustrates the water rights, physical capacities and allowable use capacity of the City's water sources

**Table CF-2
Inventory of Water Sources**

Service Area	Source	Proposed Improvements	Distribution System
Wingate & Harman Springs	Wingate & Harman Springs	Replace wrapped steel and asbestos-cement distribution mains. Wingate booster pump station upgrades.	6-12" wrapped steel, ductile iron, and asbestos-cement pipe
CBD	Wells #1, #2, #3, and #4 Wingate & Harman Springs		2-12" wrapped steel, ductile iron, and asbestos-cement pipe
Northend	Wells #1, #2, #3, and #4 Wingate & Harman Springs		6-12" ductile iron and PVC pipe
West of Puyallup River	Wells #1, #2, and #3 Wingate & Harman Springs	8" ductile iron connecting Whitehawk to Calistoga E	8"-12" ductile iron, 9" PVC

**Table CF-3
Capacities of Water Sources**

Source	Production Rate (GPM)
Well #1	500
Well #2	300
Harman Springs	72
Wingate Spring	250
Well #3	650
Well #4	1185
Total	2,957

WATER STORAGE AND TRANSMISSION

The total existing water storage capacity of the Orting water system is 1,865,900 gallons. Each of the three spring sites is equipped with a concrete reservoir storage tank with capacities as follows: Lower Harman (190,000), , and Wingate (125,900). The lower Harman reservoir was replaced in 2003 with a 190,000 gallon tank to account for storage losses at the Boatman facility. Boatman Springs, which was once a source of supply for the City, has been disconnected from the distribution system. Well #1 has a 550,000 gallon concrete reservoir, and Well #4 has a 1-million gallon concrete reservoir.

Storage analysis indicates the City's existing storage facilities are sufficient. The addition of the 1-million-gallon North End Reservoir at Well #4 to the water system currently provides an excess storage capacity of over 500,000 gallons. At build-out conditions, the system will have an excess storage capacity of approximately 460,000 gallons. No storage improvements are recommended for the City.

One of the most serious problems with the water system is the leaking of primary transmission pipes. These pipes carry municipal water from the wells and spring sites to the city's customers. The unaccounted water (the difference between quantities of water read at the source meters and consumers' meters) requires considerable city crew time to repair leaks and represents lost revenue potential for future connections. The City is aware that a majority of this water loss occurring in the system is due to aging AC and wrapped steel pipe in the distribution systems for Harman and Wingate Springs, located south of town in the upper zone of the system. To better understand the leakage occurring in the upper zone, a flow meter was installed at Well #1, which monitors the amount of water coming from the upper zone into the City limits. In a zero loss situation, the amount of water passing through the flow meter would be the difference between the water produced by Harman and Wingate Springs, and the customer usage along these distribution lines. In actuality, around 4 million gallons of water is unaccounted for each month before it passes through the flow meter. This ranges between 30 and 60-percent of the water produced from these two sources each month. The City has completed design of the water main replacement project along Orville Road, and is starting construction in 2017. In addition, the City has an annual leak detection program in an effort to reduce the quantity of unaccounted water.

WATER QUALITY

The water supply is chlorinated at all of the sources and is carefully monitored in accordance with State Department of Health and US Environmental Protection Agency standards.

NEEDS

The Orting water supply was analyzed on the basis of available storage and the ability of the system to supply fire flows as well as providing domestic needs.

Existing water rights will be adequate for supplying water for the demands of projected populations. The City has completed a number of water right change applications to create a well field so the newly constructed Well #4 can withdraw water utilizing the City's existing water rights. The system is capable of supplying fire flow requirements for single occurrence residential and commercial fires.

The Capital Facilities Program (**Table CF-8**) contains specific water system improvements that have been identified in the water utility master plan. In addition, the plan identifies the need for additional operation and maintenance staffing. The capital improvement projects include:

- Wingate Booster Pump & Main Replacement

- Orville Road Main
- Downtown Main Replacement
- Meter upgrades to Radio Read
- Corrin Ave S. Main Replacement
- Bowlin Ave Main Replacement
- Daffodil Main Extension
- Whitehawk Main Extension
- 178th Avenue Loop
- SR 162 Service Crossing Replacement
- SR 162 Main Replacement
- Well #1 VFD Install
- Upgrade Alarm Systems at all Sources
- Public Works Building

WASTEWATER

EXISTING COLLECTION SYSTEM

Orting's collection system ranges in age from the 1943 “old town” lines to new lines installed in recent subdivisions. The sewer system serves virtually all of the commercial and residential property in the city. As of September 2017, the City’s sewer system had 2,897 physical connections which is equivalent to approximately 3317 ERUs based upon consumptive meter readings. The system service area covers about 800 acres including the High Cedars golf course community located outside the City limits. At the present time there are no industrial users of the system.

The general slope of the Orting planning area is from the southeast to the northwest, towards the treatment plant. The northern and western portions of the area slope away from the existing treatment plant, creating a need for the pumping of sewage.

The city has five pumping stations One, located at the intersection of Calistoga Street W and the Puyallup River, serves the Soldiers' Home and that portion of service area south of the Puyallup River. The Soldier's Home, housing approximately 192 residents is the major commercial user in the area.

The second pumping station serves the High Cedars Village and Golf Course and discharges to the city sewer system through a 3,100 foot 6-inch diameter forcemain. The system is designed to handle 300 connections in the High Cedars development. In 2008, the pump station had a total of 180 hookups. The Village Green, Village Crest, and Rainier Meadows pumping stations respectively serve those three developments.

WASTEWATER TREATMENT

The wastewater treatment plant serves all property within the City including the High Cedars Golf Club development and the Soldier's Home.

EXISTING DEFICIENCIES

The existing gravity collection system has a serious inflow and infiltration problem due to the aging infrastructure. Inflow is defined as surface water and storm sewer water entering the sanitary sewer system through leaks. The state Department of Ecology has directed the city to correct this problem. Immediate complete correction of infiltration and inflow is not financially feasible making gradual replacement and rehabilitation of the existing sewers the only economic alternative. Replacement and rehabilitation of the existing sewers will take place systematically by removing areas of the system with the greatest inflow and infiltration problems first. In 2008, the City performed a survey of the entire sanitary sewer collection system, which included videotaping and smoke testing. Through this survey, areas of high infiltration and inflow were identified and ranked based on severity. In 2011, the City completed sanitary sewer rehabilitation on Deeded Lane and Whitesell Street, two highly ranked locations identified by the sanitary survey. In 2017, the City is in the construction process of the Eldredge Avenue NW sanitary sewer rehabilitation project. The City continues working to reduce inflow and infiltration and plans to spend approximately \$100,000 each year on inflow and infiltration projects.

Effluent from the wastewater treatment plant currently discharges into the Carbon River just north of the plant through an outfall pipe located 8 feet above the river bottom. Due to concerns over river bar formation in the vicinity of the exposed outfall which prohibit the development of a submerged outfall this side bank discharge will be maintained for all phases of future expansion.

Solids from the treatment process are currently stored in a lagoon facility at the treatment plant site. The City is currently planning to implement solids handling, which will free the lagoon area for other uses.

FUTURE WASTEWATER FLOWS

To project future wastewater flows for Orting, existing treatment plant flows and loadings as well as future collection systems have been evaluated. Total wastewater flows are the sum of residential, commercial and industrial wastewater plus infiltration and inflow. The existing sewer flows are mainly a function of residential flows and infiltration and inflow; industrial and commercial flows are minimal, as described earlier.

The City of Orting General Sewer Plan/Engineering Report Amendment (Parametrix, Inc., 2001) details the methodology for projecting service area population equivalents within the City's urban growth area.

Table CF-4 shows the current population, the wastewater treatment plant design population and the projected build out population.

**Table CF-4
Sanitary Sewer Service Area Population Equivalents***

Region	Population Equivalents		
	Current	Phase 1	Build Out
Residential	3,723	4,312	8,025
Commercial	107	370	915
High Cedars	110	229	475
Total	3,940	4,911	9,415

* Population Equivalent = one individual contributing a typical per capita flow and waste load to the treatment plant.

- Residential: 2.5 population equivalents per dwelling unit
- Commercial: 1,000 population equivalents per 7 acres; 2,000 gallons per acre per day; and

130 gallons per capita per day per population equivalent

- High Cedars: 110 existing dwelling units; 190 dwelling units at build out, for planning purposes only. Actual service is not anticipated.

Source: Parametrix, Inc.

The General Sewer Plan provides more information on the WWTP influent design flows and the rated capacity. The influent design flows are based on the build out condition of 9,415 population equivalents.

To further understand the effect of inflow and infiltration on plant capacity, the City of Orting completed an Infiltration and Inflow Report Update (Parametrix) in 2011. Inflow and infiltration appears to be consistent since the Deeded Ln and Whitesell St sewer rehabilitation project completed in 2011. Continued sanitary sewer rehabilitation and replacement projects should further decrease and stabilize inflow and infiltration in the system.

WATER REUSE

Irrigation of nonfood crops is the least costly, most prevalent potential use of reclaimed water. Irrigation demand could be greater than the dry season maximum month effluent flow of the Orting wastewater treatment plant. Feasible irrigation uses of reclaimed water include the Orting Middle School, Ptarmigan Ridge Elementary, Gratzner Park, Village Green and Whitehawk Parks, and the Foothills Trail. These uses are estimated to generate ultimate demand for 574 gpm on average and 1,150 gpm for the peak period. Water reuse facilities at the treatment plant and in the Orting Valley maybe constructed by the City Sewer Utility. All facilities will be owned and operated by the City.

The Capital Improvements Program (**Table CF-8**) lists planned improvements to the wastewater and water reuse system that are planned for the next 14 years. These improvements include providing solids handling facilities at the treatment plant and development of an extensive water reuse treatment and distribution system. Storage of the solids in the on-site lagoon will end as soon as the solids treatment facility is complete. About \$2 million worth of improvements are anticipated from now to the year 2020.

STORM WATER

The Pierce County River Improvement's Puyallup River Basin Comprehensive Flood Control Management Plan (1991) refers to Orting as one of the "hot spots" in the study area which has experienced chronic flooding problems and is not adequately protected from the 100 year floods. If a flood on either the Puyallup or Carbon Rivers were to cause levee failure or change their course, they would usually flood and possibly erode adjacent high quality agricultural lands. Potential damage to urbanized areas in Orting is also high if the levees protecting these areas were to fail.

The Puyallup River Basin Comprehensive Flood Control Management Plan identifies the types of potential damage which could occur along the Puyallup River, including the inundation of residential and agricultural lands south of Orting; the inundation of over 100 single family residences plus a power substation in Orting; closure of Calistoga St W, a major arterial in Orting; inundation of River Glen Campground, High Cedars Golf Course and agricultural lands northwest of Orting; and overtopping and possible closure of SR 162 between Orting and McMillan. Specific areas of potential damage along the Carbon River include minor inundation of vacant and agricultural land in Orting.

In 2008, Pierce County completed their Levee Setback Feasibility Study between River Miles 2.6 and 23.3 on the Puyallup River. Information from Pierce County's Setback Levee Feasibility Study was used by the City as the first step in identifying a setback levee project location. Pierce County evaluated setback levee sites using three main goals: 1) Increase floodplain connectivity and flood storage, 2) Re-establish short and long-term geomorphic processes and function, and 3) Maximize aquatic habitat and diversity use. Out of 32 potential setback levee sites, the proposed site in Orting ranked as the second best location for a levee setback on the Puyallup River.

To prevent flooding from the Puyallup River, the City utilized this feasibility study to move forward with the Calistoga Setback Levee project. Between 2008 and 2013, the City worked to acquire property, coordinate with stakeholders, secure grant funding, and design and permit the 1.5-mile long Calistoga Setback Levee. The new levee was designed to be at least 3-feet above the 100-year base flood elevation to protect the City during large storm events. The project also provides habitat benefits to the River system. Removal of the existing levee reconnects approximately 46 acres of floodplain to the middle Puyallup River, in addition to 55 acres of reconnected side stream/backwater habitat. The project was completed in 2015.

Due to State Department of Ecology (ECY) requirements for reducing non-point sources of pollution in Puget Sound, the City developed mapping and a model of the storm water system in 2002. The City's storm water utility collects fees based on storm water runoff created by impervious surfaces on each parcel within the city. These funds are used to construct needed storm water collection, detention, and treatment facilities. The City has also adopted ECY's Stormwater Management Manual for Western Washington, August 2005 edition, as part of the Orting Municipal Code. All new and redevelopment must comply with the requirements and recommendations in the manual.

SCHOOLS

The Orting School District Capital Facilities Plan is a six-year plan intended to be revised each year for the succeeding six years. The plan is intended to guide the District in providing new capital facilities to serve the projected increase in student enrollment as well as new developments emerging within the District boundaries. The plan will be reviewed on an annual basis and updated based on current and future enrollment and projected financing. Also included in the plan are major capital repairs and improvements needed to maintain the District's existing facilities.

This Capital Facilities Plan is designed to support the use of school impact fees as provided for under the 1990 Growth Management Act for the Orting School District. Therefore, it consists of:

- An inventory of the existing schools, support facilities and properties owned by the Orting School District.
- An enrollment history and projection through the 2022-2023 school year.
- An identification to the District's current "level of service" with respect to capital facilities.
- A forecast of the District's need for new construction.
- A plan that will finance the proposed construction projects within projected funding capacities and clearly identify sources of public money for such purposes.

The Growth Management Act, which was passed in 1990 and amended in 1991, includes two elements addressing the impacts of development on schools: RCW 58.17.110, the state subdivision act, was amended to require denial of any plat "unless the...county legislative body makes written findings that:

(a) Appropriate provisions are made for....schools and school grounds... Dedication of land to any public body, provisions of public improvements to serve the subdivision, and/or impact fees imposed under this act may be required as a condition of subdivision approval..." RCW 58.17.060 was also amended to require that the same determination be made with regard to short plats. Sections 43-48 of the Act specifically authorizes the counties and cities to impose impact fees for school facilities upon adoption of a capital facilities plan element and enabling ordinance.

On January 1, 1997, Pierce County implemented an impact fee ordinance for schools within unincorporated Pierce County. For 2017, the "maximum" fee for single-family residences in Orting is \$3,400. For multi-family residential units the "maximum" fee is \$163. Pierce County is engaged in a study of school impact fees and is expected to change some fees in 2017.

SCHOOL FACILITIES INVENTORY

Facilities include Orting High School, Orting Middle School, Orting Primary School, Ptarmigan Ridge Elementary School, Central Administration Building and the old Administration Building that houses the Bus Garage & Maintenance Facility and the School District Grounds/Maintenance Shop. Additionally, the District owns 22.9 acres of undeveloped land south of Orting (known as the Orville Road property). County ordinances make the Orville Road property unsuitable for a school facility due to Pierce County zoning regulations prohibiting construction of school buildings in this Mount Rainier Lahar Designated Zone and wetlands area.

ELEMENTARY SCHOOLS:

Orting Primary School (Grades P-3)
316 Washington Ave North
Orting WA 98360-8404
Total Room Count: 24
7 Portables

Ptarmigan Ridge Elementary School (Grades K-5)
805 Old Pioneer Way NW
Orting WA 98360-9466
Total Room Count: 28
9 Portables

MIDDLE SCHOOL:

Orting Middle School (Grades 6-8)
Orting WA 98360-8404
Total Room Count: 35

HIGH SCHOOL:

Orting High School (Grades 9-12)
320 Washington Ave North
Orting WA 98360-8404
Total Room Count: 32
9 Portables

SITES:

The District currently owns 13 parcels of land on 5 sites that comprise a total of 131.75 acres.

- Bus Garage & Maintenance Facility and Grounds/Maintenance shop. Total 2.15 Acres
- Orting School District's Central Office, Orting Primary School and Orting High School. Total 45.27 Acres
- Orting Middle School, District Kitchen, and Stadium. Total 42.65 Acres
- Ptarmigan Ridge Elementary School. Total 18.78 Acres
- Orville Road property, 22.90 acres south of Orting. This property lacks sewers and is unsuitable for a school per Pierce County regulations prohibiting construction of school buildings in this Mount Rainier Lahar Designated Zone and wetlands area. Total 22.90 Acres

HISTORY OF FACILITIES:

The following constitutes a known record of School District historical events:

- 1871 The first school was built.
- 1879 The second school was built.
- 1891 The third school was built. Grades 1 - 6 attended this school until 1929 when a new grade school was built.
- 1929 A new grade school was built. Additions to this school were built in 1944 and 1948. (This location is currently used as the Central Office Administration building and no longer serves as a school classroom facility.)
- 1951 A new high school was built. (This building is currently used for the transportation & maintenance/grounds departments and no longer serves as a school classroom facility.)
- 1955 A gymnasium was added to the high school campus site. (A second gym was added in 1978) □ 1961 An elementary annex building was constructed.
- 1968 The current Orting Elementary School was constructed.
- 1977 A 6-classroom addition was constructed at Orting Elementary School.
- 1987 The West Wing was constructed (currently part of OHS).
- 1987 The current Orting High School was constructed.
- 1988 An addition was constructed at Orting Elementary School that included a gym, music room and lunchroom.
- 2000 Ptarmigan Ridge Intermediate School was constructed.
- 2002 Orting High School Library addition was constructed.
- 2008 The current Orting Middle School was constructed.
- 2008 Additions were made to the current Orting High School that included the Performing Arts Center/cafeteria, additional office space, and a new gymnasium.

**Table CF-5
Facility Utilization as of 1/31/2017**

Site	Portable Classrooms	Permanent Capacity	Capacity with Portables	FTE	Under/(Over) Capacity without Portables	Under/(Over) Capacity with Portables
Orting Primary	7	288	456	501	(213)	(45)
Ptarmigan Elementary	9	431	665	680	(249)	(15)
Orting Middle School	-	689	689	561	128	128
Orting High School	9	640	892	761	(121)	131
Total	25	2,048	2,702	2,503	(455)	199

FORECAST OF FUTURE NEEDS

To better understand the degree of the enrollment changes taking place in the Orting School District, we examined (a) the District's student enrollment history over the past six (6) years; and (b) the District's enrollment projections through the 2022-2023 school year.

DISTRICT GROWTH

The School District has reviewed historical demographic trends and actual enrollments. It is the belief of the School District that future growth will be greater than these trends due to the current plans for additional housing and planned developments within our District boundaries. Over the past 6 years, the District's elementary school's enrollment (grades K-5) has grown from 1,051 students to 1,185 students. This growth of 134 students represents an 12.75% increase. The Middle School (grades 6-8) enrollment has increased from 531 students to 565 students. This growth of 34 students represents a 6.40% increase. The High School (grades 9-12) has grown from 732 students to 797 students. This growth of 65 students represents a 8.88% increase. The district total has grown from 2,314 students to 2,547 students, an increase of 233 students, or a 10.07% increase overall.

