CHAPTERS

Chapter 1: Introduction ................................................................. 1-1
Chapter 2: Land Use Element .......................................................... 2-1
Chapter 3: Capital Facilities Element ............................................. 3-1
Chapter 4: Cultural Resources Element ......................................... 4-1
Chapter 5: Design and Character Element ................................... 5-1
Chapter 6: Economic Development Element ............................... 6-1
Chapter 7: Environment Element ................................................. 7-1
Chapter 8: Essential Public Facilities Element ............................. 8-1
Chapter 9: Housing Element ....................................................... 9-1
Chapter 10: Open Space Element ............................................... 10-1
Chapter 11: Parks and Recreation Element ................................. 11-1
Chapter 12: Transportation Element .......................................... 12-1
Chapter 13: Utilities Element .................................................... 13-1
Chapter 14: Community Plans .................................................. 14-1

TABLES

LAND USE ELEMENT

Table 2-A: Pierce County Change in Population 2000-2010 .................. 2-7
Table 2-B: Total Population Targets for Pierce County ....................... 2-9
Table 2-C: OFM Population Projections .......................................... 2-10
Table 2-D: Unincorporated Pierce County UGA Target Allocations by PAA .......................... 2-13
Table 2-E: Unincorporated Pierce County Land Use Inventory ................ 2-14
Table 2-F: Urban Land Use Designations ....................................... 2-16
Table 2-G: Summary of Urban Land Use Designation Densities ............... 2-28
Table 2-H: Rural Land Use Designations ....................................... 2-46
Table 2-I: Summary of Rural Land Use Designation Densities ............... 2-48
Table 2-J: Resource Land Use Designations .................................... 2-60
Table 2-K: Distribution of Urban, Rural, and Resource Lands ............... 2-75
Table 2-L: Prime Agriculture Soil List ........................................................................................................ 2-97

CAPITAL FACILITIES ELEMENT
Table 3-A: Level of Service Standards for Capital Facilities ....................................................................... 3-3

ECONOMIC DEVELOPMENT ELEMENT
Table 6-A: Workforce Commute Patterns ........................................................................................................ 6-2
Table 6-B: Location Quotient by NAICS code .................................................................................................. 6-3
Table 6-C: Average Annual Wages and Employment by Industry .................................................................... 6-4
Table 6-D: Pierce County Percentage of US and Washington Average Wage per Job .................................. 6-6
Table 6-E: Educational Attainment .................................................................................................................. 6-7
Table 6-F: Poverty Rate for the Population 25 Years and Over for Whom Poverty Status is Determined by Educational Attainment Level .................................................................................. 6-8
Table 6-G: Median Earnings in the Past 12 Months (In 2013 Inflation-Adjusted Dollars) ............................... 6-8

ENVIRONMENT ELEMENT
Table 7-A: Mitigation Sequencing .................................................................................................................. 7-10

HOUSING ELEMENT
Table 9-A: Number of Dwelling Units by Housing Type (Unincorporated Pierce County) ......................... 9-2
Table 9-B: Occupancy/Vacancy Status (Unincorporated Pierce County) ......................................................... 9-3
Table 9-C: Condition of Single-Family Housing Stock (Unincorporated Pierce County) .............................. 9-3
Table 9-D: Market Affordability for Pierce County .......................................................................................... 9-3
Table 9-E: Monthly Rent (Urban Pierce County) ............................................................................................. 9-4
Table 9-F: Housing Needs (Unincorporated Pierce County) ........................................................................... 9-4
Table 9-G: Disproportionally Greater Need 50 - 80% AMI (Urban Pierce County) .................................. 9-7
Table 9-H: Disproportionally Greater Need 30 - 50% AMI (Urban Pierce County) .................................. 9-8
Table 9-I: Disproportionally Greater Need 0 - 30% AMI (Urban Pierce County) ...................................... 9-9
Table 9-J: Cost Burden > 30% (Urban Pierce County) .................................................................................... 9-9
Table 9-K: Severe Cost Burden > 50% (Urban Pierce County) ...................................................................... 9-9
Table 9-L: HUD 2014 Affordable Housing Income Level Limits for the Pierce County Area .......................... 9-10
Table 9-M: Subsidized Housing Summary (Unincorporated Pierce County) .................................................. 9-10

TRANSPORTATION ELEMENT
Table 12-A: County to County Travel from 1980 to 2010 ........................................................................... 12-25
Table 12-B: Service Threshold (S) .................................................................................................................. 12-26
Table 12-C: State Facility LOS Standards ................................................................. 12-28
Table 12-D: Unincorporated Area 2010 Daily VMT and VHT Summary - Pierce County, WA. 12-29
Table 12-E: County Segments with Daily V/S Equal to Greater than 0.95 in 2010 .......... 12-30
Table 12-F: Summary of Daily Statistics for County Roads – 2010 Base ...................... 12-30
Table 12-G: Summary of Daily Statistics for Federal/State Roads-2010 Base................... 12-32
Table 12-H: Major Project Development Assumptions (Unincorporated Urban Pierce) ...... 12-47
Table 12-I: Proposed Motorized Roadway Improvements............................................. 12-49
Table 12-J: Summary of Daily Statistics for County Roads .............................................. 12-51
Table 12-K: County Road Improvement Needs to Serve New Growth by 2030................. 12-54
Table 12-L: VMT/VHT Changes for County Roads (Limited Action vs. Preferred)......... 12-55
Table 12-M: Summary of Daily Statistics for Federal/State Roads in 2030...................... 12-57
Table 12-N: VMT/VHT Changes for Federal/State Roads (Limited Action vs. Preferred) .... 12-58
Table 12-O: Transportation Revenue Sources and Amounts ....................................... 12-67
Table 12-P: Forecasted Expenditures ........................................................................... 12-68
Table 12-Q: Estimated Total County Road Improvement Costs by 2030 ....................... 12-68
Table 12-R: Nonmotorized Transportation Plan Projects.............................................. 12-74
Table 12-S: Community Plan Projects that Contain Nonmotorized Elements ............. 12-75
Table 12-T: Centerline Miles ......................................................................................... 12-95
Table 12-U: Pierce Transit Bus Routes ............................................................................ 12-96
Table 12-V: Pierce Transit Park-n-Ride Lots ................................................................... 12-98
Table 12-W: Operational Characteristics of Larger Airports within Pierce County ........ 12-99
Table 12-X: Pedestrian Facilities on Pierce County Roadways ..................................... 12-100
Table 12-Y: Accidents InvolvingPedestrians on Pierce County Maintained Roadways ...... 12-100
Table 12-Z: Accidents InvolvingBicyclists on Pierce County Maintained Roadways ........ 12-100
Table 12-AA: County Projects from Pierce County Transportation Plan not in Community Plans ........................................................................................................ 12-116
Table 12-BB: State Projects from Pierce County Transportation Plan not in Community Plans . . 12-119
Table 12-CC: Alderton-McMillin Community Plan Project Recommendations ............... 12-121
Table 12-DD: Anderson and Ketron Islands Community Plan Project Recommendations ... 12-123
Table 12-EE: Browns Point - Dash Point Community Plan Project Recommendations ...... 12-125
Table 12-FF: Frederickson Community Plan Project Recommendations ...................... 12-127
Table 12-GG: Gig Harbor Peninsula Community Plan Project Recommendations ........................................ 12-131
Table 12-HH: Graham Community Plan Project Recommendations ....................................................... 12-136
Table 12-II: Key Peninsula Community Plan Project Recommendations ............................................... 12-141
Table 12-JJ: Mid-County Community Plan Project Recommendations .................................................. 12-146
Table 12-KK: Parkland-Spanaway-Midland Communities Plan Project Recommendations ................ 12-153
Table 12-LL: South Hill Community Plan Project Recommendations .................................................... 12-158

FIGURES

INTRODUCTION

Figure 1-A: Hierarchy of Planning Authority ........................................................................................ 1-6
Figure 1-B: Puget Sound Regional Council Boundary .......................................................................... 1-8

LAND USE ELEMENT

Figure 2-A: Unincorporated Pierce County Race/Ethnic Origin (includes Hispanic or Latino) ............ 2-7
Figure 2-B: Unincorporated Pierce County Age Categories .................................................................. 2-8
Figure 2-C: 2014 Buildable Lands Report Future Capacity vs. Need .................................................. 2-11

TRANSPORTATION ELEMENT

Figure 12-A: Pierce County Age Distribution ...................................................................................... 12-22
Figure 12-B: Pierce County Commute Trip Mode Share .................................................................... 12-23
Figure 12-C: Pierce County Travel Time to Work .............................................................................. 12-24
Figure 12-D: Roadway Miles by Functional Class .............................................................................. 12-28
Figure 12-E: Annual Boardings (Pierce Transit) ............................................................................... 12-34
Figure 12-F: Pierce County - Population and Employment History and Forecasts ............................. 12-44
Figure 12-G: Adopted Growth Targets .............................................................................................. 12-45
Figure 12-H: The Growing Elderly Population .................................................................................. 12-45
Figure 12-I: Population and Employment Growth Projections in Pierce County 2010-2030 .............. 12-46
Figure 12-J: Pierce TAZ ...................................................................................................................... 12-46
Figure 12-K: Schematic of the process and inputs ............................................................................ 12-46
Figure 12-L: Travel Model .................................................................................................................. 12-48
Figure 12-M: Forecasted Transportation Revenues and Expenditures (2015-2030) ............................ 12-65
Figure 12-N: Project Type Percentages – Improvement Costs ............................................................. 12-69
Figure 12-O: Conceptual Graphic – Active Living Facilities ............................................................... 12-81
Figure 12-P: Development Patterns ................................................................. 12-85
Figure 12-Q: Sumner Station License Plate Survey ........................................... 12-88

MAPS

LAND USE ELEMENT
Map 2-1: Land Use Designations ................................................................. 2-15
Map 2-2: Urban Growth Areas and Potential Annexation Areas .................. 2-19
Map 2-3: Frederickson Manufacturing/Industrial Center .............................. 2-40
Map 2-4: Agriculture Production Districts .................................................... 2-64
Map 2-5: Urban, Rural, and Resource Designations ...................................... 2-76
Map 2-6: Open Space Corridors ................................................................. 2-87
Map 2-7: Community Plan Boundaries ...................................................... 2-96

ECONOMIC DEVELOPMENT ELEMENT
Map 6-1: Existing Incomplete Freight Transportation Network .................. 6-10
Map 6-2: Connections Needed to Complete the Freight Network .................. 6-11

ESSENTIAL PUBLIC FACILITIES ELEMENT
Map 8-1: Essential Public Facilities .............................................................. 8-5

TRANSPORTATION ELEMENT
Map 12-1: County Roads – 2010 Daily V/S Ratios ........................................ 12-31
Map 12-3: Pierce Transit SHUTTLE (Paratransit Specialized) Service Area ..... 12-35
Map 12-4: Pierce Transit System Map (as of February 15, 2015) ................. 12-36
Map 12-5: Sound Transit System Map ........................................................ 12-37
Map 12-6: Road Improvements Needed by 2025 ........................................ 12-40
Map 12-7: 2012 Daily V/S Ratios ............................................................... 12-41
Map 12-8: Transportation Corridors and Connectors Right of Way Preservation Map ................................................................. 12-42
Map 12-9: Transportation Corridors and Connectors Right of Way Preservation Map ................................................................. 12-43
Map 12-10: County Roads Limited Action Scenario – 2030 Daily V/S Ratios ... 12-52
Map 12-12: County Road Improvement Projects .......................................... 12-56
List of Acronyms

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<td>Transportation Improvement Program</td>
</tr>
<tr>
<td>TNAAC</td>
<td>Tacoma Narrows Airport Advisory Commission</td>
</tr>
<tr>
<td>TPCHD</td>
<td>Tacoma-Pierce County Health Department</td>
</tr>
<tr>
<td>TPU</td>
<td>Tacoma Public Utilities</td>
</tr>
<tr>
<td>TSM</td>
<td>Transportation System Management</td>
</tr>
<tr>
<td>UGA</td>
<td>Urban Growth Area</td>
</tr>
<tr>
<td>USP</td>
<td>Unified Sewer Plan</td>
</tr>
<tr>
<td>V/S</td>
<td>Volume/Service</td>
</tr>
<tr>
<td>VHT</td>
<td>Vehicle hours traveled</td>
</tr>
<tr>
<td>VMT</td>
<td>Vehicle miles traveled</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<td>---------</td>
<td>------------------------------------------</td>
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<tr>
<td>NMTP</td>
<td>Nonmotorized Transportation Plan</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>NWP</td>
<td>Northwest Pipeline Corporation</td>
</tr>
<tr>
<td>OFM</td>
<td>Office of Financial Management</td>
</tr>
<tr>
<td>WAC</td>
<td>Washington Administrative Code</td>
</tr>
<tr>
<td>WRIA</td>
<td>Water Resource Inventory Area</td>
</tr>
<tr>
<td>WSDOT</td>
<td>Washington State Department of Transportation</td>
</tr>
</tbody>
</table>
Chapter 1: INTRODUCTION

CONTENTS

The Big Idea .......................................................................................................................... 1-2

Updating the Plan .................................................................................................................. 1-3

Public Involvement ............................................................................................................... 1-3

Pierce County Profile ......................................................................................................... 1-3

Geography ............................................................................................................................. 1-4

Topography .......................................................................................................................... 1-4

Soils ..................................................................................................................................... 1-4

Government .......................................................................................................................... 1-5

Growth Management Planning ...................................................................................... 1-5

Planning in Pierce County ................................................................................................. 1-5

Washington State Growth Management Act .................................................................. 1-6

Multicounty Planning ......................................................................................................... 1-8

Countywide Planning .......................................................................................................... 1-8

Direction and Implementing Policies ............................................................................... 1-10

Document Organization .................................................................................................... 1-10

Policy Organization ........................................................................................................... 1-11

Related Documents .......................................................................................................... 1-12
The Big Idea

The Pierce County Comprehensive Plan is an adopted policy document that guides County decisions related to growth and development in unincorporated Pierce County. The plan outlines existing conditions and a future vision for the County’s unincorporated areas. It contains goals and policies that are meant to direct growth and development in a way that will help the County achieve this vision.

The goal of the Comprehensive Plan is to honor the past and look ahead.

Pierce County adopts this Comprehensive Plan to guide all subsequent plans and decisions. The policies reflect the following key values chosen by the citizens of Pierce County:

- Protect the Character of Our Rural Lands
- Promote Open Space and Parks
- Preserve the Natural Environment
- Maintain Our Livable Neighborhoods
- Connect Motorized and Nonmotorized Transportation Routes
- Promote a Diverse, Healthy, and Sustainable Economy
- Require Infrastructure and Services Concurrent with the Actual Need
- Preserve Our History
- Public Safety

*The Big Idea* is the foundation of the Comprehensive Plan. Remember these key values when reading and interpreting the policies.
UPDATING THE PLAN

The Comprehensive Plan update began in early 2013 with internal review of the existing Pierce County Comprehensive Plan document and associated plans, including the eleven associated community plans. Team members from all applicable departments, including Planning and Land Services, many divisions within Public Works and Utilities, Parks and Recreation, Community Connections, and the Tacoma Pierce County Health Department were involved in reviewing and editing the contents of the existing plan. This team was also responsible for identifying gaps between the existing plan and the requirements of the state’s Growth Management Act and the Puget Sound Regional Council’s policy document, Vision 2040. Once the document was updated and gaps were identified, the team outlined a public participation plan that began in early 2014.

PUBLIC INVOLVEMENT

In February 2014, Long Range Planning staff began a series of study sessions to inform the County’s representative bodies, including County Council, Planning Commission, and all Land Use Advisory Committees (LUACs) about the update. Throughout 2014, staff kept engaged with the LUACs in subsequent meetings to present and receive recommendations on proposed edits to their respective community plans.

Team members worked together in April 2014 to develop an open house format that included all topics in the Comprehensive Plan to provide information to the general public and receive input on issues found in the plan. Open houses began in late May and ran through July, covering various communities within the County.

PIERCE COUNTY PROFILE

Pierce County is the second most populous county in the state of Washington, behind King County. Formed out of Thurston County on December 22, 1852 by the legislature of Oregon Territory, it was named for U.S. President Franklin Pierce. As of the 2010 Census, the population was 795,225. The County seat is Tacoma, which is also the County’s largest city, on Commencement Bay.

Pierce County’s moderate climate, combined with a contrasting geography of water and mountains, encourages a wealth of year-round outdoor activities. Pierce County has miles of Puget Sound waterfront, Mount Rainier National Park, 361 fresh-water lakes, alpine and cross-
country skiing, and nationally ranked year-round golf courses, while also offering all the urban amenities.

Major industries include aerospace, healthcare, technology, agriculture, timber products, and military installations. In addition to the City of Tacoma, Pierce County is home to several suburban cities, small towns, and rural communities, as well as forests and farmlands.

The County is notable for being home to the Mount Rainier volcano, the tallest mountain in the Cascade Range. Its most recent recorded eruption was between 1820 and 1854. There is no imminent risk of eruption, but geologists expect that the volcano will erupt again. If this should happen, parts of Pierce County would be at risk from lahars, lava, or pyroclastic flows. The Mount Rainier Volcano Lahar Warning System was established in 1998 to assist in the evacuation of the Puyallup River valley in case of eruption.

**GEOGRAPHY**

According to the U.S. Census Bureau, the County has a total area of approximately 1,800 square miles, of which 1,670 square miles is land and 130 square miles (7.2%) is water. The highest natural point in Washington is Mount Rainier at 14,411 feet. Mount Rainier is the most visited attraction in Washington, and the tallest volcano in the lower 48 states. The Mount Rainier National Park celebrated 100 years in 1999. The park has a perpetual snowpack and 26 glaciers.

**TOPOGRAPHY**

The topography of Pierce County is quite varied; elevations range from sea level to the 14,410 foot summit of Mount Rainier. The general slope from east to west is fairly gentle except for abrupt drops into the larger river valleys of the County.

The Puget Sound lowland may be characterized as a relatively flat plain ranging in elevation from 100 feet to 700 feet above mean sea level, rising to approximately 2,000 feet where the forested foothills begin. The plain is broken at irregular intervals by rolling terrain and by the steep-walled valleys of the major rivers. The valley walls are precipitous in many places such as those of the Puyallup River.

The Cascade foothills are an undulating to rolling belt of benches and low hills with fairly shallow stream channels except for the major rivers. The Cascade Mountains, with the exception of Mount Rainier, range in elevation from 2,500 to 7,000 feet.

**SOILS**

The glacially-derived soils of Pierce County have been altered by climatic and vegetative processes. Upland deposits are mantled by glacial till and shallow soil, and the alluvial deposits of the major river valleys are deep and agriculturally productive.

Two or more individual soils make up a soil association. In the Pierce County area included in the *Soil Survey of Pierce County Area, Washington* (1979), 38 different series of soils have been identified.
Most of the County’s soils are of low-to-moderate erosion potential. According to Soil Conservation Service data, approximately 12% of the soils in the Pierce County Soil Survey have moderate to severe, severe, or very severe erosion potential. Most of these soils are associated with steep slopes. Steep sloped areas, especially those with pervious soils underlain by impervious hardpan layers, are also subject to landslide hazards.

Many of the County's soils have severe limitations for septic tank fields primarily due to wetness, slope, and an impervious cemented pan layer. Soils with slight limitations for septic, such as Spanaway soils, have greater permeability. However, the permeable nature of these soils can increase the potential for groundwater pollution.

**GOVERNMENT**

The County has adopted and is governed by a charter. This is allowed by section 4 of Article XI of the Washington constitution. The Pierce County Executive heads the County's executive branch. The Assessor-Treasurer, Auditor, Prosecuting Attorney, and Sheriff are also countywide elected executive positions.

The Pierce County Council is the elected legislative body and consists of seven members elected by district. The Council is vested with all law-making power granted by its charter and by the State of Washington. The Council sets County policy through the adoption of ordinances and resolutions, approves the annual budget, and directs the use of County funds. The seven members of the County Council are elected from each of seven contiguous and equally populated districts, with each Councilmember representing approximately 114,000 County residents. Each County Councilmember is elected to serve a four-year term.

**GROWTH MANAGEMENT PLANNING**

**PLANNING IN PIERCE COUNTY**

The first Pierce County Comprehensive Plan (post-GMA) was created by the Pierce County Citizens' Advisory Group through a grassroots public process. Review and revision of the draft involved the Pierce County Planning Commission, the County Council, and the County Executive, with much technical assistance from County department staff. The review included public outreach including television programs, open houses, community meetings, public testimony, and mailings.

The plan was adopted by the Pierce County Council on November 29, 1994, and became effective on January 1, 1995. It integrated residents' ideas, concerns, and preferences into statements of how the County should be developed, what development regulations should accomplish, what facilities and services levels are needed, and how publicly-funded improvements should support these objectives.
The policies of the Comprehensive Plan articulate a vision of Pierce County. Residents and stakeholders continue to use the plan to guide their design and location decisions as they plan for improvements. Although the plan looks only 20 years into the future, the values and objectives expressed in the plan extend beyond the 20-year planning horizon. The plan is reviewed and updated regularly to address changes in conditions or the vision of the County's residents.

Planning in Pierce County is also influenced by and must be consistent with other planning documents at the State, Regional, and Countywide levels. This top-down approach is shown in the hierarchy graphic above.

**WASHINGTON STATE GROWTH MANAGEMENT ACT**

In 1990, the State Legislature enacted the Growth Management Act (GMA) which initiated and required the development of policies to manage growth in Washington State. All urban counties and their cities and towns were required to develop comprehensive plans and regulations to implement those plans. Plans must address issues in land use, transportation, housing, capital facilities, utilities, and rural lands, and must guide development and accommodate the population growth forecast for the next 20 years.

The Growth Management Act ([RCW 36.70A](#)) and related State planning guidelines ([WAC 365-196](#)) guide the development and update of the Pierce County Comprehensive Plan. The Act outlines 14 goals for the development of a comprehensive plan. Each goal, viewed as equally important, must be furthered by the growth management strategies.

These goals, as set forth in [RCW 36.70A.020](#), are adopted to guide development and adoption of Pierce County's Comprehensive Plan and Development Regulations. The goals are not listed in order of priority.
The 14 planning goals are:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban Growth</strong></td>
<td>Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.</td>
</tr>
<tr>
<td><strong>Reduce Sprawl</strong></td>
<td>Reduce the inappropriate conversion of undeveloped land into sprawling, low density development.</td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td>Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td>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, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.</td>
</tr>
<tr>
<td><strong>Property Rights</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Permits</strong></td>
<td>Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.</td>
</tr>
<tr>
<td><strong>Natural Resources Industries</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Open Space and Recreation</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.</td>
</tr>
<tr>
<td><strong>Citizen Participation and Coordination</strong></td>
<td>Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.</td>
</tr>
<tr>
<td><strong>Public Facilities and Services</strong></td>
<td>Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.</td>
</tr>
<tr>
<td><strong>Historic Preservation</strong></td>
<td>Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.</td>
</tr>
<tr>
<td><strong>Shorelines</strong></td>
<td>Manage development within Shoreline jurisdiction consistent with the Washington State Shoreline Management Act and Pierce County's Shoreline Master Program.</td>
</tr>
</tbody>
</table>
MULTICOUNTY PLANNING

The Act also required the development of multicounty planning policies for the central Puget Sound region of King, Kitsap, Pierce, and Snohomish counties. The Multicounty Planning Policies, developed as part of Vision 2040, describe regional objectives for issues that cross county boundaries and need to be met to achieve inter-jurisdictional consistency. The Vision 2040 Planning Policies were adopted in March of 1993 by the General Assembly of the Puget Sound Regional Council (PSRC) as an amendment to Vision 2040. In 2012, the PSRC adopted Transportation 2040, a transportation action plan update for the central Puget Sound region.

Vision 2040 Planning Policies cover the same topics required of the Countywide Planning Policies (CPPs). Open space linkages, resource protection, and critical areas, identified as important issues in the GMA, were also included because of their regional importance and the impossibility of achieving them without the inter-county collaboration. In 2008, the PSRC adopted Vision 2040, an update to the Multicounty Planning Policies.

COUNTYWIDE PLANNING

The Pierce County Regional Council (PCRC) was created to ensure planning between Pierce County and its cities and towns was accomplished in a coordinated, consistent manner. The Council is comprised of elected officials from Pierce County, each of its 23 cities and towns, and the Port of Tacoma. The primary responsibility of the PCRC is to ensure that the Growth Management Act requirements are coordinated within the County and the region. The Countywide coordination is accomplished through the implementation of the Pierce County Countywide Planning Policies.

The regional coordination is accomplished by this group acting as a sub-regional council to the Puget Sound Regional Council (PSRC). The PSRC represents the four-county region of Pierce,
King, Snohomish, and Kitsap counties. Members from the PCRC are represented on the different boards and commissions of this regional body. These boards include the Growth Management Policy Board, the Transportation Policy Board, the Economic Development Policy Board, and the Executive Board. Joint jurisdictional planning will occur in those areas where the respective jurisdictions agree such planning would be beneficial. Designation of Urban Growth Areas (UGA) requires extensive coordination between the cities and towns and the County. Though UGAs remain under the County's jurisdiction, it is beneficial to both municipalities and the County to jointly plan for them.

Cities and towns are concerned about the type of land use activities and design standards which are permitted outside of their municipal limits, since they have a direct impact on the city or town. Many of the cities and towns have developed land use plans which address areas currently under the County's jurisdiction. For the cities and towns to effectively reach their goals after an annexation, they need to ensure the County does not permit activity which would be inconsistent with their future plans.

To address this concern, the Pierce County Council passed Resolution No. R93-96, which supports a Joint Planning Framework recommended by the Pierce County Regional Council. The strategy of the Joint Planning Framework is to encourage appropriate jurisdictions to enter into interlocal agreements to facilitate and accomplish joint planning in areas of mutual concern. Interlocal agreements enable the involved jurisdictions to work together to review and consider issues of mutual concern.

King, Snohomish, and Kitsap counties. Members from the PCRC are represented on the different boards and commissions of this regional body. These boards include the Growth Management Policy Board, the Transportation Policy Board, the Economic Development Policy Board, and the Executive Board. Joint jurisdictional planning will occur in those areas where the respective jurisdictions agree such planning would be beneficial. Designation of Urban Growth Areas (UGA) requires extensive coordination between the cities and towns and the County. Though UGAs remain under the County's jurisdiction, it is beneficial to both municipalities and the County to jointly plan for them.

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The Comprehensive Plan is intended for use by all members of the community for unincorporated Pierce County. The plan is internally consistent even though some issues are addressed through multiple policies in multiple elements and some issues receive refined and more detailed direction in community plans.

The policies contained within this Comprehensive Plan are intended to be statements of policy, and allow flexibility when it comes to implementation. Policies cannot be applied independently; rather, implementation of the policies must be balanced with one another and will address details such as how and when the policy is applied and any relevant exceptions.

The Comprehensive Plan is a tool to assist County Councilmembers, planning commissioners, County staff, and others involved in making land use and public infrastructure decisions. It provides the framework for the County’s Development Regulations.

Supplemental resources are available on the Department of Planning and Land Services website.

DOCUMENT ORGANIZATION

While the Comprehensive Plan’s narrative text and maps frame the key proposals, the essence of the plan lies in its policies. These are declarative statements that set forth the County’s approach to various issues. While every effort has been made to provide clear policies, there may be a need for interpretation. The authority of interpretation lies with the County and will be enacted through decisions.

- **Goals** are the overarching policy direction on a particular topic that represents the main idea of subsequent policies. Goals tend to be very general and broad.