FUTURE GROWTH

The Cohort Survival analyses developed by the Office of Superintendent of Public Instruction was used to determine funding eligibility. That analysis shows growth in elementary school, middle school, and high school enrollment. Total student enrollment is projected to 2022-2023 and estimates a growth of enrollment to 2,844 students. This is up 297 students from current enrollment and equates to a total increase of 11.66%.

DEVELOPMENTS

Tehaleh is a developing 4,700-acre community within Pierce County's Urban Growth Area and encompasses the Orting and Sumner school districts. When complete, it is anticipated that the community will have up to 3,193 single-family homes, 326 multi-family dwellings and 1,337 age qualified dwellings within the Orting School District boundaries.

The Environmental Impact Statement for phase I of this project is now complete but did not include land within the Orting School District. The District is waiting for the release of Phase II to review and comment on the potential impact to the District.

The District has obtained a high level projected build-out schedule from the development land planners for the next 15 years to estimate the student growth impact for each year. Through the facility master plan, the District has estimated the student per housing unit model is .490 students per housing units. The breakdown by grade grouping level is .221 for K-5, .116 for 6-8 and .153 for 9-12. These estimates will be reviewed annually and adjusted as necessary. These projections will be combined with the OSPI Cohort Survival enrollment projections to estimate the impact of the development combined with cohort growth. By the school year 2031-32, Tehaleh is expected to generate 1,728 full-time equivalent students. In the six-year period 2017-2023, Tehaleh is expected to generate 359 students.

**Table CF-5
Facility Requirements to 2023**

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
NEW ELEMENTARY SCHOOL			700			
STUDENT CAPACITY WITHOUT PORTABLES	2,048	2,048	2,048	2,748	2,748	2,748
STUDENT CAPACITY WITH PORTABLES	2,702	2,702	2,702	3,402	3,402	3,402
PROJECTED ENROLLMENT	2,594	2,697	2,751	2,807	2,865	2,918
CAPACITY RESERVE (DEFICIENCY) W/O PORTABLES	(546)	(649)	(703)	(59)	(117)	(170)
CAPACITY RESERVE (DEFICIENCY) WITH PORTABLES	108	5	(49)	595	537	484

CAPACITY AND UTILIZATION

The capacity of a school building is driven by four main factors: (1) the physical size of the instructional spaces, (2) the class size limits, (3) the schedule of uses, and (4) the programs that are offered by the school. Current capacity standards of the Orting School District are:

Kindergarten – Grade 3	= 24 students
Grades 4 to 5	= 28 students
Grades 6 to 8	= 28 students (average over a daily schedule)
Grades 9 to 12	= 28 students (average over a daily schedule)
Special Education (Life Skills)	= 15 students
Title I, Resource	= 15 students

With the signed conference budget passed during the 2017 legislative session, the funded classroom ratio has significantly lowered the class sizes in grades K-3. This reduction in class size will affect the capacity of schools across Washington. The lower class sizes will require additional classrooms to remain in compliance. As a result, this may require the Orting School District to change its capacity standards to:

Kindergarten – Grade 3	= 17 students
Grades 4 to 5	= 27 students
Grades 6 to 8	= 28 students (average over a daily schedule)
Grades 9 to 12	= 28 students (average over a daily schedule)
Special Education (Life Skills)	= 15 students
Title I, Resource	= 15 students

Orting School District made a determination not to use the portable classrooms as part of the “level of service capacity.” This is consistent with other school districts in the State of Washington and with the Office of the Superintendent of Public Instruction. The District does not consider portables as being adequate long-term instructional space for students and/or staff members. By design, portable classrooms separate their occupants from the rest of a school's student body and/or staff members. In addition, the increased enrollment that portables afford a school serve to tax the capacities of "core" facilities of the permanent building(s) spaces such as the gymnasium, the library, the restrooms, the main office and the food service facilities.

NEW CONSTRUCTION PLANS

The ability to move forward on the construction of any new school facilities in the Orting School District hinges on three (3) factors.

First, the District needs to have local funding available to help pay for the cost of new school facilities. Normally, school districts secure the majority of their local funds through the sale of general obligation bonds, as approved by the qualified voters of their districts. The authority to issue and sell such bonds rests in the Constitution and laws of the State of Washington, including RCW 28A.530.010 and RCW 84.52.056.

Second, the district may need to secure property on which to site the new school. The State of Washington has set forth site size standards, as defined in WAC 392-342-020. Specifically, for an elementary school, the minimum standard is five (5) acres plus an additional one (1) acre for each one hundred (100) pupils of a school's maximum enrollment. For middle and senior high schools, the minimum standard is ten (10) acres plus an additional one (1) acre for each one hundred (100) pupils of a school's maximum enrollment. These recommended acreages provide space for the school building(s) and the appropriate support facilities such as play fields, athletic facilities and parking.

Third, is the eligibility for State matching funds. Such State assistance is used along with local funds to pay for the cost of new school facilities. However, State monies cannot be used to purchase school sites, to make off-site improvements and/or fund those specific items spoken to in WAC 392-342-020. The formula for determining the exact amount of State matching money a district can receive is set forth in RCW 28A.525.166.

SUMMARY

To accommodate anticipated growth, the Orting School District currently has plans for the following projects. These projects are to be funded with Bond funding and State matching funds.

Build a new approximately 700 student K-5 Elementary School on existing District property.

FINANCIAL PLAN

The District needs approximately \$43,000,000 to finance the construction of the new approximately 700 student Elementary School. These funds will be derived from the sale of general obligation bonds and impact fees on new housing developments as they are built. The District is currently eligible for state matching funds.

ASSESSED VALUATION

The assessed valuation of the school district is the total value of the real property – land and improvements including buildings – within the district boundaries. The assessed value is set by the County Assessor and serves as the base to which property tax rates are applied.

EXISTING DEBT

The Orting School District currently has existing debt (voted/non-voted) in the amount of \$19,636,291 as shown in the table below. There is a five percent ceiling on outstanding indebtedness, which means that the bonded indebtedness of the District cannot exceed five percent of the assessed value of the District at the time of issuance of the bonds. The existing debt therefore reduces the bonding capacity of the District.

For the Orting School District, as of December 31, 2016, the availability of bonding capacity is calculated as:

Total Assessed Value	\$1,240,614,482
Five Percent of Assessed Value	\$62,030,724
Existing Debt	\$19,636,291
Available Bonding Capacity	\$42,394,433

MITIGATION/IMPACT FEES

Mitigation or impact fees can be calculated on the basis of “unhoused student need” or “the maintenance of a district’s level of service” as related to new residential development. A determination of insufficient existing permanent and/or portable school space allows a district to seek imposition of

mitigation or impact fees. The amounts to be charged are then calculated based on the costs for providing the space and the projected number of students in each residential unit. A district's school board must first approve the application of the mitigation or impact fees and, in turn, approval must then be granted by the other general government jurisdictions having responsibility within the district – counties, cities, and towns.

Furthermore, developers may contribute properties which will have value to a district. In such cases, the developer is entitled to a credit for the actual cost of the provided property. This credit can reduce or eliminate the mitigation or impact fee that would have been chargeable under the mitigation/impact fee calculation.

The District will work with Pierce County to ensure that the amount of impact fees collected meets the impact of the growth within the District boundaries.

ANTICIPATED CAPITAL FUNDS

The District anticipates it will collect approximately \$300,000 for the 2017-2018 school year in Impact Fees. A bond election will be required to generate adequate funding for all future construction plans.

**Table CF-6
Capital Fund Projects and Financing Plans
Source and Uses of Funds**

Existing Revenue:	
Impact Fee Reserve:	\$ 1,239,946
New Revenue:	
2017/18 Impact Fee Estimated Collections	\$ 300,000
State Funding Assistance	\$ 1,000,000
UTGO Bonds	<u>\$ 43,000,000</u>
Total Sources	\$ 45,539,946
 Uses of Funds	
Elementary School No. 3	\$ 43,000,000
Non-Capacity Projects	<u>\$ 2,539,946</u>
Total Uses	\$ 45,539,946
 Balance	 <u><u>\$ -</u></u>

LIBRARIES

Public libraries offer education, information and recreational services to the community, as well as community gathering space. Orting's public library, housed in the Multi-purpose Center, is a branch of the Pierce County Library System. The Multi-purpose Center was constructed in 1981, and the library occupies 2700 square feet of it and shares the restrooms and entry. The site area is 10,560 square feet and includes parking and an entry plaza.

The Orting Pierce County Library is a full-service public library. It provides residents with an on-site collection of over 20,000 books, movies, music, magazines, audio books, newspapers and reference

resources, as well as access to the Library System's collection of over 1.5 million books, movies and other materials. Public computers and printers are provided and free Wi-Fi is available to mobile computers users in the library as well as in the surrounding neighborhood.

The Library System's 24/7 online branch also provides Orting residents free access to over 500,000 downloadable books, audiobooks, movies and other materials. Mobile services reach schools, adult care facilities, homebound and are present at community events. Pierce County Library has reciprocal borrowing agreements that provide Orting residents with free use of other Washington libraries including the nearby King County Library System and Timberland Regional Library, Tacoma Public Library and the Puyallup Public Library.

In 2016, the Orting Library had 56,000 visitors and checked out 130,000 books. It currently has 6100 library cardholders.

As part of the Pierce County Library system, use of the facility and its services is not limited to Orting residents. The Orting Library's current service area population is estimated at 12,700, and includes residents from surrounding communities such as Graham, South Prairie, Bonney Lake and Sumner.

FUTURE NEEDS

Pierce County Library 2030, the Library's facilities master plan, was completed in 2010, with the input from and collaboration with individuals and organizations throughout the County. The City of Orting participated in this process. A 2017 update to Pierce County Library 2030 reflects changes in the community, technology and services expectations of the public. The Pierce County Library participated in the City of Orting's facilities master planning process in 2017 identifying possible locations for expanded service.

Pierce County Library 2030 (2017 update) projects a service area population of 16,100 in 2030.

The updated plan identifies the Orting Library to its "small" category, with a need for 6,000 to 10,000 square feet, identifies inadequacies in the current building and its design, as well as a need for increased seating, computers and parking, and the addition of a meeting room for community gathering space for the public and civic groups, and conference rooms for small groups meetings or study.

Pierce County Library's existing operating levy supports ongoing operations and capital maintenance. Additional funds will be needed to support the costs of new or expanded facilities.

PARKS AND RECREATION

The City's close proximity to Mt. Rainier National Park, the Gifford Pinchot National Forest and mountain wilderness areas offer Orting residents numerous recreation opportunities. The Foothills Trail is a regional attraction, and an important recreational asset within the community.

There are a little more than 170 acres of public parks and natural resource areas, and over two miles of trails within the City of Orting. Several local residential developments also maintain private parks. There are four park classifications: mini-park, neighborhood park, and community park. Descriptions, and a full inventory, are provided in the Parks, Trails, and Open Space Plan (PTOS).

The PTOS was initially adopted in 2010 after an extensive public engagement process, and subsequently updated in 2015. A parks plan certified by the state Recreation and Conservation Office (RCO) is required to be eligible for RCO grant funding, and an update is required every six years. The

PTOS identifies current resources and need, forecasts future demand, and identifies strategies for meeting future need. Level of Service standards for park, facilities, trails and natural resource areas are set in the Capital Facilities Element by Policy CF 3.3.

POLICE

The Orting Police Department operates with nine full-time officers, one SRO, supplemented with one reserve officer who is also the code enforcement officer, a clerk, and a contract evidence custodian. Full time personnel work ten hour days four days a week, ensuring that two officers are available at night during the peak hours. Currently, the department has achieved a ratio of 1.4 officers per 1,000 resident population, which is below the national average of 1.7 officers per 1,000 population. The Department's service area is limited to Orting city limits, but officers will respond to an incident outside of the city, as necessary to assist other agencies when necessary. The Department strives to maintain an unofficial response time of three to four minutes. Should areas outside the City be annexed, additional full-time officers will need to be hired to maintain the Department's ability to adequately serve Orting residents.

Police facilities are currently located in the Public Safety Building at 401 Washington Ave SE, which lies between Bridge St and Hardefeldt St SE. . The Department has fourteen police vehicles, which allows for Reserve Officers & a backup vehicle for primary vehicles, when occasional maintenance takes them out of service. Orting is dispatched by South Sound 911 county wide dispatch service. By 2020, the City will move the police station to a new facility on a site to be determined.

FIRE

The City receives services from Pierce County Fire District 18 DBA Orting Valley Fire and Rescue (OVFR), to provide fire protection and emergency medical services to Orting and the Orting Valley. The Orting fire station is located in the Public Safety Building at 401 Washington Ave S. OVFR has additional fire stations located on Patterson Road and Orting Kapowsin Highway. The Fire Department is comprised of 17 full time response staff, the Fire Chief, and approximately eight (8) volunteer fire fighters. Orting Valley Fire and Rescue provides 24/7 ambulance service with Paramedics on duty. The District has three (3) ambulances, two (2) command vehicles, three (3) fire engines, two (2) water tankers, and two (2) brush units. The construction of the reservoir and booster pump station at Well Number One#1 provides adequate fire flow to fight simultaneous fires in the lower pressure zone. Fire flow is not adequate in the upper pressure zone. With the completion of Well #4 (completed) and the north end reservoir, scheduled for 2010, the city will have adequate fire flow city wide.

Orting has a Fire Insurance Rating classification of four on a scale that ranges from one to ten, with a rating of one being the highest.

By 2018, OVFR is expected to purchase the existing Public Safety Building. The Orting Police Department and Court will be relocated within approximately three (3) years of the purchase.

CITY ADMINISTRATION

The Orting City Hall located at 110 Train St SE was constructed in the 1920s, and up to 2007 housed the Orting Fire Department as well as city administration functions. The building area is 6,000 square feet, not including the loft area over the truck bays. The site area is 9,000 square feet. The

administration area has been remodeled to accommodate growing space needs for additional staff. The former council chamber has been converted to offices and conference areas. The City Council, municipal court, and boards and commissions meet in the Public Safety Building and Multi-Purpose Center. Preliminary space needs analyses indicate that about twice as much space will be needed to accommodate increased demand on the administration created by population growth. Planning for improvements to the Administration facilities are underway.

Maintenance and repair facilities for city vehicles and equipment will be needed in the future. The City plans on constructing a new public works facility in 2018.

ORTING EMERGENCY EVACUATION BRIDGE SYSTEM

Preliminary design for a pedestrian bridge across the Carbon River with a grade-separated SR 162 crossing and pedestrian trail linkages is underway, this project is also known as Orting Emergency Evacuation Bridge System. This project is intended to provide an emergency evacuation route for children from the Orting schools, as well as other locations. Efforts are underway to raise additional grant funding from state and federal sources for final design and construction. More information is available in the Land Use and Transportation Appendices.

CONCURRENCY

The purpose of the Capital Facilities Element is to determine the availability of existing capital facilities, forecast future needs for such facilities based upon the projected growth in the community, and determine how such facilities will be financed. Future needs should also be based not only upon the projected growth of the community, but also maintaining a locally determined level of service to be provided by those facilities. This concept of maintaining level of service standards throughout the planning time frame is a key goal of the Growth Management Act. Goal 12 of the Act states that those public facilities and services necessary to support development shall be adequate to serve the development at the same time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards. This concept is known as "concurrency," and it applies to transportation facilities and to a locally defined list of additional capital facilities.

Locally established standards are referred to as "level of service standards (LOS)," and are a method of measuring the quality or quantity of service provided by a facility. Policy CF 3.3 of the Capital Facilities Element establishes the City's adopted LOS.

CAPITAL FACILITIES FINANCING

The six-year capital facilities plan includes improvements that the comprehensive plan elements indicate are necessary, along with potential funding sources. In order to identify these potential funding sources, it is important to review how capital improvements have been financed in Orting in the past.

Orting does not typically allocate general fund revenues for large capital projects. Rather, these projects are funded through bond issues, state and federal grants, and revenues from enterprise funds, such as water, sewer and solid waste fee revenues. Over the past three years capital projects have been financed primarily through federal and state grants, and revenues from the Motor Vehicle Tax.

FINANCING SOURCES

The funding sources identified below are potential long-term choices that may be available to the City for major capital improvement projects. The sources will depend on the status of the City's existing financial commitments, capital required, cash flow requirements, source availability, and whether the source is acceptable to the customers. Any package selected must provide sufficient revenue to construct system improvements as well as satisfying any debt services. The following section will describe the several funding sources available to the City without reference to any specific project.

REVENUE BONDS

The most common source of funds for construction of major capital improvements is the sale of revenue bonds. The tax-free bonds are issued by the City. The major source of funds for debt service on these bonds is from user charges to the individual utility customers. The major advantage of revenue bonds is that they protect the general obligation debt capacity for other projects.

The City is capable of issuing tax exempt bonds up to a 20-year term without public vote. In order to qualify to sell revenue bonds, the City must show that its net operating income (gross income less expenses from the utility) is equal to or greater than 1.4 times the annual principal and interest payments due for all outstanding bonded indebtedness. This 1.4 factor is commonly referred to as the coverage factor and is applicable to revenue bonds sold on the commercial market. As a comparison, the FmHA loan program only requires a coverage factor of approximately 1.1.

The major disadvantages to revenue bonds when compared to general obligation bonds are:

- Issuance costs tend to be higher.
- Interest rates tend to be higher because of lower security with the lack of a general obligation bond.
- Revenue bonds may require that all of the project's net revenues first be applied to either reducing outstanding debt or creating reserve funds for the same purpose.

GENERAL OBLIGATION BONDS

The City, by special election, may issue general obligation bonds to finance almost any project of general benefit to the City. The bonds are paid off by assessments levied annually against all privately-owned properties within the City. This includes vacant property which otherwise would not contribute to the cost of such general improvements. This type of bond issue is usually reserved for municipal improvements that are of general benefit to the public, such as arterial streets, bridges, lighting, municipal buildings, firefighting equipment, and parks. In as much as the money is raised by assessment levied on property values, the business community also provides a fair share of the funds to pay off such bonds.

General obligation bonds have the best market value and carry the lowest rate of interest of all types of bonds available to the City because they are backed by the good faith of all the entire city's assets. Disadvantages of general obligation bonds include the following:

- Voter approval is required which may be time-consuming, with no guarantee of successful approval of the bond.

- The City would have a practical or legal limit for the total amount of general obligation debt. Financing large capital improvements through general obligation debt severely dilutes the ability of the city to issue future debt.
- Extensive use of general obligation debt may endanger the City's credit rating.