- **Policies** provide further guidance in support of the goals.

The Comprehensive Plan is organized into the following chapters:

1. **INTRODUCTION.** Presents The Big Idea and County profile. Outlines the planning process and provides further detail on the purpose and organization of the Comprehensive Plan.
2. **LAND USE ELEMENT.** Establishes land use designations and policies to guide development within those designations.
3. **CAPITAL FACILITIES ELEMENT.** Capital Facilities planning guidance.
4. **CULTURAL RESOURCES ELEMENT.** Encourages protection of cultural and historic resources.
5. **DESIGN AND CHARACTER ELEMENT.** Defines the character of the County and provides policy guidance for design standards.
6. **ECONOMIC DEVELOPMENT ELEMENT.** Policy guidance on supporting employment economies.
7. **ENVIRONMENT ELEMENT.** Policy direction regarding critical areas and other environmental concerns.
8. **ESSENTIAL PUBLIC FACILITIES.** Includes policy for identifying and siting essential public facilities.
9. **HOUSING ELEMENT.** Provides solutions to housing issues with a focus on affordable housing.
10. **OPEN SPACE ELEMENT.** Describes the different types of open space and their further application throughout this plan.
11. **PARKS AND RECREATION ELEMENT.** Policies guiding parks development and recreational opportunity.
12. **TRANSPORTATION ELEMENT.** Outlines transportation system development, concurrency, and policy guidance on all modes of transportation. Includes technical information consistent with the GMA.
13. **UTILITIES ELEMENT.** Utilities planning guidance and an inventory of existing facilities with reference to other supplemental plans.
Within each element chapter, the policies are organized presented in the following format:

**SOLUTIONS TO HOUSING ISSUES**

The Housing and Land Use Elements provide direction to accommodate enough affordable housing for all economic segments of the community. Land use strategies may include allowances for accessory dwelling units, infill development, rehabilitation of existing housing, mixed-use development, and smaller lot sizes. Regulatory strategies may include streamlined approval processing and priority permit processing.

The Land Use Designations Map in the Land Use Element identifies ten land use designations within an Urban Growth Area to accommodate projected housing needs: Moderate Density Single Family, High Density Single Family, Master Planned Communities, Major Urban Centers, Activity Centers, Community Centers, Neighborhood Centers, Mixed Use Districts, High Density Residential Districts, and Urban Villages. Of these designations, the Moderate Density Single-Family, High Density Single Family, and the High Density Residential Districts are to accommodate only residential uses.

Low income and government subsidized rental or multifamily structures. Housing objectives, principles, and strategies in the Comprehensive Plan encourage income diversity within the housing stock to ensure an adequate supply of housing for all economic segments of the population.

It is the intent of the Plan to use the Housing Element to create solutions for affordability, which shall collectively address all economic segments of the population, including low income, very low income, and extremely low income households. 40% percent area median income, 50 percent area median income, 60 percent area median income, respectively.

<table>
<thead>
<tr>
<th>GOAL H-1</th>
<th>Allow for a range of housing types in appropriate areas of the County.</th>
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<tbody>
<tr>
<td>H-1.1</td>
<td>Encourage a variety of housing types that allow high densities and creative use of land within the urban area.</td>
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<tr>
<td>H-1.2</td>
<td>Ensure that housing types within the rural and resource areas retain the rural character, and respect the features of the lands.</td>
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<tr>
<td>H-2.1</td>
<td>Encourage the development of new housing within the urban growth areas where facilities and services exist or are planned.</td>
</tr>
<tr>
<td>H-2.2</td>
<td>Allow for accessory dwelling units, cottage housing, and Katrina cottages to reduce housing costs for residents.</td>
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</tbody>
</table>

Pierce County Comprehensive Plan | Housing Element 1-8

**LINKS TO OTHER ELEMENTS/SECTIONS**

Buttons identify where there is overlap in policy with another element and provide a link to where they can be found.

**GOALS**

A goal is a general statement to introduce the general idea of the following policies.

**POLICIES**

A policy is a statement to guide decision making. Policies are intended be carried out by an implementation measure.

**NUMBERING**

Policy numbering corresponds with the chapter title. Policies subsequent to a larger policy issue are numbered in a hierarchical format.

**CHAPTER AND PAGE NUMBERS**

Page numbers are organized by chapter number and page; they also include the title of the chapter.

**NARRATIVE INFORMATION**

An introduction to each section, supplemental information, and data may be found in the narrative preceding policies.

**ADDITIONAL INFORMATION AND SIDEBARS**

Text boxes and sidebars are used to provide more information, examples, and visuals that are associated with policies.
There are multiple sub-plans that implement the Comprehensive Plan, and other documents that are related to the plan. The following list is not comprehensive, but provides supportive and related documents organized by element.

<table>
<thead>
<tr>
<th>Element</th>
<th>Document</th>
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<tbody>
<tr>
<td>Land Use</td>
<td>▪ Buildable Lands Report</td>
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<td>▪ Joint Land Use Study</td>
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<td>▪ Sustainability Plan</td>
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<td>Capital Facilities</td>
<td>▪ Capital Facilities Plan</td>
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<td>▪ School District Facility Plans</td>
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<td>▪ Fire District Facility Plans</td>
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<td>▪ Pierce County Library 2030: Summary Report</td>
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<tr>
<td>Economic Development</td>
<td>▪ Economic Development Strategic Plan</td>
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<td>Environment</td>
<td>▪ Critical Areas Ordinance</td>
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<td>▪ Transfer of Development Rights</td>
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<td>Housing</td>
<td>▪ 2010-2015 CDBG Consolidated Plan</td>
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<td></td>
<td>▪ Plan to End Homelessness</td>
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<td></td>
<td>▪ Housing Affordability</td>
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<td>▪ Report and Recommendations from the Pierce County Housing Affordability Task Force</td>
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<tr>
<td>Parks and Recreation</td>
<td>▪ Parks, Recreation and Open Space (PROS) Plan</td>
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<td>Transportation</td>
<td>▪ Pierce County Transportation Plan (1992) and minor update (1999)</td>
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<td></td>
<td>▪ Nonmotorized Transportation Plan (1997)</td>
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<td></td>
<td>▪ Six-Year Transportation Improvement Program &amp; Fourteen-Year Ferry Program</td>
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<td></td>
<td>▪ Commute Trip Reduction Plan (Ordinance 2008-104)</td>
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<td>▪ Traffic Impact Fee Program (Ordinance 2006-60s)</td>
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<td>▪ Pierce County Ferry Planning Documents</td>
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<td>▪ Annual Transportation Concurrency Management System Report</td>
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<td>▪ Rhodes Lake Road Corridor Study (Ord. 2008-28s)</td>
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<td>▪ WSDOT Planning Documents</td>
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<td>▪ Pierce Transit Planning Documents</td>
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<td>▪ Sound Transit Planning Documents</td>
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<td>▪ PSRC Regional TDM Action Plan</td>
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<td>▪ Tidelflats Area Transportation Study (2011)</td>
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<tr>
<td>Utilities</td>
<td>▪ Capital Facilities Plan</td>
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<td></td>
<td>▪ 2010 Unified Sewer Plan</td>
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<td></td>
<td>▪ Pierce County Sewer Improvement Program 2013-2018</td>
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<td></td>
<td>▪ 2000 Tacoma-Pierce County Solid Waste Management Plan</td>
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<td></td>
<td>▪ 2008 Solid Waste Management Plan Supplement</td>
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<tr>
<td></td>
<td>▪ Other Solid Waste Planning Documents</td>
</tr>
<tr>
<td></td>
<td>▪ Coordinated Water System Plan</td>
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<td></td>
<td>▪ Water District Improvement Plans</td>
</tr>
</tbody>
</table>
Element | Document
--- | ---
- Power Company Plans
- **2014 Stormwater Management Program**
- Basin Plans
  - Clear Clarks Creek Basin Plan Volume I
  - Clear Clarks Creeks Basin Plan Volume II
  - Clover Creek Basin Plan Volume I
  - Clover Creek Basin Plan Volume II
  - Gig Harbor Basin Plan Volume I
  - Gig Harbor Basin Plan Volume II
  - Hylebos-Browns Point-Dash Point Basin Plan
  - Key Peninsula Basin Plan Volume I
  - Key Peninsula Basin Plan Volume II
  - Mid Puyallup Basin Plan Volume I
  - Mid Puyallup Basin Plan Volume II
  - Muck Creek Basin Plan Volume I
  - Mid Puyallup Basin Plan Volume II
  - Muck Creek Basin Plan Volume I
  - Muck Creek Basin Plan Volume II
  - Nisqually Basin Plan Volume I
  - Nisqually Basin Plan Volume II
  - White River Basin Plan Volume I
  - White River Basin Plan Volume II
- **Rivers Flood Hazard Management Plan**
- Sludge Management Program, 1987
Chapter 2: LAND USE ELEMENT

CONTENTS

Introduction ................................................................. 2-5
   Growth Management Act and the Land Use Element .................. 2-5
   Growth and Development Strategy ....................................... 2-5
   Provision of Facilities and Services ..................................... 2-6
   Planning Approaches to Increase Physical Activity .................. 2-6
   Inventories, Forecasts, and Analysis ..................................... 2-6
      Population ........................................................................ 2-7
      Population Targets ............................................................ 2-8
   Pierce County Buildable Lands Report .................................. 2-10
   Housing Unit and Employment Target Allocations .................. 2-12
   Land Use Inventory ............................................................. 2-13
   Land Use Map ....................................................................... 2-14

Urban .......................................................... 2-16
   Urban Growth Area ........................................................... 2-16
   Annexation ......................................................................... 2-17
   Incorporation ....................................................................... 2-17
   Annexation and Urban Growth Area Expansion ...................... 2-20
   Compact Urban Communities ............................................. 2-24
      Centers/Central Places and Transit-Oriented Corridors .......... 2-25
      Infrastructure Funding Priority ......................................... 2-26
      Joint Development Funding Priority ..................................... 2-27
   Urban Residential ............................................................... 2-27
      Moderate Density Single-Family ........................................ 2-30
      High Density Single-Family ............................................... 2-30
   Urban Commercial ............................................................. 2-32
      Activity Center .................................................................. 2-33
Community Center ............................................................................................................. 2-33
Neighborhood Center ........................................................................................................ 2-34
Major Urban Center .......................................................................................................... 2-34
Mixed Use District ............................................................................................................. 2-35
Urban Village ...................................................................................................................... 2-36
Urban Industrial .................................................................................................................. 2-37
Employment Center ......................................................................................................... 2-37
Frederickson Regional Manufacturing/Industrial Center ................................................. 2-40
Other Urban Land Use Designations ............................................................................... 2-41
Employment-Based Planned Community ....................................................................... 2-41
Master Planned Community ............................................................................................ 2-43
Major Institution ............................................................................................................... 2-43
Rural ..................................................................................................................................... 2-44
Rural Character ................................................................................................................. 2-45
Population Growth Expected in the Rural Areas ............................................................... 2-45
Rural Residential ............................................................................................................... 2-47
Rural Farm .......................................................................................................................... 2-48
Rural Centers ..................................................................................................................... 2-49
Rural Activity Center ................................................................................................------- 2-51
Rural Neighborhood Center ........................................................................................... 2-52
Rural Gateway Community ............................................................................................. 2-52
Rural Industrial Center .................................................................................................... 2-54
Other Rural Land Use Designations ................................................................................. 2-55
Master Planned Resort ..................................................................................................... 2-55
New Fully Contained Communities ............................................................................... 2-56
Rural Airport ....................................................................................................................... 2-56
Additional Rural Policies ................................................................................................. 2-57
Schools in Rural Areas ..................................................................................................... 2-57
Rural and Resource Agricultural Activity ......................................................................... 2-58
Resource Lands ................................................................................................................. 2-60
Agricultural ......................................................................................................................... 2-62
Agricultural Resource Lands Designation Criteria ............................................................. 2-65
Agricultural Lands De-designation ..................................................................................... 2-67
Farmland Conservation Strategy ....................................................................................... 2-71
Forest ..................................................................................................................................... 2-72
Mineral................................................................................................................................... 2-73
Gravel quantity available ................................................................................................... 2-73
Results ................................................................................................................................ 2-73

Urban, Rural, and Resource ........................................................................... 2-75
General................................................................................................................................. 2-75
Airports .................................................................................................................................. 2-77
Tacoma Narrows Airport .................................................................................................... 2-77
Thun Field Airport .............................................................................................................. 2-77
Small Airport ...................................................................................................................... 2-78
Current Use ............................................................................................................................ 2-78
Essential Public Facility – State Corrections Overlay............................................................. 2-78
Home Occupations and Cottage Industries........................................................................ 2-79
Military Land Designation and Compatibility ...................................................................... 2-79
Nonconforming Uses and Vesting ......................................................................................... 2-81
Approved Discretionary Land Use Actions ........................................................................ 2-82
Nonconforming Uses ............................................................................................................ 2-82
Open Space Network ............................................................................................................ 2-82
Designation of an Open Space Network ............................................................................... 2-83
Open Space Acquisition, Preservation, and Conservation ................................................ 2-84
Park and Recreation Designation .......................................................................................... 2-88
Public and Community Facilities ......................................................................................... 2-89
Location Criteria .................................................................................................................... 2-89
Public Institution ..................................................................................................................... 2-90
Rezoning and Redesignating ................................................................................................. 2-90
Transfer of Development Rights/Purchase of Development Rights .................................... 2-90
Utilities ................................................................................................................................... 2-91
Community Plans .................................................................................................................... 2-91
INTRODUCTION

The Land Use Element describes how the policies in the other plan elements will be implemented through land use policies and regulations, and thus, it is a key element of the Comprehensive Plan.

The Land Use Element was developed in accordance with the Countywide Planning Policies, VISION 2040, and integrated with the other Plan elements to ensure consistency throughout the Comprehensive Plan. The Land Use Element considers the general distribution and location of land uses, the appropriate intensity and density of land uses given current development trends, the provision of public services, and environmental considerations.

GROWTH MANAGEMENT ACT AND THE LAND USE ELEMENT

The Land Use Element of the Pierce Comprehensive Plan meets the goals of the State Growth Management Act by providing policies and mapping which designates the general distribution, location and extent of land use within the County. The land use element provides for a wide range of land uses including agriculture, timber production, housing, commerce, industry, recreation, open spaces, general aviation airports, public utilities, public facilities, and other land uses.

The land use element includes policies and guidance based on the existing population densities, and estimates of future population growth. The Land Use Element supports the foundational goal of the Growth Management Act by identifying and designating urban and rural areas and directing higher intensity development and growth into the urban areas. The Land Use Element recognizes development in both the urban and rural areas of the County that focuses urban development in the urban areas and provides for lower density development in rural areas to preserve the rural character.

The Land Use Element also includes policies that support communities that provide walking and biking access to local services and transportation. This includes policies for the development of more compact communities focused on access to transit and complete streets that provide for multiple users including pedestrians, bicyclists and transit. This urban design approach promotes increased physical activity within communities as encouraged by the Growth Management Act.

GROWTH AND DEVELOPMENT STRATEGY

The growth and development strategy directs future development primarily to occur within Urban Growth Areas. The growth and development strategy further directs major concentrations of development to occur in centers, mixed use districts, and high density residential districts. Moderate density single-family residential areas will serve as the principal land use for the remaining areas within the Urban Growth Areas.
**PROVISION OF FACILITIES AND SERVICES**

Facilities and services are necessary for urban growth and economic development. They are essential for achieving high-quality, attractive communities. Since most growth will be encouraged in Urban Growth Areas and since the low densities to be maintained in Rural Areas require a lesser level of public improvements, Pierce County is committed to using its limited public resources to concentrate on providing public services in Urban Areas. The County also can set different spending priorities within UGAs to maximize the impact of public spending and to attract certain kinds of growth to specific locations.

**PLANNING APPROACHES TO INCREASE PHYSICAL ACTIVITY**

Recognizing the growing need for physical activity among residents, the Washington Legislature enhanced the GMA guidelines for multimodal transportation in 2005 when they passed Engrossed Substitute Senate Bill (ESSB) 5186. This law amends the GMA and requires that communities consider urban planning approaches that promote physical activity. (Planning to Encourage Physical Activity-WA CTED) Meeting this requirement includes providing policies and plans regarding land use and transportation that make walking and biking to daily services and needs easier and preferred.

The Pierce County Comprehensive Plan includes the following approaches to increase physical activity:

- **Compact Communities and Transit-Oriented Corridors** – The Comprehensive Plan provides policies for the development of compact communities or transit oriented corridors that provide for pedestrian and bicycle connections to local services and transit. (Land Use Element: Compact Urban Communities)

- **Complete Streets** – The Comprehensive Plan provides policies for the development of streets that accommodate multiple users and enhance access and connectivity for pedestrians and bicyclists. (Transportation Element: Active Transportation)

- **Employment Centers** – The Comprehensive Plan provides policies that the location and design of employment centers should facilitate access and circulation by transit, pedestrians, bicyclists, and other alternative transportation modes. (Land Use Element: Employment Center)

**INVENTORIES, FORECASTS, AND ANALYSIS**

The inventory presented in this element provides information useful to the planning process. It does not include all of the data or information that was gathered, but presents the relevant information in an organized and useful format. The inventory summarizes general implications for development of the physical descriptions or types of land use, and summarizes the County's specific information. The analysis of this information is detailed below. This section includes population, demographics, population targets, land capacity, target allocations, and the land...
use inventory. The following information shows Pierce County is compliant with the Vision 2040 Regional Growth Strategy.

**POPULATION**

The 2010 Census reports that 795,225 people, 299,918 households, and 202,174 families resided in the County with a population density of 476.3 people per square mile. Approximately 46% of the population resides within unincorporated Pierce County. Table 2-A shows the increase in population since the 2000 Census.

<table>
<thead>
<tr>
<th>Table 2-A: Pierce County Change in Population 2000-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Pierce County</td>
</tr>
<tr>
<td>Unincorporated</td>
</tr>
<tr>
<td>Incorporated</td>
</tr>
</tbody>
</table>

1OFM, 2000 and 2010 Census.

**DEMOGRAPHICS**

Figure 2-A shows the racial makeup of unincorporated Pierce County was 78.8% White, 5.0% Black or African American, 1.2% Native American and Alaska Native, 4.4% Asian, 1.5% Native Hawaiian or Other Pacific Islander, 6.3% from two or more races, and 2.9% some other race (all categories include Hispanic or Latino). Within these categories, 8% of the total population was Hispanic or Latino.

**Figure 2-A: Unincorporated Pierce County Race/Ethnic Origin (includes Hispanic or Latino)**

- White
- Black or African American
- American Indian and Alaska Native
- Asian
- Native Hawaiian and Other Pacific Islander
- Two or More Races
- Some Other Race

Source: OFM, 2010 Census.

In Pierce County as a whole, the 2010 Census reported 299,918 households, of which 35.3% had children under the age of 18 living with them, 49% were married couples living together, 13% had a female householder with no husband present, and 32.6% were non-families.
Individuals made up 25.1% of all households and 7.9% of those were individuals who were 65 years of age or older. The average household size was 2.59 and the average family size was 3.09.

**Figure 2-B: Unincorporated Pierce County Age Categories**

![Age Categories Chart]

Source: OFM, 2010 Census.

As shown in Figure 2-B, the majority of unincorporated Pierce County’s 2010 population was in the Under 18 category and the remainder of the population was dispersed evenly throughout the other categories. Males accounted for 50.02% of the population, while females accounted for 49.98%. The median age was 35.7; 35 for males and 36.4 for females.

**Population Targets**

The Growth Management Act requires Pierce County to designate an Urban Growth Area(s) that is sufficient in size to accommodate the projected urban population growth for the 20-year planning period.

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.

Pierce County Council adopted targets in 2011 using the April 2007 population projections, and basing the target on the 2008 population estimate. The 2008 population estimates have since been updated with the 2010 Census.
### Table 2-B: Total Population Targets for Pierce County

<table>
<thead>
<tr>
<th>Municipality</th>
<th>2010 Census Population Estimate</th>
<th>Adopted Population Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auburn</td>
<td>7,419</td>
<td>7,950</td>
</tr>
<tr>
<td>Bonney Lake</td>
<td>17,374</td>
<td>21,640</td>
</tr>
<tr>
<td>Buckley</td>
<td>4,354</td>
<td>7,500</td>
</tr>
<tr>
<td>Carbonado</td>
<td>610</td>
<td>800</td>
</tr>
<tr>
<td>DuPont</td>
<td>8,199</td>
<td>11,900</td>
</tr>
<tr>
<td>Eatonville</td>
<td>2,758</td>
<td>3,120</td>
</tr>
<tr>
<td>Edgewood</td>
<td>9,387</td>
<td>13,700</td>
</tr>
<tr>
<td>Fife</td>
<td>9,173</td>
<td>9,425</td>
</tr>
<tr>
<td>Fircrest</td>
<td>6,497</td>
<td>6,950</td>
</tr>
<tr>
<td>Gig Harbor</td>
<td>7,126</td>
<td>10,500</td>
</tr>
<tr>
<td>Lakewood</td>
<td>58,163</td>
<td>72,000</td>
</tr>
<tr>
<td>Milton</td>
<td>6,137</td>
<td>5,750</td>
</tr>
<tr>
<td>Orting</td>
<td>6,746</td>
<td>8,000</td>
</tr>
<tr>
<td>Pacific</td>
<td>92</td>
<td>0</td>
</tr>
<tr>
<td>Puyallup</td>
<td>37,022</td>
<td>50,000</td>
</tr>
<tr>
<td>Roy</td>
<td>793</td>
<td>1,070</td>
</tr>
<tr>
<td>Ruston</td>
<td>749</td>
<td>1,450</td>
</tr>
<tr>
<td>South Prairie</td>
<td>434</td>
<td>750</td>
</tr>
<tr>
<td>Steilacoom</td>
<td>5,985</td>
<td>6,830</td>
</tr>
<tr>
<td>Sumner</td>
<td>9,451</td>
<td>11,970</td>
</tr>
<tr>
<td>Tacoma</td>
<td>198,397</td>
<td>281,300</td>
</tr>
<tr>
<td>University Place</td>
<td>31,144</td>
<td>39,540</td>
</tr>
<tr>
<td>Wilkeson</td>
<td>477</td>
<td>570</td>
</tr>
<tr>
<td><strong>Municipal Total</strong></td>
<td><strong>428,487</strong></td>
<td><strong>572,715</strong></td>
</tr>
<tr>
<td>Unincorporated UGA</td>
<td>207,839</td>
<td>265,265</td>
</tr>
<tr>
<td>Rural</td>
<td>158,899</td>
<td>176,992</td>
</tr>
<tr>
<td><strong>Unincorporated Total</strong></td>
<td><strong>366,738</strong></td>
<td><strong>442,257</strong></td>
</tr>
<tr>
<td>Countywide Total</td>
<td>795,225</td>
<td>1,014,972</td>
</tr>
</tbody>
</table>


The adopted countywide population target of 1,014,972, shown in Table 2-B, is within the medium range of the 2007 population projections, shown in Table 2-C, OFM released its latest 20-year growth management planning population projections in April 2012.
Table 2-C: OFM Population Projections

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>903,819</td>
<td>827,893</td>
</tr>
<tr>
<td>Medium</td>
<td>1,050,953</td>
<td>967,601</td>
</tr>
<tr>
<td>High</td>
<td>1,213,326</td>
<td>1,080,829</td>
</tr>
</tbody>
</table>


Table 2-C also shows that the countywide range in the 2012 projection series is: low–827,893; medium–967,601; high–1,080,829. The countywide population target, shown in Table 2-B, is within the high range of the 2012 population projection series. Although the target is not based on the most recent OFM population projection series, it is still within the range of the 2012 projections.

Pierce County Buildable Lands Report

The Growth Management Act requires Pierce County to designate an Urban Growth Area(s) that is sufficient in size to accommodate the projected urban population growth for the 20-year planning period. The basis for the County's urban population projection is a countywide projection range generated by OFM. Pierce County and its cities and towns are challenged to identify a 20-year countywide population forecast within the OFM range and then disperse the total to individual Urban Growth Areas and the rural area of the County.

Pursuant to RCW 36.70A.215, Pierce County and its cities and towns collect development data and establish assumptions for future growth in an effort to analyze future housing and employment capacity. In June 2014, Pierce County submitted its third Buildable Lands Report to the State Legislature that encompasses all incorporated and unincorporated areas. The Buildable Lands Report monitors growth since the last report cycle and uses assumptions based on the growth trends in order to estimate future capacity for the 20-year planning horizon. The results of the report are used as a basis to determine if the Urban Growth Area is appropriately sized.

Urban Growth Area Capacity Methodology

The methodology applied to estimate housing and employment capacity is detailed in the 2014 Pierce County Buildable Lands Report. The inventory categorizes lands as vacant, underutilized, or pipeline projects, and all other land is assumed to be undevelopable or built out. Vacant lands include all lands that typically do not have an established structure or land use associated with them. Vacant land is categorized as either a vacant parcel or a vacant single unit parcel, the distinction being that it is assumed vacant parcels have sufficient acreage to be further subdivided, whereas, the vacant single unit parcels are too small to be further subdivided and are counted as one unit per parcel. Underutilized lands are identified as having an existing use, but meet the criteria used to determine if they may be able to accommodate more growth. Pipeline projects are parcels with an application for a project that is assumed will build out during the 20-year time frame.
The methodology also assumes that not all of the property will be developed to its potential and available for housing within the next 20 years. To reflect this assumption, land is subtracted to account for supply availability. The full methodology is outlined in the 2014 Buildable Lands Report.

**CONCLUSIONS OF THE 2014 BUILDABLE LANDS REPORT**

Collectively, the statistics derived from the analyses indicate Pierce County’s existing Urban Growth Areas contain an adequate amount of buildable land needed to accommodate the planned growth. While the analyses may indicate some jurisdictions do not have the housing or employment capacity to meet their needs, the surplus within other jurisdictions is adequate meet the County's overall needs.

Summarizing the results of the report, as shown in Figure 2-C, the Pierce County housing need totals 115,483 units. The estimated housing capacity equals 184,962. This difference identifies an excess of residential capacity at approximately 60% of the countywide need. For the unincorporated Pierce County Urban Growth Area, the estimated housing capacity equals 40,058 units. Compared to housing need of 29,714 units, there is an excess capacity of approximately 35%.

The Pierce County employment need totals 160,885 employees, while the estimated employment capacity is 319,386 employees. This difference identifies an excess of employment capacity at approximately 98.5% of the countywide need. For the unincorporated Pierce County UGA, the estimated employment capacity equals 30,118 employees, compared to an adjusted employment need of 26,969 employees, resulting in an excess capacity of approximately 11.7%.

Within unincorporated urban Pierce County, 29.3% of the assumed housing capacity is from vacant land, 39.6% is from underutilized land, and 33.5% is from pipeline projects. The majority of residential capacity is from underutilized lands, which are more challenging to develop than vacant lands. It is also assumed a greater share of growth will be housed in areas zoned for multifamily/mixed use development.

**Figure 2-C: 2014 Buildable Lands Report Future Capacity vs. Need**

HOUSING UNIT AND EMPLOYMENT TARGET ALLOCATIONS

The County adopted housing and employment targets for the 20-year planning period. Pierce County Transportation Planning developed a Transportation Analysis Zone (TAZ) based land use allocation model that allocated these targets throughout cities, towns, and unincorporated UGAs.

The method focused on allocating future growth to areas that had experienced growth in the last 20 years and still had capacity for future growth, as opposed to an even proportional method which spreads growth evenly across a jurisdiction where there is capacity. The approach assumes that growth will infill areas that have already experienced growth before expanding to outer regions that have not; growth begets more growth.

DATA

Inputs included:

- 1990 and 2010 housing data from the census;
- 1990 and 2010 employment data from the Washington State Employment Security Department (ESD); and
- Inventory and capacity data from the 2014 Buildable Lands Report.

These data sets were used to determine where:

- Growth occurred;
- Development exists; and
- Capacity for more growth is located.

TARGET ALLOCATION

The allocation totals for cities and towns are consistent with the adopted targets. Each jurisdiction’s target was then further allocated by TAZ. As directed by Pierce County Council Ordinance No. 2011-36s, the targets for urban unincorporated Pierce County were further subdivided by sub-area using Potential Annexation Area (PAA) boundaries.

Allocations for the PAAs, Frederickson Manufacturing/Industrial Center, and the remainder of the UGA not associated with a PAA are included in Table 2-D. Each jurisdiction’s target was then further allocated by TAZ.
### Table 2-D: Unincorporated Pierce County UGA Target Allocations by PAA

<table>
<thead>
<tr>
<th>Potential Annexation Areas</th>
<th>Unincorporated Urban Pierce County</th>
<th>Housing Target</th>
<th>Employment Target¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Auburn</td>
<td>175</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Bonney Lake</td>
<td>63</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Bonney Lake 2013 U-1 Amendment</td>
<td>875</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Carbonado</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Eatonville</td>
<td>533</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Fife</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Fircrest</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Gig Harbor</td>
<td>743</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Milton</td>
<td>72</td>
<td>561</td>
</tr>
<tr>
<td></td>
<td>Pacific</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Puyallup</td>
<td>1,074</td>
<td>860</td>
</tr>
<tr>
<td></td>
<td>Roy</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>South Prairie</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Sumner</td>
<td>416</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Tacoma</td>
<td>2,951</td>
<td>3,784</td>
</tr>
<tr>
<td></td>
<td>Fife/Milton Overlap</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Lakewood/Steilacoom Overlap</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>PAAs Total</td>
<td>7,029</td>
<td>5,463</td>
</tr>
<tr>
<td></td>
<td>Frederickson M/IC</td>
<td>0</td>
<td>6,501</td>
</tr>
<tr>
<td></td>
<td>Remainder of UGA</td>
<td>20,538</td>
<td>8,708</td>
</tr>
<tr>
<td></td>
<td>UGA outside PAAs Total</td>
<td>20,538</td>
<td>15,209</td>
</tr>
<tr>
<td></td>
<td>Total Unincorporated Pierce County UGA</td>
<td>27,567</td>
<td>20,672</td>
</tr>
</tbody>
</table>

¹Employment allocations do not match the estimated need shown in the 2014 Buildable Lands Report. Allocations used ESD employment data for 2010 where the report used 2010 existing employment data reported by PSRC.

### LAND USE INVENTORY

The inventory shown in Table 2-E includes land use information about the unincorporated portions of Pierce County. The existing types of land uses can be used to gauge the proportion of total land area that the County will need to devote to each land use in the future. The existing land uses will be adjusted for expected shifts in needs or desires, and projections of future land uses will be derived.
Table 2-E: Unincorporated Pierce County Land Use Inventory

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Acres</th>
<th>Percent Gross Area</th>
<th>Percent of Total Built Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family (1-4 du)</td>
<td>99,337</td>
<td>74.49%</td>
<td>16.89%</td>
</tr>
<tr>
<td>Multifamily (5+ du)</td>
<td>2,311</td>
<td>1.73%</td>
<td>0.39%</td>
</tr>
<tr>
<td>Group homes</td>
<td>59</td>
<td>0.04%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>26,188</td>
<td>19.64%</td>
<td>4.45%</td>
</tr>
<tr>
<td>Outbuildings</td>
<td>5,459</td>
<td>4.09%</td>
<td>0.93%</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td>133,354</td>
<td>100.00%</td>
<td><strong>22.67%</strong></td>
</tr>
<tr>
<td>Commercial</td>
<td>3,911</td>
<td>25.56%</td>
<td>0.67%</td>
</tr>
<tr>
<td>Industrial</td>
<td>2,103</td>
<td>13.74%</td>
<td>0.36%</td>
</tr>
<tr>
<td>Transportation/Communication/ Utilities</td>
<td>5,146</td>
<td>33.63%</td>
<td>0.87%</td>
</tr>
<tr>
<td>Education</td>
<td>2,200</td>
<td>14.38%</td>
<td>0.37%</td>
</tr>
<tr>
<td>Public Facilities</td>
<td>1,051</td>
<td>6.87%</td>
<td>0.18%</td>
</tr>
<tr>
<td>Quasi-Public Facilities</td>
<td>892</td>
<td>5.83%</td>
<td>0.15%</td>
</tr>
<tr>
<td><strong>Total Built Environment</strong></td>
<td>15,303</td>
<td>100.00%</td>
<td><strong>2.60%</strong></td>
</tr>
<tr>
<td>Parks and Recreation</td>
<td>16,029</td>
<td>3.65%</td>
<td>2.73%</td>
</tr>
<tr>
<td>Resource Lands</td>
<td>287,597</td>
<td>65.44%</td>
<td>48.90%</td>
</tr>
<tr>
<td>Vacant, undeveloped area</td>
<td>132,788</td>
<td>30.22%</td>
<td>22.58%</td>
</tr>
<tr>
<td>Water Bodies</td>
<td>3,046</td>
<td>0.69%</td>
<td>0.52%</td>
</tr>
<tr>
<td><strong>Total Unbuilt Environment</strong></td>
<td>439,460</td>
<td>100.00%</td>
<td><strong>74.72%</strong></td>
</tr>
<tr>
<td>Uncategorized Land*</td>
<td>4,594</td>
<td>0.78%</td>
<td>0.78%</td>
</tr>
<tr>
<td><strong>Gross Area</strong></td>
<td>588,117</td>
<td>100.00%</td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Source: Pierce County Assessor-Treasurer, 2014

**LAND USE MAP**

The Growth Management Act (RCW 36.70A.070(1)) requires that the Comprehensive Plan clearly show the general distribution of land, where appropriate, for agriculture, timber production, housing, commerce, industry, recreation, open spaces, general aviation airports, public utilities, public facilities and other land uses. The future land use map, Map 2-1, should also show cities and urban growth areas. The Comprehensive Plan Land Use map shows the general distribution of land uses, city boundaries and urban growth areas and is the representation of the goals and policies of the Comprehensive Plan for the organization and coordination of land uses.
Map 2-1: Land Use Designations Map

This map is a generalization of the County's future land use pattern and provides guidance for the development of future zoning classifications that implement the Comprehensive Plan. Refer to the official zoning atlas or GIS data when determining zoning for a specific parcel.
The majority of new housing and jobs are intended to locate within the Urban Growth Areas (UGAs). Public spending for facilities, services, and open space is to be focused in the UGA to promote efficient use of public improvements and services, and enhance community diversity and livability. The UGAs include incorporated cities and towns, and the majority of Pierce County’s population and economic base.

The growth and development strategy directs future development to occur primarily within Urban Growth Areas. Major concentrations of development will be directed to occur in centers, mixed use districts, and high density residential districts. Moderate density single-family residential areas will serve as the principal land use for the remaining areas within the UGA.

The urban land use designations addressed in this section are as follows:

**Table 2-F: Urban Land Use Designations**

<table>
<thead>
<tr>
<th>Type</th>
<th>Land Use Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential</strong></td>
<td>Moderate Density Single-Family (MSF)</td>
</tr>
<tr>
<td></td>
<td>High Density Single-Family (HSF)</td>
</tr>
<tr>
<td></td>
<td>High Density Residential (HRD)</td>
</tr>
<tr>
<td><strong>Mixed Use</strong></td>
<td>Activity Center (AC)</td>
</tr>
<tr>
<td></td>
<td>Community Center (CC)</td>
</tr>
<tr>
<td></td>
<td>Neighborhood Center (NC)</td>
</tr>
<tr>
<td></td>
<td>Mixed Use District (MUD)</td>
</tr>
<tr>
<td></td>
<td>Urban Village (UV)</td>
</tr>
<tr>
<td><strong>Industrial</strong></td>
<td>Employment Center (EC)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Employment Based Planned Community (EBPC)</td>
</tr>
<tr>
<td></td>
<td>Master Planned Community (MPC)</td>
</tr>
<tr>
<td></td>
<td>Major Institution</td>
</tr>
</tbody>
</table>

**Urban Growth Area**

An Urban Growth Area (UGA) is defined by a boundary which is intended to graphically show the separation of lands expected to be urban from those lands expected to be rural or devoted to mining, forestry, or agriculture. Each city and town within the County must fall within an Urban Growth Area. Additionally, urban lands in unincorporated portions of the County should be within an urban growth boundary. The Growth Management Act (GMA) bestows the responsibility for designating these UGAs upon the County; and further, GMA requires that the designations be contained in the County’s Comprehensive Plan.
ANNEXATION

Although the County has the ultimate responsibility for defining the UGAs, the design of the Urban Growth Area scheme is the result of a collaborative process with the cities and towns of the County.

The individual cities and towns within the Urban Growth Area (UGA), in collaboration with the County, have established Potential Annexation Areas (PAAs). Each PAA mapped within the UGA is based upon the information provided by the individual city or town. These individual city and town PAAs, within the UGA, are incorporated as part of the County's Comprehensive Plan.

Although the County and the cities and towns within the UGA concur that individual PAAs may change as growth management planning and implementation proceed, the affected municipalities and the County agree that PAA designations are provided under the terms of the June 30, 1992 Countywide Planning Policies (page 48, Policies 1.1 and 1.3) and RCW 36.70A.110.

Areas within the UGA, where requested individual Potential Annexation Areas overlap one another, have been identified as overlap areas on the Urban Growth Area/Potential Annexation Area map, Map 2-2. The County should not designate UGAs or PAAs within these overlap areas until such time as the requesting jurisdictions resolve the overlap conflicts by agreement and/or further cooperation with the County.

These designations are based upon the jurisdictions' commitment and ability to provide urban level services and facilities to these areas. Ultimately, the specific activities and land uses encouraged within these areas and the growth management system used will be identified through a joint planning process and subsequent negotiation and execution of interlocal agreements.

However, until such agreements are in place, the County's land use designation and growth management system will govern development proposals within the unincorporated areas. The County's land use designations within these unincorporated UGAs are generally consistent with comprehensive plans of the affected jurisdictions.

The biannual plan amendment process, as authorized by RCW 36.70A.130(2) and PCC 19C.10, will be used to designate Urban Growth Areas, as necessary, for cities and towns as the County's growth management abilities evolve. Likewise, it is expected that the plan amendment process will be critical in allowing necessary adjustments to the PAAs of jurisdictions within the UGA and making necessary and reciprocal modifications to the UGA itself.

INCORPORATION

In addition, the County has identified a Potential Incorporation Area (PIA) for the Employment Based Planned Community (EBPC) of Tehaleh and expects to designate additional PIAs upon further review. The Tehaleh PIA designation was based upon a variety of factors including: its size and projected population, which are comparable to those of other cities in Pierce County;
its EBPC designation and master plan, distinguishing it from other urban areas; its separate geographical identity, removed from nearby cities through distance, land use and topography; its mixture of urban densities and other uses needed for a complete city, including employment, civic, commercial, park and other uses; uses that establish a viable potential tax base; a sense of unique identity and community that has already developed; and the provision of urban services that are planned to serve the whole development, largely financed by the residents and not provided by nearby cities. These factors, as well as the expressed views of current residents, make incorporation a strong potential. PIAs are identified as part of the County's Comprehensive Plan.

This PIA designation includes additional parcels that are owned by others within the general boundaries of Tehaleh. These additional parcels are part of the logical boundary of the future incorporation area. Although they are not part of the Tehaleh Master Plan, they are in the UGA, are in the Cascadia Sewer Service Area, are served by the same street network, and are physically located so that they should be part of the same municipality.
ANNEXATION AND URBAN GROWTH AREA EXPANSION

GOAL LU-1 Promote the annexation of adjacent unincorporated urban areas by the neighboring city or town and the incorporation of suitable areas.

LU-1.1 Pierce County shall encourage annexation of adjacent unincorporated urban areas by neighboring cities and towns through outreach to residents, land owners, and other stakeholders.

GOAL LU-2 All unincorporated urban areas within the urban growth area shall be either affiliated with neighboring cities and towns as Potential Annexation Areas (PAAs) or identified as Potential Incorporation Areas (PIAs).

LU-2.1 Overlapping PAAs are not encouraged but may exist where two or more jurisdictions have mutual interest in an area.

LU-2.2 Any modification to an established PAA shall not result in an unincorporated urban island that is not affiliated with any city or town.

LU-2.3 The general preference is for unincorporated urban areas to be affiliated with neighboring cities or towns rather than being identified as a PIA. However, a PIA designation can be established where incorporation of an area is appropriate based upon: logical geographic boundaries; size; population; a potential tax base to support a City; a variety of uses needed for a City, including residential, businesses, civic and recreational; urban services and facilities provided other than by adjacent cities; a community identity; and other appropriate factors.

GOAL LU-3 Pierce County should establish a program that explores the possibility of incorporation of identified areas.

LU-3.1 Pierce County should establish stakeholder groups of local residents, service providers, businesses, and other interested parties to identify opportunities and challenges associated with the incorporation of identified areas.

LU-3.2 Pierce County should explore the economic viability of incorporation through the completion of incorporation feasibility studies. An incorporation feasibility study should include at a minimum:

LU-3.2.1 The area proposed to be included;
LU-3.2.2 Current estimate and future projections of population;
LU-3.2.3 Existing land uses and housing;
LU-3.2.4 Per capita assessed valuation;
LU-3.2.5 Current services provided to the community by the County, special purpose districts, school districts, other countywide authorities, and the state;
LU-3.2.6 Analysis of tax and revenue options for the operations of a new city;
LU-3.2.7 Revenue estimates;
LU-3.2.8 Expenditures – proposed city budget including operating expenditures and capital facilities and equipment expenditures;
LU-3.2.9 Land use policy;
LU-3.2.10 Provision of services by new city and impacts upon current service providers; and
LU-3.2.11 Analysis of alternatives.

GOAL LU-4 Facilitate the transformation of unincorporated urban areas into cities and towns through annexation.

LU-4.1 Pierce County should establish a program that promotes annexation of Potential Annexation Areas.

LU-4.1.1 Pierce County shall support annexation proposals that are consistent with the Pierce County Countywide Planning Policies and the Washington State Growth Management Act, when the area proposed for annexation is wholly within the annexing city’s adopted Potential Annexation Area (PAA).

LU-4.1.2 The County’s highest priority for annexation are unincorporated islands between cities and towns.

LU-4.1.3 Pierce County shall not support annexation proposals that would:
   LU-4.1.3.1 Result in illogical service areas;
   LU-4.1.3.2 Create or lead to a potential creation of unincorporated islands; or,
   LU-4.1.3.3 Focuses solely on areas that would provide a distinct economic gain for the annexing city at the exclusion of other proximate areas that should logically be included.

LU-4.2 Pierce County should work towards establishing joint planning agreements between the County and its cities and towns

LU-4.2.1 Joint planning agreements should encompass a city or town’s Potential Annexation Area.

LU-4.2.2 A joint planning agreement is to serve as a mechanism where the County or a city can, prior to notice of annexation, identify potential objections and resolutions.

LU-4.2.3 The development and implementation of joint planning agreements between cities and the County shall be accomplished through reference to relevant adopted community plans and in consultation with representatives of appropriate Land Use Advisory Commission or community representatives if a commission has not yet been established for the area.

LU-4.2.4 Pierce County should explore the establishment of financial partnerships with its cities and towns to address needed infrastructure.
LU-4.2.5 Cities and towns should establish a timeline for service transitions and for annexation.

LU-4.2.6 Ensure that the County’s land use designations and associated development regulations are consistent with a city or town’s land use plans within its respective Potential Annexation Areas.

LU-4.3 Encourage the annexation or incorporation of unincorporated urban areas through improving the local economic market.

GOAL LU-5 The County should explore and implement financial incentives for a city or town to annex areas associated with its respective Potential Annexation Area.

GOAL LU-6 Contain and direct growth within the designated Urban Growth Areas (UGAs) where adequate public facilities exist or can be efficiently provided.

LU-6.1 Adopt measures individually or through joint planning to ensure that growth is timed and phased consistently with the provision of adequate public facilities and services.

LU-6.2 Prior to expansion of a Potential Annexation Area (PAA) affiliated with a city or town, a joint planning agreement must be in place for all PAAs affiliated with the jurisdiction.

GOAL LU-7 Review residential, commercial, and industrial development capacity no later than a year prior to a mandated Comprehensive Plan update to determine whether adjustment of the UGA is appropriate.

LU-7.1 The evaluation should encompass the capacity of lands within municipal limits and unincorporated urban Pierce County.

LU-7.2 Utilize the most recent information on population and development trends to augment the most recent capacity analysis when reviewing proposed new UGAs or expansion of existing UGAs.

LU-7.3 The land safety factor for the Pierce County UGAs should not exceed 25%, derived from the combined UGAs, not individual UGAs.

LU-7.4 The methodologies used to determine the capacity of the UGAs and to calculate the allowable number of dwelling units for individual development proposals shall be consistent with each other.

GOAL LU-8 Consider the following priorities for expanding the 20-year Urban Growth Area (UGA) boundary:

LU-8.1 Future expansion areas should be affiliated with a city or town.

LU-8.2 Lands with high concentrations of critical areas or designated as resource lands should be given the lowest priority for inclusion into the UGA, and should be included only when a compensatory program, such as the Transfer of Development Rights, is in place.
LU-8.3 Lands that are necessary to provide capacity for student population growth in those school districts that have completed a collaborative planning process with the County.

LU-8.4 Assure that urban level facilities and services are provided within the designated Urban Growth Areas.

LU-8.5 Ensure that future Urban Growth Area expansions are consistent with applicable provisions of the Growth Management Act (GMA) and State Environmental Policy Act (SEPA).

GOAL LU-9 Expansions of the UGA shall be approved only by the County Council through a Comprehensive Plan amendment process as established in Chapter 19C.10 PCC, if the following criteria are met:

LU-9.1 A need is demonstrated for additional residential or employment capacity within the urban growth area affiliated with an individual jurisdiction and a demonstrated countywide need; or the expansion results in a no net gain of housing unit or employment capacity to the countywide UGA. The demonstration of need shall be shown though a comparison of the adopted housing unit or employment targets against the housing or employment capacity as documented in the most recent Buildable Lands Report; and

LU-9.2 The jurisdiction’s observed development densities are consistent with the planned density assumptions as documented in the most recently published Buildable Lands Report as required by RCW 36.70A.215; and

LU-9.3 If the Buildable Lands Report identifies an inconsistency between the observed and assumed densities, the jurisdiction shall either demonstrate that reasonable measures were adopted to rectify the inconsistency, or document updated development data that indicates consistency.

LU-9.4 If a jurisdiction adopted reasonable measures, documentation shall be submitted that summarizes the monitoring results of the effectiveness of the measures in rectifying density inconsistencies.

LU-9.5 Documentation that adequate public facilities and services can be provided within the 20-year planning horizon is provided.

LU-9.6 Proposed UGA expansion areas shall be required to comply with the requirements of Pierce County’s TDR/PDR program.

LU-9.7 Proposed UGA expansion areas should be approved only if the proposing jurisdiction provides an analysis of:

LU-9.7.1 The underutilized lands, consistent with the Pierce County Buildable Lands program methodology, within its existing municipal boundaries and affiliated UGAs, and evidence of implementation strategies in place or being pursued to densify the underdeveloped lands;
LU-9.7.2 Housing goals or policies in place to encourage housing for all economic segments of the community; and

LU-9.7.3 How the proposal is consistent and reasonable with the jurisdiction’s adopted comprehensive plan.

LU-9.8 Future UGA expansion areas should be approved only if it is demonstrated that the area has the capability and capacity to provide urban level services while maintaining a healthy natural ecosystem.

LU-9.9 Future UGA expansion areas should avoid the inclusion of designated agricultural lands and critical areas.

LU-9.10 Adopted land use and design standards for proposed UGA expansion areas shall plan for design characteristics and infrastructure necessary to make transit a viable transportation alternative.

LU-9.11 Prohibit the expansion of the UGA into the 100-year floodplain of any river or river segment per RCW.

LU-9.12 Area(s) proposed to be removed from the UGA shall be rural in character and not have vested permits that will result in urban type development.

**COMPACT URBAN COMMUNITIES**

The PSRC Vision 2040 policies and the Pierce County Countywide policies direct the development of compact urban communities that have diversity of housing, high connectivity, and provide for multi-modal transportation including pedestrian, bicycle and transit. Many of the elements are found in Transit-Oriented Development (TOD). TOD is a land use strategy intended to promote efficient use of land and transportation infrastructure with places of relatively higher density, pedestrian-friendly development with a mix of land uses located within an easy walk of a bus or rail transit center.

The central Pierce County UGA presents opportunities and alternative ways to provide for centers/compact communities, these include Centers/Central Places and Transit-Oriented Corridors:

- **Centers/Central Places**: Identification of existing developed areas comprised of significant intersections or existing commercial/employment development that would serve as a focus of a future center/compact community; and

- **Transit-Oriented Corridor Center**: A Transit-Oriented Corridor is located along major corridors where existing development patterns provide the functions of a center, but in a linear corridor. These Corridors may be enhanced with transit and increased connectivity between transit-oriented residential and commercial areas.

An example of a Central Place/Local Center is the Garfield/Pacific Lutheran University area. This area is designated an Activity Center and has an existing Transit Center. The specific focus of the area is Garfield Street South which is being redeveloped into a mixed use commercial/residential center. This Central Place is identified in the Parkland Spanaway
Midland Community Plan. Other Central Places/Local Centers will be designated and mapped in the future.

**CENTERS/CENTRAL PLACES AND TRANSIT-ORIENTED CORRIDORS**

**GOAL LU-10** Designate Centers/Central Places and Transit-Oriented Corridors within the UGA. These Centers/Central Places and Transit-Oriented Corridors shall be characterized by the following:

- **LU-10.1** Clearly defined geographic boundaries;
- **LU-10.2** Intensity/density of land uses sufficient to support high-capacity transit;
- **LU-10.3** Pedestrian-oriented land uses and amenities;
- **LU-10.4** Pedestrian connections shall be provided throughout;
- **LU-10.5** Urban design standards which reflect the local community;
- **LU-10.6** Provisions to reduce single-occupancy vehicle use especially during peak hours and commute times;
- **LU-10.7** Provisions for bicycle use;
- **LU-10.8** Sufficient public open spaces and recreational opportunities; and
- **LU-10.9** Uses which provide both daytime and nighttime activities.

**GOAL LU-11** Recognize and map Central Places/Local Centers and Transit-Oriented Corridors through the comprehensive plan and community planning process.

- **LU-11.1** The Garfield/Pacific Lutheran University area is designated as a Central Place/Local Center.
- **LU-11.2** Recognize other Local Centers designated through community plans.
- **LU-11.3** Designate local centers as Centers of Local Importance (CoLI) and forward to Pierce County Regional Council for review and comment.

**GOAL LU-12** The County will develop high quality, compact communities that:

- **LU-12.1** Impart a sense of place;
- **LU-12.2** Preserve local character;
- **LU-12.3** Provide for mixed uses and choices in housing types; and
- **LU-12.4** Encourage walking, bicycling, and transit use.

**GOAL LU-13** The County shall design public buildings and public spaces that contribute to the unique sense of community and a sense of place.

**GOAL LU-14** The County shall design transportation projects and other infrastructure to achieve community development objectives of connectivity, walkability, bikability and transit support.
LU-14.1 Promote context-sensitive design of transportation facilities, both for facilities to fit in the context of the communities in which they are located, as well as applying urban design principles for projects in centers and transit station areas.

GOAL LU-15 Use community design that enhances the streetscape including:

LU-15.1 Wide sidewalks;
LU-15.2 Buildings that are located in close proximity to the right of way;
LU-15.3 Street trees;
LU-15.4 Landscape strips;
LU-15.5 Pedestrian amenities;
LU-15.6 Allowance for vertical mixed use development in selected places; and
LU-15.7 Transit amenities.

GOAL LU-16 Road designs in the centers and corridors must provide for all users including pedestrians, bicyclists and transit.

LU-16.1 Planning the design of the roads should focus on the particular need of that roadway to provide for the range of users.

GOAL LU-17 The Centers/Central Places and Transit-Oriented Corridors will be provided with transit amenities including bus stops, commuter parking and transit designated lanes.

GOAL LU-18 The County will coordinate with local transit providers to support high interval transit service that provides access to services within the entire Center/Central Place or Transit-Oriented Corridor and access to transit facilities that access regional centers of activity.

Infrastructure Funding Priority

The PSRC Vision 2040 policies and the Pierce County Countywide policies direct that transportation and economic development funds should be prioritized for Centers. The following types of improvements that promote compact urban communities and provide for multi-modal transportation including pedestrian, bicycle and transit:

- Amenities and community design elements that create a sense of place
- Wide Sidewalks
- Street trees
- Landscape strips
- Pedestrian amenities, benches, etc.
- Allowance for vertical mixed use development in selected places
- Transit amenities, bus stops, commuter parking, and transit designated lanes or corridors

GOAL LU-19 Infrastructure funding to support the growth and development of locally designated Centers/Central Places and Transit-Oriented Corridors shall be a high priority.
LU-19.1 The Capital Facilities Plan shall include a separate funding category that identifies infrastructure improvements and funding allocations for infrastructure improvements for Centers/Central Places and Transit-Oriented Corridors.

LU-19.2 The County shall develop plans and policies for designated Centers/Central Places and Transit-Oriented Corridors that identify the objectives to be met by future improvements.

LU-19.3 The County shall establish criteria for prioritizing improvements in Centers/Central Places and Transit-Oriented Corridors.

LU-19.4 Infrastructure identified in the Capital Improvement Plans shall support the policies and objectives of the Centers/Central Places and Transit-Oriented Corridors.

**Joint Development Funding Priority**

Joint development occurs when a public agency partners with other agencies, typically a transit agency, and private developers to develop property that may be owned by the agency and is generally located near a transit station. Partnership may also include the funding or construction of a major infrastructure components that facilitate a transit-oriented community or project even if property in owned privately.

**GOAL LU-20** The County will work with transit agencies to identify opportunities for use of publicly owned lands for joint use projects that enhance access to transit, increase transit ridership, and further the development of compact communities.

**GOAL LU-21** The County will work with private developers to create public-private projects where the joint action will create infrastructure improvements that will further the objectives of compact communities.

**GOAL LU-22** The County will prioritize and locate publicly accessed, public buildings within the Centers/Central Places or Transit-Oriented Corridors with the intent of adding services that are accessible by walking, biking and transit and furthering the objectives of compact communities.

**Urban Residential**

The land use designations that allow for residential uses range from single family to multifamily and mixed use at a variety of densities. The minimum density within the urban growth area is four dwelling units per acre, and in limited circumstances may be less than four in recognition of unique environmental characteristics as noted in the policies below.

**GOAL LU-23** Establish a minimum, base, and maximum density for all residential zones.

**LU-23.1** Ensure additional criteria are met if a property is developed at a density higher than the base.

Additional criteria include (LU-23.1):
- Site amenities
- Design features.
LU-23.2 Utilize a range of maximum densities to increase compatibility between neighboring residential zones.

LU-23.3 Provide density-based incentives.