UTILITY LOCAL IMPROVEMENT DISTRICTS

Another potential source of funds for improvements comes through the formation of Utility Local Improvement Districts (ULID's) involving a lien against the property collected through assessment made on properties benefited by the improvements. ULID bonds are further guaranteed by revenues and are financed by issuance of revenue bonds.

ULID financing is frequently applied to water or sewer system extensions into previously unserved areas. Typically, ULID's are formed by the City at the written request (by petition) of the property owners within a specified area of the City. Upon receipt of a sufficient number of signatures on petitions, the local improvement area is defined, and a system is designed for that particular area in accordance with the City's general comprehensive plan. Each separate property in the ULID is assessed with the special benefits the property receives from the system improvements.

A City-wide ULID could form part of a financing package for large-scale capital projects such as water supply or storage improvements which benefit all residents in the service area. The City-wide ULID would be formed by a majority vote of the City Council.

There are several benefits to the City in selecting ULID financing. The assessment places a lien on the property and must be paid in full upon sale of the property. Further, a substantial number of property owners can be expected to pay the assessment immediately upon receipt.

Therefore, the City avoids the need to pay interest cost for a portion of the costs financed by the ULID. The advantages of ULID financing, as opposed to rate financing, to the property-owner include:

- The ability to avoid interest costs by early payment of assessments.
- If the ULID assessment is paid off in installments, it may be eligible to be deducted from federal income taxes.
- Low-income senior citizens may be able to defer assessment payments until the property is sold.
- Some Community Block Grant funds are available to property owners with incomes near or below the poverty level. Funds are available only to reduce assessments.

The major disadvantage to the City-wide ULID process is that it may be politically difficult to approve formation. The ULID process may be stopped if owners of 40-percent of the property within the ULID boundary protest its formation.

REAL ESTATE EXCISE TAX FUNDS

The real estate excise tax is levied on all sales of real estate, measured by the full selling price, including the amount of any liens, mortgages, and other debts given to secure the purchase. The state levies this tax at the rate of 1.28-percent. Orting has added the locally imposed tax of .50 for a total of 1.78-percent.

The City must spend the first 50-percent of the real estate excise tax receipts solely on capital projects that are listed in the capital facilities plan element of the comprehensive plan. "Capital projects" funded

by the first quarter percent of the REET are “public works projects of a local government for planning, acquisition, construction, reconstruction, repair, replacement, rehabilitation, or improvement of streets; roads; highways; sidewalks; street and road lighting systems; traffic signals; bridges; domestic water systems; storm and sanitary sewer systems; parks; recreational facilities; law enforcement facilities; fire protection facilities; trails; libraries; administrative and judicial facilities”. The state law requires that the “legislative authority” (Council) shall identify in the adopted budget the capital projects funded in whole or in part from the proceeds of the tax authorized in this section, and shall indicate that such tax is intended to be in addition to other funds that may be reasonably available for such capital projects. These funds may also be used to make loan and debt service payments on projects that are permitted uses.

The second 50-percent of the REET, may be used to fund capital projects listed above, except that acquisition of land for parks is not permitted. Payments of loan and debt service for these projects are also authorized for the use of these funds.

CENTENNIAL CLEAN WATER GRANT PROGRAM

State funded grant programs administered by the Department of Ecology for water quality infrastructure and nonpoint source pollution projects to improve and protect water quality. Eligible nonpoint source pollution projects include stream restoration and buffers, on-site septic repair and replacement, education and outreach, and other eligible nonpoint activities. Eligible infrastructure (point source pollution control) projects are limited to wastewater treatment facility construction projects for financially distressed communities. State grants and loans are available based on a 50% - 75% local matching share range.

STATE REVOLVING LOAN FUND

State low interest loans and loan guarantees administered by the Environmental Protection Agency. The Clean Water State Revolving Fund aims to help communities meet the goals of the Clean Water Act by improving water quality, achieving and maintaining compliance with environmental laws, protecting aquatic wildlife, protecting and restoring drinking water sources, and preserving waters for recreational use. Applicants must show a water quality need, have a facilities plan for treatment works, and show the ability to pay back the loan through a dedicated source of funding. Funds must be used for construction of water pollution control facilities (wastewater treatment plants, stormwater treatment facilities, etc.).

DEPARTMENT OF HEALTH WATER GRANTS AND LOANS

State grants available for upgrading existing water systems, ensuring effective management, and achieving maximum conservation of safe drinking water. Grant funds can be used for technical assistance for upgrading current water systems. The Drinking Water State Revolving Fund provides low-interest construction loans to drinking water systems to finance infrastructure improvements.

AQUATIC LAND ENHANCEMENT ACCOUNT (ALEA)

Grants program administered by the Recreation and Conservation Office. ALEA funds are limited to water dependent public access/recreation projects or on-site interpretive projects. 50% local match required.

CONSERVATION FUTURES

Pierce County provides grant funds to purchase conservation easements or property for the purposes of habitat and resource protection and active recreation.

HOUSING AND URBAN DEVELOPMENT BLOCK GRANT

The city may qualify for Federal Department of Housing and Urban Development (HUD) Block Grants depending on its needs and the ability to compete with other communities. To qualify for a block grant, the applicant must show that the project benefits low and moderate income persons or households.

STATE PUBLIC WORKS TRUST FUND

The Public Works Trust Fund (PWTF) is a revolving loan fund designed to help local governments finance needed public works projects through low-interest loans and technical assistance. The PWTF, established in 1985 by legislative action, offers loans substantially below market rates, payable over periods ranging up to 20 years.

Interest rates are 1%, 2%, or 3%, with the lower interest rates providing an incentive for a higher local financial share. A 20% local share qualifies the applicant for a 2% interest rate and a 30% local share qualifies for a 1% PWTF loan. A minimum of 10% of project costs must be provided by the local community. The useful life of the project determines the loan term, with a maximum term of 20 years.

To be eligible, an applicant must be a local government or special purpose City and have a long-term plan for financing its public works needs. If the applicant is a county or City, it must adopt the optional 1/4% real estate excise tax dedicated to capital purposes. Eligible public works systems include streets and roads, bridges, storm sewers, sanitary sewers, and domestic water. Loans are presently offered only for purposes of repair, replacement, rehabilitation, reconstruction or improvement of existing eligible public works systems, in order to meet current standards and to adequately serve the needs of existing service users. Ineligible expenses include public works financing costs that arise from forecasted, speculative or service area growth. Such costs do not make a project ineligible but must be excluded from the scope of their PWTF proposal.

Since substantially more trust fund dollars are requested than are available, local jurisdictions must compete for the available funds. The applications are carefully evaluated and the Public Works Board submits to the Legislature a prioritized list of those projects recommended to receive low-interest financing. The Legislature reviews the list and indicates its approval through the passage of an appropriation from the Public Works Assistance Account to cover the cost of the proposed loans. Once the Governor has signed the appropriation bill into law (an action that usually occurs by the following April), those local governments recommended to receive loans are offered a formal loan agreement with appropriate interest rate and term as determined by the Public Works Board.

DEVELOPER FINANCING

Developers may fund the construction of extensions to the water system to property within new plats. The Developer extensions are turned over to the City for operation and maintenance when completed.

It may be necessary, in some cases, to require the developer to construct more facilities than those required by the development in order to provide either extensions beyond the plat and/or larger pipelines for the ultimate development of the sewer system. The City may, by policy, reimburse the developer through either direct outlay, latecomer charges, or reimbursement agreements for the

additional cost of facilities, including increased size of pipelines over those required to serve the property under development. Compensation for oversizing is usually considered when it is necessary to construct a pipe larger than eight inches in diameter in residential areas to comply with the intent of the Comprehensive Plan. Construction of any pipe in commercial or industrial areas that is larger than the size required to service the development should also be considered as an oversized line possibly eligible for compensation. Developer reimbursement (latecomer) agreements provide up to 10 years or more for developers to receive payment from other connections made to the developer-financed improvements. The developer may collect up to 75% of the cost of the original improvement through latecomer reimbursement.

SYSTEM DEVELOPMENT CHARGES (GFC)

The City may adopt a system development charge to finance improvements of general benefit to the total system which are required to meet future growth. System development charges (general facilities charges) are generally established as one-time charges assessed against developers or new customers as a way to recover a part or all of the cost of additional system capacity constructed for their use.

The system development charge or fee is deposited in a construction fund to construct such facilities. The intent is that all new system customers will pay an equitable share of the cost of the system improvements needed to accommodate growth. Typical items of construction financed by the system development charge are water treatment facilities, pump stations, transmission lines, and other general improvements that benefit the entire system. This system development charge is quite effective in a fast growing community, but of little value in areas with slow growth because too much time is required to accumulate sufficient funds.

The system development charge is applicable to those lots within plat developments that install a complete water system in their plat to include all lines and appurtenances. The system development charge then help finance the development of transmission lines, pump stations and water treatment facilities to increase the system capacity to meet the new demands.

There are two basic methods for determining system development charges. One is the system buy-in method, and the other is the incremental-cost pricing method. The first method recognizes capital contributions of existing customers towards financing existing facilities. New customers are required to pay an amount equivalent to that paid by existing customers towards invested capital funds under this method. Under the incremental-cost pricing method, new customers are responsible for their share of the last increment of the cost of system facilities. The goal of the incremental-cost pricing method is to eliminate or minimize future service rate increases due to growth by an up-front charge for new capacity.

SIX YEAR CAPITAL FACILITIES PLAN

The six-year capital facilities plan, based on the capital facility needs identified in this plan and related functional plans, is adopted annually by ordinance. Since the comprehensive planning process is a continuing, evolving process, this six-year plan will be continually reviewed and updated.

Any plan is a tool to aid in decision making. This plan is no exception. By outlining how the needed capital facilities of the future can be successfully provided, it will assist annual budget decisions which need to incrementally provide the funding for those facilities. The plan is not intended as a substitute for those budget decisions, only to provide a tool for them.

Capital facility is a widely used term that can be used in a variety of ways. In accounting, it may mean any asset that is capable of being capitalized. As such it would include vehicles, furniture, equipment, and similar assets, as well as much longer term fixed assets. The use of the term here, however, is intended to be much more limited, referring instead to long term fixed assets that have a significant (at least three year) life, and a substantial cost (at least \$20,000). As such, these facilities would require a policy for financing of a longer term character than that which can be readily afforded by the annual budget cycle of the City.

In addition to the six-year plan, the Comprehensive Plan also anticipates other capital facilities needs throughout the 20-year life of the Plan.

20-YEAR CAPITAL FACILITIES NEEDS

Table CF-8 lists the anticipated capital facilities needs, estimated costs, and potential funding sources for projects that the City is considering to accommodate growth between 2015 and 2035.

Table CF-7
20-Year Capital Facilities Needs
 (Transportation Facility Needs are identified in **Table T-7** in the Transportation Appendix)

PROJECT	YEAR	ESTIMATED COST	FUNDING SOURCES
Water			
Wingate Booster Pump & Main Replacement	Unscheduled	\$4,240,000	GFCs/Rates/Grants
Orville Road Main	2017-2018	\$1,500,000	City
Downtown Main Replacement Plan	2018-2020	\$836,200	GFCs/Rates/Grants
Meter Upgrades to Radio Read	2017-2020	\$80,000	
Corrin South Main Replacement	Unscheduled	\$281,000	GFCs/Rates/Grants
Bowlin Main Replacement	Unscheduled	\$254,000	GFCs/Rates/Grants
Daffodil Main Extension	Unscheduled	\$509,400	Developers
Whitehawk Main Extension	Unscheduled	\$615,000	Developers
178 th Avenue Loop	Unscheduled	\$1,060,000	GFCs/Rates/Grants
SR 162 Service Crossing Replacement	2017-2035	\$20,000 Annual Until Completed	
SR 162 Main Replacement	Unscheduled	\$2,750,000	
Well #1 VFD Install	Unscheduled	\$133,000	
Upgrade Alarm System at all Sources	2017-2020	\$40,000	
Public Works Building	2017	\$200,000	
Sewer			
Solids Handling Facilities	2018-2020	\$5,400,00	GFCs/Rates
Lagoon Biosolids Dredging	2017	\$684,300	GFCs/Rates/Grants
Water Reuse Treatment & Distribution	Unscheduled	\$2,000,000	GFCs/Rates/Grants
Collection System Improvements (Annual)	2016-2020	\$540,000	Rates
Puyallup River Pump Station	Unscheduled	\$140,000	

Table CF-7
20-Year Capital Facilities Needs
 (Transportation Facility Needs are identified in **Table T-7** in the Transportation Appendix)

PROJECT	YEAR	ESTIMATED COST	FUNDING SOURCES
Pump Station Upgrades	2017-2020	\$123,200	GFCs/Rates/Grants
Eldredge Avenue NW Sewer Rehabilitation	2017	\$185,000	GFCs/Rates/Grants
Public Works Building	2017	\$200,000	
Stormwater			
Bridge Street/River Ave Outfall Improvements	Unscheduled	\$659,000	O&M
Orting High School/Carbon River Outfall Improvements	Unscheduled	\$806,000	Grants, O&M
Corrin Ave NW Improvements	Unscheduled	\$367,000	Capital Funds, O&M
Corrin Ave SE Improvements	Unscheduled	\$940,000	Capital Funds, O&M
WWTP Outfalls & Culverts	Unscheduled	\$691,000	Capital Funds
Calistoga West Improvements	Unscheduled	\$600,500	O&M
Calistoga East Improvements	Unscheduled	\$466,300	O&M
Puyallup River Outfall Improvements	Unscheduled	\$654,000	O&M
Kansas Ave SW Improvements	Unscheduled	\$561,000	O&M
Ammons Ln/Whitesell Improvements	Unscheduled	\$578,000	O&M
Eldredge Ave/Whitesell Improvements	Unscheduled	\$402,300	Capital Funds, O&M
Harman Wy SW Improvements	Unscheduled	\$109,000	O&M
Deeded Lane SW Improvements	Unscheduled	\$265,000	O&M
Village Green Divs 1,2,&5 Outfall Maintenance	Unscheduled	\$538,000	O&M
Stormwater Management Program	2017-2020	\$357,400	O&M

Table CF-7
20-Year Capital Facilities Needs
 (Transportation Facility Needs are identified in **Table T-7** in the Transportation Appendix)

PROJECT	YEAR	ESTIMATED COST	FUNDING SOURCES
Public Outreach	2017-2020	\$37,000	O&M
Public Involvement and Participation	2017-2020	\$37,000	O&M
Discharge Detection & Elimination	2017-2020	\$90,400	O&M
Pollution Prevention	2017-2020	\$357,400	O&M
Reporting	2017-2020	\$37,000	O&M
Public Works Building	2017	\$200,000	
Bridge Street SW Improvements	Unscheduled	\$129,400	O&M
Runoff Control from New Development, Redevelopment, and Construction Sites	2017-2020	\$714,800	O&M
Parks & Recreation			
Gratzer Park Phase 2	2016-2020	\$600,000	Impact Fees, State Grants, Contributions, General Fund, REET
Splash Park	Unscheduled	\$80,000-100,000	Impact Fees, Grants, Contributions
Municipal Facilities			
City Hall/Library/Community Center/Maintenance Facility Needs Analysis & Site Study	2016-2020	\$50,000 – \$100,000	General Fund, REET
Carbon River Evacuation (SR 162 Overpass & River Bridge)	Unscheduled	River Bridge Cost:\$45,000,000 (Overpass Cost Unknown)	Federal, State Grants

Utilities Appendix

UTILITIES APPENDIX

INTRODUCTION

The Growth Management Act requires comprehensive plans to include utilities elements. Specifically, this element must address electrical power, natural gas and telecommunications in the following manner:

- Inventory the general location of existing utilities.
- Establish the proposed location of proposed utilities.
- Examine the capacity of existing and proposed utilities.

UTILITIES ISSUES

The distribution system for natural gas to Orting and Puyallup is nearing capacity. As the population in these two areas grows, what improvements must be made to provide for the needs of the future population?

ELECTRICAL SYSTEM

Puget Sound Energy (PSE) is an investor-owned utility providing electrical service to approximately 1,000,000 residential, commercial, and industrial customers in a nine county, 4,500 square mile service territory in western Washington. To provide reliable service, PSE builds, operates, and maintains an extensive electrical system consisting of generating plants, transmission lines, substations, and distribution systems. PSE is regulated by the Washington Utilities and Transportation Commission (WUTC) and is obligated to serve its customers subject to WUTC rates and tariffs.

EXISTING SYSTEM

There are two main access points for receiving power in Pierce County: White River 230/115 kilovolt (kV) Transmission Station located north of Orting; and at PSE's Frederickson Generation station located in Frederickson Industrial area of Pierce County. A third and fourth access point from St. Clair transmission substation near the Thurston/Pierce County line and Tono near Thurston/Lewis county line provide a major tie between Pierce and Thurston Counties. The existing electrical system serving the Orting area consists of the following:

TRANSMISSION SUBSTATIONS:

- The White River Transmission Station (immediately east of Sumner, north of Orting)
- Alderton Transmission Station (in Alderton).

- Electron Heights Switching Station
- Frederickson Generation Station

DISTRIBUTION SUBSTATIONS:

- Orting
- Rhodes Lake
- Kapowsin
- Gardella
- Knoble

TRANSMISSION LINES (115KV):

- Alderton – Electron Heights
- White River – Alderton # 2
- Blumaer – Electron Heights

CAPACITY

EXISTING

The power utilization factor of all distribution substations serving the City of Orting and surrounding area is at 72-percent. The utilization factor is a comparison of current peak system load (during the winter heating season), divided by the design capacity of the substations in the area. The following table illustrates the capacity versus peak winter loads for the Orting distribution substations.

**Table U-1
Electrical Utilities: Existing Capacity in MVA***

Distribution Substations	Capacity	Winter Load (Feb 6, 2014)
Orting	25	23.2
Rhodes Lake	25	22.4
Kapowsin	20	12.7
Gardella	25	19.2
Knoble	25	8.9
Total	120	86.4

*MVA = Mega Volt Amperes

The electrical system can be expanded as the area load develops. The timing of future construction is largely dependent on the development growth of an area, and the associated increase electric demand (load), as well as facility maintenance requirements, reliability related improvements, or system replacement needs.

PROJECTED NEED

PSE's future Electrical Facilities Plans are developed for all of Pierce County to support the projected load level in the county including the city of Orting and surrounding areas.

The population and employment forecasts are based on a regional economic and demographic model and then allocated into each of the counties within the service territory. The regional forecasts account for the latest assumption about the national economy and reflect the historical structure of employment and population within each county as well as their recent growth patterns. The historical population data by county is based on the state's Office of Financial Planning reports, while the employment data is based on the state's Employment Security Department's monthly reports. The projection of these inputs together with the company's projections of conservation, retail rates and any known short term large load additions or deletions from the company's forecast of energy and peak loads.