LU-23.3.1 Mitigation necessary to address impacts of a development proposal will not be used as a basis for density incentives.

LU-23.3.2 Allow additional dwelling units achieved through the use of density incentives to be transferred off site to other urban residential areas based upon zoning.

LU-23.4 Allow for one accessory dwelling unit on a residential lot where a single-family dwelling exists.

LU-23.4.1 Accessory dwelling units within urban land use designations shall not be included in the calculation of residential densities.

<table>
<thead>
<tr>
<th>Table 2-G: Summary of Urban Land Use Designation Densities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation</td>
</tr>
<tr>
<td>MSF</td>
</tr>
<tr>
<td>HSF</td>
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<tr>
<td>HRD$^6$</td>
</tr>
<tr>
<td>AC</td>
</tr>
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<td>CC</td>
</tr>
<tr>
<td>NC</td>
</tr>
<tr>
<td>MUD$^6$</td>
</tr>
<tr>
<td>UV</td>
</tr>
<tr>
<td>EC</td>
</tr>
</tbody>
</table>

$^1$ When sewer is available.

$^2$ When density incentives are used, subject to compliance with design standards. The maximum density incentive granted should not exceed the maximum density generally allowed in a zone by more than 30%.

$^3$ For ground level development.

$^4$ For multi-level development.

$^5$ Permitted in excess of 25 if developed with a component of mixed use development containing both commercial and residential uses.

$^6$ No more than 8 units per acre consisting of single- or two-family units, or 12.5 units per acres for multifamily, should be allowed if sewer service is not available.
GOAL LU-24  Maintain the stability and integrity of residential neighborhoods through a variety of techniques.

LU-24.1  Encourage cluster development of residential lands to permanently protect sensitive features or reserve land for future urban development.

LU-24.2  Allow a range of housing types and designs.

LU-24.2.1  Encourage high density housing within commercial centers, and mixed use and multifamily districts.

LU-24.2.2  High density development should serve as a transition between low density development areas and commercial development.

LU-24.2.3  Encourage the integration of residential units within the same building(s) as commercial activity in mixed use designations.

GOAL LU-25  Require clustering on all residential lands within the Urban Growth Areas where sewers are not available.

GOAL LU-26  The allowable number of dwelling units within individual urban development proposals shall be calculated using net developable acreage.

LU-26.1  In determining net developable acreage, deductions shall be made for roads and environmentally constrained lands.

GOAL LU-27  Urban level facilities and services must be provided prior to or concurrent with development.

LU-27.1  These services include, but are not limited to, water, adequate sewage treatment, surface water management, and roads, where appropriate.

LU-27.2  Other types of services could include schools, sidewalks, bicycle paths, trails, parks and recreation.

GOAL LU-28  When creating new lots or placement of new housing in urban areas where sanitary sewer is planned but not yet available, consider a design, such as "shadow platting", which would allow for increased densities once sanitary sewer is available to the specific property, provided Health Department requirements are met.

GOAL LU-29  Encourage alternative sewage disposal methods approved by the Tacoma-Pierce County Health Department, provided that any developments served are consistent with allowed residential densities as adopted in the Pierce County Comprehensive Plan. In addition, legal lots of record which were recorded with the Pierce County Auditor before January 1, 1995, may also be served.

Techniques may include (LU-24):
- Community values
- Development type and compatibility
- Appropriate densities
- Affordability
- Critical area protection and capability
- Applicable mitigation activities
- Utilizing performance standards such as buffers
- Innovative building and development techniques
- Site amenities and design features
MODERATE DENSITY SINGLE-FAMILY

Areas which fall outside of a designated center or district are designated as Moderate Density Single-Family (MSF). This designation provides for single-family, two-family dwelling units, and in limited circumstances multifamily housing. Design standards for development within this designation should consider: a range of housing types; costs and densities; pedestrian and vehicular access and circulation; transit strategies; and environmental constraints.

GOAL LU-30 Implement the Moderate Density Single-Family land use designation through the following zone classifications: Moderate Density Single-Family (MSF) 4 to 6 units per acre, Single-Family (SF) 4 units per acre, and Residential Resource (RR) 1 to 3 units per acre.

GOAL LU-31 The Moderate Density Single-Family (MSF) designation allows for single- or two-family dwellings, and in limited circumstances multifamily housing.

LU-31.1 Prohibit commercial and industrial uses.
LU-31.2 Allow for limited civic use.
LU-31.3 Multifamily housing should be prohibited unless it is in the form of attached single-family housing that meets MSF densities.
LU-31.4 The Residential Resource (RR) zone is intended to provide for low-density single-family residential uses compatible or integrated with areas of unique open space character and/or environmental sensitivity.

LU-31.4.1 This zone is applied in areas that have high value environmental features that are both complex in structure and function and large in scope.

HIGH DENSITY SINGLE-FAMILY

The High Density Single-Family (HSF) land use designation is intended for moderate to high urban density single-family developments. Higher density single-family development is intended to expand the variety of housing types and choices available while maximizing the utilization of existing infrastructure within the Urban Growth Area.

GOAL LU-32 Implement the High Density Single-Family land use designation through the High Density Single-Family zone classification.

GOAL LU-33 Encourage high density single-family housing to expand the variety of housing types and maximize the use of existing infrastructure within the UGA.

LU-33.1 Allow for moderate to high urban density single-family developments.
LU-33.2 Allow for attached single-family development.

HIGH DENSITY RESIDENTIAL DISTRICT

High Density Residential Districts (HRDs) are composed of multifamily and high density single-family housing and limited neighborhood retail and service commercial which are located along
major arterials, state highways, and major transit routes that connect to Activity, Community, or Employment Centers, but are non-commercial or non-industrial in nature.

Developments will be located within walking distance of the major roadway. There will be a mix of development sizes and housing types within the HRDs. The HRDs will include design standards and placement criteria to ensure a compatible relationship with residential areas with lower density adjacent to the HRDs.

**GOAL LU-34** Implement the High Density Residential land use designation through the following zone classifications. High Density Residential (HRD), Residential/Office-Civic (ROC) and Moderate-High Density Residential (MHR).

**GOAL LU-35** Encourage HRDs to develop with high density single-family and multifamily housing that is served by transit routes, and connect with Mixed Use Districts, and Activity, Community, and Employment Centers.

**LU-35.1** Locate HRD’s along major arterials that are characterized by:

**LU-35.1.1** Minimal commercial or industrial development; and

**LU-35.2** Utilize site design techniques to create a smooth transition and ensure compatibility with adjacent lower density single-family areas.

**LU-35.3** Ensure mitigation of any significant increase in traffic volume caused by high density residential development on residential streets serving low to moderate density residential development.

**LU-35.4** Develop recreational open spaces within and between connecting developments.

**LU-35.5** Provide neighborhood retail and service commercial activities of limited size at intervals to prevent development of commercial strips.

**LU-35.6** Allow high density single- and two-family residential development.

**LU-35.6.1** Densities should be based on land characteristics and the availability of urban services.

**LU-35.7** Develop the Moderate-High Density Residential (MHR) zone primarily with multifamily housing.

**LU-35.7.1** Permit single and two-family housing only when developed as a cluster or cottage subdivision.

**LU-35.8** Office uses are permitted in portions of the HRD designation recognized as transitional areas between commercial centers and districts and single-family neighborhoods and must comply with residential design standards.

**LU-35.9** Compatible civic uses are permitted in the HRD designation and must comply with residential design standards.
Pierce County intends to provide a predictable development atmosphere that emphasizes diversity in the range of goods and services provided, and ensures that as the economy changes, employment opportunities and associated land uses are balanced with a wide range of other uses.

**GOAL LU-36** Encourage community facilities, retail trade, services, and multifamily development.

- **LU-36.1** Discourage detached single- and two-family residential, and auto-oriented commercial development.
- **LU-36.2** Discourage heavy industrial, manufacturing, or commercial development which is land intensive and includes a low number of employees per acre.

**GOAL LU-37** Provide a predictable development atmosphere.

- **LU-37.1** Emphasize diversity in the range of goods and services provided.
- **LU-37.2** Locate shopping, service, and leisure-time activities in commercial areas.
- **LU-37.3** Ensure that as the economy changes, employment opportunities and associated land uses are balanced accordingly.
- **LU-37.4** Infill, renovate, or redevelop existing commercial properties before creating new commercial areas.
  - **LU-37.4.1** Designate new commercial areas in response to growth or in underserved areas, only when a market analysis shows existing commercial areas are insufficient to meet local needs.

**GOAL LU-38** Design or improve commercial sites to facilitate circulation by pedestrians, bicyclists, transit, and other alternative transportation modes.

- **LU-38.1** Retrofit commercial strip malls into pedestrian-oriented commercial nodes.
- **LU-38.2** Locate convenience and commercial services at transit centers to provide enhanced services and security to users of public transit facilities.
- **LU-38.3** Mix civic, recreational, residential, office, and open space uses within commercial areas to encourage walking and discourage driving for short trips.
- **LU-38.4** Promote safe, efficient commercial development along arterials and state routes.
- **LU-38.5** Develop vacant and underutilized properties as unified developments to provide multiple goods or services.
- **LU-38.6** Discourage commercial development in continuous strips along arterials.
  - **LU-38.6.1** Prohibit the extension of existing commercial strips.
  - **LU-38.6.2** Concentrate commercial areas and discourage the appearance of strip-like development.
LU-38.7 Orient major traffic generators to the main transportation network, grouping these uses into planned areas to avoid impacting residential streets and neighborhoods and to eliminate strip development.

LU-38.8 Separate adult businesses from facilities oriented toward children, and from other adult businesses.

**Activity Center**

An Activity Center (AC) has as its focus a recreational, cultural, or educational activity, around which develops a concentration of commercial, office, or high density residential development. The attraction draws people from throughout the area, not just surrounding neighborhoods or the community in which the activity is located.

**GOAL LU-39** Implement the Activity Center land use designation through the Activity Center zone classification.

**GOAL LU-40** Designate near recreational, cultural, and educational attractions, and design to meet the shopping, service, office, and multifamily housing needs of residents and visitors.

**LU-40.1** Locate within or around any of the following uses:
- **LU-40.1.1** College or university;
- **LU-40.1.2** Regional public recreation complex;
- **LU-40.1.3** Commercial recreation complex with a regional draw; or
- **LU-40.1.4** Cultural complex composed of museum(s) and/or theater(s).

**LU-40.2** Properly size to encourage pedestrian movement throughout the center.

**LU-40.3** Locate on major transit routes.

**Community Center**

A Community Center (CC) has as its focus a significant commercial traffic generator, around which develops a concentration of other commercial and some high density multifamily developments. The commercial activity within the center is directed to a customer base drawn from more than one neighborhood.

**GOAL LU-41** Implement the Community Center land use designation through the following zone classifications: Community Center (CC), Residential/Office-Civic (ROC), and Moderate-High Density Residential (MHR).

**GOAL LU-42** Locate and design to meet shopping, service, and multifamily housing needs of the surrounding community.

**LU-42.1** Properly size to serve the needs of more than one neighborhood while remaining small enough to be compatible with surrounding residential areas.

**LU-42.2** Designate CCs as receiving zones for Transfer of Development Rights.
**Neighborhood Center**

A Neighborhood Center (NC) is a concentrated mix of small-scale retail, service commercial, and office development that serves the daily needs of residents within the immediate neighborhood. Residential development at various densities may occur within the center, if appropriate to the individual neighborhood.

**GOAL LU-43** Implement the Neighborhood Center land use designation through the following zone classifications: Neighborhood Center (NC), Residential/Office-Civic (ROC), and Moderate-High Density Residential (MHR)

**GOAL LU-44** Locate and design NCs to provide everyday shopping and services to a relatively small, nearby population.

  LU-44.1 Limit the size to keep NCs small and compatible with surrounding residential areas.

**Major Urban Center**

The Major Urban Center is a highly dense concentration of urban development with a commercial focus. A significant multi-family residential presence in the area is encouraged. Buildings should not have height restrictions. It is an area of regional attraction and a focus for both the local and regional transit systems. The geographic area around South Hill Mall is Pierce County's existing Major Urban Center. Commercial, office and multi-family development are encouraged within Major Urban Centers. Low density residential, businesses with a low number of employees per acre, and auto-oriented commercial uses should not be located in Major Urban Centers. Design standards should emphasize internal pedestrian circulation.

**GOAL LU-45** Encourage development of Major Urban Centers to meet the needs of the region's economy, to provide employment, shopping, services, multi-family development and leisure-time activities in Urban Areas, and to transform Pierce County from a commuter economy to a jobs-based economy.

  LU-45.1 Encourage retail trade, service, finance, insurance, real estate, multi-family housing, pedestrian and transit-oriented facilities development within the Major Urban Centers.

  LU-45.2 Discourage detached single-family residential, two-family residential, and auto-oriented commercial development.

  LU-45.3 Discourage industrial, manufacturing or commercial development which is land intensive and employs a low number of employees per acre.

  LU-45.4 Require developments to meet design standards that further the Major Urban Center objectives.

    LU-45.4.1 Sidewalks, skywalks, boardwalks, bicycle paths, and other means of internal pedestrian and non-motorized circulation are a priority.

    LU-45.4.2 Sites should be developed without front yards.

    LU-45.4.3 Parking should be shared and parking management programs implemented.
Control vehicular access.

Landscaping, plazas, and other amenities should be required.

Multi-level parking facilities are encouraged.

Community facilities are encouraged to locate in Major Urban Centers.

Major Urban Centers should be designated as receiving zones for transfer of development rights.

**MIXED USE DISTRICT**

Mixed Use Districts (MUDs) are concentrations of commercial, office, and multifamily developments located along major arterials, state highways, and major transit routes, and between Activity or Community Centers. Commercial activity in Mixed Use Districts caters to a customer base beyond the surrounding neighborhoods or community due to its placement on a roadway used by residents of more than one community.

Auto-oriented commercial and land-intensive commercial with a low number of employees per acre should be the primary use within Mixed Use Districts. The individual commercial activities or developments in these districts are not of a size or character to be considered major activity or traffic-generating uses.

Multifamily and office uses are allowed within Mixed Use Districts to provide economic diversity and housing opportunities near transit routes and business activity. There will be a mix of size and type of development within the Mixed Use Districts. These districts will include design standards and placement criteria to ensure a compatible relationship with residential areas adjacent to the Mixed Use Districts.

**GOAL LU-46**

Implement the Mixed Use District land use designation through the following zone classifications: Mixed Use District (MUD), Commercial Mixed Use District (CMUD), Office Mixed Use District (OMUD), Residential/Office-Civic (ROC), and Moderate-High Density Residential (MHR).

**GOAL LU-47**

Encourage the reorientation of historically commercial strips to less congested, transit-compatible districts of mixed uses and intensities.

Locate along major transportation routes characterized by auto-oriented commercial development.

Allow for auto-oriented and land-intensive commercial development.

Encourage intensive commercial and office development.

Promote low impact development designs to reduce the amount of impervious area.

Establish performance standards for efficiency, functionality, and aesthetics.

Encourage developments to access side streets rather than directly onto the corridor roadway.
LU-47.4.1 Provide incentives to control vehicular access along major arterials.

LU-47.5 Utilize common access points onto the roadway and allow access for employees, patrons, and residents of abutting developments.

LU-47.6 Provide incentives for pedestrian-friendly developments.

LU-47.7 Define building heights in consideration of anticipated land uses, surrounding land uses, safety and emergency measures, transportation networks, and efficient use of land.

LU-47.8 Designate MUDs as receiving zones for Transfer of Development Rights.

GOAL LU-48 Residential uses in MUDs should serve as a transition between commercial areas and adjacent residential neighborhoods.

LU-48.1 Encourage high density detached single-, two-family, and multifamily residential development.

LU-48.2 Utilize incentives for inclusion of a multifamily residential component in commercial developments.

**Urban Village**

An Urban Village (UV) is a mix of commercial and residential activity designed in a manner that creates a focal point or central place for a community. Urban Villages encourage the evolution of central places within communities to provide for shopping, service, entertainment, and housing for residents and visitors.

A mix of pedestrian-oriented businesses and supporting residential development is intended to create a vibrant place where the community's residents can work, live, shop, or be entertained. A mix of commercial and residential activity may be of a horizontal or vertical design.

GOAL LU-49 Locate and design UVs to create unique shopping, living, and entertainment opportunities for both community residents and visitors.

LU-49.1 Evaluate the area's redevelopment potential, surrounding residential densities, and existing community facilities that economically support a central place concept.

LU-49.2 Consider the existing and planned, motorized and nonmotorized circulation routes.

LU-49.3 Address a coordinated approach to the build out of an Urban Village through the development of a community plan.

LU-49.4 No more than three UVs should be located within a single community planning area.

GOAL LU-50 Promote land use patterns that economically support commercial businesses.

LU-50.1 Encourage commercial businesses that accommodate a range of compatible activity and support a central place concept.

LU-50.2 Permit types of activities that encourage people to spend leisure, entertainment, or shopping time within the area.
LU-50.3 Discourage land-intensive commercial activity.
LU-50.4 Discourage businesses that accommodate quick convenience shopping.
LU-50.5 Discourage fast-food establishments.
LU-50.6 Encourage federal, state, and local government services to locate within UVs to draw people into the area.
LU-50.7 Encourage mixing commercial activity and high density residential units through horizontal or vertical design.
LU-50.7.1 Strongly encourage a vertical mix of commercial businesses and residential units in specific circumstances.
LU-50.8 Encourage higher density housing to support commercial activity.
LU-50.8.1 Require a residential housing component to contribute to the economic viability of businesses.
LU-50.8.2 Ensure higher residential densities are located around a node of commercial activity to implement a horizontal mix of uses.
LU-50.8.3 Encourage developments to integrate residential units within the same building(s) as commercial activity to implement a vertical mix of uses.
LU-50.8.3.1 The type of mixed use should be decided through the development of a community plan.

GOAL LU-51 Project a consistent streetscape and site design to distinguish UVs from other areas within the community.
LU-51.1 Encourage development to integrate amenities including courtyards, plazas, benches, artwork, and lighting into site design to create unique pedestrian experiences.
LU-51.2 Encourage innovative pedestrian-oriented site design that creates a unique business character to attract potential customers.
LU-51.3 Ensure commercial businesses are developed with pedestrian-oriented design.
LU-51.3.1 Auto-dependent design should be prohibited.

GOAL LU-52 Implement the Urban Village land use designation through the following zone classification: Urban Village.

Urban Industrial

Employment Center

An Employment Center (EC) often contains office parks, manufacturing, other industrial development, or a combination of activities. It may also include commercial development as a part of the center, as long as the commercial development is incidental to the employment
activities of the center. Designation of adequate areas for Employment Centers is one component of meeting the needs of a growing jobs-based economy. Master planning for Employment Centers is encouraged to ensure efficient access, facilitate timely provision of public services, and provide safety and design standards for location of uses.

GOAL LU-53 Implement the Employment Center land use designation through the following zone classifications: Employment Center (EC), Community Employment (CE), Public Institution (PI), Employment Services (ES), and Research-Office (RO).

GOAL LU-54 Designate industrial areas:

LU-54.1 Where there is adequate land, public facilities and services, and street capacities available within the 20-year planning horizon;

LU-54.2 Adjacent to or in proximity to land designated EC;

LU-54.3 Within proximity to major transportation thoroughfares, including rail;

LU-54.4 Adjacent to or in proximity to adequate water, sanitary sewer, power and natural gas utilities capable of servicing commercial/industrial development;

LU-54.5 Near historical employment generating operations;

LU-54.6 On properties that are not constrained by significant critical areas such as wetlands, steep slopes or other environmental factors limiting development potential;

LU-54.7 Characterized by larger parcels, typically averaging more than five acres;

LU-54.8 Within Urban Growth Areas;

LU-54.9 In a manner which attracts and retains businesses;

LU-54.10 Geographically dispersed throughout the County to meet the industrial and manufacturing needs of a growing jobs-based economy; and

LU-54.11 Only if there is a demonstrated need to provide for more land in the area based on shortages of developable land, and when the expansion is compatible with any applicable community plan.

GOAL LU-55 Promote the grouping of uses which will mutually benefit each other, or provide needed services.

LU-55.1 Encourage planned developments of multiple buildings or uses which provide a mixture of low and moderate-intensity industrial, research, office, and supporting commercial uses.

LU-55.2 Encourage intensive manufacturing businesses to be clustered in industrial parks along major transportation links to minimize the impact on less intensive surrounding land uses.

GOAL LU-56 Provide a diverse range of goods and services to ensure that as the economy changes, employment opportunities are balanced with a wide range of other land uses.
LU-56.1 Ensure enough land is designated as industrial to meet employment targets.

LU-56.2 Establish distinct land use types and zoning classifications for industrial, research, and office development which accommodate a broad range of economic development activities in appropriate locations.

LU-56.3 Ensure no net loss of land designated for industrial uses.

**LU-56.3.1** Redesignate parcels from the EC designation to another designation only when an equivalent area of suitable land is added to the EC designation in the same Comprehensive Plan amendment cycle, or through a community plan adopted within the prior two years. The no net loss requirement does not apply in the event a parcel is determined to be unlikely developable for industrial uses due to adjacent incompatible uses, the amount of critical areas on the parcel, or if the parcel is determined to be of insufficient size or proper location for industrial use, then the legislative body may consider redesignating the parcel.

**LU-56.3.2** Complete a comprehensive analysis of industrial lands needs and availability.

- **LU-56.3.2.1** Identify criteria for siting
- **LU-56.3.2.2** Review existing zoning classifications
- **LU-56.3.2.3** Recommend properties that should have the zoning modified

**LU-56.3.3** Rezoning property to accommodate difficult to site public uses, including schools, may be authorized subject to the County's "no net loss" of land designated for industrial uses policy except rezoning property for public uses within the designated Frederickson “Manufacturing/Industrial Center” is prohibited.

LU-56.4 Location and design should facilitate access and circulation by transit, car and van pools, pedestrians, bicyclists, and other alternative transportation modes.

LU-56.5 Encourage developments to consider visibility and convenient access from major arterials and highways, proximity to environmentally sensitive lands, and the desired character of the industrial area.

LU-56.6 Allow commercial and residential uses that support and serve the daily needs of the workforce when the neighboring zone classifications do not allow for such uses.

LU-56.7 Prohibit new detached single-family residential with limited exceptions.

LU-56.8 Development should be required to undergo a formal site plan review process to minimize impacts on neighboring properties.

LU-56.9 Encourage master planning for industrial areas, including such features as open space, landscaping, integrated signage, traffic control, and overall management and maintenance through covenants or other property management techniques.

LU-56.10 Encourage large, contiguously-owned properties to be developed as a unified whole.
LU-56.11  Provide sites with a variety of parcel sizes to accommodate both large and small businesses, and particularly those of sufficient size to permit development of large industrial facilities.

**Frederickson Regional Manufacturing/Industrial Center**

The Frederickson Regional Manufacturing/Industrial Center is located within the urban unincorporated area, southeast of Tacoma and south of Puyallup. The center contains the intersection of 176th St. E. and Canyon Road E., and goes as far south as 208th Street. The boundaries are depicted in Map 2-3.

The Employment Center in Frederickson was designated as a Regional Manufacturing/Industrial Center in 1995 in anticipation of future development. Employment doubled from 2000-2010 from 1,580 jobs to a total of 3,394. Since then it has reached close to 4,000 employees. The Frederickson Manufacturing/Industrial Center (M/IC) still contains a significant amount of vacant land for future development and is characterized by large blocks averaging 102.8 acres, and large industrial parcel sizes averaging 6.2 acres, which will enable it to accommodate large manufacturing and industrial development projects. Since designation, the boundary has been adjusted to remove properties with environmental constraints, vested residential plats, parks, and open space to focus on properties that are conducive to industrial development.

**Map 2-3: Frederickson Manufacturing/Industrial Center**
The Frederickson M/IC is considered medium sized in terms of total gross acreage (2,651 acres), and has a smaller number of jobs compared to other designated regional centers. The center contains mostly employment-oriented activity. Major industry sectors include Manufacturing (69%), Wholesale, Transportation, and Utilities (9%), and Suppressed/Other (22%). Of the total number of jobs, the vast majority are in goods-dependent industries that are typically appropriate for Regional Manufacturing/Industrial Centers. The two largest employers are The Boeing Company and Toray Composites (America), which combined make up more than half of the employment within the center. The current employment density is 1.5 employees per acre. The target for the Frederickson M/IC is 13,700 total employment (9,700 additional) within the 20-year planning period. This target would create employment density of 5.6 employees per acre.

**GOAL LU-57** Recognize the Frederickson Employment Center as a Regional Manufacturing/Industrial Center and focus employment growth to this area.

**LU-57.1** Encourage the type of development that will focus a significant share of employment growth to the Frederickson M/IC.

**LU-57.1.1** Emphasize efficient size and shape, planning for transportation facilities and services, urban design standards, and protection from incompatible land uses.

**LU-57.1.2** Discourage developments with low employment rates that cover large expanses of land.

**LU-57.2** The County shall prioritize infrastructure funding for projects supporting the Frederickson Industrial Center.

**LU-57.2.1** Identify and implement infrastructure improvements which enhance the viability and attractiveness of the Frederickson Industrial Center.

**LU-57.2.2** Coordinate with stakeholders to provide critical infrastructure to encourage the concentration of urban manufacturing and industrial land uses in the Frederickson Industrial Center.

**LU-57.3** Establish center-specific employment targets, transportation-mode split goals, a market analysis for the area, and information on public service improvement financing and projects beyond roads.

**LU-57.3.1** Meet an employment target of 13,700 total jobs within the 20-year planning period.

**OTHER URBAN LAND USE DESIGNATIONS**

**EMPLOYMENT-BASED PLANNED COMMUNITY**

**GOAL LU-58** Encourage development of new, self-sufficient, planned communities that address the full range of needs of the residents, including housing, jobs, services, and recreation.
LU-58.1 Establish an Employment-Based Planned Community (EBPC) land use classification to allow for EBPC developments approved pursuant to the planned unit development or planned development district permit process.

LU-58.2 Develop EBPCs within the Urban Growth Area.

LU-58.2.1 EBPCs must meet the following criteria:

LU-58.2.2 EBPC development must be at least 320 acres or more in size.

LU-58.2.3 New infrastructure is provided for and impact fees are established consistent with the requirements of RCW 82.02.050;

LU-58.2.4 Transit-oriented site planning and traffic demand management programs are implemented;

LU-58.2.5 Buffers are provided between the EBPC and adjacent urban development;

LU-58.2.6 A mix of uses is provided to offer jobs, housing, and services to the residents of the EBPC;

LU-58.2.7 Affordable housing is provided within the EBPC for a broad range of income levels;

LU-58.2.8 Environmental protection has been addressed and provided for.

LU-58.3 By allowing EBPCs, the County is not committing to provide levels of public services and facilities which would serve the development.

LU-58.3.1 Any extension of services and facilities must be in accord with other provisions of the Comprehensive Plan.

LU-58.4 Require the proponent to submit an infrastructure and public facilities plan, including an analysis of financing options that conform to the proposed phasing plan and assure concurrency.

LU-58.5 EBPCs must be developed with an Employment Center in the first component of development.

LU-58.5.1 Residential development will not be accepted as the exclusive use in the initial phases of an EBPC.

LU-58.5.2 Over the course of project development, the EBPC shall maintain an appropriate mix of jobs, services, recreation, and housing as established by the initial approval.

LU-58.6 Require EBPCs to provide their approved levels of employment in tandem with their residential development.