PROPOSED SYSTEM

Puget Sound Energy has identified system and transmission improvements required to serve the forecasted load growth in Pierce County. Many improvements are in progress or planned for the future; others have been identified as future improvements to meet the growth demand. These improvements are intended to meet the growth and reliability demands for the City of Orting and the surrounding area, as well as other portions of Pierce County.

SYSTEM IMPROVEMENTS IN PROGRESS

PSE has identified the need for a new bulk power delivery point for Pierce County at the Alderton Transmission Station, located approximately 5 miles north of Orting City limits. Existing transmission lines are planned to be upgraded to provide a 230 kV tie between the White River Transmission Station and the Alderton Transmission Station. Future improvements are as follows:

- **Alderton 230 kV Development** – Pierce County will need a major upgrade of bulk power delivery system in the near future. The Alderton Transmission Station has been identified as future 230 kV transformation station. The project will involve upgrade of an existing transmission lines north of Orting and installation of a 230 – 115 kV transformer at the Alderton transmission substation.
- **White River** – Electron Heights transmission loop into Alderton – These improvements will provide a transmission route from the Bonney Lake area into the Alderton Transmission Station and from the Rhodes Lake Area also into Alderton Transmission Station. Phase one of this project was completed in 2014; with the 2nd phase is currently scheduled to be completed in 2016.

- **Blumaer** – Electron Heights 115 kV Transmission rebuild: This project is to re-build the 42 miles Blumaer – Electron Heights 115 kV transmission line in stages; which mostly consists of low capacity conductors; with 115 kV high capacity conductors.

FUTURE TRANSMISSION IMPROVEMENTS

- **Woodland** – St. Clair Phase II – This project will involve upgrade of Woodland substation (in southwest Puyallup) to a switching station and rebuilding of existing lines between Lakewood and Woodland. When completed, the project will increase transmission backup capacity between Pierce and Thurston counties and improve reliability in central Pierce County.
- **Alderton** – Electron Heights Transmission Re-configuration: This is a long range plan to Re-configure the 115 kV transmission network south of Alderton towards Electron Heights to increase transmission reliability in Orting valley and surrounding areas. This project may include a new transmission line between Frederickson and Electron Heights via Graham.

COMPLETED DISTRIBUTION IMPROVEMENTS

- **New 25MVA transformer bank installed at Orting substation in 2014** – The new transformer bank added 5 MVA of capacity to Orting substation.

FUTURE DISTRIBUTION IMPROVEMENTS

- **New 12kV distribution circuit out of Orting substation** – This project will build up existing infrastructure and add new infrastructure to relieve load from the most heavily loaded and unreliable circuit at Orting substation. When completed, this project will help improve reliability for customers on both the existing circuit and the new circuit.

NATURAL GAS

Puget Sound Energy provides natural gas service to more than 750,000 customers in six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. It is estimated that PSE currently serves over 2,160 customers within the City of Orting.

EXISTING DISTRIBUTION SYSTEM

Natural gas comes from gas wells in the Rocky Mountains and in Canada and is transported through interstate pipelines by Williams Northwest Pipeline to Puget Sound Energy's gate stations.

Supply mains then transport the gas from the gate stations to district regulators where the pressure is reduced to less than 60 psig. The supply mains are made of welded

steel pipe that has been coated and is cathodically protected to prevent corrosion. They range in size from 4" to 20".

Distribution mains are fed from the district regulators. They range in size from 1-1/4" to 8" and the pipe material typically is polyethylene (PE) or wrapped steel (STW).

Individual residential service lines are fed by the distribution mains and are typically 5/8" or 1-1/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4", 2" or 4" in diameter.

FUTURE FACILITY CONSTRUCTION

PSE does not have any major projects planned in Orting at this time, but new projects can be developed in the future at any time due to:

- New or replacement of existing facilities to increased capacity requirements due to new building construction and conversion from alternate fuels.
- Main replacement to facilitate improved maintenance of facilities.
- Replacement or relocation of facilities due to municipal and state projects.

PSE Gas System Integrity-Maintenance Planning has several DuPont manufactured main and service piping and steel wrapped main replacements planned for 2015. There will be several pipe investigations throughout the city to determine the exact location of the DuPont manufactured pipe. Identified DuPont manufactured piping in PSE's entire system will be ranked and replaced accordingly.

TELECOMMUNICATIONS

Telecommunications services include switched and dedicated voice, data, video, and other communication services delivered over the telephone and cable network. Regulated or non-regulated companies may provide these services. Cable service includes communication, information and entertainment services delivered over the cable system whether those services are provided in video, voice or data form.

There are no shortages in the existing or future capacity of the telecommunication services for Orting at this time. The existing network of phone and cable television lines has sufficient capacity to accommodate increases in development or subscription. The limitation in providing services would stem from lack of a direct hook-up from a specific residence to the television or telephone line. This linkage can be installed when service is desired.

COMMUNICATION

Multiple companies offer communication services in Orting, including integrated voice and data. CenturyLink (d.b.a. CenturyTel), the Incumbent Local Exchange

Carrier (ILEC), provides local telephone and a mix of copper and fiber based internet services.

The extended area service enables City residents to make local calls to Buckley, Enumclaw, Graham, Puyallup, South Prairie, Sumner and Tacoma. Calls outside of these areas are considered long distance. CenturyLink is joined by several Competitive Local Exchange Carriers (CLECs) in providing more communication service options to Orting residents and businesses. For long distance services, residents may choose from a variety of companies in addition to CenturyLink, including but not limited to AT&T and Sprint.

Since the Washington Utilities Trade Commission (WUTC) regulations require CenturyLink to provide adequate public switched telephone network (PTSN) telecommunications service on demand, there are no limits to future capacity, although demand for land lines is declining.

Orting is now provided for by most wireless telephone providers.

CABLE AND SATELITE

Cable television and cable internet service is provided in Orting by Comcast. The Orting area is handled through the TCI Cable of Auburn Office. TCI Cablevision is in the process of expanding their services north and south of the City along Pioneer Way, as well as westward towards the Soldier's Home.

SOLID WASTE MANAGEMENT

Under state law governing solid waste management (RCW 70.95.090) local governments are required to provide collection of source separated recyclable materials from single and multi-family residences; drop-off or alternative systems for rural residents; yard waste collection; educational and public outreach programs; programs to monitor the collection of recyclables from commercial sources; in-house recycling and procurement programs; and any other programs the municipalities determine are necessary to achieve state and local waste reduction and recycling goals.

The Tacoma-Pierce County Solid Waste Management Plan, adopted in 2000 and supplemented in 2008, guides all aspects of solid waste handling in Pierce County and each city and town wholly within Pierce County. It is the primary tool implementing the law cited above. Pierce County has started work on a new supplement which is scheduled for adoption in late 2015.

Except for collection contracting authority, which it retains through an Interlocal Agreement, Orting has designated Pierce County as the entity responsible for managing waste reduction, recycling, composting, disposal, and household hazardous waste programs, including associated public information, outreach, and engagement. Under County direction, waste generated within the City of Orting is disposed in the

LRI Landfill in unincorporated Pierce County and yard waste is composted at facilities owned by Pierce County or operated under contract with Pierce County.

Orting contracts with Waste Connections d/b/a DM Disposal for the collection of household and commercial garbage, recyclables and yard waste. Food waste is not accepted as part of the County-provided yard waste program. Residents and businesses can self-haul special wastes and recyclables (e.g. household hazardous waste, tires, batteries, and oil) to fixed facilities located throughout the County.

Non-Motorized Transportation Plan

PREPARED FOR:



JUNE 2017

NON-MOTORIZED TRANSPORTATION PLAN



Parametrix

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

Non-Motorized Transportation Plan

Prepared for

City of Orting

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CITATION

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CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by Dallas Graham and Susan Devine

Checked by Erinn Ellig

Approved by John Carl Hungerford, P.E.

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KEY TERMS

ADA	Americans with Disabilities Act
BLOS	Bicycle-Level-of-Stress
CBDG	Community Block Development Grant
EMPG	Emergency Management Performance Grant
EMS	Emergency Medical Services
FRC	Functional Road Class
GIS	Geographic Information System
GMA	Washington State Growth Management Act
LTS	Level of Traffic Stress
mph	miles per hour
NACTO	National Association of City Transportation Officials
ONMTP	Non-Motorized Transportation Plan
Orting	City of Orting
PLOS	Pedestrian-Level-of-Stress
Pol.	policy
PSRC	Puget Sound Regional Council
PUD	Public Utility District
RCW	Revised Code of Washington
SR	State Route
SRTS	Safe Routes to Schools
TAP	Transportation Alternatives Program
TIP	Transportation Improvement Program
WSDOT	Washington State Department of Transportation

1. PLANNING CONTEXT

1.1 Background and Compliance

The City of Orting (Orting) Non-Motorized Transportation Plan (ONMTP) is being created in response to conditional certification given by Puget Sound Regional Council (PSRC). This document is intended to fulfill the remaining requirements requested by PSRC and advance into a full certification. The ONMTP will address the PSRC “Areas for Further Work,” as it relates to non-motorized transportation.

Comments from PSRC are shown below in italics – the methods for meeting these criteria follow each Area of Work, as denoted by a check mark:

PSRC COMMENT

In addition to plan for future pedestrian and bicycle networks referenced in the condition for certification, the City should add additional detail to the pedestrian and bicycle component including:

- *A map of existing pedestrian facilities (e.g. sidewalks, crosswalks, multiuse paths) and bicycle facilities (e.g. bike lanes, shared use paths, paved road shoulders, bicycle crossings)*
 - *Identification of priority needs for improvements (e.g. gaps, locations with safety concerns or high travel demand)*
 - *A project list of priority bicycle and pedestrian improvements and programs, including stand-alone projects that address identified gaps, including a finance plan.*
- ✓ These items are addressed in Chapter 2, Existing Conditions ; Chapter 5, Planned Improvements; and Section 6.2, Recommended Improvements and Financial Strategy; of the ONMTP.

PSRC COMMENT

VISION 2040 calls for level-of-service standards to be focused on the movement of people and goods instead of only the movement of vehicles (MPP-DP-54), and for concurrency programs to address multimodal transportation options – both in assessment and mitigation (MMP-DP-55).

- ✓ The ONMTP includes both pedestrian and bicycle “Level of Stress” in order to assess the functionality of the City’s non-motorized system.

PSRC COMMENT

The city should work to develop policies and provisions that will ensure mobility choices for people with special transportation needs, including persons with disabilities, the elderly, youth, and low-income populations. For more information, see WSDOT’s Americans with Disabilities Act resource page and PSRC’s Special Needs Transportation website.

- ✓ The ONMTP will address non-motorized options for all groups, including special transportation needs and other Americans with Disabilities Act (ADA) concerns. See Section 6.1.4.

1.2 Promoting Safety: Towards Target Zero

The primary objectives of the ONMTP are to complete the requests of PSRC, and to improve non-motorized transportation planning in Orting. In addition to enhancing mobility, providing travel choice, and reducing emissions that can exacerbate greenhouse gas emissions and climate change, improving non-motorized modes also has the added benefit of improving safety for pedestrians and bicyclists. Therefore, this plan will also consider safety elements identified within the Washington State Department of Transportation (WSDOT) Strategic Highway Safety Plan (2016), also referred to as Target Zero. The primary goal of Target Zero is zero deaths and zero serious injuries by the year 2030. Target Zero addresses everything associated with highway safety: risk behaviors, crash types, road users, decision-making, and performance improvement. The ONMTP will draw upon aspects of Target Zero in terms of planned improvements, because a successful non-motorized plan is also a safe one.

The methods to approach achieving the daunting goal of Target Zero are based around the following categories:

Education

Give road-users the information to make good choices, such as driving unimpaired, wearing a seatbelt, and avoiding distractions.

Enforcement

Use data-driven analysis to help law enforcement officers pinpoint and address locations with a high number of behavior-driven fatal and serious injury crashes, such as speeding and impairment.

Engineering

Design roads and roadsides using practical solutions to reduce crashes, or to reduce the severity of crashes if they do occur.

Emergency Medical Services (EMS)

Provide high-quality and rapid medical response to injury crashes.

Leadership/Policy

Change laws, agency rules, or policies to support safer roads and driving.

1.3 Consistency with 2015 Comprehensive Plan

The 2015 Comprehensive Plan includes numerous overarching goals. Several of those goals are applicable to the ONMTP:

- Preserve open space and the character of the rural landscape.
- Preserve critical environmental resources.

Key Facts from Target Zero: Bicyclists

Speed is a critical factor in motor vehicle-bicycle crashes. Seventy percent of bicyclist fatalities where the posted speed of the roadway was 30 mph or more.

Men accounted for a disproportionate share of bicyclist fatalities and serious injuries, at 93% and 88% respectively.

Target Zero partners are working to gather more accurate information about the total number of people bicycling. Without this information, it is difficult to know if rates of bicycling – and therefore exposure – are changing.

- Preserve important agricultural lands.
- Foster a financially sound development pattern.
- Reduce reliance on the automobile and encourage establishment of pedestrian and bicycle-oriented development.
- Provide a place where citizens can both live and work.

The Comprehensive Plan also included future street improvement goals, one of which fits well with the intentions of the ONMTP:

- Increase safe, attractive pedestrian ways linked to the Foothills Trail and parks.

1.3.1 Transportation Goals

The ONMTP will be consistent with the following specific Comprehensive Plan Goals for the Transportation Element:

- Goal T 1:** Maintain a transportation system that accommodates the separation of through and local traffic, provides adequate internal circulation, and interconnects effectively to the regional highway, non-motorized, and public transportation systems, is responsive to the mobility needs of City businesses and neighborhoods, and guides future developments.
- Goal T 3:** Establish a safe and convenient pedestrian and bicycle circulation system linking residential communities with key destinations.
- Goal T 4:** Fund transportation facility improvements with federal, state, and local public and private sources.
- Goal T 5:** Realize the vision for Washington Avenue as Orting's main street, providing high quality aesthetic design in conjunction with multimodal mobility, pedestrian safety, and infill economic development.
- Goal T 6:** Meet federal and state air quality requirements and work with state, regional and other local agencies to develop transportation control measures and/or mobile source emission reduction programs that may be warranted to attain or maintain air quality requirements.

Key Facts from Target Zero: Pedestrians

The data showed that 14% of fatalities occurred on roads with a posted speed of 25 mph or less, 42% occurred on roads with a speed of 30-35 mph, 17% when the speed limit was 40-45 mph and 23% on roads with a speed limit of 50 mph or more.

Most of the pedestrian fatalities and serious injuries happened within cities, at 69% and 67% respectively.

Sixty percent of pedestrian fatalities and 62% of serious injury occurred while pedestrians were crossing the road.

These percentages echo how vehicle impact speed directly affects the severity of the injury and that crashes are more frequent when there are more areas of conflict.

The two major behavioral factors most commonly cited for pedestrian fatalities are driver distraction at 32% and pedestrian impairment at 43%.

1.3.2 Transportation Policies

The ONMTP will be consistent with the following specific Comprehensive Plan Vehicular Transportation Policies (Pol.) for the Transportation Element:

Street Design Standards

- Pol. T 10:** Maintain a comprehensive street improvement plan for city streets that implements the desired streetscape for each functional classification. Arterial street standards shall provide guidance on the width of lanes, driveway access, right-of-way width, sidewalks median treatments, setbacks, lighting, pedestrian facilities, landscaping, or other improvements.
- Pol. T 11:** Design street improvements to fit the character of areas they serve.
- Pol. T 14:** Use street design standards to minimize pavement widths while accommodating on-street parking, and allowing cars to pass, thereby slowing the speed of vehicles on local streets, improving pedestrian safety and allowing for landscaping.
- Pol. T 15:** Require safe, attractive sidewalks on all streets.
- Pol. T 16:** Provide comprehensive street lighting, including lights for pedestrians on sidewalks and trails, using such factors as adjacent land uses, hazardous street crossings, transit routes, schools, and parks.

Traffic Safety

- Pol. T 18:** Consider the use of devices that increase safety of pedestrian crossings such as flags, in-pavement lights, raised crosswalks, colored and textured pavements.

Pedestrian and Bicycle Policies

- Pol. T 32:** Promote pedestrian and bicycle networks that safely access commercial areas, schools, transit routes, parks, and other destinations within Orting and connect to adjacent communities, regional destinations and routes.
- Pol. T 33:** Require new development to ensure safety, comfort and convenience of pedestrians and bicyclists.
- Pol. T 34:** Designate and construct segregated internal pedestrian circulation systems in new or redeveloping commercial-retail districts. Provide connectivity to nearby transit stops using sidewalks, landscaping, covered walkways, or other treatments.
- Pol. T 35:** Promote a comprehensive and interconnected network of pedestrian and bike routes within and between neighborhoods.
- Pol. T 36:** Require trail routes and/or sidewalks where appropriate in Public Utility District (PUD), plat and short plat approvals.
- Pol. T 37:** Work progressively to provide and maintain sidewalks in established neighborhoods. Priority shall be given to all public facilities such as transit routes, schools and parks, and multi-family housing, commercial areas, and gaps in the existing sidewalk system.
- Pol. T 38:** Provide striped, on-street bicycle facilities on arterial streets on paved shoulders or within wide curb lanes to ensure safety for bicyclists.
- Pol. T 39:** Ensure that sidewalks meet requirements of the Americans with Disabilities Act.

- Pol. T 40:** Identify non-motorized facility improvements on school walk routes to increase pedestrian safety.
- Pol. T 41:** Require secure (racks and lighting) bicycle parking at commercial and institutional facilities along with automobile parking.



2. EXISTING CONDITIONS

This Chapter describes the existing conditions of the non-motorized network within the City of Orting, including roadways, trails, sidewalks and other facilities.

2.1 Motorized Facilities

Table 2-1 summarizes the City’s primary roadways, including functional classification, the presence and type of shoulders, parking, sidewalks, and bike lanes, as well as the posted speed limit. Many of these roadways serve as shared facilities between motorized and non-motorized users.

Table 2-1. City of Orting Primary Road Network

Roadway	Functional Classification	Shoulder	Parking	Sidewalks	Bicycle Lane	Speed Limit (miles per hour [mph])
SR-162/Pioneer Way	Principal arterial	Paved	No	Interrupted	No	50/35/25
Washington Avenue	Major arterial	Paved	Yes	Both	No	25
Orting- Kapowsin Highway	Major arterial	Gravel	No	No	No	35
Varner Avenue NE	Collector	Gravel/grass	Yes	Both	No	Not posted
Calistoga Street	Principal arterial	Paved/gravel	Yes	Both	No	25
Whitehawk Blvd	Proposed Minor Arterial	Paved	Yes	Both	No	25
Eldredge Avenue	Collector	Gravel/grass	Yes	Whitesell north—both sides; Safeway south – one side	No	Not posted
Whitesell Street	Collector	None	No	One side	No	Not posted
Corrin Avenue	Minor arterial	Paved	Yes (angle parking downtown)	Both	No	Not posted
Bridge Street	Collector	Gravel/grass	Yes	Both	No	Not posted
Kansas Street SW	Principal arterial	Paved	Yes	Both	No	Not posted
Harman Way	Principal arterial	Paved	Yes	Yes	No	Not posted

According to Target Zero, in Washington State, 15% of all serious roadway related injuries are inflicted upon pedestrians, and 5% were to bicyclists.