LU-58.6.1 Monitor this balance through the periodic review of the development’s traffic impacts as required by the Hearing Examiner.
**Master Planned Community**

**GOAL LU-59**  Encourage Master Planned Community (MPC) developments within an Urban Growth Area as a way to achieve well-designed, compact urban development with a balance of uses, more efficient use of public facilities, and greater open space.

**LU-59.1**  MPC developments should be allowed provided that any approval shall include a phasing plan to ensure that the various segments of the development are served by adequate public facilities and services.

**LU-59.2**  MPC developments must be at least 320 acres in size.

**LU-59.3**  MPC developments should consider including the following:

- **Lu-59.3.1** An appropriate mix of housing, services, and recreation;
- **Lu-59.3.2** Neighborhoods with a variety of housing options, including affordable housing for a range of income levels, consistent with a jobs-housing balance;
- **Lu-59.3.3** A phasing plan to ensure orderly urban growth and ability to respond to market demands for economic development and housing;
- **Lu-59.3.4** An infrastructure and public facilities plan, including an analysis of a range of financing options, where appropriate, that conform to the proposed phasing plan;
- **Lu-59.3.5** Site planning that encourages transit use and nonmotorized transportation, and a transportation demand management plan;
- **Lu-59.3.6** Open space to promote both active and passive recreation, and centers for community activities and assembly; and
- **Lu-59.3.7** Measures to protect critical areas and conserve resource lands.

**Major Institution**

**GOAL LU-60**  Establish a Major Institution Overlay for Pacific Lutheran University. The designation should include the existing campus located on 150 acres in the Parkland area, and may include other lands surrounding the university as a result of future Comprehensive Plan amendments.

**LU-60.1**  The overlay will be implemented by a Major Institution Master Plan (MIMP) that will be approved by the Pierce County Hearing Examiner and establish allowed facilities and uses, including those facilities and uses typically associated with the university, and may include educational facilities, housing, commercial uses, and supporting infrastructure.

**LU-60.2**  Provide measures to ensure that the uses and activities associated with the university are compatible with the surrounding land uses and natural systems on adjacent lands.
RURAL

Rural lands are lands located outside of an Urban Growth Area (UGA). They are separate from those lands that are designated Resource lands. While there are designated Resource lands outside the UGA, resource uses are allowed in all rural designations.

The context of rural areas is provided by the adjacent lands, such as designated forest land, and the land uses, such as designated agricultural land, that are interspersed within the rural areas. Rural areas in Pierce County are generally located between an urban growth boundary and forest lands utilized primarily for commercial timber production. Except for incorporated cities, all of the southern county, a part of the eastern county, the peninsulas, and most islands are characterized by rural settlement and activities. The presence of Fort Lewis exerts considerable influence on the south part of the County. There are considerable local differences within the rural areas in terms of physical environment and settlement pattern. For example, a suburban development pattern exists in some limited areas such as the southern part of the Gig Harbor Peninsula. Diversity in the existing rural environment provides a unique local identity for each rural area.

Typically, rural areas have received their identity from a rural way of life rooted in history and resource-based industries such as commercial fishing, aquaculture, lumber milling, logging, dairying, daffodil or berry farming, horse ranching, and mining. More recently, recreation and other associated uses have come to dominate in areas with outstanding natural features and scenic beauty. Counties, small towns, and rural centers provide limited services to rural residents. Many people choose to reside in rural areas because of the desired quality of life and relative affordability.

Rural areas provide for rural uses incorporating existing as well as historic patterns of settlement and character. Rural areas can function as a buffer between urbanized areas and resource land. They can supply lands that may be added to an urban growth area over time.

Major components of the Rural section are as follows:

A. Encourage and support economic vitality of the County’s rural area in ways that protect the rural way of life and are compatible with the rural environment. One of the means to accomplish this goal is to not allow urban-level service extensions including sewer lines into rural areas except to remedy groundwater contamination problems to correct health hazards or when there is an existing formal binding agreement to serve an approved development.

B. Allow a range of rural densities within the carrying capacity of the natural environment. The residential range provides some options for property owners and developers to utilize density incentives if open space is set aside through clustering of dwelling units on a portion of a site, thus balancing the concern for property rights with the need to conserve and efficiently utilize rural land and the environment, provided the increased density is compatible with the rural character of the surrounding areas.

C. A mix of uses is directed to locate in Rural Centers which include Rural Activity Centers, Rural Neighborhood Centers, and Rural Gateway Communities. Rural Gateway
Communities are located near major recreational facilities including the entrances to Mount Rainier National Park. The major functions of the Rural Centers are servicing the retail and other commercial and business needs of the local communities and providing employment opportunities including those related to tourism and natural resource-based industries.

D. Respect the carrying capacity of the natural environment and protect important elements of the rural environment, including its scenic and historic resources, in order to preserve the basis of a rural way of life.

**RURAL CHARACTER**

Rural areas are characterized by low densities with scattered residential sites and moderate-sized to large open acreages for farm or forest use, often with an owner’s home on such acreage. Commercial and non-commercial agricultural and forestry and other natural resource based practices are consistent with rural areas. Rural areas are characterized by having individual services (septic tanks, water wells) and/or by district services (some water districts, fire districts, etc.) and having minimal roads (except thoroughfares).

The Rural Area designations include areas meeting one or more of the following location criteria:

A. All lands outside of feasible or currently planned extension areas (i.e., an urban growth area) for public service facilities needed to support urban level development intensity.
B. All lands outside of long-term commercially significant forest resources.
C. All lands outside of long-term commercially significant agricultural resources.
D. Lands developed in rural uses on soils poorly suited to development at urban level densities with on-site disposal of sewage.
E. Lands where good opportunities exist for small-scale farming and forestry (large-scale farms and forested lands are designated as Resource Lands).
F. Lands where a Rural Area designation will help buffer nearby Resource Lands from conflicting urban uses.

**POPULATION GROWTH EXPECTED IN THE RURAL AREAS**

The population growth projected for the rural areas is approximately 32,000 persons during the 20-year planning horizon.

Rural areas are characterized by low densities with scattered residential sites and moderate to large-sized open acreages for farm or forest use. Agriculture, forestry, and other natural resource-based practices are consistent with rural areas. Rural areas are characterized by having individual services and/or by district services and having minimal roads.
Table 2-H: Rural Land Use Designations

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<th>Type</th>
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<td>Rural Neighborhood Center (RNC)</td>
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<td>Rural Industrial Center (RIC)</td>
</tr>
<tr>
<td>Other</td>
<td>Master Planned Resort (MPR)</td>
</tr>
<tr>
<td></td>
<td>New Fully Contained Community (NFCC)</td>
</tr>
</tbody>
</table>

GOAL LU-61  Rural character is defined as:

LU-61.1  An environment highlighted by the natural landscape, native vegetation, wildlife habitat, and large areas of open space.

LU-61.2  An economy and lifestyle supported by agricultural and forestry activities, small-scale natural resource industries, cottage industries, and services that serve needs of local residents and tourists

LU-61.3  A visual character enhanced by scenic resources and territorial views

LU-61.4  A landscape attuned with the use of the land and water by wildlife and fish.

LU-61.5  A land use pattern protected from conversion into uses that require urban level services except for extension of sewer to school facilities that meet Additional Rural Policies - Schools in Rural Areas LU-78.5.

LU-61.6  An area served by limited public services and facilities.

LU-61.7  A built environment developed in a manner that preserves watercourses, aquifer recharge areas, and the natural hydrologic cycle.

LU-61.8  A land use pattern that is depicted through limited commercial services and low density residential development.

GOAL LU-62  Ensure land uses and activities are consistent with and preserve rural character.

LU-62.1  Encourage and support economic vitality in ways that protect the rural way of life and are compatible with the rural environment.
LU-62.2 Prohibit urban level service extensions, including sewer lines, into rural areas, except:

LU-62.2.1 To remedy groundwater contamination problems to correct health hazards; or
LU-62.2.2 When there is an existing formal binding agreement to serve an approved development.
LU-62.2.3 For public facilities and utilities to serve a school sited in a rural area pursuant to Additional Rural Policies – Schools in Rural Areas LU-78.5.

LU-62.3 Explore opportunities for establishing development standards for rural areas that would consider the differences between urban development requirements and rural development needs.

LU-62.4 Respect the carrying capacity of the natural environment, and protect important elements of the rural environment, including its scenic and historic resources to preserve rural character.

LU-62.4.1 Encourage low-density residential and resource-based activity as primary uses.
LU-62.4.2 Allow for limited non-residential land uses that support rural densities.

LU-62.4.2.1 Promote cluster development as a means to increase flexibility in site development, preserve open space, reduce development cost, provide buffer strips to separate land use, and facilitate low impact development techniques and design to preserve environmental quality. Best Management Practices shall be used taking into consideration soil types and slopes when clustering development.

LU-62.4.3 Encourage home occupation or cottage industry as another means for non-residential uses.
LU-62.4.4 Allow agricultural sales involving products such as produce, dairy products, flowers, and handcrafted items in commercial areas.
LU-62.4.5 Locate commercial animal production, boarding, and slaughtering uses in rural and agricultural areas.
LU-62.4.6 Support the raising of crops in rural and agricultural areas.
LU-62.4.6.1 Crop processing facilities should be located in commercial, industrial, and agricultural areas.
LU-62.4.6.2 Limited processing activities may occur in rural areas.

**Rural Residential**

Rural residential areas are planned at low densities that require rural service levels. They are intended to contain diverse housing opportunities through a mix of large lots and clustering.

**Low impact development standards are (LU-62.3):**

Land use management strategies that emphasize conservation, use of on-site natural features and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.
Long-term rural areas should provide for low residential densities and appropriate public
improvements and services to provide for a rural lifestyle and protect rural character.

GOAL LU-63  Allow a variety of rural residential land uses and densities that are consistent with the
rural lifestyle and within the carrying capacity of the natural environment.

LU-63.1  Provide options for property owners and developers to utilize density incentives if open space is set aside.

LU-63.2  Allow for one accessory dwelling unit on a residential lot where a single-family dwelling exists.

LU-63.2.1  Accessory dwelling units within rural land use designations shall not be included in the calculation of residential densities.

LU-63.3  Maintain and promote rural residential land uses that:

LU-63.3.1  Promote a low density rural land use pattern;

LU-63.3.2  Preserve rural character;

LU-63.3.3  Encourage resource-based activities; and

LU-63.3.4  Protect environmentally sensitive features.

Table 2-I: Summary of Rural Land Use Designation Densities

<table>
<thead>
<tr>
<th>Designation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td>Rural 5</td>
<td>1 unit per 5 acres</td>
<td>1 unit per 5 acres</td>
</tr>
<tr>
<td>Rural 10</td>
<td>1 unit per 10 acres</td>
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</tr>
<tr>
<td>Rural 20</td>
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<td>1 unit per 10 acres¹</td>
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<td>1 unit per 5 acres¹</td>
</tr>
<tr>
<td>Rural Sensitive Resource</td>
<td>1 unit per 10 acres</td>
<td>1 unit per 5 acres³</td>
</tr>
<tr>
<td>Rural Separator</td>
<td>1 unit per 5 acres</td>
<td>2 units per 5 acres</td>
</tr>
</tbody>
</table>

¹If 50% or more of the property is designated as open space.
²If 75% or more of the property is designated as open space.
³When it can be demonstrated that the increase in density will not result in adverse impacts to the resources being protected and 50% of the gross acreage is dedicated in perpetuity as open space.
⁴If allowed in a community plan.

RURAL FARM

GOAL LU-64  Protect agricultural activities on lands that do not qualify as designated Agricultural Resource Lands of long-term commercial significance.

LU-64.1  Establish the Rural Farm designation based on current or historic agricultural use, including the following factors:

LU-64.1.1  The property shall be a minimum of one acre in size;
LU-64.1.2 The property is located outside a Rural Center or designated Resource Land designation;

LU-64.1.3 The property meets one of the following conditions:

LU-64.1.3.1 The property is currently enrolled in the Current Use Assessment program for productive farm and agriculture; or

LU-64.1.3.2 The property owner requests designation as Rural Farm through a Comprehensive Plan amendment process.

LU-64.2 Recognize agricultural properties that may or may not contain prime soils supporting the Agricultural Resource Land designation, but are or have been used for agricultural activities to increase the agricultural base within the County.

LU-64.3 Provide all the protections to agricultural activities within the Rural Farm designation which are afforded to those activities in the Agricultural Resource Land designation.

LU-64.4 Allow a range of uses that would be permitted in the Agricultural Resource Land designation or Rural Residential designations.

LU-64.5 Use community planning and Comprehensive Plan amendment processes to implement or revise the Rural Farm designation as follows:

LU-64.5.1 Rural Separator, Rural Sensitive Resource, Rural 10, or Rural 20 designations may be redesignated to Rural Farm pursuant to the criteria outlined above.

LU-64.5.2 Rural Farm designations may be redesignated to an adjacent Rural Residential designation, provided that the property directly abuts one of these designations and the property is converted to that designation (e.g., a Rural Farm designated property abuts a R10 property and would be changed from Rural Farm to R10).

**Rural Centers**

Rural centers include Rural Activity Centers (RACs), Rural Neighborhood Centers (RNCs), Rural Gateway Communities (GCs) and Rural Industrial Centers (RICs). Rural centers are intended to establish a mix of more intensive uses primarily commercial in nature which are supportive of the surrounding rural areas. The major functions of the rural center designations are servicing the retail and other commercial and business needs of the local rural communities. Rural center designations provide employment opportunities including those related to tourism and natural resource-based industries. Rural centers are intended to be limited in scope to prevent sprawl and ensure that rural character is not compromised.

Rural centers are allowed under the Growth Management Act (RCW 36.70A.070 (5)(d)) under the Limited Areas of More Intensive Rural Development or LAMIRD criteria. The LAMIRD criteria allows the establishment of rural centers based on the built environment as existed on July 1, 1990 and the establishment of a logical outer boundary of those built uses. The logical outer
boundary defines the rural center and the area, within which, additional more intensive rural use may locate.

All County rural centers must be consistent with the LAMIRD criteria. Pierce County adopted policies requiring the evaluation of rural centers for LAMIRD consistency as part of the development of community plans. The determination of LAMIRD consistency for rural centers in community plan areas was made as part of community plan adoption and for non-community plan areas as part of the 2015 Comprehensive Plan update. All rural centers in Pierce County have been reviewed and found consistent with the LAMIRD criteria.

The establishment of any new rural center or the expansion of a rural center must be consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

**GOAL LU-65** The most intensive uses of rural land allowed in rural areas should be directed into rural centers.

**LU-65.1** Rural centers serve the following purposes:

**LU-65.1.1** To provide centers where rural residents and others can gather, work, shop, entertain and, where appropriate, reside;

**LU-65.1.2** To provide a focus for the surrounding rural area that is appropriate in character and scale in rural environment;

**LU-65.1.3** To provide an alternative to strip developments along arterials and state routes;

**LU-65.1.4** To provide services to tourists and other visitors recreating in the major recreation facilities; and/or

**LU-65.1.5** To provide an opportunity to develop facilities that can function as a community center in those areas where an incorporated town does not serve that role for the surrounding area.

**LU-65.2** Establish standards and design guidelines to protect environmental quality, rural character, and significant natural and scenic amenities and features the communities value.

**LU-65.3** Provide for accessory dwelling units, senior housing and group homes, within Rural Centers.

**LU-65.4** Provide four categories of Rural Centers: Rural Activity Centers, Rural Neighborhood Centers, Rural Gateway Communities and Rural Industrial Center.

**LU-65.5** Recognize isolated areas of commercial/business park development which had existing uses or areas of higher intensity use on July 1, 1990, and were not identified as an RNC in a community plan as of January 2012. The size of the area and determination of the logical outer boundary as defined by the LAMIRD criteria, should be established by amendment to a community plan and an area-wide map amendment.
GOAL LU-66  Commercial uses should be limited to areas that support rural neighborhoods and rural tourist areas.

LU-66.1  Non-residential uses of rural intensity include industrial and commercial uses which:

LU-66.1.1  Depend upon being in a rural area;
LU-66.1.2  Do not require urban level services;
LU-66.1.3  Are compatible with the functional and visual character of the rural area;
LU-66.1.4  Are smaller in size/scale and utilize a smaller percentage of impervious cover than the same land use allowed in an urban area;
LU-66.1.5  Support the everyday needs of rural residents and tourists;
LU-66.1.6  Are related to and dependent upon natural resources; and
LU-66.1.7  Include public and commercial recreational and associated uses.

GOAL LU-67  The establishment of any new rural center or the expansion of a rural center must be consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

RURAL ACTIVITY CENTER

The Rural Activity Center (RAC) designation creates areas where residents can gather, work, shop, and entertain; and tourists traveling to outlying recreation areas can obtain needed services. The most intensive uses of rural land allowed in rural areas should be allowed in Rural Activity Centers where adequate facilities and improvements exist or can be provided. Generally, RACs will provide for services for a larger rural area and include such uses as grocery stores, drug stores, restaurants, general retail, personal and business services, financial services, civic uses and automobile servicing, sales and repair.

GOAL LU-68  Rural Activity Centers should provide for more intensive uses to provide employment, shopping, services, and housing opportunities that will reinforce these areas as rural centers, at a scale which is compatible with surrounding roads, utilities, and rural character.

LU-68.1  Ensure immediate access onto state routes or major arterials.
LU-68.2  Allow intensive uses where adequate facilities and improvements exist or can be provided.
LU-68.3  Expansion should be compatible with other adjacent uses and avoid areas of natural hazards.

RCW 36.70A.070 (5)(d)  Limited areas of more intensive rural development (LAMIRDs) criteria require that rural commercial centers are based on (LU-67):

- Lands that do not extend beyond the logical outer boundary of an existing area or use that was established as of July 1, 1990.
- Existing areas delineated by the built environment, but that may also include infill areas of undeveloped lands.
- The logical outer boundary addresses the need to preserve the character of existing natural neighborhoods and communities.
LU-68.4  Permit residential development consistent with the residential density allowed in the adjacent rural designations.

LU-68.5  Rural Activity Centers may only be established or expanded consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

**Rural Neighborhood Center**

The Rural Neighborhood Center (RNC) designation is intended to serve the everyday needs of local rural residents. RNCs provide limited convenience shopping and services, and retain a scale and intensity that is appropriate for maintaining rural character. Generally, RACs will provide for services for a smaller rural area and include such uses as convenience stores, gas stations, personal services, small retail outlets and civic uses.

**GOAL LU-69**  Rural Neighborhood Centers should provide limited convenience shopping and services which meet the daily needs of residents of the surrounding rural area.

LU-69.1  Ensure immediate access onto state routes, or major or secondary arterials.

LU-69.2  Residential development should be permitted consistent with the residential density permitted in the adjacent rural designations.

LU-69.3  New development should exhibit a scale and intensity that is appropriate for maintaining rural character.

LU-69.4  Discourage commercial development in continuous strips.

LU-69.5  Promote coordinated and planned commercial developments.

LU-69.6  Recognize areas of commercial/business park development.

LU-69.7  Rural Neighborhood Centers may only be established or expanded consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

LU-69.8  The size and logical outer boundary of isolated areas of commercial/business park development shall be determined in the community plan by Comprehensive Plan amendment.

**Rural Gateway Community**

The Rural Gateway Community (GC) designation provides for a mix of commercial and higher density residential housing. The types of uses and activities allowed within the designation vary depending on the implementing zone.

The GC designation currently applies to four historical commercial nodes that have served as tourist areas approaching Mount Rainier National Park from either side. The Rural Gateway Communities include Greenwater and the Upper Nisqually Valley centers: Elbe, Ashford and the National Park entrance.

The Greenwater Gateway Community is distinguished from the Upper Nisqually Centers in that it is a commercial center in it’s entirely and as such the boundaries must meet the LAMIRD criteria. In contrast the Upper Nisqually Gateway Community are a community plan structure...
that includes a mix of tourist commercial, village residential as well as larger rural residential parcels. Within the Upper Nisqually Gateway Communities areas of more intensive use are designated with Tourist Commercial and Village Commercial designations. The boundaries of these commercial areas have been found to be consistent with LAMIRD criteria and may only be expanded if consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

GOAL LU-70 Rural Gateway Communities should provide commercial services to accommodate the needs of visitors and tourists.

LU-70.1 Locate near major recreational facilities and opportunities to provide facilities and services necessary to support tourism and the surrounding community.

LU-70.1.1 Housing accommodations for tourists, visitors, and workers and their families;
LU-70.1.2 Commercial uses serving tourists, visitors, and residents;
LU-70.1.3 Outdoor recreational facilities and uses;
LU-70.1.4 Facilities and services necessary to support tourism-related uses;
LU-70.1.5 Cultural facilities including theaters, galleries, arts and craft centers, interpretive centers; and
LU-70.1.6 Transportation facilities necessary to link tourism with surrounding recreational opportunities.

LU-70.2 Ensure immediate access onto state routes or major arterials.

LU-70.3 Discourage commercial development in continuous strips.

LU-70.4 Residential density may be higher than the surrounding rural area.

LU-70.4.1 Density calculations will not include land devoted to overnight lodging or commercial purposes.

LU-70.5 Develop procedures to ensure overnight lodging cannot be utilized as full-time residential units.

LU-70.6 Rural Gateway Communities should provide commercial services to meet everyday needs of the surrounding residents.

LU-70.7 The boundaries of Upper Nisqually GCs may be revised, as part of the Comprehensive Plan amendment or Community Plan update process.

LU-70.8 The boundaries of the Greenwater Rural Gateway Community and the Village Commercial and Tourist Commercial designated areas in the Upper Nisqually Rural Communities may only be expanded consistent with the LAMIRD criteria of RCW 36.70A.070 (5)(d).

LU-70.9 Encourage light industry in Gateway Communities to provide stable, year-round family wage employment for residents.
The Rural Industrial Center (RIC) designation allows light industrial uses that are related to food, agriculture, or intermediate manufacturing and final assembly. It does not allow heavier industrial uses that produce substantial waste byproducts or wastewater discharge or noise impacts incompatible with a rural area. Currently, the only RIC is in the Alderton-McMillin Community Plan area.

GOAL LU-71  Recognize and designate the McMillin Park of Industry area for rural industrial uses.

LU-71.1  Establish a designated Rural Industrial Center (RIC) that encompasses property vested for industrial activity within and adjacent to the McMillin Park of Industry.

LU-71.2  Ensure the designated RIC meets the criteria to allow for more intensive uses within a rural area.

GOAL LU-72  Reserve land in the RIC for manufacturing/light industrial uses.

LU-72.1  Limit the permitted uses to manufacturing/light industrial activity, preferably served by rail.

LU-72.2  Promote railway facilities including transfer facilities and laydown yards.

LU-72.3  Discourage heavy industrial, residential, and commercial services.

LU-72.4  Ensure that industrial activities do not require the expansion of urban services.

LU-72.5  Ensure that industrial uses do not negatively impact the environment or degrade water quality.

LU-72.6  Minimize any impacts on the community and surrounding neighborhoods.

LU-72.7  Explore developing regulations that facilitate the relocation of existing cottage industries to the RIC when expansion of the cottage industry is desired and the use is consistent with permitted uses in the RIC.

GOAL LU-73  Minimize impacts to State Routes and the local road system from the Rural Industrial Center to the greatest extent possible.

LU-73.1  Developments should incorporate local rail service into their operations as a means to reduce traffic.

LU-73.2  Industries requiring rail service are encouraged to locate within Rural Industrial Centers.

LU-73.3  Parcels within a Rural Industrial Center shall not have direct access to a state highway.

LU-73.4  Access to all parcels within a Rural Industrial Center shall be from an internal access road.
OTHER RURAL LAND USE DESIGNATIONS

MASTER PLANNED RESORT

GOAL LU-74 Allow within Pierce County, the two categories of Master Planned Resorts (MPRs) subject to the following criteria and standards:

LU-74.1 Proposals for MPRs must conform to RCW 36.70A.360; or
LU-74.2 Proposals for existing MPRs must conform to RCW 36.70A.362 and the following criteria:

LU-74.2.1 The resort was in existence on July 1, 1990;
LU-74.2.2 The resort is largely self-contained and integrated into a development that includes short-term visitor accommodations associated with recreational facilities within the resort boundaries in a setting of significant natural amenities;
LU-74.2.3 New urban land uses in the vicinity of the existing resort are prohibited except in areas specifically designed for urban growth in the Comprehensive Plan;
LU-74.2.4 On- and off-site infrastructure impacts shall be fully considered and mitigated;
LU-74.2.5 The County finds that the land is better suited and has more long-term importance for the existing resort than for the commercial harvesting of timber or agricultural production; and
LU-74.2.6 The County finds that the resort plan is consistent with the Development Regulations for critical areas.

LU-74.2.6.1 On sites where Pierce County does not have jurisdictional authority to apply the County Development Regulations for critical areas, the resort plan shall be consistent with requirements for critical areas as administered by the government entity having jurisdictional authority.

LU-74.3 Services and facilities needed to support such development are provided by the developer on a fair-share basis.
LU-74.4 On- and off-site impacts and uses of the site are mitigated through site development standards and guidelines.
LU-74.4.1 Site plan review of MPRs shall be conducted through the public hearing process.
LU-74.5 Any proposed expansion or changes to any existing MPR shall be subject to the same PUD review process as a new MPR.
LU-74.6 The overall residential density may be higher within a MPR than the surrounding rural area.

Standards and guidelines include (LU-74.4):
Aesthetic, visual, and environmental considerations to incorporate and retain on-site features and aesthetic qualities of the surrounding rural community.
LU-74.7 The density of overnight lodging within MPRs may be greater than the surrounding area.

LU-74.7.1 Procedures should be developed to ensure overnight lodging within MPRs cannot be utilized as full-time residential units.

LU-74.8 The focus of residential areas in a MPR shall be short-term visitor accommodations.

LU-74.8.1 A MPR may include other residential uses within its boundaries, but only if the residential uses are integrated into and support the on-site recreational nature of the resort.

LU-74.9 If Pierce County does not have jurisdictional authority to apply one or more particular land use controls over a development proposal, a proposal for a MPR shall be consistent with development requirements as administered by the government entity with jurisdictional authority.

LU-74.10 Lands designated MPR shall be developed pursuant to approval of a PUD consistent with the conceptual plans reviewed under 19C.10.055 D, except that the zone classification in place at the time of MPR designation approval shall control development of the land until a PUD permit is approved by the Hearing Examiner.

NEW FULLY CONTAINED COMMUNITIES

GOAL LU-75 Prohibit new fully contained communities outside of the designated urban growth area.

RURAL AIRPORT

GOAL LU-76 Establish an Airport Overlay-Rural Airport designation on land adjacent to rural airports to buffer the airport from incompatible uses.

LU-76.1 Establish Rural Airport Overlay boundaries using each airport’s area of influence.

LU-76.2 Provide buffering between those more intense uses related to aviation activities and the rural uses authorized in the Rural Residential designations.

LU-76.3 Limit land uses to low density and low intensity uses including forestry uses, agricultural uses, walking and biking trails, golf courses, and single-family dwelling units.

LU-76.4 Density should reflect the surrounding rural residential density.

GOAL LU-77 Establish an Essential Public Facility – Rural Airport Designation at the Tacoma Narrows Airport. Establish a Rural Airport Overlay adjacent to the Tacoma Narrows Airport to buffer the airport from incompatible uses.

LU-77.1 Designate the property at the Tacoma Narrows Airport as Essential Public Facility-Rural Airport.
**LU-77.1.1** Allow for airport related uses on that portion of the Tacoma Narrows Airport located south of Stone Road.