2.2 Non-Motorized Facilities

This section describes the facilities that are solely intended for pedestrian and bicycle use, including official trails as well as widely used pathways located along the City's extensive levee system.

2.2.1 Foothills Trail

A completed paved section of the Foothills Trail runs parallel to State Route (SR) 162 through Orting, this is the reason for the characterization of road/trail, etc. This is a 12-foot wide non-motorized asphalt trail suitable for bicycles, walking, skating, and wheel chairs. It also has a soft shoulder path for horses. Once completed, the Foothills Trail will extend 26 miles from McMillin through Orting to Buckley. The trail continues to Sumner and Puyallup. From Sumner, the trail connects with the Interurban Trail that now extends through Kent and Auburn. The Puyallup connection will extend west through Puyallup and into Tacoma.

2.2.2 Levees

Orting is bordered by two rivers, the Puyallup River and the Carbon River. Although not official non-motorized facilities, the levees along these two rivers are commonly used as paths to cycle, run, walk, or ride horseback and because of their popularity are included in the ONMTP.



2.3 Evacuation Routes

This plan also specifically identifies the City's evacuation routes, as the chance of a volcanic eruption and subsequent lahar, although rare, is a real possibility in Orting. The City has prepared for an emergency through several evacuation routes (Figure 2-1). These routes are often used in everyday life for other daily activities and should be assessed for both emergency and daily use.

The existing primary evacuation route for the schools is through the levee system.

Lahar Evacuation Routes Planning

Lahar Hazards

- Lahar Evacuation Routes
- School Lahar Evacuation Route
- Cities in Pierce County
- Case 1 – 500-1000 yr frequency
- Case 2 – Average 100 yr frequency
- Case 3 – 1-100 yr frequency

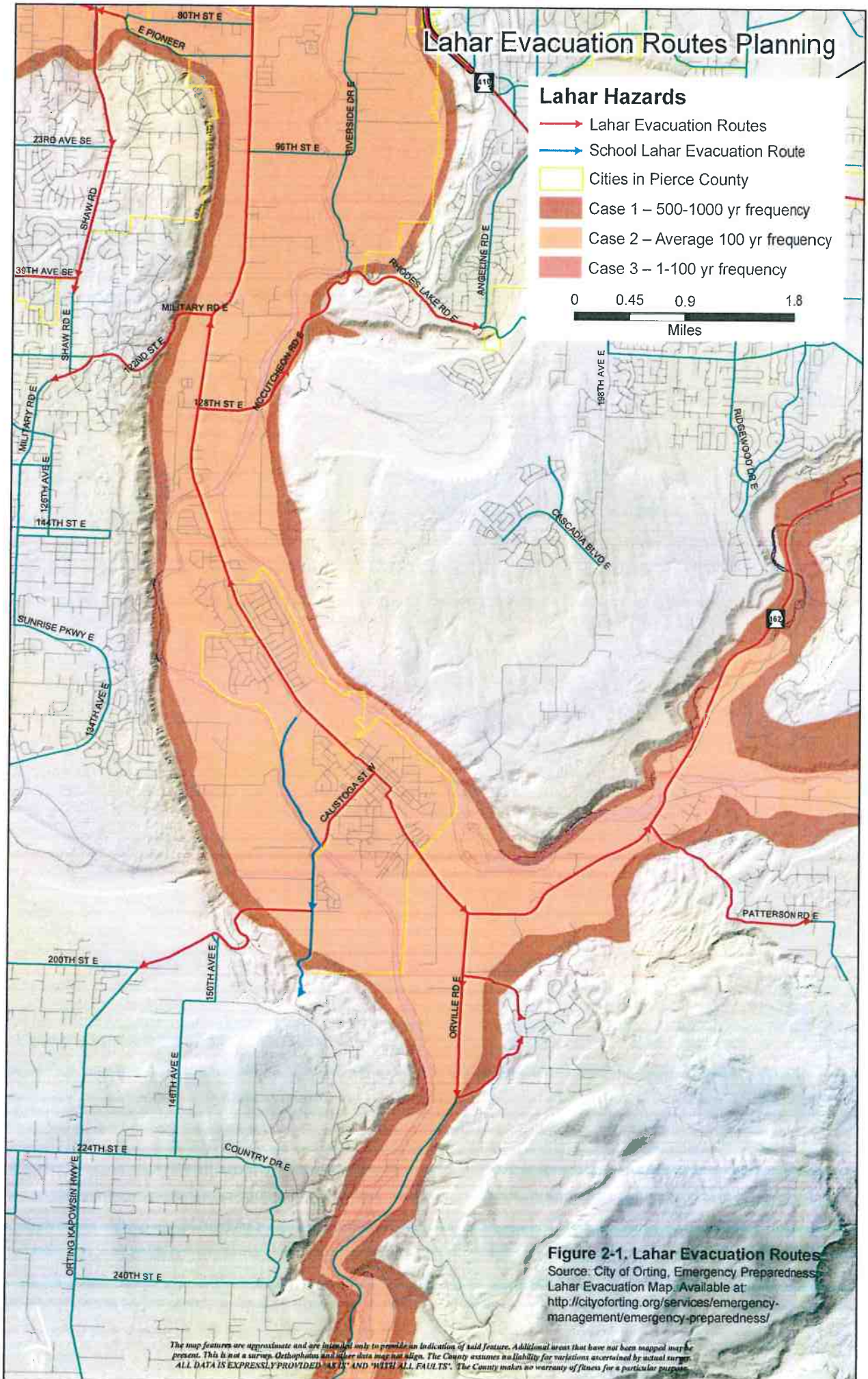


Figure 2-1. Lahar Evacuation Routes
 Source: City of Orting, Emergency Preparedness Lahar Evacuation Map. Available at <http://cityoforting.org/services/emergency-management/emergency-preparedness/>

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED "AS IS" AND "WITH ALL FAULTS". The County makes no warranty of fitness for a particular purpose.

2.4 Data Collection and Analysis

In order to assess the existing conditions of non-motorized facilities, two types of data was utilized: pedestrian and bicycle user counts, and Geographic Information System (GIS) data for roadway, trail, and sidewalk conditions. The count data indicates how the existing facilities are currently being utilized, while the GIS data reflects the actual existence of non-motorized facilities, as well as the extent to which the transportation network creates a “level of stress” on pedestrians and bicycles. Ideally a transportation system will be highly connected, low-stress, and create an environment of safety and ease. This is particularly important when referring to a non-motorized network as pedestrians and bicyclists are at a much higher risk for serious injury or fatality.

GIS data is used to both illustrate the motorized AND non-motorized network, as well as assess the *level of stress* the network creates for pedestrians and bicycles. The *level of stress* is different from the *level of service* that is associated with vehicular traffic conditions. Pedestrian and bicycle level of stress is a calculation based upon the comfort and safety felt by the non-motorized traveler, based upon the experience being created by the presence or absence of certain key factors.

2.5 Level of Stress and Level of Service Standards

The level of stress methodology is based upon research conducted by Mineta Transportation Institute which ultimately resulted in a way to measure traffic stress levels:

The Level of Traffic Stress (LTS) method measures low-stress connectivity, defined as ‘the ability of a network to connect travelers’ origins to their destinations without subjecting them to unacceptably stressful links.

Both Pedestrian-Level-of-Stress (PLOS) and Bicycle-Level-of-Stress (BLOS) have aims similar to LTS, acknowledging that one “weak link” (high stress in one area) in the non-motorized transportation system is a serious issue for the entire system. An interconnected system cannot be low stress overall, which it strives to be, if there is any area of high stress.

Level-of-stress is rated on a scale of 1-5. For the purposes of this document, it was determined that an acceptable and/or reasonable LOS was anything which scored between 1-3; and anything rated 4 or 5 is generally considered unacceptable. The facilities with 4 or 5 ratings are the areas that need to be addressed when planning non-motorized improvements.

- Level 1** – Very low level of stress, due to presence of sidewalks, low traffic volumes, and low posted speed limits. This condition is considered highly desirable, and therefore acceptable.
- Level 2** – Low level of stress. This condition is considered acceptable.
- Level 3** – Moderate level of stress. This condition is considered acceptable, although it could be improved.
- Level 4** – High level of stress. This condition is not considered acceptable and should be addressed.
- Level 5** – Very high level of stress, due to lack of bike lanes, insufficient lane width, on street parking, high speeds, or high functional classification. This condition is not considered acceptable and should be addressed when possible.

Within the ONMTP, sidewalk and trail are combined to sidewalk/trail because of the layout (interconnectivity) in the City. This refers to sidewalks which border trails, and the levees which are used as trails. The same is done for pedestrian road/trail and for bicycle road/trail.

For instance, there are 262,882 feet of sidewalk/trail in the entire city of Orting. Almost 97 percent of the sidewalk/trail lengths in Orting were given a score of 1-3. This means that the vast majority of the sidewalk/trail length in the City meets satisfactory LOS and just 3 percent is below acceptable standards.

2.6 Scoring Methodology

Figure 2-2 describes the scoring methodology and Figure 2-3 shows several examples of this method in practice. Level of Stress scoring was completed for all the roads, trails and sidewalks in the City of Orting. Each Level of Stress score is calculated based on a number of contributing factors. Each factor is given a slightly different weight based on Level of Stress caused. It is important to acknowledge that the pedestrian separation is being weighted slightly higher than the other factors.



Methodology Summary

The Level of Stress score is created in GIS using street attributes that are tied spatially to street and sidewalk centerlines. Different attributes are assigned point values based on the relevant effect on pedestrian and/or biker stress. Scores are aggregated from each attribute along each street segment to create a combined LOS score. The LOS Scores are broken out into classes based on Jenks Natural Breaks Classification Method - which is a data clustering method for best arrangement of values into classes.

What Factors into the Bike and Pedestrian LOS Scores

Sidewalk Width (Pedestrian Only): Width of sidewalk pavement. Wider sidewalks result in a lower level of stress (higher score) for pedestrians.

Sidewalk Buffer Width (Pedestrian Only): Distance from the edge of the sidewalk to the curb. A greater distance results in a gap between pedestrians and moving vehicles.

Curb Presence (Pedestrian Only): Presence of Curb. Creates an additional barrier between pedestrians and vehicles.

Street Width: Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.

Number of Lanes: Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful, street for bikes and pedestrians

Vehicle Speed: Typical speed of travelling vehicles (not posted speed limit). Lower vehicle speeds results in a safer environment for adjacent pedestrians and bikers.

Outside Lane Width: Width of lane closest to sidewalk on each side of the street. Width of outside lane affects amount of space for bikers and pedestrians

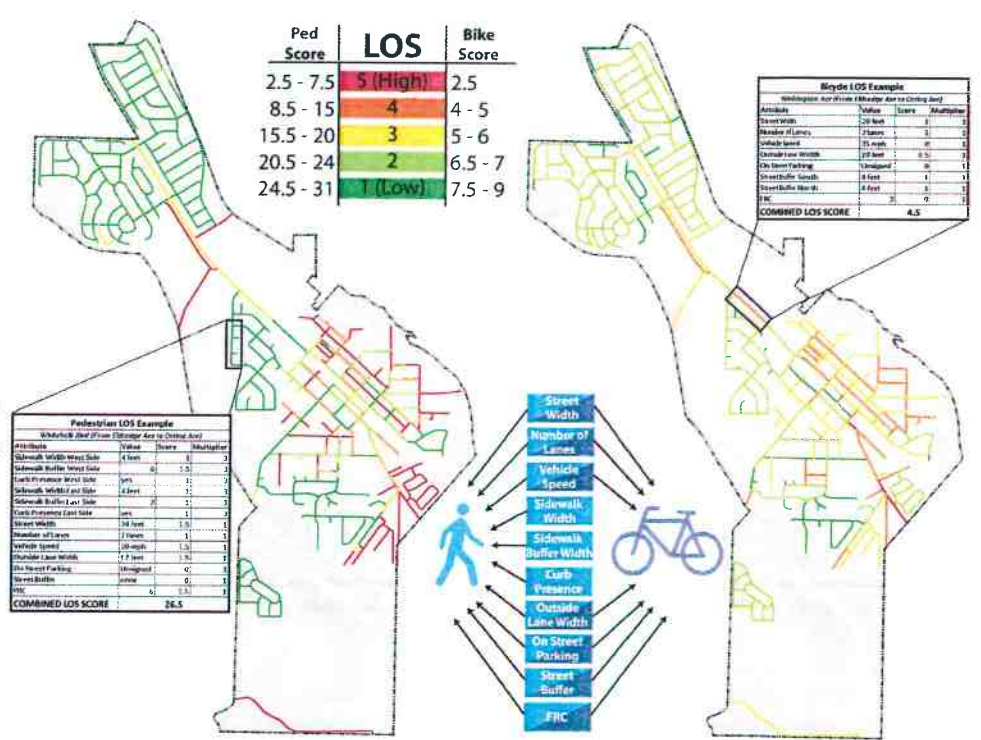
On Street Parking: Whether on street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking spaces create an additional buffer between the street and bikes and pedestrians.

Street Buffer: The space between the outer street striping or pavement and the curb. Creates additional space for bikes and pedestrians.

FRC: Functional Road Class defines the type of roadway (arterial, collector, or local) and is indicative of vehicle volumes.

**Scoring for each attribute is highlighted on page 2. Each score from the individual attributes is summed to create the combined Bike and Pedestrian Scores determining Level of Stress*

Ped Score	LOS	Bike Score
2.5 - 7.5	5 (High)	2.5
8.5 - 15	4	4 - 5
15.5 - 20	3	5 - 6
20.5 - 24	2	6.5 - 7
24.5 - 31	1 (Low)	7.5 - 9



Pedestrian LOS Example

Attribute	Value	Score	Multipplier
Sidewalk Width	4.5m	1	2
Sidewalk Buffer	1.5m	1	3
Curb Presence	Yes	1	1
Street Width	12m	1	3
Number of Lanes	2	1	3
Vehicle Speed	28 mph	1	1
Outside Lane Width	1.7m	1	1
On Street Parking	Unsigned	0	1
Street Buffer	None	0	1
FRC	6	1	1
COMBINED LOS SCORE			26.5

Bicycle LOS Example

Attribute	Value	Score	Multipplier
Street Width	20 feet	1	3
Number of Lanes	2 lanes	1	3
Vehicle Speed	25 mph	1	1
Sidewalk Width	20 feet	1	3
On Street Parking	Unsigned	0	1
Street Buffer	4 feet	1	1
Street Buffer Area ft	4 feet	1	1
FRC	2	0	1
COMBINED LOS SCORE			4.5

Figure 2-2

Methodology Summary

The Level of Stress score is created in GIS using street attributes that are tied spatially to street and sidewalk centerlines. Different attributes are assigned point values based on the relevant effect on pedestrian and/or biker stress. Scores are aggregated from each attribute along each street segment to create a combined LOS score. The LOS Scores are broken out into classes based on Jenks Natural Breaks Classification Method - which is a data clustering method for best arrangement of values into classes.

What Factors into the Bike and Pedestrian LOS Scores

Sidewalk Width (Pedestrian Only): Width of sidewalk pavement. Wider sidewalks result in a lower level of stress (higher score) for pedestrians.

Sidewalk Buffer Width (Pedestrian Only): Distance from the edge of the sidewalk to the curb. A greater distance results in a gap between pedestrians and moving vehicles.

Curb Presence (Pedestrian Only): Presence of Curb. Creates an additional barrier between pedestrians and vehicles.

Street Width: Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.

Number of Lanes: Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful, street for bikes and pedestrians

Vehicle Speed: Typical speed of travelling vehicles (not posted speed limit). Lower vehicle speeds results in a safer environment for adjacent pedestrians and bikers.

Outside Lane Width: Width of lane closest to sidewalk on each side of the street. Width of outside lane affects amount of space for bikers and pedestrians

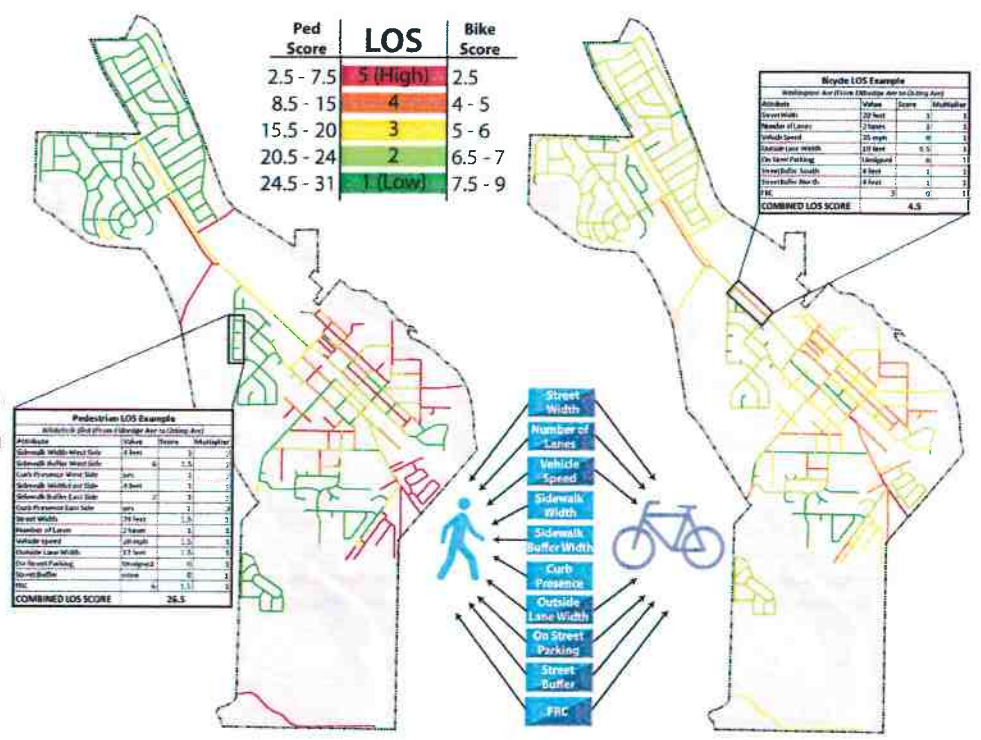
On Street Parking: Whether on street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking spaces create an additional buffer between the street and bikes and pedestrians.