**LU-77.2** All properties located within 1,000 feet of the Essential Public Facility-Rural Airport Designation outside the City of Gig Harbor's UGA shall be designated Rural Sensitive Resource or Rural 10 with a Rural Airport Overlay.

**LU-77.2.1** Land use activities that are incompatible with general aviation airport uses shall be discouraged in the Rural Airport Overlay.

**LU-77.2.2** Rural land uses shall be limited to low density and low intensity uses including forestry uses, agricultural uses, walking and biking trails, golf courses, and single-family dwelling units.

**LU-77.2.3** Residential density shall be limited to 1 dwelling unit per 10 acres for new subdivisions. A minimum lot size of 5 acres is required. A bonus density that will provide for 2 dwelling units per 10 acres may be permitted when 50% of the development is retained in open space.

### ADDITIONAL RURAL POLICIES

#### SCHOOLS IN RURAL AREAS

**GOAL LU-78** Schools, institutions, and other community facilities may be located in rural areas.

**LU-78.1** Expansion of an existing site is preferred over the creation of a new site.

**LU-78.2** Ensure the location and design of proposed facilities in the rural area are harmonious with the existing character of the area.

**LU-78.3** Ensure coordination between the County and each school district siting schools in the rural area.

**LU-78.3.1** Each school district siting schools in the rural area shall participate in the County’s periodic updates to its Comprehensive Plan as required by RCW 36.70A.130(1)(b) by:

- Coordinating its enrollment forecasts and projections with the County’s adopted population projections;
- Identifying school siting criteria with the County, cities, and regional transportation planning organizations;
- Identifying suitable school sites with the County and cities, with priority to siting urban-serving schools in existing cities and towns in locations where students can safely walk and bicycle to the school from their homes and that can effectively be served with transit; and
- Working with the County and cities to identify school costs and funding for the capital facilities plan element required by RCW 36.70A.070(3).
LU-78.4  New schools in the rural area serving students from an urban area shall not be incorporated into the calculations to determine school impact fees for a school district nor receive funding from school impact fees.

LU-78.5  The extension of public facilities and utilities to serve a school sited in a rural area may be authorized by the County provided the following requirements are met:

LU-78.5.1  The applicable school district board of directors must adopt a policy addressing school service area and facility needs and educational program requirements;

LU-78.5.2  School districts must make a finding, with the concurrence of the County Council and the legislative authorities of any affected cities, that the district’s proposed site is suitable to site the school and any associated recreational facilities that the district has determined cannot reasonably be collocated on an existing school site, taking into consideration the policy adopted in LU-78.5.1 and the extent to which vacant or developable land within the growth area meets facility needs and educational program requirements;

LU-78.5.3  The County and any affected cities that provide sewer service agree to the extension of public facilities and utilities to serve the school sited in a rural area that serves urban and rural students at the time of concurrence as referenced in LU-78.5.2;

LU-78.5.4  If a sanitary sewer line is extended beyond the urban growth area to serve a school, private property in the rural area may connect to the sewer utility if:

- The property has a failing onsite sanitary sewer system; or
- The property owner requests connection provided:
  - The property is located no further from the public facility or utility than the distance that, if the property were within the urban growth area, the property would be required to connect to the public facility or utility;
  - The property may only develop at existing zoning densities; and
  - There may be no request to expand the Urban Growth Boundary based solely on the extension of the sewer.

RURAL AND RESOURCE AGRICULTURAL ACTIVITY

GOAL LU-79  Support and strengthen the local and regional agriculture-based economy and lifestyle.

LU-79.4  Conserve and enhance the agricultural land base.

LU-79.4.1  Maintain local, regional, state, and national agricultural reserves.

LU-79.5  Encourage agricultural activities as an appropriate land use throughout the rural area.
LU-79.5.1 Ensure adequate accessory uses are allowed.

LU-79.6 Facilitate the availability of locally-grown, healthy food options for residents.

LU-79.7 Reduce barriers to agriculture.

LU-79.8 Allow production, sales, and marketing of farm and related products throughout agricultural lands.

LU-79.8.1 Allow direct farm marketing, U-pick, value-added product sales, wineries, nursery sales, and accessory uses such as sales of arts and crafts or antiques.

LU-79.8.2 Discretionary land use review should be required for farm activities that continue for more than 60 days and generate heavy traffic, excessive noise, or other significant impacts to the community.

LU-79.8.3 Encourage farm-related uses including value-added products or products used for farming or farm tourism.

LU-79.8.4 Allow the sale of agricultural supplies such as feed, grain, fertilizers, and small farming equipment.

LU-79.8.5 Large suppliers and equipment sales should be located in Rural Neighborhood Centers, industrial areas, or nearby urban areas.

LU-79.8.6 Allow non-agritourism craft distilleries as defined in RCW 66.04.010(12) in rural areas, at an appropriate rural scale and consistent with community character and where at least half of the raw materials used in the production are grown in the State of Washington.

LU-79.8.6.1 Non-agritourism craft distilleries are similar to other agricultural uses such as primary processing, packing, shipment, and cold storage plants and should be considered in the land use designations that permit these use types.

LU-79.8.6.2 The total area that encompasses the craft distillery building, sampling/sales building, storage buildings, and parking shall not exceed 1 acre and should be permitted at a rural scale.

LU-79.8.6.3 Limit the entire non-agritourism craft distillery production and retail sales/product sampling area to a total of 8,000 square feet. The area for retail sales/product sampling shall be limited to a maximum of 3,000 square feet of this total.

LU-79.9 Allow local farmers flexibility to stay in business throughout the year.

LU-79.10 Provide programs, policies, and other regulations to achieve agricultural conservation and support agricultural activities.

Examples of farm-related uses (LU-79.5.3):
- Bakery sales
- Restaurants
- Microbreweries and wineries
- Sales of feed or farm equipment
- Recreational activities and educational tours
- Company picnics
- Birthday parties
- Weddings
LU-79.10.1 Give high priority to agriculture in land acquisition programs.
LU-79.10.2 Support agencies and organizations that play a role in agricultural conservation.
LU-79.10.3 Preserve the high-quality agricultural soils for future farming.
LU-79.11 Protect agricultural operations from incompatible uses and ensure the vitality of the agricultural industry.
LU-79.11.1 Prohibit developments that impede farm management and operations.
LU-79.12 Recognize that some critical areas have been legally altered and continue to be used for agricultural activities, and that the responsible use and maintenance of such areas for agricultural activities may continue.
LU-79.13 Promote the importance of farm management plans.
LU-79.13.1 Work with agencies and advisory groups to develop informational materials and educational opportunities regarding best management practices for agricultural activities.

RESOURCE LANDS

The Resource Lands designation indicates areas where Pierce County’s land use plans, regulations, and incentives will promote long-term commercially significant resource use. These natural resources are an important part of the regional economy, providing jobs, tax revenue, valuable products, and raw materials for local use and export. Farmlands and forested lands also provide aesthetic, recreational, and environmental benefits to the public while contributing to the diverse character of Pierce County.

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<td>Resource Lands</td>
<td>Agricultural Resource Land (ARL)</td>
</tr>
<tr>
<td></td>
<td>Forest Land (FL)</td>
</tr>
<tr>
<td>Overlays</td>
<td>Mineral Resource (MRO)</td>
</tr>
</tbody>
</table>

GOAL LU-80 Utilize resource lands at sustainable levels to provide raw materials, value-added products, and jobs necessary for future generations.

LU-80.4 Conserve and preserve resource lands as a limited resource of both environmental and economic value.
LU-80.5 Encourage retention of properties of sufficient size to make resource industry economically feasible.
LU-80.6 Encourage the preservation of those tracts of land used for resource practices.
LU-80.7 Promote the use of best management practices (BMPs).
LU-80.8 Consider a program that would allow the direct purchase of those development rights on existing resource lands.

LU-80.9 Ensure that the use of resource lands takes priority over use of adjacent lands.

LU-80.10 Coordinate conservation policies with other agencies and their respective programs.

LU-80.11 Encourage and recognize the multiple uses and values of resource lands.

GOAL LU-81 Conserve rural resources.

LU-81.4 Preserve the land and water required by natural resource based activities, including the protection of critical areas, natural wildlife, rural lifestyles, outdoor recreation, and other open spaces and protect air and water quality and availability.

LU-81.5 Minimize conversion of agricultural and forestry land by providing cluster development and buffer strips between these designated lands and residential developments.

LU-81.6 Protect important elements of rural character including its scenic and historic resources.

LU-81.6.1 Discourage billboards and off-site advertising on resource lands.

LU-81.7 Minimize the amount of impervious surface in development.

LU-81.7.1 Site development standards should include provisions for limiting paved parking, widths, and lengths of paved access roads and driveways, and site coverage in general, allowing shared access roads and using permeable construction material for roads where feasible.

LU-81.8 Minimize the use of constructed drainage facilities and encourage alternative perpetually maintained methods of surface water management such as grass covered swales, on-site retention areas, retaining vegetative cover, etc.

LU-81.9 Encourage Best Management Practice regarding animal wastes or forestry practices affecting water quality downstream.

LU-81.10 Provide incentives, such as tax reduction, to landowners who voluntarily provide public benefits such as protecting wildlife corridors, historic and cultural sites, and scenic amenities.

LU-81.11 Protect important land features such as ridgelines by discouraging their alteration.

GOAL LU-82 Allow for one accessory dwelling unit on a residential lot where a single-family dwelling exists.

LU-82.4 Accessory dwelling units within resource land use designations shall not be included in the calculation of residential densities.
Agricultural lands are distinct from rural lands and include lands that have been designated as having long-term commercial agricultural significance. In November 1991, Pierce County, on an interim basis, classified and designated agricultural lands of long-term commercial significance, which were located outside the Urban Growth Areas. The criteria for designation were reviewed and the interim criteria became the final criteria for the adopted 1994 Comprehensive Plan.

While the expression of planning goals in the GMA is linked to natural resource industries, including productive timber and fisheries, a separate policy for agricultural lands was proposed because of their unique importance in Pierce County and their relationship to Urban Growth Area boundaries and policies. Although the GMA does not expressly require a countywide planning policy on agricultural lands, the requirement was added by the Interlocal Agreement: Framework Agreement for the Adoption of the Countywide Planning Policies (Pierce County Council Resolution No. R91-172, September 24, 1991).

In 2004, the County created the Agricultural Resource Lands (ARL) designation (Ordinance No. 2005-87s). At that time, the County established specific criteria for ARL designation and used the Natural Resource Conservation Service soil data base as a key criterion focused on prime farm land soils.

In 2018, the County reviewed the criteria for the designation of ARL lands. Revisions were made to the ARL criteria based on a study “A Fresh Look at Pierce County agriculture.” This resulted in the creation of four Agricultural Production Districts. The individual districts reflect the unique agricultural characteristics of each area. Properties within each of the districts were reviewed and designated using customized criteria for ARL designation that address the unique characteristics of each district. The four Agricultural Production Districts are shown in Map 2-4.

GOAL LU-83

Implement the Growth Management Act's planning goal related to maintaining and enhancing natural resource-based industries by preserving and enhancing the agricultural land base which is being used for, or offers the greatest potential for, production of agricultural products.

LU-83.4

The conservation and enhancement of the County's agricultural land base serves the following purposes:

- LU-83.4.1 Supporting the local and regional economic base for agriculture;
- LU-83.4.2 Maintaining local, regional, state and national agricultural reserves;
- LU-83.4.3 Preserving the high quality agricultural soils for future farming;
- LU-83.4.4 Facilitating the availability of locally grown, healthy food options for residents;
- LU-83.4.5 Retaining natural systems and natural processes;
- LU-83.4.6 Alleviating some of the pressures to urbanize;
- LU-83.4.7 Supporting the rural lifestyle; and
LU-83.4.8 Providing environmental benefits, such as air quality and habitat.

LU-83.5 The County encourages agricultural activities as an appropriate land use throughout the rural area.

LU-83.6 Agricultural activities are also allowed in the urban area.
AGRICULTURAL RESOURCE LANDS DESIGNATION CRITERIA


LU-84.4  Lands should be considered for designation as agricultural resource lands based on three factors:

LU-84.4.1  The land is not already characterized by urban growth.
LU-84.4.2  The land is used or capable of being used for agricultural production. This factor evaluates whether lands are well suited to agricultural use based primarily on their physical and geographic characteristics.
LU-84.4.2.1  In determining whether lands are used or capable of being used for agricultural production, the County shall use the land-capability classification system of the United States Department of Agriculture Natural Resources Conservation Service as defined in relevant Field Office Technical Guides.
LU-84.4.3  The land has long-term commercial significance for agriculture.
LU-84.4.3.1  In determining whether lands have long-term commercial significance for agriculture, the County should consider the ten criteria listed under WAC 365-190-050.
LU-84.4.4  Consider excluding properties already characterized by urban growth or characterized by more intensive rural development, such as:

LU-84.4.4.1  Lands designated as rural centers;
LU-84.4.4.2  Lands rezoned to rural centers;
LU-84.4.4.3  Lands that are part of a preliminary plat approved prior to February 1, 2005, or a final plat recorded prior to February 1, 2005, including any associated open space or other non-buildable tracts identified on the face of the plat;
LU-84.4.4.4  Lands covered by a non-residential development permit for uses other than agriculture.
LU-84.4.4.5  Lands with mobile home parks; and
LU-84.4.4.6  Properties owned by governmental agencies prior to the effective date of the 2015 Comprehensive Plan Update for public use as identified in a Capital Facilities Plan adopted as part of the Pierce County Comprehensive Plan or an adopted long-range planning document.
LU-84.4.4.7  Land that is irrevocably dedicated to non-farm use.
LU-84.4.4.8  Designated forest and timber lands as identified by Pierce County, RCW 84.33, and RCW 84.34 shall be excluded.
LU-84.4.5 Designated forest and timber lands as identified by Pierce County, RCW 84.33, and RCW 84.34 shall be excluded.

LU-84.5 Designation of Agricultural lands of "long-term commercial significance" requires consideration of size of the land and soil composition and the land’s proximity to populated areas. The following criteria shall be considered when designating land as Agricultural Resource Land.

LU-84.5.1 Location in rural areas (outside the UGA).
LU-84.5.2 Parcel size on the effective date of Ordinance No. 2018-39.
LU-84.5.3 Amount of prime farmland soils.
LU-84.5.4 Larger parcels abutting the property.
LU-84.5.5 Property owner request for designation.

LU-84.6 Designate four Agricultural Production Districts to reflect the different agricultural characteristics of the County.

LU-84.6.1 Designated Agricultural Resource Lands shall be located within the four Agricultural Production Districts.

LU-84.6.2 Agricultural Resource Lands shall be designated by the following criteria in the four Agricultural Production Districts:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Production District</th>
<th>Bonney Lake/ Buckley Plateau</th>
<th>Central/South Pierce County</th>
<th>Peninsula</th>
<th>Puyallup/ Orting Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Located Outside Urban Growth Areas</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parcel Size on the effective date of Ordinance No. 2018-39</td>
<td>10 acres or greater</td>
<td>40 acres or greater</td>
<td>10 acres or greater</td>
<td>10 acres or greater</td>
<td></td>
</tr>
<tr>
<td>Amount of Prime Farmland Soils</td>
<td>50% or 20 acres</td>
<td>50% or 20 acres</td>
<td>50% or 20 acres</td>
<td>25% or 10 acres</td>
<td></td>
</tr>
<tr>
<td>Abutting parcel size</td>
<td>50 % of abutting parcels larger than 5 acres</td>
<td>50 % of abutting parcels larger than 20 acres</td>
<td>50 % of abutting parcels larger than 5 acres</td>
<td>50 % of abutting parcels larger than 1 acre</td>
<td></td>
</tr>
<tr>
<td>Landowners may request designation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

LU-84.7 Landowner intent. While landowner intent, by itself, cannot be used as a rationale for de-designation, it can be used as a criterion for inclusion into the ARL designation. Property owners requesting inclusion into the ARL designation shall not be assessed a Comprehensive Plan Amendment processing fee.
GOAL LU-85  Use the community planning and joint planning agreement processes to make refinements to Agricultural Resource Lands designation as follows:

LU-85.4  Joint planning agreements and community plans may recommend re-designation of Agricultural Resource Lands to Rural 5 for a buffer around a city or town Urban Growth Area, using the criteria specified in this Title.

LU-85.5  Community plans may recommend that parcels not meeting the criteria of the Title be designated as Agricultural Resource Lands:

LU-85.5.1  When contiguous ownership involves parcels that meet the criteria of this Title, except that some parcels are below the threshold size of 5 acres,

LU-85.5.2  When the soil type is present, but the size of the parcel is below the threshold of 5 acres, or

LU-85.5.3  When the soil type is not present, but the property is being used for commercial agriculture and the landowner requests inclusion.

LU-85.6  Community plans and joint planning agreements may recommend de-designation of Agricultural Resource Lands to correct errors in designation.

LU-85.7  Community plans can make refinements to the implementing regulations consistent with the provisions of this Title.

AGRICULTURAL LANDS DE-DESIGNATION

GOAL LU-86  Provide the criteria and process for removing properties from the Agricultural Resource Lands Designation. Pierce County will consider applications for de-designation of ARL zoning as part of the Comprehensive Plan amendment process described in Title 19C PCC. Application fees shall be waived for properties that were originally designated in error or voluntarily designated through a property owner request.

LU-86.4  Removal of properties from the Agricultural Resource Lands designation must be evaluated against the same criteria as designation.

LU-86.5  Removal of properties from the Agricultural Resource Lands designation shall be limited to the following processes:

LU-86.5.1  Allow for the de-designation of ARL properties.

LU-86.5.1.1  The approval of a Map Amendment to correct technical errors or revert voluntarily designated ARL parcels to another rural land use designation where the property does not meet one or more of Pierce County’s ARL designation criteria.

LU-86.5.1.2  The property is shown to no longer have long-term commercial significance for agricultural.
LU-86.5.1.3 For the purpose of determining if a property continues to have long-term commercial significance, the County may consider other factors in conjunction with the ten criteria listed under WAC 365-190-050(3)(c).

LU-86.5.2 The adoption of a community plan that includes re-designation of parcels consistent with the Comprehensive Plan.

LU-86.5.3 The approval of a Map Amendment to establish a Rural 5 buffer for a city or town, following a recommendation of an approved joint planning agreement consistent with the provisions of the Comprehensive Plan.

LU-86.5.4 De-designation of Agricultural Resource Lands for the purpose of expanding a Rural 5 buffer for a city or town shall only be considered during the Compliance review required by RCW 36.70A.130.

LU-86.5.5 De-designation of agricultural resource lands for the purposes of expanding the Urban Growth Area, provided that such de-designation is allowed for and consistent with the applicable community plan.

LU-86.6 Agricultural Resource Lands cannot be amended directly into the Urban Growth Area unless permitted by the applicable community plan.

GOAL LU-87 Implement the Agricultural Resource Lands with development regulations that support and enhance farming.

LU-87.4 Provide a base and maximum residential density of 1 unit per 10 acres.

LU-87.5 Allow uses that support the economic viability of farming and protect the farming operations from incompatible uses. In addition to the basic agricultural land uses of crop production, agricultural services, and animal production/boarding, provide for the permitting of more intensive agriculture-related uses, such as small contractor yards, cold storage, small restaurants, with minimum parcel size requirements. For the more intensive agriculture-related uses with the potential for heavy truck traffic, excessive noise, or other significant environmental impacts, such uses may be allowed with an administrative or conditional use permit.

LU-87.6 Ensure that allowed uses support and are agriculture-related.

LU-87.7 Community plans may provide for variations in the density and uses allowed under the following guidelines:

LU-87.7.1 A community plan can include density exceptions with a maximum residential density no greater than 1 unit per 5 acres. Community plans may include provisions for clustering of lots provided that the parent parcel is 20 acres or larger in size and the clustering results in no more than 10 lots per cluster. The remaining unclustered area must be dedicated to agriculture. Lots created after February 1, 2005, shall not be used to de-designate Agricultural Resource Lands using the criteria in the Comprehensive Plan.

LU-87.7.2 The implementing regulations for a community plan may provide for a density exception for housing seasonal farm workers in a community planning process.
LU-87.7.3 A community plan may provide for only the following civic uses on parcels at least 40 acres in size, where 90% of the site is dedicated or available for farming activities: religious assemblies not to exceed 30,000 square feet of building area, and small public safety stations (fire and sheriff).

GOAL LU-88 Provide programs, policies and other regulations to achieve agricultural conservation and support agricultural activities:

LU-88.4 Developing a purchase of development rights program or transfer of development rights program;

LU-88.5 Giving high priority to agriculture in land acquisition programs sponsored by the County, such as Conservation Futures, Purchase of Development Rights, and the Conservation District Assessment;

LU-88.5.1 The Agricultural Resource Lands designated properties in the Alderton-McMillin community planning area shall be given high priority because of the value of the agricultural soils in those areas.

LU-88.5.2 The Agricultural Resource Lands designated adjacent to cities and towns shall be given high priority because of the pressures to urbanize, heritage of farming, and the value of the agricultural soils.

LU-88.6 Leasing development rights for a term of years;

LU-88.7 Implementing anti-nuisance right-to-farm rules that have been adopted by Pierce County;

LU-88.8 Making preferential tax treatment available;

LU-88.9 Continuing support for the Pierce County Farm Advisory Commission (PCFAC), Pierce Conservation District, Washington State University Cooperative Extension, and other agencies and organizations that play a role in agricultural conservation;

LU-88.10 Investigating other innovative techniques to achieve agricultural conservation;

LU-88.11 Coordinating with other jurisdictions, tribes, and special districts, and engaging in the joint planning of agricultural lands;

LU-88.12 Coordinate agricultural land conservation policies with other Countywide Planning Policies through:

LU-88.12.1 Correlating agricultural land conservation policies with Urban Growth Area policies and with public facility and service provision policies – to avoid the extension of urban services into areas intended for continued agricultural use;

LU-88.12.2 Ensuring that public facility and service extensions, even if not directly serving the agricultural lands, do not stimulate the conversion of agricultural land or make its conservation and protection more difficult; and

LU-88.12.3 Joint jurisdictional planning of agricultural land;
LU-88.13 Develop a process for accepting donations of agricultural lands, and develop a program for continuing agricultural operations on donated agricultural lands or County-owned agricultural lands;

LU-88.14 Support local and regional direct marketing campaigns;

LU-88.15 Implement ways to improve the permitting process for, and minimize costs associated with, construction of farm-related structures, and to minimize costs associated with permitting;

LU-88.16 Expand the existing tax incentive programs to provide further benefits to farmers;

LU-88.17 Use existing publicly owned land or acquire farmland to create a lease-back program to farmers;

LU-88.18 Analyze the effect of reducing stormwater fees for agricultural lands.

LU-88.19 Make the purchase of locally grown produce a priority for the County's purchasing programs; and

LU-88.20 Investigate the possibility of establishing an agriculture regulatory ombudsman.

GOAL LU-89 Encourage the provision of an effective stewardship of the environment to conserve Agricultural Resource Lands and agricultural activities.

LU-89.4 Address the effect of agricultural practices on non-point source pollution and groundwater impacts.

LU-89.5 Take measures to minimize any adverse impacts of agricultural activities utilizing best management practices.

GOAL LU-90 Protect agricultural operations from incompatible uses and ensure regulations are in places that maintain the vitality of the agricultural industry.

LU-90.4 Extend the agricultural policies to locations within or adjacent to agricultural activities throughout the County:

LU-90.4.1 Protect such areas from encroachment by incompatible uses;

LU-90.4.2 Protect related development such as farmers markets and roadside stands; and

LU-90.4.3 Protect smaller sized agricultural parcels which are not individually viable for production, but which taken cumulatively with other smaller sized parcels in the area, have long term significance for agricultural production.

LU-90.5 Minimize the conflict of incompatible uses in areas adjacent to Agricultural Resource Lands and other agricultural activities by using measures including, but not limited to:

LU-90.5.1 Setbacks and buffer strips; and

LU-90.5.2 Public education concerning resource activities.

Pierce County Comprehensive Plan | Land Use Element
LU-90.5.3 Provisions to require notification to residential properties within 500 feet of designated Agricultural Resource Land, that activities may occur on the ARL land that are not compatible with residential development.

LU-90.6 Farming is encouraged throughout the rural area. Pierce County's regulation of farming should be consistent with these guiding principles:

LU-90.6.1 Homeowner covenants for new subdivisions and short subdivisions in the Rural Area should not restrict farming;

LU-90.6.2 Agricultural management practices shall not be construed as public nuisances when carried on in compliance with applicable regulations, even though they may impact nearby residences; and

LU-90.6.3 County environmental standards for agriculture should protect environmental quality, especially in relation to water and fisheries resources, without discouraging farming.

LU-90.7 Pierce County should use incentives to encourage farming, including, but not limited to:

LU-90.7.1 Tax incentives;

LU-90.7.2 Expedited permit review and/or permit exemptions for resource activities complying with "best management practices"; and

LU-90.7.3 Reduced or eliminated processing fees for subdivisions for the purpose of recombining substandard lots and "right to farm" provisions that would apply to all new development.

LU-90.8 Streamline permit processes to promote the continued viability and maintenance of agricultural lands without compromising environmental or public health safeguards.

LU-90.9 Incentives to experiment with innovative farm technology.

LU-90.10 Residential uses allowed near designated Agricultural Resource Lands should be developed in a manner which minimizes potential conflicts and reduces unnecessary conversion of farm lands.

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**Farmland Conservation Strategy**

**GOAL LU-91** Encourage the development of a Farmland Conservation Strategy using available programs and services to fulfill the County’s commitment to the local agriculture sector including:

LU-91.4 The use of public funds to make strategic purchases of farmland.

LU-91.5 Voters approved bond funds, backed by a property tax, to acquire development rights.

LU-91.6 Purchase of development rights through a farmland preservation program.
LU-91.7 Real Estate Excise Tax as allowed by Washington State law authorizing counties to levy a tax of up to 1 percent on real property transactions.

**FOREST**

**GOAL LU-92** Lands should be designated as forest resource lands of long-term commercial significance based on three factors:

**LU-92.4** The land is not already characterized by urban growth.

**LU-92.5** The land is primarily devoted to growing trees for long-term commercial timber production.

**LU-92.6** The land has long-term commercial significance which is defined as:

**LU-92.6.1** The growing capacity, productivity, and soil composition of the land for long-term commercial production.

**LU-92.6.2** Consideration of the land’s proximity to population areas, and the possibility of more intense uses of the land as indicated by the following criteria as applicable:

**LU-92.6.3** The area should be located outside of the Urban Growth Area (UGA), and have limited public services and facilities.

**LU-92.6.4** Should be buffered from urban land use designations by compatible rural land use designations.

**LU-92.6.5** Forest lands consist of predominantly large parcels that are at least 40 acres or greater in size.

**LU-92.6.6** While landowner intent cannot be used as a rationale for de-designation, it can be used as a criterion for inclusion when reflected by the tax status of the land (inclusion in the County’s Current Use Assessment program as timberland).

**GOAL LU-93** Limit development on designated Forest Resource Lands.

**LU-93.4** Maintain the vitality of forestry, including early selective harvesting, or selective clearing to reduce fire hazard or to follow an approved forest management plan.

**LU-93.5** Use incentives to encourage forestry.

**LU-93.6** Remove land from the designation only when it has been demonstrated that the land is no longer suitable for long-term forest production.

**LU-93.7** Ensure that forestry use activities are conducted in a manner that is compatible with rural residential character.

**LU-93.8** Allow Christmas tree farms and the direct marketing of forest products associated with the holiday season.
**LU-93.9** Allow custom milling and forest product sales on sites that engage in forest practice operations.