Street Buffer: The space between the outer street striping or pavement and the curb. Creates additional space for bikes and pedestrians.

FRC: Functional Road Class. defines the type of roadway (arterial, collector, or local) and is indicative of vehicle volumes.

**Scoring for each attribute is highlighted on page 2. Each score from the individual attributes is summed to create the combined Bike and Pedestrian Scores determining Level of Stress*

Ped Score	LOS	Bike Score
2.5 - 7.5	5 (High)	2.5
8.5 - 15	4	4 - 5
15.5 - 20	3	5 - 6
20.5 - 24	2	6.5 - 7
24.5 - 31	1 (Low)	7.5 - 9



Pedestrian LOS Example

Attribute	Value	Score	Multplier
Sidewalk Width (feet)	6	2.5	1
Curb Presence	Yes	1	1
Sidewalk Buffer (feet)	10	2	1
Street Width (feet)	60	1	1
Number of Lanes	2	1	1
Vehicle Speed (mph)	25	1	1
Outside Lane Width (feet)	10	1	1
On Street Parking	Designated	1	1
Street Buffer (feet)	10	1	1
FRC	Local	1	1
COMBINED LOS SCORE		26.5	

Bicycle LOS Example

Attribute	Value	Score	Multplier
Sidewalk Width	20 feet	3	1
Number of Lanes	2 lanes	1	1
Vehicle Speed	25 mph	1	1
Outside Lane Width	10 feet	0.5	1
On Street Parking	Designated	1	1
Street Buffer Width	10 feet	1	1
Street Buffer	10 feet	1	1
FRC	Local	0	1
COMBINED LOS SCORE		4.5	

Figure 2-2

2.6.1 Methodology Summary

The Level of Stress score was created in GIS using street attributes that are tied spatially to street and sidewalk centerlines. Different attributes are assigned point values ranging from 1-5 based on the relevant effect on pedestrian and/or cyclists stress. Scores are combined from each attribute along each street segment to create a collective LOS score for individual streets, sidewalks, or trails. This form of classification is based on Jenks Natural Breaks Classification Method (a data clustering method which best arranges values into classes).

2.6.2 Factors in the LOS Score

Factors included in finding the level of stress were as follows, some attributes were only considered when scoring pedestrian level of stress:

- **Sidewalk Width (Pedestrian Only):** Width of sidewalk pavement. Wider sidewalks result in lower level of stress for pedestrians.
- **Sidewalk Buffer Width (Pedestrian Only):** Distance from the edge of the sidewalk to the curb. Greater distance creates an additional barrier between pedestrian and moving vehicles.
- **Curb Presence (Pedestrian Only):** Presence of a curb creates an additional barrier between pedestrians and vehicles.
- **Street Width:** Distance between outside striping or width of pavement where striping is not used. Wider streets result in more space between cars and bikes and pedestrians.
- **Number of Lanes:** Total number of lanes in either direction. Three or more lanes is indicative of a busier, more stressful street for cyclists and pedestrians.
- **Vehicle Speed:** Average speed of traveling vehicles (not posted speed limit). Lower vehicle speeds create a safer environment for non-motorized counterparts.
- **Outside Lane Width:** Width of lane closest to sidewalk on both sides of the street. The width of the lane affects the amount of space for pedestrians and cyclists.
- **On Street Parking:** Whether or not street parking is permitted with signs, not allowed, or unsigned. Designated on-street parking space creates an additional buffer between the street and pedestrians and cyclists.
- **Street Buffer:** The space between the outer edge of the street striping or pavement and the curb. Creates additional space between non-motorized users and traffic.
- **FRC:** Functional Road Class (FRC) defines the type of roadway (includes: arterial, collector or local) and is an indicator of vehicle volumes.

2.7 Pedestrian Level of Stress (PLOS)

Based upon the methodology as previously described, the Pedestrian Level of Stress (PLOS) scores for existing conditions are quite good in Orting, with only a small percentage of facilities creating an “unacceptable” PLOS. These results are illustrated on the map in Figure 2-6. The facilities shown in orange (PLOS 4) and red (PLOS 5) should be addressed and improvements made where possible (see Chapter 5).

The pedestrian level of stress on facilities with road/trail connections is acceptable on 78 percent of the network (Figure 2-4), meaning that 22 percent of the roadway is rated a PLOS of 4 or 5. The pedestrian level of stress on facilities with sidewalks is acceptable on 97 percent of those facilities (Figure 2-5), with only 3 percent rating a PLOS of 4 or 5.

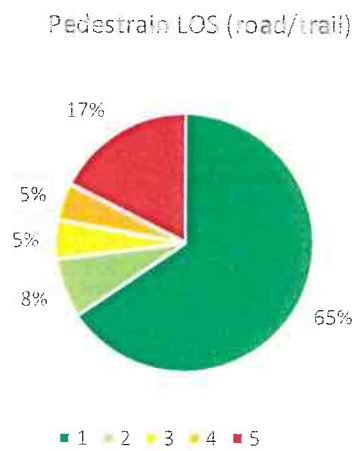


Figure 2-4. PLOS Scoring of Road/Trail

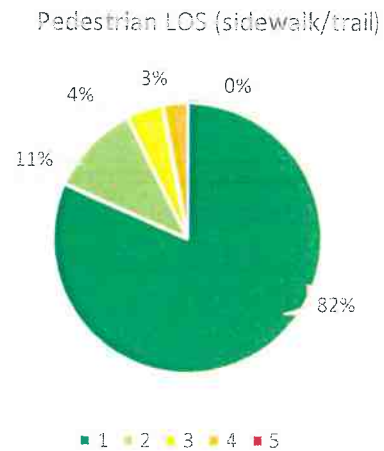


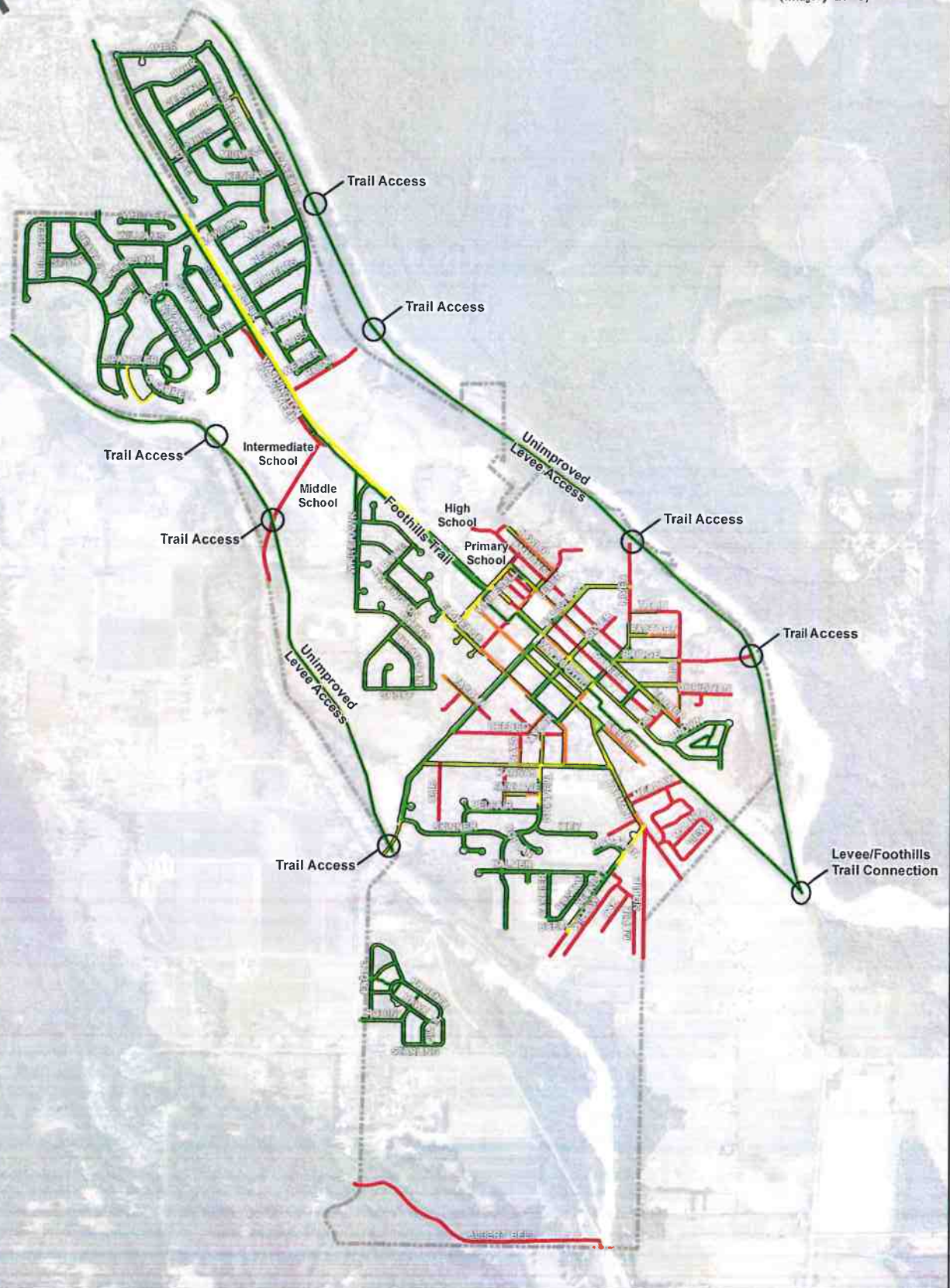
Figure 2-5. PLOS Scoring of Sidewalk/Trail



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Data Source: ESRI (Street Data), NAIP (Imagery 2015)

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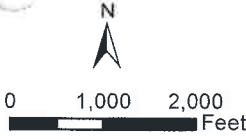


Parametrix

- Sidewalk
- City Limit

- Pedestrian Level of Stress**
- LOS 5: 2.5 - 7.5 (High Stress)
 - LOS 4: 8.5 - 15.0
 - LOS 3: 15.5 - 20.0
 - LOS 2: 20.5 - 24.0
 - LOS 1: 24.5 - 31.0 (Low Stress)

Figure 2-6. Pedestrian Level of Stress Existing Conditions



2.8 Bicycle Level of Stress (BLOS)

Variables considered when determining bicycle level of stress include: street width, the number of lanes, posted speed limits, outside lane width, on-street parking, and the functional classification of the roadway. Based upon the GIS data, there are just over 214,500 feet of road/trail in Orting (Figure 2-8). Of this, 87% of the road/trail facilities provide for an acceptable BLOS of 1, 2, or 3 and 13% of the road/trail score an unacceptable BLOS of 4 or 5 (Figure 2-7). The 13 percent of facilities that received a poor BLOS should be improved (see Chapter 5).

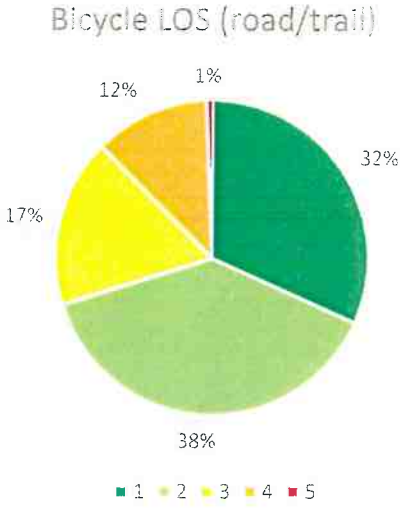


Figure 2-7. BLOS Scoring of Road/Trail



2.9 Foothills Trail Data

The foothills trail is the primary non-motorized transportation system in the City of Orting. The trail parallels SR-162 and it is the preferred transportation facility for pedestrians and bicyclists, in place of SR-162. The popularity of this trail is shown in Figure 2-9 and Figure 2-10 listed below. Counts were taken across two separate days (one weekday and one weekend day) at three different locations. Counts were taken in early May; it should be noted that trail usage is typically highest during summer months. Northwest-bound and Southeast-bound directions were also accounted for. The figures below are representative of the total non-motorized users at each location by weekday and weekend day. Trail usage for both pedestrians and bicyclists is higher on weekends compared to weekdays.

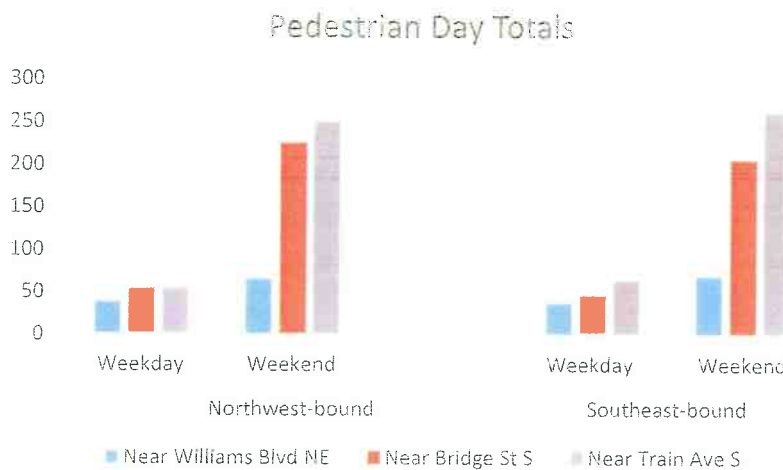


Figure 2-9. Pedestrian Day Totals

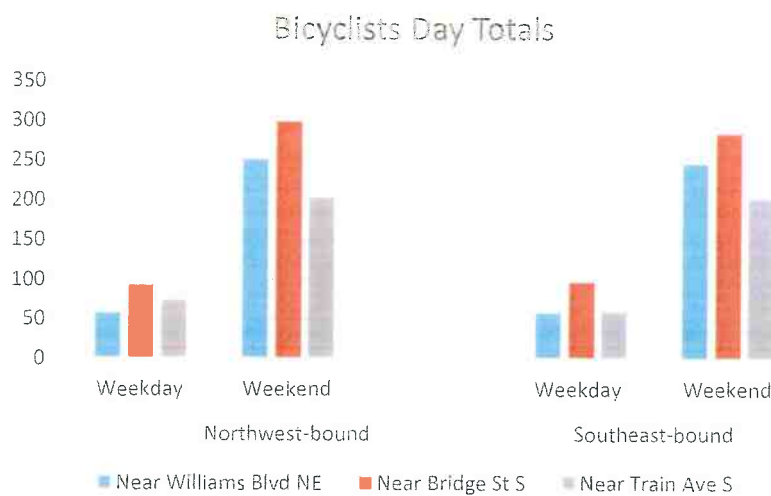


Figure 2-10. Bicyclists Day Totals

3. THE TARGET ZERO CONNECTION

In addition to understanding the Pedestrian and Bicycle levels of stress created by the transportation network of the City, it is also important to consider the broader safety issues for non-motorized users. Such safety issues are clearly outlined in the Washington State Department of Transportation’s (WSDOT) 2016 update to *Target Zero*, whose goal is to reach zero deaths and zero serious injuries on Washington roadways by 2030. The City of should consider implementing some of the *Target Zero* improvement strategies to increase pedestrian and bicyclist safety.

3.1 WSDOT Collision Summary

Table 3-1. WSDOT Collision Summary

Collision Date	Collision Location	Pedestrians Involved	Bicyclists Involved	Description
8/15/2012	Hawk Ave SW near Mockingbird St SW	1	None	Vehicle traveling straight collided with pedestrian
5/10/2011	Riddell Ave NE near Johns St NE	5	None	Vehicle backing collided with pedestrian
11/5/2011	SR 162/ Washington Ave N and Williams Blvd NW	None	1	Left turning vehicle collided with bicyclist at intersection
10/24/2013	SR 162/ Washington Ave N and Williams Blvd NW	None	1	Left turning vehicle collided with bicyclist at intersection
9/28/2011	SR 162/ Washington Ave N and Cardinal Ln NE	None	1	Left turning vehicle collided with bicyclist at intersection
10/10/2014	SR 162/ Bridge St NW and Corrin Ave	None	1	Left turning vehicle collided with bicyclist at intersection

WSDOT provided collision data for Orting for the past 5 years (January 2011 through December 2015). During this time period, there were six collisions involving non-motorized users, shown on Figure 3-2; four collisions with bicyclists and two collisions with pedestrians.

All of the collisions with bicyclists occurred at intersections along SR 162, which runs parallel to the Foothills Trail. Left-turning vehicles failed to see bicyclists in all of the collisions and the majority occurred after daylight hours (three out of four collisions). Two of the collisions with bicyclists occurred at same intersection located at SR 162 and Williams Blvd NW.

The two collisions involving pedestrians occurred in residential areas. The collision on Hawk Ave SW occurred near a neighborhood park. The collision on Riddell Ave NE occurred in a cul-de-sac between several pedestrians and a vehicle that was backing out from a driveway. Figure 3-2 shows where these collisions occurred in Orting.

3.2 Pedestrian Facilities

According to the 2016 *Target Zero* plan, 11 percent (93 of 814) of the fatal and serious injury crashes involved pedestrians in Pierce County between 2012-2014. Although this number is not specific to Orting, the City does have areas where pedestrian level of stress – and safety – could be improved, SR 162 is an example of this. Figure 3-1 and Figure 3-3 list several of the most common contributing factors. Vehicles going straight was one of the injuries listed in the WSDOT data, Table 3-1. Four out of six of the injuries recorded by WSDOT happened at intersections. *Target Zero* Figure 3-3 lists intersections as one of the highest contributing factors of fatality or serious injury.