**LU-93.10** Wood chipping activities may occur on-site only during forest practice activities that occur on the site.

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**MINERAL**

Pierce County used the population forecast for the 20-year planning period to estimate the quality of gravel needed in the county area. The Washington State Department of Natural Resources (DNR) uses 11.3 tons/per person/per year as the estimate of volume. Given the large road projects projected for Pierce County, 15 tons/per person/per year were used to generate the estimate.

The population for each year was multiplied by 15, and summed up to arrive at the total tons of gravel needed during the 20-year planning period. This was then converted to cubic yards in order to compare with the amount of gravel available.

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**GRAVEL QUANTITY AVAILABLE**

DNR provided a database of currently permitted and active mining sites, as well as locations where gravel deposits are expected to exist. The projected total excluded developed sites and JBLM.

Industry standards suggest forty feet is a realistic average depth of excavation for gravel sources. The existing sites are not full of gravel, and many of the potential sites will not be economically viable to develop due to long haul routes and lack of road access. Therefore, for comparison a range of gravel thickness from 5’ to 40’ was assumed. The resulting volumes were converted to cubic yards in order to compare with the amount of gravel needed.

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**RESULTS**

Given the above assumptions, Pierce County will need 190 million cubic yards of gravel. Assuming a 25’ material thickness and considering only the DNR presently permitted active mining sites, there would be just 105 million cubic yards available. However, if the potential mining sites are also considered at an assumed 25’ thickness, there would be an additional 1.8 billion cubic yards available, approximately 10 times more than is needed. While it must be understood that excavating materials from this entire area is likely not realistic (due to difficulty and expense of development, accessibility, long haul routes, future competing land uses and development, etc.) it does demonstrate that if needed there are adequate mineral resources in Pierce County.

**GOAL LU-94** Maintain and enhance mineral resource-based industries.

**LU-94.4** Maintain, map, and classify known and potentially significant economically developable mineral deposits within Pierce County as identified by the Washington State Department of Natural Resources.
LU-94.5 Ensure excavated land has an ultimate economic use which will complement and preserve the value of adjoining land.

LU-94.6 Allow extractive industries to locate where prime natural resource deposits exist, provided these sites are separated by buffer strips from existing residential areas and restored for appropriate re-use after removing the resource material.

LU-94.7 If the demand for mineral resources is documented in the future, use the following criteria to designate Mineral Resource Overlay areas:

LU-94.7.1 The mineral deposit must contain at least one million cubic yards of extractable sand, gravel, or rock material;

LU-94.7.2 The size must be at least 40 acres; and

LU-94.7.3 The new area must be outside the Urban Growth Area.

LU-94.7.4 Allow property owners to have a Mineral Resource Overlay (MRO) placed on their property.
URBAN, RURAL, AND RESOURCE

The policies in this section govern a variety of land use designations and land use activities that may be found in any portion of the County.

The distribution of land designated Urban, Rural, and Resource is shown in Map 2-5. The total acreage and percent of land designated as urban, rural, and resource lands are outlined in Table 2-K.

### Table 2-K: Distribution of Urban, Rural, and Resource Lands

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Acres</th>
<th>Percent of Total Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>54,846</td>
<td>8%</td>
</tr>
<tr>
<td>Rural</td>
<td>271,800</td>
<td>38%</td>
</tr>
<tr>
<td>Resource</td>
<td>383,866</td>
<td>54%</td>
</tr>
<tr>
<td>Total</td>
<td>710,512</td>
<td>100%</td>
</tr>
</tbody>
</table>

GENERAL

**GOAL LU-95**  
Allow development to occur only when adequate public facilities and services are available and the carrying capacity of the natural environment is not exceeded.

**GOAL LU-96**  
Ensure the property rights of landowners are protected from arbitrary and discriminatory actions.

**GOAL LU-97**  
Private property shall not be taken for public use without just compensation having been made.

**GOAL LU-98**  
Ensure timely permit review and information dissemination to avoid delays or discourage growth from where it is intended to be focused.

**GOAL LU-99**  
Allow land use changes only when these changes are accompanied by specific documentation or proposed plans showing how the transportation system can adequately support the needs of existing and proposed development.

**LU-99.4**  
Pierce County will establish threshold levels for this policy so that small landowners will not be unfairly disadvantaged, and will tie implementation of this policy to impact mitigation planning that seeks to fairly allocate the costs of transportation improvements among and between the County and all affected parties.
This map is a general illustration of the County’s future land use patterns and provides guidance for the development of future zoning classifications that inform the Comprehensive Plan.

Refer to the official zoning rules or GIS data when determining zoning for a specific parcel.
AIRPORTS

Pierce County is served by Seattle-Tacoma International Airport in south King County, two military base airports, and a number of smaller airports owned by the public and private sector. The largest airports located in the County are the military air facilities on Joint Base Lewis McChord (JBLM), McChord Field and Gray Field. General aviation is served by the Tacoma Narrows Airport, Thun Field and several other small private airports. Pierce County owns both the Tacoma Narrows and Thun Field airports. Other small private airports in the County include Spanaway Airport in Spanaway, Shady Acres Airport in the Frederickson/Graham area, Swanson Field in the Eatonville area, and Ranger Creek State Airport near Crystal Mountain.

TACOMA NARROWS AIRPORT

Tacoma Narrows Airport is a regional airport that is used for small business jet travel and general aviation. The airport serves businesses, recreational flying, flight instruction, medical services, the media, the military, and law enforcement. There are approximately 60,000 operations at the airport each year.

Pierce County purchased the airport from the City of Tacoma in 2008. The County is currently preparing a Master Plan Update for the airport which will be the first master plan update since the purchase. The last master plan update was completed in 2003.

The Tacoma Narrows Airport is designated an Essential Public Facilities and policies related to the airport are found in the Essential Public Facilities Element and the Land Use Element.

THUN FIELD AIRPORT

Pierce County also owns Pierce County Airport-Thun Field in Puyallup. Located in central Pierce County 21 miles southeast of Tacoma, Pierce County Airport/Thun Field functions as a key community transportation and emergency services facility. The runway at Thun Field, measuring 3,650 feet long by 60 feet wide, is capable of handling all general aviation aircraft, from light sport to small business jets.

In order to protect airport operations and surrounding land uses, the County has established the overlay zones including the Airport Overlay – Rural Airports Designation and Airport Overlay-Small Airports Designation. The Airport Overlay - Rural Airports Designation is assigned to the Tacoma Narrows Airport while the Airport Overlay -Small Airports Designation is assigned to all other airports.

GOAL LU-100 Ensure compatibility between airports and surrounding developments.

LU-100.4 Coordinate with airports, the Aviation Division of the Washington State Department of Transportation, and other affected parties.

LU-100.5 Utilize airport overlays to protect the public’s health, safety, and welfare and to address incompatible uses with airport operations.
LU-100.6 Establish Tacoma Narrows Airport as an Essential Public Facility.

**SMALL AIRPORT**

**GOAL LU-101** Establish an Airport Overlay-Small Airport designation for small public use airports in unincorporated Pierce County to protect the airports from incompatible uses, consistent with the requirements of RCW 36.70A.510 and 36.70.547.

LU-101.4 Establish Small Airport Overlay boundaries using each small airport’s area of influence

**CURRENT USE**

The Current Use Open Space Taxation Act states that it is in the best interest of the State to maintain, preserve, conserve and otherwise continue in existence adequate open space lands for the production of food, fiber and forest crops and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens. Upon removal of classification, an additional tax, interest and penalty shall be due.

The law provides for three classifications:

- **Farm and Agricultural** - Land primarily devoted to the production of livestock or agricultural commodities for commercial purposes.
- **Timber** - Land in any contiguous ownership of five acres or more, which is primarily devoted to the growth, and harvest of timber for commercial purposes.
- **Open Space** - Land retained in its natural state. Land that would enhance, protect or preserve natural areas, i.e. parks, sanctuaries, historic sites, scenic resources, streams, beaches.

**GOAL LU-102** Foster partnerships between interest groups to promote participation in the Current Use Assessment program.

LU-102.4 Provide information on obtaining financial assistance.

LU-102.5 Educate on the uses and limitations of the Current Use Assessment (tax incentive) program.

**ESSENTIAL PUBLIC FACILITY – STATE CORRECTIONS OVERLAY**

**GOAL LU-103** Establish an Essential Public Facility – State Corrections Overlay for the McNeil Island Corrections Center on McNeil Island. The designation should include only the Main Institution located on approximately 89 acres and the existing north complex facility on approximately 87 acres, and should not include any other land on McNeil Island.

LU-103.4 Establish allowed facilities and uses, including those facilities and uses typically associated with a State corrections center, but not including facilities associated with a sexual offender program.
LU-103.5 Provide measures to assure that the uses and activities associated with the State Corrections designation are compatible with the land uses and natural systems on adjacent lands and shorelines.

HOME OCCUPATIONS AND COTTAGE INDUSTRIES

GOAL LU-104 Allow home occupations, daycare facilities, and cottage industries.

LU-104.4 Recognize the importance of the home-based business sector.
LU-104.5 Encourage environmentally friendly home occupations and industries as a means of low impact employment.
LU-104.6 Promote local professional services so business owners don’t need to travel out of the area to purchase services.
LU-104.7 Explore options for flexibility, such as creating separate regulations for home occupations in different industry sectors.
LU-104.8 Ensure compatibility with the underlying land use designation.
LU-104.9 Ensure activities are maintained and carried out in accordance with the conditions of approval.
LU-104.10 Relocate to an appropriate area if the use grows beyond the limits of the underlying designation.

MILITARY LAND DESIGNATION AND COMPATIBILITY

Pierce County is engaged in a collaborative planning effort involving Joint Base Lewis McChord and local governments surrounding this military installation. The goal of this effort is to encourage compatible development and redevelopment in surrounding areas. The effort is designed to balance the sustaining the local military mission with long term community land use needs. The policies represent Pierce County’s commitment in support of this effort.

Two land use designations have been established to recognize federal and state military installations within unincorporated Pierce County. These designations are not intended as an attempt to govern land use activities, rather as a mechanism to recognize the presence of military lands within unincorporated Pierce County.

GOAL LU-105 Recognize the unique character of land uses associated with military operations and support structures.

LU-105.4 Designate the portions of Joint Base Lewis-McChord and Camp Murray that contain urban level of services and characteristics as Urban Military Lands.
LU-105.5 Designate the portions of Joint Base Lewis-McChord that lie outside the UGA as Rural Military Lands.
The application of the Military Lands designations shall be consistent with official federal and state military installation master plans.

GOAL LU-106 Provide the military installations with opportunities to participate in the review and development of land use programs, policies, and decisions that affect them.

LU-106.4 Consider the military installations as an affected agency for land use planning decisions.

LU-106.5 Invite the military to participate as members on growth management committees.

LU-106.6 Provide opportunities for the military to participate in local and regional planning issues and programs.

LU-106.7 Establish periodic meetings of elected local, state, and federal officials and military commanders on growth management issues of mutual concern.

LU-106.8 Environmental policies adopted by the military should continue to reinforce the environmental policies of surrounding jurisdictions.

LU-106.9 Comprehensive Plan policies pertaining to environmental issues should agree with and not degrade the environmental policies of the military installations.

LU-106.10 Consider amendments necessary to provide consistency and compatibility between the County’s Comprehensive Plan, Development Regulations, and the Joint Base Lewis-McChord (JBLM) Joint Land Use Study (JLUS) upon completion of the JLUS which is anticipated to occur in October 2015.

GOAL LU-107 Recognize the possibility of military lands reverting back to Pierce County.

LU-107.4 If military lands revert back to Pierce County, the County should adopt interim regulations that restrict development of the reverted property until such time a sub-area plan is adopted.

LU-107.5 The County should coordinate with adjacent cities and towns to identify the desired character of the reverted property.

GOAL LU-108 Recognize aircraft noise as a health impact and an environmental constraint when developing land use classifications and regulations.

LU-108.1 Promote cooperation between Joint Base Lewis-McChord and Pierce County to address the reduction or mitigation of noise-generating uses.

LU-108.1.1 Establish a disclosure process advising property owners of possible noise impacts to property around JBLM.

GOAL LU-109 Recognize safety issues associated with training, artillery, and small-arms activities on Joint Base Lewis-McChord.

LU-109.1 Future construction adjacent to the installation should provide for fire protection at Fort Lewis boundaries.
LU-109.2 Incorporate the Installation Compatible Use Zone Study (ICUZ) noise contour maps and the "Recommended Land Uses for Installation Compatible Use Zone (ICUZ) Program Noise Zones" for Noise Zone II.

LU-109.3 Prohibit the following land uses within Noise Zone II:

LU-109.3.1 New residential uses, unless the design of the structure and general site plan incorporate noise-reduction measures to meet the Department of Housing and Urban Development (HUD) standards;

LU-109.3.2 Public services and quasi-public services such as hospitals, public meeting rooms, and libraries, and cultural, recreational, and entertainment land uses, unless the design of the structure and general site plan incorporate noise-reduction measures to meet HUD standards; and

LU-109.3.3 Schools, daycare facilities, and other facilities which incorporate outside activities.

LU-109.4 Direct the following land uses away from property abutting the installation boundary:

LU-109.4.1 High density residential;

LU-109.4.2 Public buildings (such as schools, medical facilities, public meeting facilities, and churches); and

LU-109.4.3 Cultural facilities.

LU-109.5 Cooperate with Joint Base Lewis-McChord and Camp Murray in developing plans for circulation improvements in and around the installations.

LU-109.5.1 The viability of cross-base corridors (arterial or highway) should be determined on the basis of detailed studies of population projections, military mission, land availability, land use projections, and environmental analysis of alternative routes and corridors.

LU-109.5.2 Plan public services, transportation, land use, and other decisions on the ability of the public transportation network to meet access needs without depending on military roads.

LU-109.5.3 Cooperate in the development of mitigation plans for military road closures that affect public use.

Nonconforming Uses and Vesting

GOAL LU-110 Maintain consistency with State vesting laws.
APPROVED DISCRETIONARY LAND USE ACTIONS

GOAL LU-111 Concomitant agreements and discretionary land use actions approved prior to the effective date of the Comprehensive Plan, any subsequent Plan amendment, or any Pierce County development regulation shall be allowed to develop on the basis of the controls contained in the decision granting approval; provided that they remain in compliance with the conditions of approval. Also building permits shall not be issued unless the action meets concurrency requirements, as determined by those agencies responsible for administering concurrency policy, in effect at the time of submittal of building permit applications.

LU-111.1 Concurrency requirements may include, but are not limited to, imposition of impact fees.

NONCONFORMING USES

GOAL LU-112 Allow the expansion of nonconforming uses that do not detract from the intent of the Comprehensive Plan, according to specific criteria. Types of nonconforming uses that the Council determines by Ordinance to be a nuisance or detrimental to public health safety or welfare may be terminated according to a reasonable amortization timetable, or reasonable conditions added.

LU-112.1 Develop standards for identifying those uses or groups of uses that are inconsistent with the Land Use designations, but are still consistent with the intentions of the Plan.

LU-112.2 Allow limited outright expansion of nonconforming uses.

LU-112.2.1 Develop standards that would allow for limited outright expansion of nonconforming uses considering at least existing and proposed site intensity and coverage.

LU-112.3 Allow major expansion of nonconforming uses if specific conditions to make them more compatible with allowed uses are met.

LU-112.3.1 Develop standards that would allow for major expansion of nonconforming uses considering items such as buffers, screening, lighting, and noise.

LU-112.3.2 Existing nonconforming uses may be converted to other uses so long as the proposed use is of equal or lesser intensity, would create equal or lesser environmental impacts, and would be compatible with allowed uses.

OPEN SPACE NETWORK

The GMA requires that the designation, proposed general distribution and location of open space and recreational lands be identified in local comprehensive plans. Identification of areas suitable for open space corridors within and between Urban Growth Areas (UGAs) is also required. These open space areas provide diverse functions including: protecting
environmentally sensitive lands, which are often ill-suited for commercial and residential development; separating incompatible land uses; linking communities and businesses; and creating corridors for wildlife migration and nonmotorized transportation routes.

Open space corridors serve as buffers within and between urban growth areas. The Open Space Corridors map, Map 2-6, is not intended to have regulatory effect but rather provide general guidance for open space preservation efforts. The Open Space Corridors map may be refined in the future based on more detailed analysis through community planning, watershed basin planning, fish and wildlife habitat planning, and other open space planning efforts.

**DESIGNATION OF AN OPEN SPACE NETWORK**

**GOAL LU-113** Establish an open space network linking open space areas via greenbelt corridors throughout Pierce County.

**LU-113.1** Pierce County shall designate an Open Space Corridors Map which identifies the general location of open space areas and corridors in Pierce County.

**LU-113.1.1** The map is based upon the high priority open space categories as set forth in Title 19D.170, Open Space Priorities.

**LU-113.1.2** The map should be refined based on the development of more detailed open space information obtained through community plans, open space plans, watershed basin plans, fish and wildlife habitat plans, or similar planning efforts.

**LU-113.2** Additional areas should be considered for designation as open space including:

**LU-113.2.1** Wooded areas that serve a functional purpose in climate, noise, light, habitat, and pollution control.

**LU-113.2.2** Environmentally or geologically unique areas, and scenic view points and scenic corridors as defined in Chapter 2.114 PCC, Current Use Assessment Administrative Procedures.

**LU-113.2.3** Lands that can provide for a separation between communities, thereby preserving character, preventing sprawl, and creating a buffer between urban and rural areas or other land uses.

**LU-113.3** Incorporate landscaped greenbelt areas into the open space network.

**LU-113.3.1** Establish and maintain greenbelts within the Plan area that provide multi-use functions such as buffers between incompatible uses, separation between communities and rural/urban areas, visual relief from the built environment, and passive open space recreation areas.

**LU-113.3.2** Utilize greenbelts for pathways and integrate this system into the nonmotorized transportation network.
LU-113.3.3 Encourage the planting of native vegetation within greenbelt areas but recognize that other non-native species, such as turf, may be appropriate for the intended use.

LU-113.3.4 Integrate built structures such as children's play equipment, play areas, climbing rocks, water features, benches, trails, and picnic tables into greenbelt systems. Trails shall be made of permeable pavement or materials.

LU-113.3.5 Greenbelt areas should integrate or bridge critical areas, such as wetlands, fish and wildlife habitat areas, or designated open space areas, when possible.

OPEN SPACE ACQUISITION, PRESERVATION, AND CONSERVATION

GOAL LU-114 Utilize a number of techniques and innovative measures to acquire and conserve open space.

LU-114.1 Consider the use of overlays, special zoning districts (e.g., agricultural zoning or sensitive resource zones), design standards, low impact development strategies, and large-lot zoning to preserve high priority open space areas.

LU-114.2 Provide incentives for open space preservation by allowing innovative measures such as cluster zoning, transfer of development rights, and zero-lot-lines.

LU-114.3 Consider the use of real estate excise taxes (Chapter 82.46 RCW) to acquire open space lands, including the following authorized taxing sources:

LU-114.3.1 A 1/4 of 1% tax for capital facilities (RCW 82.46.010);

LU-114.3.2 Second 1/4 of 1% tax for capital facilities (RCW 82.46.035); or

LU-114.3.3 "Tree tax" of up to 1% for acquisition and maintenance of conservation areas (RCW 82.46.070).

LU-114.4 Utilize Conservation Futures Program funding (Chapters 2.96 and 2.97 PCC) to acquire open space lands.

LU-114.5 Provide increased opportunities for current-use or preferential tax assessment (Chapter 84.34 RCW) for open space lands by promoting public enrollment in the program.

LU-114.6 Pursue public acquisition of open space lands through actions such as:

LU-114.6.1 Fee-simple purchase;

LU-114.6.2 Less than fee-simple purchase (i.e., purchase of development rights, conservation easements);

LU-114.6.3 Voluntary donations with tax incentives;

LU-114.6.4 Land transfers or exchanges;

LU-114.6.5 Limited development techniques (develop a portion of the site for economic return and leave remainder as open space).
LU-114.7 Promote private (land trusts) acquisition of open space lands.

LU-114.8 Consider pursuing a number of funding mechanisms to acquire open space lands, including but not limited to:

LU-114.8.1 Property tax levies;

LU-114.8.2 General obligation bonds and limited general obligation bonds;

LU-114.8.3 Intergovernmental funds (e.g., State grants);

LU-114.8.4 User fees;

LU-114.8.5 Foundation monies.

LU-114.9 Examine the potential of County surplus lands for open space purposes and consider transferring these lands to a local land trust.

GOAL LU-115 County programs that provide for the acquisition and/or preservation of open space shall have established priorities.

LU-115.1 Priorities for the preservation of open space shall be in conformance with the policies established in Chapter 19D.170, Pierce County Open Space Priorities.

LU-115.2 These priorities shall be coordinated with any subsequent updates of the Parks and Recreation Plan for the County.

LU-115.3 At a minimum, the priorities will be used for the following programs and regulations:

LU-115.3.1 Conservation Futures Program (open space acquisition);

LU-115.3.2 Current Use Assessment Program- Public Benefit Rating System (tax incentive);

LU-115.3.3 Development Regulations – Zoning (density bonus incentive).

GOAL LU-116 Ensure that Pierce County open space properties, open space passive recreation parks, conservation easements, and conservation futures covenants are managed and maintained to provide long-term stewardship of the open space function and value.

GOAL LU-117 Recognize that open space is an integral part of an area's infrastructure and that it should be provided concurrent with development, and with minimum percentages of public open space required per development.

LU-117.1 Require that new residential developments set aside a percentage of total land area as open space in perpetuity.

LU-117.1.1 Ensure that the designated area best serves the purpose of open space (e.g., the area should match areas on the Open Space/Greenbelts Map) and can be linked to adjacent open space areas to provide greenbelts.

LU-117.1.2 Where linkages and greenbelts occur, ensure that public easements are provided.
LU-117.1.3 Where land is not suitable for open space purposes, require the acquisition (or contribution towards acquisition) of nearby open space lands. These nearby lands should be identified on the Open Space Corridors Map.

LU-117.2 Design standards for development within designated open space/greenbelt areas should be implemented through the community planning, basin planning, or other similar planning efforts. At a minimum, the following should apply:

LU-117.2.1 Open space in urban areas should remain substantially undeveloped and exemplify the Pacific Northwest character (retention and replanting of native vegetation).

LU-117.2.2 Open spaces should be located contiguous to other open space areas, creating the potential for open space corridors.

LU-117.2.3 Open space in urban areas should be readily accessible to residents where appropriate.
Map 2-6: Open Space Corridors Map

Note:
This map illustrates the general location of significant open space areas within Pierce County. This map does not change the rights property owners are entitled under the local law designation identified as the Comprehensive Plan Land Use Designation. Map. Portions of the area identified, such as the Fort Lewis Military Reservation, are outside lands available for open space purposes.
GOAL LU-118  Designate specific public lands and private parks, campgrounds, historical sites or tourist attractions for park and recreational purposes when identified through a city, community, or regional planning process.

LU-118.1 Public lands identified for the Park and Recreation designation may include historical sites, tourist attractions, or property improved with park or recreational facilities. Unimproved public lands may be designated Park and Recreation when identified for future regional park uses.

LU-118.2 Privately owned properties identified for the Park and Recreation designation may only include properties improved with park, campground, or other recreational amenities that are open to the general public with or without a fee.

LU-118.3 The Park and Recreation designation shall be applicable in Urban and Rural designations. Resource Lands shall not be designated or zoned Park and Recreation.

LU-118.4 Development and improvement of park and recreational facilities, other than new regional parks, on sites designated as Park and Recreation, should be permitted outright. New regional parks should require Conditional Use Permits.

LU-118.5 Uses permitted on Park and Recreation designated sites may include passive or active recreation.

LU-118.6 The conversion of lands designated as Park and Recreation to other uses is discouraged.

LU-118.7 Publicly owned or managed land which is readily accessible via existing public roads or where roads can be reasonably extended to access the site should be considered for possible park and recreation sites. Public park and recreation sites should be located close to their prospective users.

LU-118.8 Sites or areas within a park site used for active recreational uses should be nearly level, dry and readily useable. However, the site should be suitable for the type of recreation proposed; activities which require differences in topography should be sited accordingly.

LU-118.9 Land which includes significant historic, archaeological, scenic, cultural or unique natural features should be considered for incorporation into the park and recreation system.
PUBLIC AND COMMUNITY FACILITIES

LOCATION CRITERIA

GOAL LU-119 Public and community facilities will be located in consideration of the following criteria.

LU-119.1 Public facilities should be designed around the service delivery standards with service levels appropriate to the people using each facility.

LU-119.2 Recreation facilities, schools, libraries, medical area facilities, sheriff and other community facilities, should be convenient to people using them.

LU-119.3 Community facilities should be located in centers or in areas with direct access to major thoroughfares.

LU-119.4 Public facilities should be located on sites which are economical to develop and reasonably level.

LU-119.5 Major parks, because of space needs, should be allocated by regional need.

LU-119.6 Schools, because of health and safety issues, should be protected from traffic.

LU-119.7 Cultural facilities, educational institutions, and spectator sports facilities, because of service areas, should be located central to their function or where complementary functions could be located.

LU-119.8 Branch government offices should be easily accessible and located in centers.

LU-119.9 Community facilities should be located on level or gradable land and avoid geologically hazardous areas.

LU-119.10 Community facilities should be located outside of floodplains, wetlands, riparian areas, or other critical areas, and constructed to protect major aquifers providing drinking water for the community.

LU-119.11 Community and public facilities which are associated with infrastructure corridors should be located with regard to such factors as terrain, the geological and hydrological conditions, the site's proximity to population concentrations and water supply, and the potential for supporting higher land uses.

GOAL LU-120 Coordinate the orderly provision of public facilities and services with public and private development activities in a manner that is compatible with the fiscal resources of the County through the development and adoption of a Concurrency Management System.

LU-120.1 Development activity shall be conditioned upon facilities being in place as the impacts of the development occur.

LU-120.2 Provisions for the review of applications for development and the timing of the actual impacts caused by development will be adopted as part of Pierce County's Concurrency Management System.
GOAL LU-121  Public facilities and utilities shall be located to maximize the efficiency of services provided, minimize costs, and minimize impacts upon the natural environment.

GOAL LU-122  Developments with requirements that exceed the capacity of the Capital Facilities Plan should not be allowed to develop until such services can be provided and maintained.

GOAL LU-123  The Comprehensive Plan and development regulations will be used to ensure compatibility with other land uses when siting essential public facilities.

LU-123.1  Establish criteria for siting essential public facilities.

LU-123.2  Caution will be used when locating capital facilities in critical areas.

LU-123.3  In communication with State agencies, emphasize the importance of their compliance with County policies.

PUBLIC INSTITUTION

GOAL LU-124  Recognize major parcels of land serving the cultural, educational, recreational, and public service needs of the community through the Public Institution designation.

LU-124.1  The Public Institution designation may be applied to urban or rural institutions and facilities.

GOAL LU-125  Identify lands owned by governmental agencies for public use or benefit with the Public Institution designation or other land use designation that supports and protects these uses.

REZONING AND REDesignating

GOAL LU-126  Provide strict guidance and review criteria for rezones to ensure planning goals are properly implemented and resulting changes are compatible with surrounding uses.

GOAL LU-127  Consider the availability of adequate potable water and other services when reviewing proposals for modifications to the land use designation or zoning classification.

GOAL LU-128  Utilize inventory of flood hazard or flood-prone properties in determining appropriate land use designations and zoning.