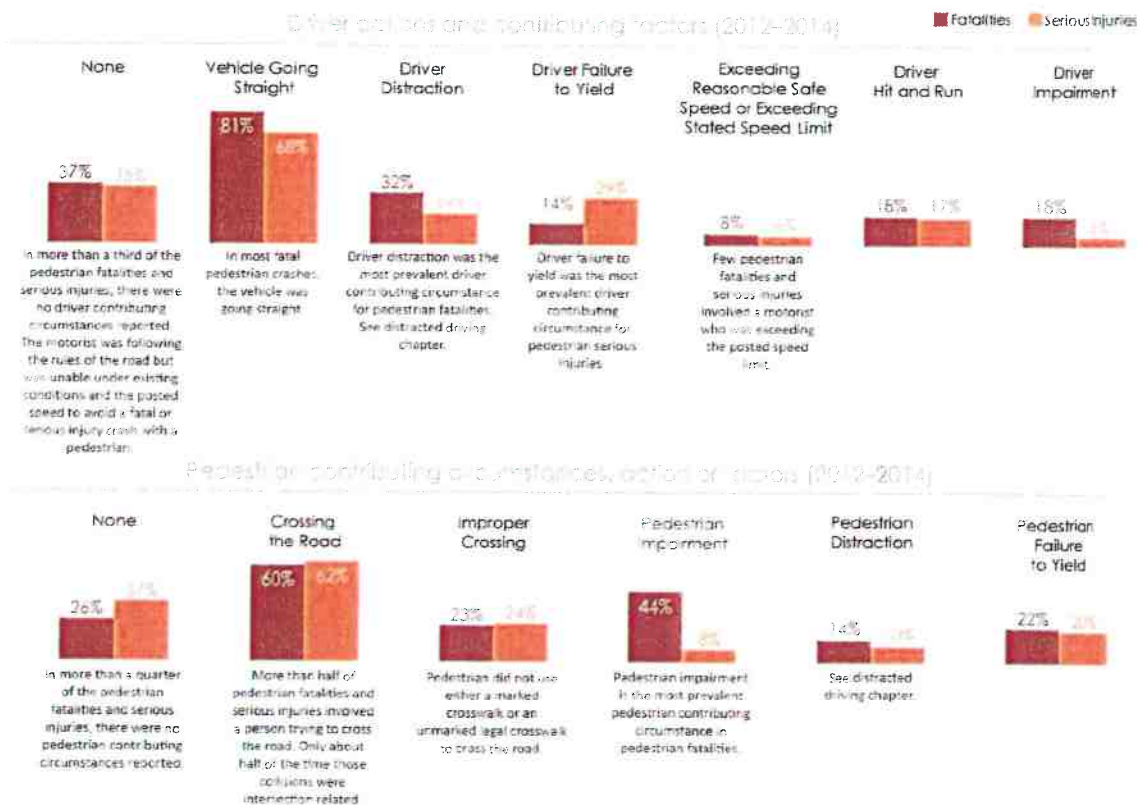
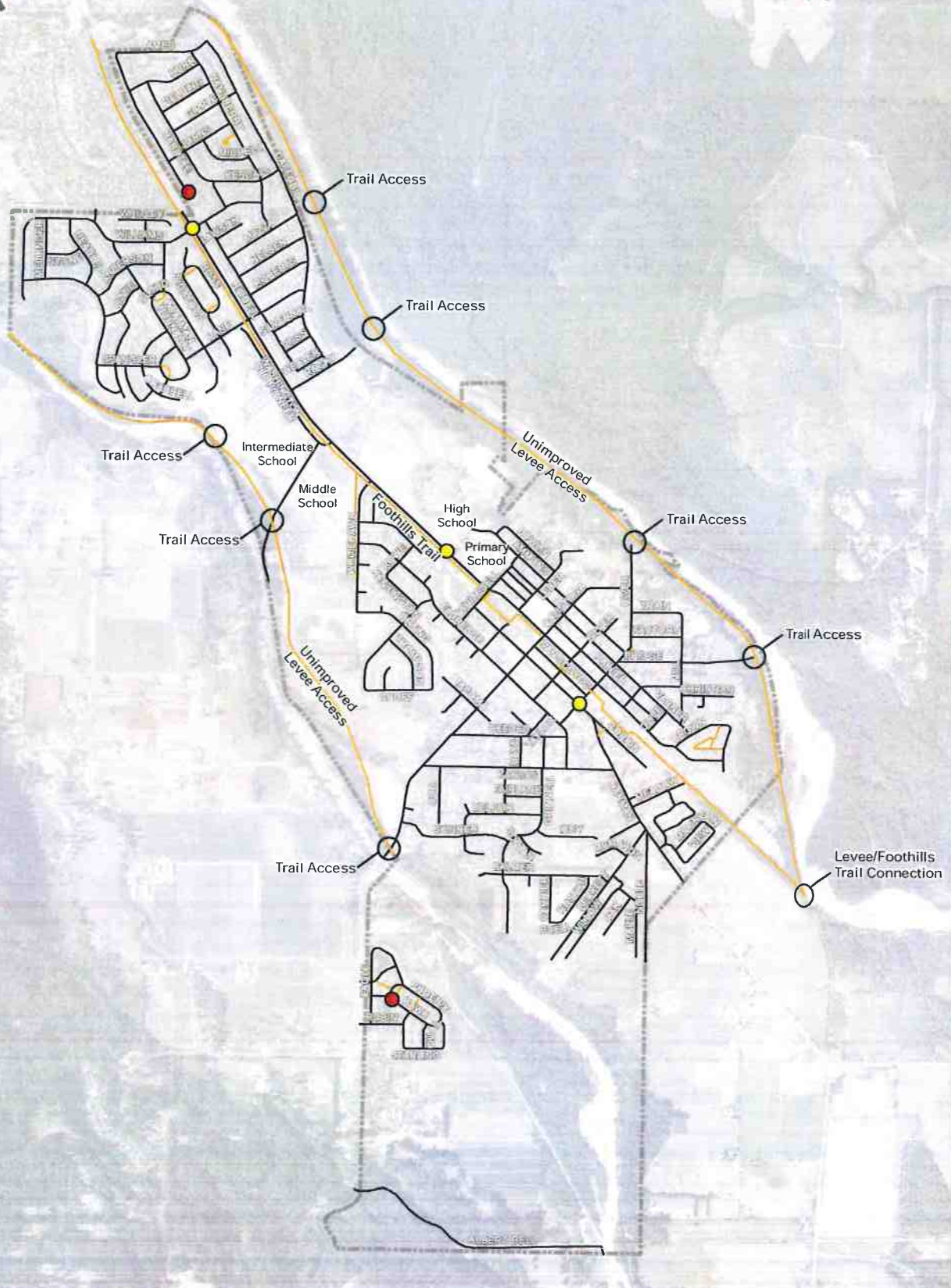


Figure 3-1. Contributing Factors in Pedestrian-Related Fatalities and Injuries
Source: *Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030*. Washington Traffic Safety Commission.

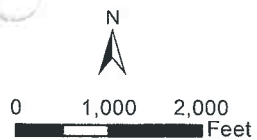
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Data Source: ESRI (Street Data),
NAIP (Imagery 2015)

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Parametrix



- Bicycle Collision
- Pedestrian Collision
- Street
- Trail
- City Limit

Figure 3-2. Non-Motorized Collisions
2011-2015

Non-Motorized Transportation Plan
Orting, WA

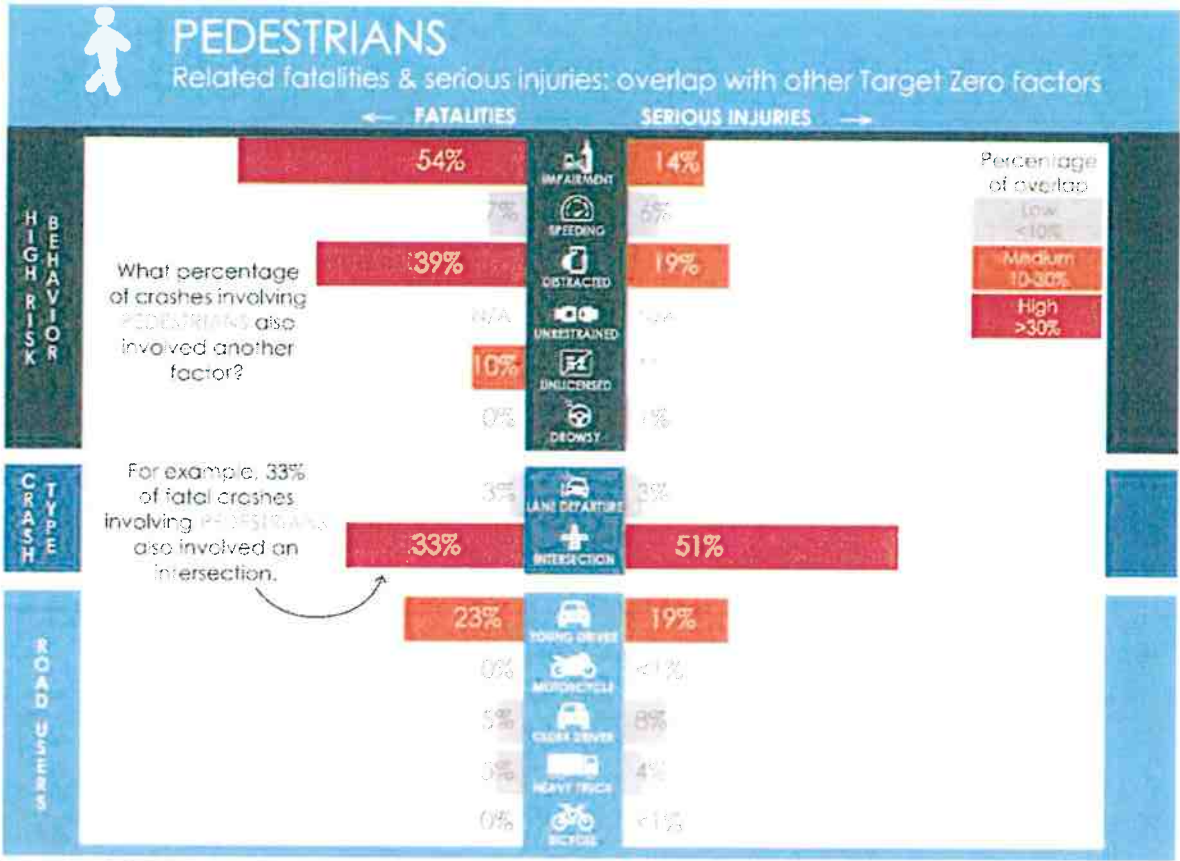


Figure 3-3. Contributing Factors in Pedestrian-Related Fatalities and Injuries
Source: Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030. Washington Traffic Safety Commission.

3.3 Bicycle Facilities

Target Zero also addresses bicycle safety, as well as the most common contributing factors in bicycle injuries and fatalities (Figure 3-4). Currently, 87 percent of the City of Orting’s transportation network has an acceptable level of stress on bicyclists, but there are areas where improvements can be made. These factors should be considered when determining how to best make those improvements. Vehicles making a left turn is listed as a Target Zero contributing factor to serious injuries or fatalities. All four of the recorded bicycle injuries over the last 5 years in Orting were caused by vehicles making a left turn.



Figure 3-4. Contributing Factors in Bicyclist Fatalities and Injuries
Source: Washington State Strategic Highway Safety Plan 2016: Target Zero, Zero Deaths & Zero Serious Injuries by 2030. Washington Traffic Safety Commission.

In addition, the National Association of City Transportation Officials (NACTO) created an Urban Bikeway Design Guide. The guide has chapters on bike lanes, cycle tracks, intersection treatments, bicycle signals, bikeway signing and marking, and bicycle boulevards. Each of these chapters has examples of successful implementation across the country. There are currently no bicycle lanes within the City of Orting; however, the City as a whole is relatively bicycle friendly. The Urban Bikeway Design Guide could be a useful tool in deciding if there are treatments the City would want to use to further improve the bicycle facilities within Orting.

4. EVACUATION FACILITIES

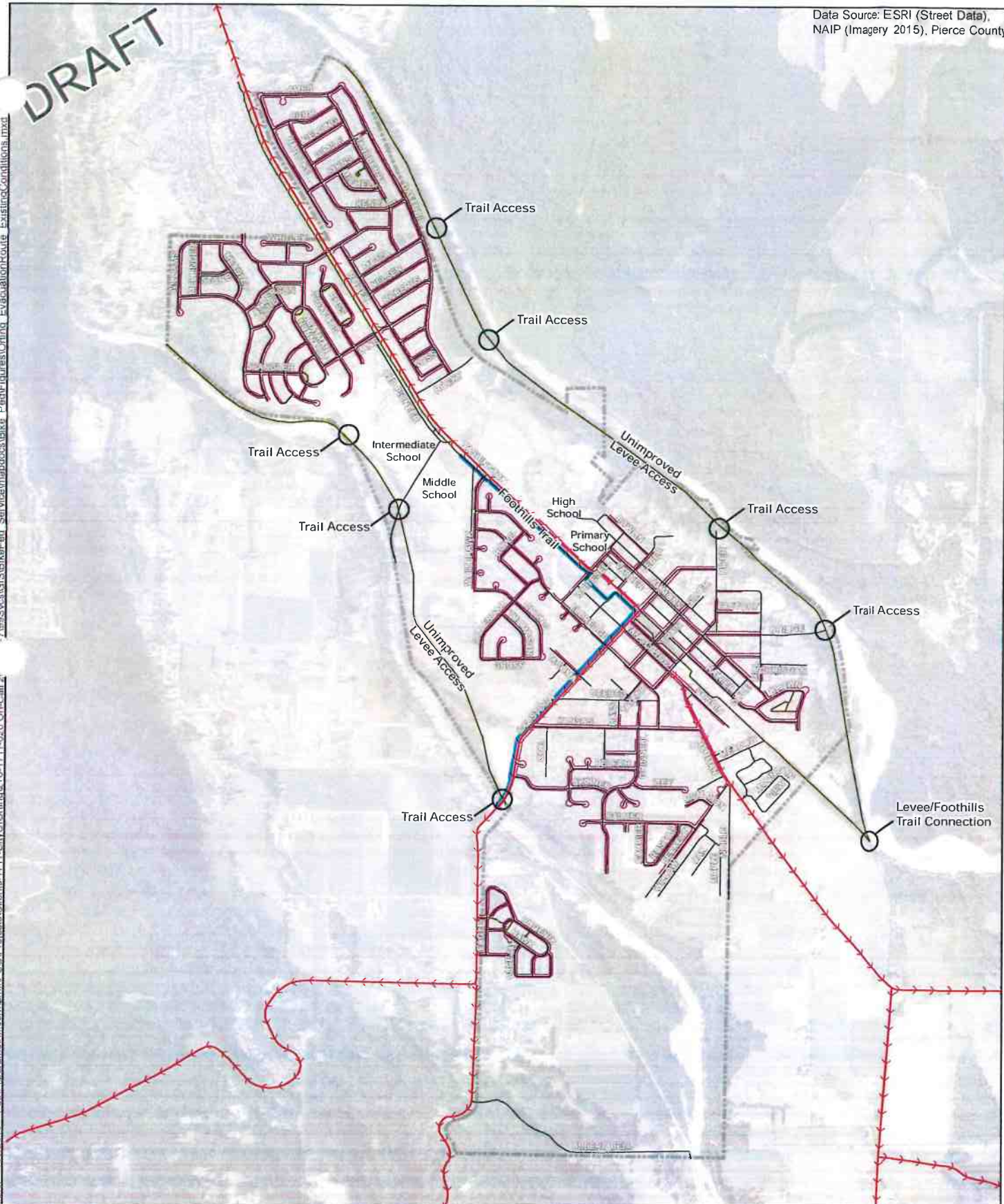
The City of Orting is located in an open valley, between the Puyallup and Carbon rivers, approximately 30 miles to the northwest of Mt. Rainier. Because Mt. Rainier is an active volcano, and Orting is located within the lahar hazard zone, the City has prepared for the chance of emergency evacuation. The evacuation routes are intended to move the greatest amount of people as fast as possible out of the lahar and flood danger zones. In the event of an emergency, it is entirely possible that people may evacuate by several modes, including walking. Therefore, these routes (see Figure 4-1) are referenced in the ONMTP, to ensure that emergency evacuation planning addresses all potential modes. This is particularly important should an event occur during the school day, when children may need to evacuate by bus or on foot.



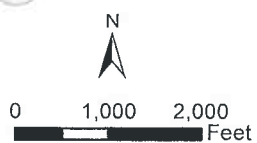
DRAFT

Data Source: ESRI (Street Data),
NAIP (Imagery 2015), Pierce County

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Date: 11/30/2016



rametrix



- - - - - Lahar Evacuation Route
- Existing School Evacuation Route
- Street
- Sidewalk
- Path/Trail

Figure 4-1. Evacuation Route Existing Conditions

5. PLANNED IMPROVEMENTS

In addition to addressing the existing deficiencies (the facilities creating high areas of pedestrian and bicycle levels of stress) in the non-motorized network, the City should also consider additional growth anticipated by 2030. The 2015 population estimate in Orting was 7,446, an increase of 10.4 percent from April 2010. By 2040, the City of Orting is expected to grow to 8,500 residents.

There are several key factors which present challenges for non-motorized travel in Orting:

Rural character of the City

The City of Orting, while compact along the downtown core, also has several areas that rate poorly for non-motorized travel primarily due to lack of sidewalks and bike lanes. Given that the City is small (less than 3 square miles) and largely rural in nature (as desired by residents), providing such facilities may not always be the best solution. The neighborhood roads have low posted speeds, which are conducive to safe non-motorized travel.

Major transportation facility (Washington Ave/SR 162) is a highway, and a main street

Washington Avenue is a major arterial and also has a paved shoulder, parking space, sidewalks, and a posted speed limit of 25 mph through the city core. The Foothills Trail runs parallel to Washington Avenue, making separate dedicated bike lanes on the roadway unnecessary, but this also affects the BLOS score.

Transit opportunities:

One factor impacting scores is the accessibility to transit facilities. Because of the population size, there are no transit options or opportunities within the City itself, although there are excellent bus and commuter rail options located in both Puyallup and Sumner there is no connectivity between Orting and those cities.

5.1 Pedestrian Facilities

5.1.1 Recommended Improvements

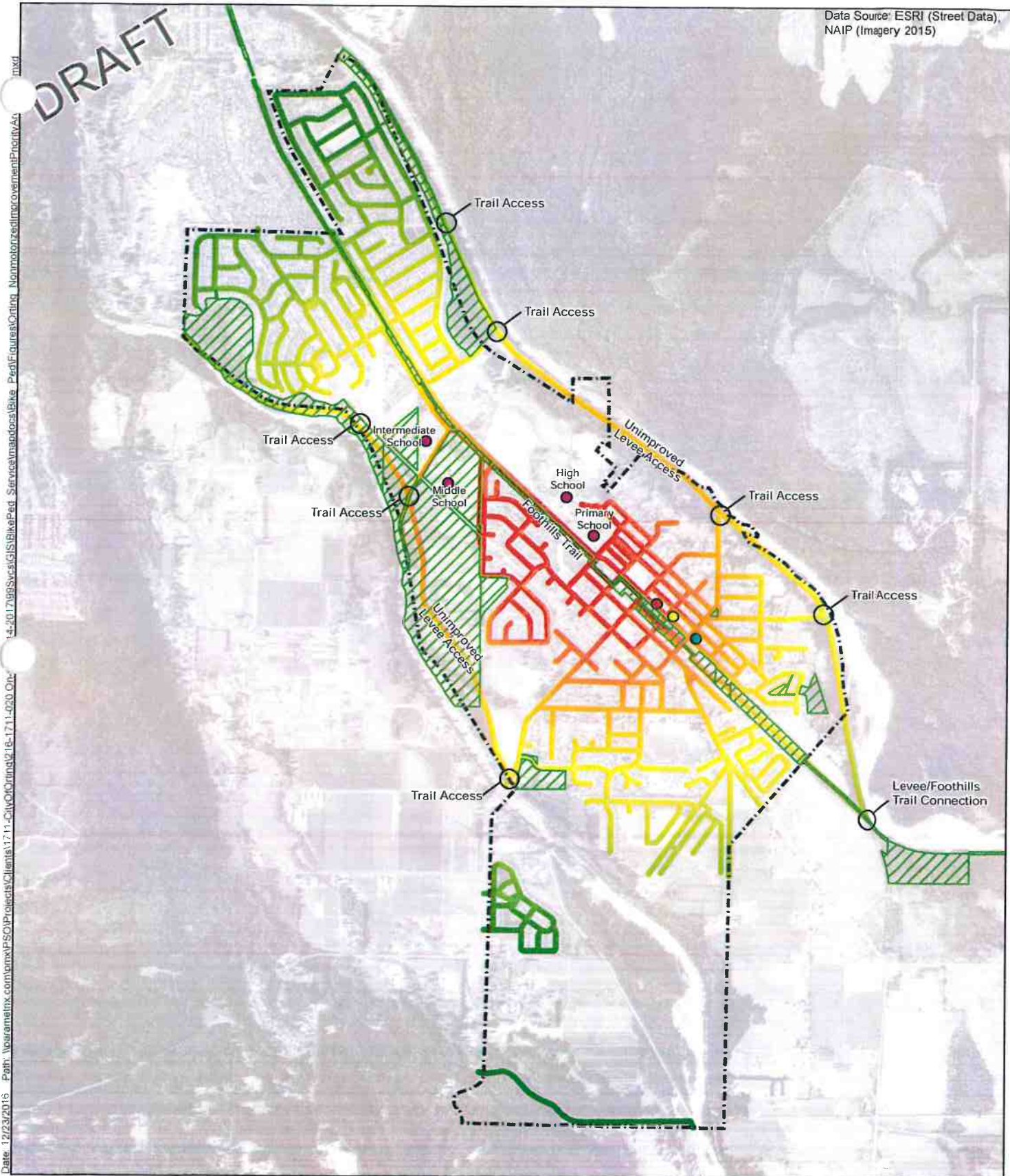
In order to address facilities with high pedestrian levels of stress, the suggested solutions are to complete gaps in the sidewalk and trail systems. The City is currently planning on replacing outdated ADA ramps in Old Town as well as widen sidewalks in Old Town. When these gap improvements and the suggested improvements are made, the resulting conditions should score acceptable PLOS scores of 1-3. Some areas will continue at a PLOS of 4-5 and do not need to be improved, simply due to the fact that these are subdivisions where sidewalks are not appropriate due to the rural character of those areas and the low posted speeds of the roadways. In these areas, a poor PLOS does not translate to a required improvement. It is recommended that some of the programs and policies included in Target Zero be considered (see section 5.1.2, Programs and Policies on page 5-5) for areas that desire an improved PLOS score. Other recommendations for the City are to:

- Widen evacuation route along Calistoga Street West towards Soldiers home.
- Widen the sidewalks on Calistoga Bridge.

- Improve City's crosswalk safety.
- Pursue opportunities to work with Pierce County to provide ADA access to the levee system.

Non-motorized improvements could be prioritized in areas where pedestrian and bicycle activity is likely higher and supported by nearby land uses and destinations. This would include schools, parks, transit stops, downtown and areas with connections to the Foothills trail. These types of land uses and destinations are considered non-motorized generators and generally have a greater potential to encourage non-motorized travel. Figure 5-1 is a heat map which indicates via a color scale, places in Orting where non-motorized travel is likely to be higher. These areas of higher non-motorized travel could be prioritized for investments in non-motorized improvements and are indicated in red and orange. Areas shown in yellow or green are a lower priority for investment.





Parametrix

N

0 1,000 2,000 Feet

- Downtown
 - Library
 - Orting Manor
 - School
 - City Limit
 - ▨ Park
- Non-Motorized Improvement Priority
- High Priority
 - Low Priority

Figure 5-1. Non-Motorized Improvement Area Priority

Non-Motorized Transportation Plan
Orting, WA

Date: 1/23/2016 Path: \\parametrix.com\pmx\PSO\Projects\Clients\1711-1711-020-00\14-2017\88\Sves\GIS\BikePed_Service\mapdocs\Bike_Ped\Figures\Orting_NonMotorizedImprovementPriority_Ar...

5.1.2 Programs and Policies

Target Zero offers several categories of programs, project types, and policies that can be considered when making improvements to pedestrian facilities. Many of these are not capital improvements, but rather, steps that can be taken to increase overall awareness, improve travel behavior, and increase safety. In Target Zero, these strategies are broken out into education, engineering, enforcement, and policy. The City of Orting should determine which of these may be most appropriate in meeting their desired level of stress for pedestrians. Emergency Response is also addressed in Target Zero – due to unique conditions related to lahar and evacuation route planning in Orting, this topic is addressed separately (see Section 5.3 on page 5-8).

Some potential considerations include:

Education

- Promote the use of reflective apparel among pedestrians.
- Educate pedestrians about the dangers of distracted walking.
- Increase public awareness on the significance speed has on the severity of pedestrian injury.
- Improve training on pedestrian laws for law enforcement officials.
- Implement middle school pedestrian and bicycle safety training in school curriculum.
- Encourage campaigns such as Walking School Buses.

Engineering

- Safe Routes to School - the City has four different schools: Orting High School, Orting Middle School, Ptarmigan Ridge Elementary School, and Orting Primary School. Emphasizing safe routes to school would result in safer pedestrian pathways and sidewalks for everyone.
- Implement pedestrian safety zones, targeting geographic locations and audiences with pedestrian crash concerns.
- Improve safety at pedestrian crossings by installing refuge islands and shortening crossing distances with curb extensions where crosswalk enhancements are needed.
- Increase the use of rectangular rapid flashing beacons and pedestrian hybrid beacons where needed to enhance crosswalks.
- Implement programs that improve the built environment such as improving pedestrian connections to public transportation.
- Improve sight distance and visibility at pedestrian crossings by clearing vegetation to improve sight, extending crossing times, adding pedestrian scale illumination, etc.
- Provide more frequent pedestrian crossing options.
- Be sure pedestrian signing is consistent and appropriate for the zone it is in.

Enforcement

- Use enforcement and speed feedback signs to help motorists change speeding behavior.
- Expand targeted crosswalk enforcement and education for both motorists and pedestrians.

Leadership/Policy

- Implement Complete Streets policies to provide for all modes of transportation.
- Collect miles walked data, similar to collecting vehicle miles travelled.

More than half (57%) of pedestrian facilities and 67% of serious injuries occurred while the pedestrian was crossing the road.

In 2012–2014, there were no pedestrian fatalities on roads with a posted speed of 20 mph.

5.2 Bicycle Improvements

Overall, Orting rated well in the low levels of stress placed on bicyclists, with 87 percent of facilities meeting an acceptable level of stress. The single best way to achieve 100 percent acceptable level of stress for bicycles is to add bike lanes to any roadway with a BLOS of 4 or 5. However, bike lanes may not be desirable or reasonable on every local access or neighborhood road, where low traffic volumes and low speeds already provide a safe condition for non-motorized uses. Old Pioneer Way is an example of a street that scored a BLOS of 5 but will not need improvements because it is paralleled by the Foothills Trail, which is used by non-motorized road users in place of Old Pioneer Way. Programs and policies that promote and enhance bicycle travel should be considered, primarily in places where reasons for poor BLOS have a reasonable explanation, such as on Old Pioneer Way.

A focus on connectivity to the Foothills trail is one way to make bicycle improvements. The Foothills trail is a popular route for bicyclists and providing access points with a low Level of Stress would improve the City's overall BLOS. Figure 5-1 shown on page 5-3 under Pedestrian Facilities emphasizes that non-motorized generators, such as the Foothills trail, are generally a higher priority for improvement. In terms of bicycle use, trail access points in orange or red are areas that would benefit from improvement projects.

- Calistoga Street West
- Kansas Street Southwest
- Consider the addition of bike lanes on Calistoga Street and Kansas Street.
- Consider striping the trail with "fast" and "slow" lanes for bicycle and foot traffic.
- Removing mid-block crossings with Foothills trail.

5.2.1 Programs and Policies

Many of the following potential projects are also suggestions from Target Zero.

Education

- Promoting the use of reflective apparel and bicycle lights by bicyclists.
- Including bicycle safety awareness in drivers' education courses.
- Improving training on bicycle laws for law enforcement officers.
- Encouraging local schools to implement Safe Routes to School.

Engineering

In addition to bike lanes, a variety of treatments could be considered, including: narrower travel lanes, medians, chokers or pinch points, horizontal lane shift, vertical traffic calming, traffic diverter islands, roundabouts, two-way streets, trees, and tighter curb radii.

Near intersections and crossings, the engineering treatments could include: intersection crossings, green-colored pavement, bike boxes, two-stage turn boxes, bicycle signals, median refuge islands, active warning beacons and hybrid beacons. Many of these suggestions and successful implementation examples are listed in the *Urban Bikeway Design Guide*, including:

- Implement speed management using target speeds and context sensitive solutions.
- Utilize road diets/reconfigurations to improve safety for all roadway users.
- Follow national guidelines on the use of reflective markings and sign material.
- Construct more bike lanes, separate bicycle lanes, and separated bicycle facilities.
- Create bicycle boulevards on low volume, low speed streets.
- Install colored bicycle boxes at intersections.

Leadership/Policy

- Increase number of people bicycling because there is safety in numbers.
- Encourage bicycle helmet use for both children and adults.
- Implement Complete Streets policies to provide for all modes of transportation.
- Collect Bicycle Miles Traveled similar to collecting Vehicle Miles traveled.

5.3 Evacuation Routes

Evacuation and emergency planning and preparedness are covered by the City's Emergency Management team under a document called Emergency Preparedness. However, it is worth emphasizing in this ONMTP, to ensure that evacuation route planning also meets the needs of anyone traveling on foot or by mode other than car should a lahar occur. The City currently has several evacuation routes (see Figure 4-1, located on page 4-3).

5.3.1 Considerations

The ONMTP is not requiring specific evacuation route improvements, as these are being addressed in other areas of City planning. However, in order to support all modes, particularly during emergencies, it is worth noting a few key projects and areas that should be addressed in the City's hazard mitigation and emergency planning.

Orting Emergency Evacuation Bridge System

The Orting Emergency Evacuation Bridge System is a proposed an evacuation improvement, which was developed from a concerned group of parents. The fear was that in an actual emergency the current evacuation routes would be compact with vehicles slowing the evacuation process for pedestrians and vehicles alike. Out of this concern, a pedestrian only evacuation route, was born. The route is accessible to all four schools in the area and uses Rocky Road to lead pedestrians to higher and safer ground. This project is not currently fully funded, however preliminary design is complete and funding is being actively pursued.

Sidewalk Gaps/System Repairs

Repair/rebuild elements of current evacuation routes that may need to be improved, such as heavily used sidewalks and bridges along the routes.

6. IMPLEMENTATION

As with the city's Transportation Plan, the ONMTP needs to be consistent with several statewide and regional planning objectives. This chapter describes the ONMTP as it pertains to state and regional planning, and provides a proposed list of recommended projects with associated implementation timeline and possible funding sources.

6.1 Consistency with other Planning Efforts

6.1.1 Growth Management Act (GMA)

The Washington State Growth Management Act (GMA) was designed as a way for state and local governments to identify as well as protect natural resources when planning urban areas of growth. GMA, specifically Revised Code of Washington (RCW) 36.70A.070(6) expects several requirements to be met relating to the transportation element of a comprehensive plan. The GMA requires a financial analysis to include:

- An analysis of a jurisdiction's funding capability by comparing needs with likely funding sources.
- A multi-year financing plan based on the needs addressed in the most recent comprehensive plan. Pieces of the multi-year plan serve as the foundation for the development of the Transportation Improvement Program (TIP), a 6-year program covering street, road, or transit programs required by cities and other transit agencies.
- If possible funding does not meet all the needs, there needs to be an element of the financial plan dedicated to addressing how additional funding will be raised or how land use assumptions will be reassessed at a later time to ensure level of service standards are met.

6.1.2 VISION 2040

The objective of VISION 2040 surrounds the idea of active transportation, meaning bicycle and pedestrian planning. VISION 2040 is the Puget Sound region's long range growth management, economic, and transportation strategy. The plan calls for developing a transportation system that both creates a variety of travel choices and preserves open space and the environmental quality. Non-motorized transportation, including pedestrians and bicycles, play a substantial role in attaining these goals. The goals established should implement efficient and effective projects and programs.

6.1.3 Transportation 2040

Transportation 2040 is a 30 year plan intended as a course of action for the transportation quality in the central Puget Sound region. With an anticipated growth rate to 1.5 million people by 2040, this plan is critical to the region. There is also an expected 1.2 million new jobs. Both jobs and people will boost travel demand by an estimated 40 percent. With the increased need, Transportation 2040 outlines a financial plan that works to shift how transportation improvements are funded in the long-term. The plan also acknowledges the reliance on those using the improvements also paying for them as well as strategies to reduce transportation contributions to environmental changes.

6.1.4 Americans with Disabilities Act

Puget Sound Regional Council has a commitment to the Americans with Disabilities Act (ADA) and adopted the Coordinated Transit-Human Services Plan in 2014 to outline how transit agencies, social services, schools, and other transportation providers can work together to improve special needs transportation throughout multiple counties. Pierce, Snohomish, King and Kitsap Counties were all involved in this plan.

6.2 Recommended Improvements and Financial Strategy

Based upon the existing conditions, and the City’s desired level of stress standards for pedestrians and bicyclists, several projects have been identified that will allow the City to achieve their goals. Table 6-1 summarizes each recommended improvement project or program, as well as possible funding sources. An explanation of cost range is listed below.

Table 6-1. Non-Motorized Improvement Projects

Project/Program	Description/Timeline	Cost Range	(Potential) Funding Sources
Pedestrian			
Sidewalk Gap Closures and ADA Compliance	Widen sidewalks for ADA acceptable use and replace ADA ramps.	\$2,000 – \$6,000 per ADA ramp \$570 – \$650 per linear foot to construct sidewalks	CBDG (Community Block Development Grant)
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	TAP (Transportation Alternatives Program)
Safe Routes to School	Improve sidewalks and routes to school so that children can walk to school safely *based off of sidewalk improvements listed in the TIP ranging from 5-foot sidewalks to 12-foot sidewalks.	\$570 – \$650 per linear foot to construct sidewalks	Safe Routes to School Grant
Bicycle			
Trail Enhancements	Add pavement markings/stripping, such as “fast” and “slow” lanes to separate bicycle traffic and foot traffic.	\$1 – \$2 per linear foot of stripping \$200 – \$600 per each marking symbol	
Evacuation			
Orting Emergency Evacuation Bridge System	<i>**This project is included to highlight the importance of evacuation route planning for all modes. This project will likely be funded through multiple sources.**</i>	Phase 1 – \$7 million Phase 2 – \$40 million	Hazard Mitigation Grant
Evacuation Route Improvements	<i>Widen the sidewalks on the current evacuation route. Widen the west side of Calistoga to 8 – 12 feet. Widen the East side of the bridge sidewalk to 8 – 12 feet.</i>	\$287,400 – \$362,000	Grant (EMPG) Emergency Management Performance

All cost range estimates are derived from the Cost for Pedestrian and Bicyclist Infrastructure Improvements: a Resource for Researchers, Engineers, Planners, and the General Public Manual (2013) and from recently constructed projects in the region.

ADA Ramps: The cost to replace or construct ADA ramps is approximately \$2,000 to \$6,000 per ramp. This cost is estimated from *Cost for Pedestrian and Bicyclist Infrastructure Improvements Manual (2013)* and recently constructed projects in the region.

Sidewalk Gap Closures: Sidewalk gap closures are estimated to cost between \$570 and \$650 per linear foot depending on sidewalk widths, pavement types, and amount constructed. This cost is a high level planning cost that includes the major components of a sidewalk construction project, including clearing and grading, pavement and curb and gutter removal, traffic curb and gutter installation, storm drainage improvements, engineering/construction management fees, and contingencies.

Trails: Trail Enhancements were calculated from several different sources, including the *2015 City of Orting Parks, Trails and Open Space Plan*, the *Manual Cost for Pedestrian and Bicyclist Infrastructure Improvements: a Resource for Researchers, Engineers, Planners, and the General Public (2013)*, and recently constructed projects in the region.

Currently, there are no proposals to construct or rebuild new portions of the Foothill's Trail in Orting. However, trail enhancements, such as adding "fast" and "slow" lanes, could be completed. This type of trail enhancement would include adding pavement markings and striping to the existing asphalt trail.

The average cost of striping the trail would be between approximately \$1 and \$2 per linear foot. Pavement marking symbols, which would be placed at intersections and approximately every 500 feet, would be approximately \$200 to \$600 each.

Safe Routes to School: Safe Routes to Schools (SRTS) projects primarily consist of sidewalk and bicycle improvements. Once SRTS routes are identified, typical improvements to make bicycling and walking safer can be completed:

- Stripe bicycle lanes: \$26,000 – \$53,000 per mile
- Construct sidewalk: \$570 – \$650 per linear foot
- Construct pedestrian crossings: \$500 – \$3,000 each
- Construct pedestrian safety island: \$10,000 – \$75,000 each

Other improvements can include general traffic calming measures, such as high visibility crosswalks, raised crosswalks, speed humps/tables, and signage.

Orting Emergency Evacuation Bridge System: The cost to construct the Orting Emergency Evacuation Bridge System is estimated to be \$47 million dollars. This facility could be completed in two phases, with the first estimated to cost \$7 million and the second estimated to cost \$40 million.

Emergency Evacuation Route: The costs to complete improvements to the emergency evacuation route include widening the sidewalks. Between Washington Ave S and the Puyallup River, Calistoga Ave is approximately 3,800 feet in length. It would cost between approximately \$2.3 to \$2.5 million to construct an 8- to 12-foot sidewalk on the west side of the street between Washington Ave S and the Puyallup River. The existing bridge over the Puyallup River is approximately 500 feet in length and the existing sidewalks are 6 feet wide. The sidewalks on the bridge could be widened to between 8 and 10 feet on either side by reducing the widths of the travel lanes to between 13 and 12 feet each (from 15 feet wide). Increasing the sidewalk width on one side of the bridge would cost approximately \$140,000 to \$150,000. Providing sidewalks wider than 10 feet would require expansion of the bridge structure, which would greatly increase construction costs. Expansion of the bridge could require additional girders and foundations to accommodate a wider and heavier structure.