TRANSFER OF DEVELOPMENT RIGHTS/PURCHASE OF DEVELOPMENT RIGHTS

GOAL LU-129  Maintain and implement transfer of development rights (TDR) and purchase of development rights (PDR) programs to provide the public benefit of permanently conserving resource and rural agricultural lands, recreational trails, open space, and habitat areas through acquisition of the development rights on those lands.
LU-129.1 Allow residential density credits to transfer to urban areas in exchange for permanent preservation of agricultural lands and timberland through the TDR program.

LU-129.2 Transfer of development rights from ARL properties should be a higher priority than transfer from Rural Farm zoned properties.

Utilities

Most utilities are provided by agencies other than the County government. The coordination between agencies is important to the livability of the County.

GOAL LU-130 Provide for the locating of utility facilities.

GOAL LU-131 Base the type of land use and development intensity on the existence or planned construction of utility facilities.

Community Plans

Community plans result from partnerships that unite the County and citizens of a planning area. The majority of unincorporated County population resides in community plan areas. Community plans describe how the general policies of the Comprehensive Plan apply in a specific community and address local issues that are not in a general comprehensive plan. The purpose of the community planning process is to enhance community values and identify and assure sensible growth and development.

Community plans provide for a more refined scale and level of detail than can be attained under the broad guidelines of a comprehensive plan. Community plans augment and enhance the Comprehensive Plan so as to enhance a community character. Because of the diversity in the character of various parts of the County, Comprehensive Plan policies may not address specific issues confronting individual communities. Conversely, due to the distinct nature of community plan areas, not all community plan policies should be applied countywide. The community plan area boundaries are shown in Map 2-7.

Community Autonomy

GOAL LU-132 Foster the autonomy of communities.

LU-132.1 Support and incorporate methods which can establish or preserve community autonomy.

LU-132.2 Community plans should be used as a means of implementing Comprehensive Plan policy as follows:

LU-132.2.1 By applying Comprehensive Plan policy to specific parcels or groups of parcels of land within the community planning areas.
LU-132.2 By identifying community design characteristics which are used in project reviews (special district reviews, site plan reviews, conditional use permits, unclassified use permits, etc.).

LU-132.3 Establish or use existing community councils and/or other groups to make recommendations on land use designations, design standards, transportation improvements, capital facility improvements, densities, and development proposals within the community planning area using the policies of the Comprehensive Plan and development regulations.

LU-132.4 An effective communication system should advise citizens in community plan areas of proposed developments and policy decisions that would affect their community plan or planning area.

COMMUNITY CHARACTER

GOAL LU-133 Foster and retain community character.

LU-133.1 Adopt planning "standards" for the development of a community plan.

LU-133.1.1 Community plans shall involve the people of the community in plan development and amendment.

LU-133.1.2 Community plans should articulate a vision for the community.

LU-133.1.3 Community plans should identify features and characteristics of communities to be retained, developed, preserved, enhanced or corrected.

LU-133.1.4 Community plans should consider areas for commercial, industrial, residential, capital facilities, recreation and other land uses.

LU-133.1.5 Community plans shall contain policies that supplement the policies of the Comprehensive Plan.

LU-133.1.6 Community plans may identify design features to be encouraged in capital facilities, multifamily residential, commercial and industrial construction and landscaping. Design features may include site planning, building design and other features which affect the character of a community.

NEW COMMUNITY PLANS

GOAL LU-134 Support communities in the development of new community plans.

LU-134.1 Adopt a process for initiating the development of new community plans.

LU-134.1.1 Community plans may be initiated by one of the following means:

LU-134.1.1.1 Communities can request new community plans by submitting a petition to the Pierce County Executive and County Council that:

LU-134.1.1.1.1 Identifies the proposed area; and

LU-134.1.1.2 Identifies reasons why a community plan is needed, such as:
The need to preserve historical or heritage areas
New problems identified
Change in local conditions
Previous solutions have proven unworkable or to have unacceptable side effects.

Community plans may be initiated by the Pierce County Executive or County Council in order to implement policies of the Comprehensive Plan.

New community plan areas should be established on the basis of the following priorities:
- Public health, safety, or welfare;
- Previous commitments by the County through legislative action to prepare a plan; and
- Evidence of community support.

New community plan areas shall meet the following criteria:
- Contain a Commercial Center, Mixed Use District, Employment Center, or Rural Center;
- Have a common association or identity as a town, center, or destination; and
- Have boundaries as follows:
  - Contiguous with other community plans or municipal boundaries or designated rural lands;
  - Reflecting school district or other service area boundaries; or
  - Defined by topography and natural land features or manmade constructions, transportation arterials, road and rail, etc.

Upon the initiation of a community plan in the rural area of the County, all rural centers shall be evaluated and updated as necessary to be consistent with Growth Management Act provisions in RCW 36.70A.070(5) for LAMIRDs.

Community planning boards should focus on policy choices and regulatory options that can be effectively implemented and shown to be beneficial and desirable for the community.

Community planning boards should, with the assistance of PALS staff, share innovative or updated information throughout the plan formation process with other planning boards or land use advisory commissions to determine if there is a need or desire for changes countywide.
LU-134.7  Implement community plans through land use regulations and administrative decisions where possible, capital facilities provisions and other public programs, as applicable.

LU-134.8  Community plans should be developed in consultation with the following entities:

- LU-134.8.1 Community groups;
- LU-134.8.2 Governmental departments and agencies as applicable;
- LU-134.8.3 Neighboring cities, towns, or communities;
- LU-134.8.4 Affected Indian Tribes; and
- LU-134.8.5 Utility and service providers.

LU-134.9  Community plans should use existing land use designations rather than creating new designations and zoning classifications.

LU-134.10 Amendments to community plans shall be undertaken when changes to the Comprehensive Plan make community plan policies incompatible or inconsistent.

**CONSISTENCY WITH DEVELOPMENT REGULATIONS**

**GOAL LU-135**  Promote predictability and consistency in development regulations implementing community plans.

LU-135.1  One set of development regulations shall apply countywide.

- LU-135.1.1 The development regulations shall provide a range of alternatives that recognizes and provides for local uniqueness and character.
- LU-135.1.2 Communities may select from the range of alternatives to achieve their desired character.
- LU-135.1.3 Communities may recommend changes to the development regulations to achieve the desired character as articulated in an adopted community plan. Proposed new regulations shall be able to be applied to all similar situations or locations in other parts of the County.
- LU-135.1.4 Communities may recommend the creation of additional new zoning classifications that are consistent with land use designations identified in the Comprehensive Plan; however, these classifications may be applied only to parcels within the jurisdiction of a community plan adopted or updated after August 1999, which specifically allows such classifications.
- LU-135.1.5 Densities and uses may vary among communities only when consistent with the countywide land use designation and zone classifications.
- LU-135.1.6 Community plan regulations regarding permit processes or amendments to regulations should be considered for countywide application when beneficial and desirable for all communities.
LU-135.2  Eliminate and discourage redundant regulations, procedures and inconsistent, unnecessary overlays in community plan areas.
Community Plans

- Upper Nisqually Valley Community Plan, Adopted Ord. #99-66s, Effective 1/1/2000
- Parkland-Spanaway-Midland Communities Plan, Adopted Ord. #2002-22s, Effective 9/3/2002
- Gig Harbor Peninsula Community Plan, Adopted Ord. #2002-113s, Effective 12/1/2002
- South Hill Community Plan, Adopted Ord. #2003-11s, Effective 6/16/2003
- Frederickson Community Plan, Adopted Ord. #2003-94s, Effective 12/15/2003
- Mid-County Community Plan, Adopted Ord. #2005-94s2, Effective 3/1/2006
- Alderton-McMillin Community Plan, Adopted Ord. #2007-41s2, Effective 6/1/2008
- Key Peninsula Community Plan, Adopted Ord. #2007-75s, Effective 6/1/2008
- Browns Point-Dash Point Community Plan, Adopted Ord. #2008-50s, Effective 10/1/2008
- Anderson-Ketron Islands Community Plan, Adopted Ord. #2009-9s, Effective 6/1/2009
### APPENDIX A: SOIL LIST FOR ARL DESIGNATION

#### Table 2-L: Prime Agriculture Soil List

<table>
<thead>
<tr>
<th>NRCS SOIL SURVEY</th>
<th>MAP UNIT #</th>
<th>MAP UNIT NAME</th>
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<td>WA653</td>
<td>1B</td>
<td>Alderwood gravelly sandy loam, 0 to 8 percent slopes</td>
</tr>
<tr>
<td>WA634</td>
<td>20</td>
<td>Belfast silt loam, 0 to 2 percent slopes</td>
</tr>
<tr>
<td>WA653</td>
<td>4A</td>
<td>Bellingham silty clay loam</td>
</tr>
<tr>
<td>WA653</td>
<td>5B</td>
<td>Bow silt loam, 2 to 8 percent slopes</td>
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<td>6A</td>
<td>Briscot loam</td>
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<td>Indianola loamy sand, 0 to 5 percent slopes</td>
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<td>Klaber-Cinebar silt loams, 0 to 8 percent slopes</td>
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<td>McKenna gravelly loam</td>
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<td>National cindery sandy loam, 0 to 8 percent slopes</td>
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<td>23A</td>
<td>National gravelly sandy loam</td>
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<td>Norma fine sandy loam</td>
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<td>Norma loam, 0 to 3 percent slopes</td>
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<td>WA653</td>
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<td>Description</td>
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<td>Puyallup silt loam, 0 to 3 percent slopes</td>
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<td>Ragnar sandy loam, 0 to 6 percent slopes</td>
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<td>Reed silty clay</td>
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<td>Semiahmoo muck</td>
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<td>Semiahmoo muck, 0 to 1 percent slopes</td>
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<td>Semiahmoo muck, 0 to 1 percent slopes</td>
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<td>WA653</td>
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<td>Semiahmoo-Water complex, 0 to 1 percent slopes</td>
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<td>1103</td>
<td>Semiahmoo-Water complex, 0 to 1 percent slopes</td>
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<td>WA653</td>
<td>38A</td>
<td>Shalcar muck</td>
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<td>WA634</td>
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<td>Shalcar muck, 0 to 1 percent slopes</td>
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<td>WA653</td>
<td>39A</td>
<td>Snohomish silty clay loam</td>
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<td>WA634</td>
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<td>Snoqualmie loamy fine sand, 0 to 8 percent slopes</td>
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<tr>
<td>WA777</td>
<td>1106</td>
<td>Snoqualmie loamy fine sand, 2 to 8 percent slopes</td>
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<tr>
<td>WA653</td>
<td>40A</td>
<td>Spana loam</td>
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<td>WA653</td>
<td>41A</td>
<td>Spanaway gravelly sandy loam</td>
</tr>
<tr>
<td>WA777</td>
<td>110</td>
<td>Spanaway gravelly sandy loam, 0 to 3 percent slopes</td>
</tr>
<tr>
<td>WA777</td>
<td>1100</td>
<td>Steilacoom-Yelm complex, 0 to 2 percent slopes</td>
</tr>
<tr>
<td>WA634</td>
<td>247</td>
<td>Sulsavar loam, 0 to 8 percent slopes</td>
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<tr>
<td>WA653</td>
<td>42A</td>
<td>Sultan silt loam</td>
</tr>
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<td>WA634</td>
<td>248</td>
<td>Sultan silt loam, 0 to 2 percent slopes</td>
</tr>
<tr>
<td>WA653</td>
<td>44A</td>
<td>Tanwax muck</td>
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<tr>
<td>WA653</td>
<td>45A</td>
<td>Tisch silt</td>
</tr>
<tr>
<td>WA634</td>
<td>261</td>
<td>Tukwila muck, 0 to 1 percent slopes</td>
</tr>
<tr>
<td>WA634</td>
<td>278</td>
<td>Winston loam, 0 to 8 percent slopes</td>
</tr>
</tbody>
</table>
Chapter 3: CAPITAL FACILITIES ELEMENT

CONTENTS

Introduction..................................................................................................... 3-2
  Funding .................................................................................................................. 3-5
Emergency Response ............................................................................................. 3-6
  Fire ......................................................................................................................... 3-6
  Law Enforcement .................................................................................................... 3-6
Public Schools ......................................................................................................... 3-7
Public Libraries........................................................................................................ 3-8
INTRODUCTION

The Capital Facilities Element is comprised of these policies and the Capital Facilities Plan (CFP) itself. The policies found in this element provide guidance to the CFP, a long-range plan for predictable infrastructure provision. The CFP details the County's current understanding of the projected capital improvement needs and financing sources that support the County's current and future population and economy. The Capital Improvement Program (CIP) is the operational implementation of the Capital Facilities Plan.

Capital Facilities is an element of this Comprehensive Plan, as required by Washington's Growth Management Act (GMA). The GMA requires the element to identify public facilities that will be needed to address development expected to occur during the next six years. The CFP is adopted by ordinance as an amendment to the Comprehensive Plan each year.

The adopted CFP is an investment strategy, defining:

- What public facilities are needed;
- Where they will be provided;
- When projects will occur; and
- How they will be financed.

The CFP does not authorize the expenditure of funds. Rather, the funds for capital projects are appropriated annually in the County's operating budget.

The County establishes standards for the desired level of service for each type of public facility and determines the necessary capital improvements to maintain or achieve that level of service for existing and future populations. The County can provide public facilities only when funds are available. When authorized, the County may require others to provide public facilities.

GOAL CF-1

County expenditures for facilities and infrastructure must be consistent with the adopted Comprehensive Plan.

GOAL CF-2

Prepare and maintain a financially feasible six-year schedule of capital improvements in a Capital Facilities Plan.

CF-2.1

Use the Capital Facilities Plan, Six-Year Transportation Improvement Plan, Unified Sewer Plan, Coordinated Water System Plan, Surface Water Management Plan, and the Rivers Flood Hazard Management Plan to determine the existing and proposed availability of infrastructure for new areas for residential, commercial, and industrial growth.

CF-2.1.1

The absence of a Capital Facilities Plan for a school district under the County's CFP does not limit the Hearing Examiner's authority, if any, to review the impact from residential development on schools while reviewing applications for land developments.

CF-2.2

Establish and update level of service (LOS) standards for applicable capital facilities in the CFP.
## Table 3-A: Level of Service Standards for Capital Facilities

<table>
<thead>
<tr>
<th>Capital Facility</th>
<th>Levels of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>The airports capital plans through 2015 include airport master plan updates,</td>
</tr>
<tr>
<td></td>
<td>obstruction surveys, wildlife hazard assessments, security improvements, and</td>
</tr>
<tr>
<td></td>
<td>pavement maintenance.</td>
</tr>
<tr>
<td>Ferry</td>
<td>Maintain ferry capacity at 100% peak winter weekday demand.</td>
</tr>
<tr>
<td>Corrections and Detention</td>
<td>2.0 beds per 1,000 population.</td>
</tr>
<tr>
<td>District Court</td>
<td>One courtroom per judicial position.</td>
</tr>
<tr>
<td>Juvenile Court</td>
<td>0.132 beds per 1,000 population</td>
</tr>
<tr>
<td>Superior Court</td>
<td>One permanent courtroom in the County-City Building for each Superior Court judge;</td>
</tr>
<tr>
<td></td>
<td>one hearing room per commissioner assigned to the County-City Building;</td>
</tr>
<tr>
<td></td>
<td>one courtroom/hearing room per judicial officer when serving at locations away</td>
</tr>
<tr>
<td></td>
<td>from the County-City Building.</td>
</tr>
<tr>
<td>County Buildings</td>
<td>The Level of Service for General Administration Buildings has historically been</td>
</tr>
<tr>
<td></td>
<td>calculated using the most currently available population growths for</td>
</tr>
<tr>
<td></td>
<td>incorporated Pierce County to calculate and project future office space needs for</td>
</tr>
<tr>
<td></td>
<td>the general administrative function of the County.</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>The optimal performance of the radio communications systems is expressed in</td>
</tr>
<tr>
<td></td>
<td>terms of a load capacity that is not more than 80% of its total capacity.</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>The Sheriff level of service is 0.5 sq. ft./population.</td>
</tr>
<tr>
<td>Library</td>
<td>The level of service target for Pierce County libraries is 0.61 to 0.71 square</td>
</tr>
<tr>
<td></td>
<td>feet per capita by 2030, which was the planning horizon for the Pierce County</td>
</tr>
<tr>
<td></td>
<td>Library 2030: Facilities Master Plan.</td>
</tr>
<tr>
<td>Regional Parks</td>
<td>The PROS Plan establishes a LOS standard for parks based on investment per capita.</td>
</tr>
<tr>
<td>Roads</td>
<td>Pierce County has established traffic volumes (V), service thresholds (S), and V/S</td>
</tr>
<tr>
<td></td>
<td>Service Standards that are used for determining transportation concurrency on</td>
</tr>
<tr>
<td></td>
<td>jurisdictional roadways. The Capital Facilities Plan describes these V/S thresholds</td>
</tr>
<tr>
<td></td>
<td>and identifies roadway locations where these thresholds are exceeded in the</td>
</tr>
<tr>
<td></td>
<td>current year and future 6 year period.</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>The LOS of 220 gallons per day per residential equivalent plus a 15% reserve</td>
</tr>
<tr>
<td></td>
<td>capacity meets current level of service requirements.</td>
</tr>
<tr>
<td>Schools</td>
<td>As determined by individual school district.</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>The SWMP reaffirmed waste reduction and recycling as County priorities and set a</td>
</tr>
<tr>
<td></td>
<td>goal to reduce per capita waste disposal needs from 4.5 pounds per day (2007 level</td>
</tr>
<tr>
<td></td>
<td>to less than 1.1 pounds per day by 2032.</td>
</tr>
<tr>
<td>Surface and Storm Water Management,</td>
<td>The level of service (LOS) for stormwater facilities is detailed in the current</td>
</tr>
<tr>
<td>and River Levees</td>
<td>version of the Pierce County Stormwater and Site Development Manual.</td>
</tr>
<tr>
<td></td>
<td>The LOS for flood management facilities along major rivers refer to the current</td>
</tr>
<tr>
<td></td>
<td>version of the comprehensive Rivers Flood Hazards Management Plan.</td>
</tr>
</tbody>
</table>
GOAL CF-3  Ensure that adequate infrastructure is provided to accommodate economic growth.

CF-3.1 Direct growth where adequate public facilities exist, or where they can be efficiently provided.

CF-3.2 Ensure the necessary urban services are available in urban areas to support business development.

CF-3.3 Target areas of high growth for future infrastructure improvements.

CF-3.3.1 Give priority to designated commercial and industrial lands.

CF-3.4 Direct infrastructure resources to areas identified for planned industrial development.

CF-3.4.1 Phase public facilities and infrastructure in designated industrial areas.

CF-3.5 Lobby the federal government for revenue sharing or similar programs for the financing of needed infrastructure.

CF-3.6 Consider the use of recycled materials in the construction of facilities.

GOAL CF-4  Construct needed capital improvements which:

CF-4.1 Repair or replace obsolete or worn out facilities;

CF-4.2 Eliminate existing deficiencies; and

CF-4.3 Meet the needs of future development and redevelopment caused by previously issued and new development permits.

GOAL CF-5  Rank possible sites for planned public facilities and services using a priority system.

CF-5.1 Allocate public services to sites that provide the greatest possible returns, unless private property owners assist with the costs involved in extending or providing service.

CF-5.2 Give priority to the maintenance and improvement of public facilities in commercial areas and along major routes connecting commercial areas to residential neighborhoods.

GOAL CF-6  Establish a system of concurrency management to relate capacity of facilities to the approval of development permits when concurrency is required.

CF-6.1 Provide non-capital alternatives to achieve and maintain the adopted standard for level of service.

CF-6.2 Condition development projects in a manner that guarantees public facilities will be in place or that adequate mitigation will be provided as the impacts of the development occur.

CF-6.3 Annually review public facilities to determine if there is sufficient capacity to meet the needs and to maintain acceptable levels of service for existing and approved development.
CF-6.4 Identify the necessary facilities to maintain adopted levels of service to serve anticipated development and eliminate deficiencies.

CF-6.5 Consider the impacts of development on public facilities.

CF-6.6 Issue final development permits only when there is sufficient capacity of Category A and Category B public facilities available to meet the adopted levels of service for existing and proposed development.

GOAL CF-7 Coordinate the providers of water, sewer, power, natural gas, telecommunications, cable television, transportation systems, and other infrastructure.

CF-7.1 Coordinate infrastructure provision among jurisdictions.

**FUNDING**

GOAL CF-8 Use a realistic, financially feasible funding system based on revenue sources available according to applicable laws.

CF-8.1 The estimated costs of all needed capital improvements shall not exceed conservative estimates of revenues from sources that are available pursuant to current statutes, and not rejected by referendum, if required.

CF-8.1.1 Conservative estimates cannot exceed the most likely estimate.

CF-8.2 Require both existing and future development to pay for the costs of needed improvements.

CF-8.3 Finance enterprise and non-enterprise funds used for capital improvements with:

- CF-8.3.1 Debt to be repaid by user fees and charges, and connection or capacity fees; or
- CF-8.3.2 Current assets; or
- CF-8.3.3 A combination of debt and current assets.

CF-8.4 Limit the use of debt financing to provide more capacity than is needed within the schedule of capital improvements for non-enterprise public facilities.

CF-8.5 Consider the ability to pay for the subsequent operating and maintenance costs before providing a public facility or accepting a public facility provided by others.

CF-8.6 Support initiatives that will provide funding for unmet infrastructure needs.

CF-8.7 Allocate funding for public infrastructure to encourage infill, land assembly, redevelopment, and land conversion for commercial and industrial development, with priority toward areas with substantial private development.

CF-8.8 Use impact fees for schools, parks, and roads.

Category A: Facilities owned or operated by Pierce County and subject to the requirement for concurrency.

Category B: Facilities owned or operated by federal, state, or city governments, independent districts, or private organizations and subject to the requirement for concurrency (CF-6.6).
GOAL CF-9  Include all the capital improvements projects required for concurrency and listed in the schedule of capital improvements for expenditure during the appropriate fiscal year.

   CF-9.1  The County may omit any capital improvements when a binding agreement has been executed with another party to provide the same project in the same fiscal year.

GOAL CF-10  Prioritize funding for infrastructure projects within the UGA in the Transportation Improvement Program (TIP) and the Capital Facilities Plan (CFP).

   CF-10.1  Recognize that the TIP and CFP need to include rural area projects which focus on rehabilitation, restoration, and safety improvements within the rural area.

EMERGENCY RESPONSE

GOAL CF-11  Pursue funding to develop emergency plans and provide information to prepare for disaster events.

GOAL CF-12  Consolidate emergency services that create stronger and more cost-effective service.

GOAL CF-13  Prepare to respond to possible disaster events affecting islands.

FIRE

GOAL CF-14  Support fire districts’ efforts to:

   CF-14.1  Respond to the increasing demand for services;
   CF-14.2  Establish a team to provide rescue operations in cooperation with other agencies; and
   CF-14.3  Promote the use of volunteers for emergency services and public health and safety training.

GOAL CF-15  Provide support services to the fire districts.

GOAL CF-16  Communicate with fire districts regarding design of new developments and the layout of water system plans.

LAW ENFORCEMENT

GOAL CF-17  Provide an adequate number of law enforcement staff, based upon population growth and crime rate, to address safety concerns.

GOAL CF-18  Locate new law enforcement facilities in the UGA and where there is direct access to major arterial roads.
GOAL CF-19  Pursue partnerships with adjacent jurisdictions to enhance police services.

PUBLIC SCHOOLS

GOAL CF-20  Coordinate land use planning and school district capital facilities planning.

CF-20.1  School facilities should meet the needs of the existing and future population.

CF-20.1.1  The County shall work collaboratively with the School Districts to identify strategies to accommodate student populations in proximity to their residences.

CF-20.1.2  Strategies may include providing an inventory of developable land to a School District, identifying surplus County owned properties, modifying development regulations to eliminate barriers to school property development or redevelopment, rezoning suitable urban lands, or adjusting the urban growth area consistent with UGA expansion policies.

CF-20.1.3  Adequate school facilities should be provided concurrent with need. Pierce County should employ a variety of strategies to support school districts’ ability to provide adequate school facilities including, but not limited to, school impact fees, property dedication, school supportive zoning, and development phasing/timing or other project specific mitigation.

Public School Districts:

- Bethel
- Carbonado
- Clover Park
- Dieringer
- Eatonville
- Fife
- Franklin Pierce
- Orting
- Peninsula
- Puyallup
- Steilacoom
- Sumner
- University Place
- White River
- Yelm

Private Schools:

- Cascade Christian Schools
- Life Christian School and Academy
- Bellarmine Preparatory School
- Charles Wright Academy

Other Institutions:

- Tacoma Community College
- Pierce College
- University of Puget Sound
- Pacific Lutheran University
- Central Washington University extension centers
- University of Washington Tacoma

See the Rural Section of the Land Use Element for Rural School Policies
CF-20.1.4  In coordination with school districts, Pierce County may establish a committee of school district representatives, at least one year prior to each mandated Comprehensive Plan Update. The committee should be responsible for conducting a review of each school district’s capital facilities plan which describes the capacity, enrollment projections, standard of service, and capital facility needs of the district(s). In the event potential school facility capacity deficiencies are identified, the committee may make recommendations to the school district(s) and Pierce County on actions that may be taken in response to the projected deficiencies.

CF-20.2  Ensure school impact fees help pay the costs associated with serving new development.

CF-20.3  Coordinate annually with school districts to determine if the current impact fee payments are effective.

CF-20.3.1  Request an account of how the fees are being utilized.

CF-20.4  New schools in the rural area serving students from an urban area shall not be incorporated into the calculations to determine school impact fees for a school district nor receive funding from school impact fees.

PUBLIC LIBRARIES

GOAL CF-21  Encourage the Pierce County Library system to maintain the existing level of service.

GOAL CF-22  Use the annual capital facilities planning process to monitor the library system’s ability to serve future population growth.
Chapter 4: **Cultural Resources Element**

**Contents**

**Introduction**
- What are Cultural Resources? ......................................................... 4-2
- What is Historic Preservation? ....................................................... 4-2

**Identification** .............................................................................. 4-3

**Protection** .................................................................................. 4-3
- Incentives ................................................................................... 4-4
- Stewardship ................................................................................ 4-4
- Sustainability ............................................................................. 4-4

**Economic Development and Tourism** .................................... 4-4

**Outreach and Education** ............................................................ 4-5
INTRODUCTION

Pierce County’s historic and archeological resources are similar to our natural resources. Like wetlands, forests, agricultural lands, and other natural resources, historic properties are a finite and endangered resource. Like our natural resources, when a historic or archeological site is destroyed, it is lost forever. Cultural resources—historic buildings, monuments, archeological sites—are statements of Pierce County’s identity.

WHAT ARE CULTURAL RESOURCES?

Cultural resources are those buildings, structures, sites, or associations that are generally 50 years or older.

Cultural resources consist of three main types:

a) Historic structures and landscapes (buildings, structures, historic districts, objects, and landscapes);

b) Archeological sites (battlefields, campsites, cemeteries, burial sites, rock carvings, village sites, fishing sites, trading sites, and ceremonial sites); and

c) Cultural properties that were held in spiritual or ceremonial honor which may no longer show the evidence of man-made structures but retain a historical association with an event or period.

WHAT IS HISTORIC PRESERVATION?

Preservation is keeping properties and places of historic and cultural value in active use by accommodating appropriate improvement while maintaining the key, character-defining features that contribute to their significance as cultural resources. This process keeps cultural resources intact for the benefit of future generations. Pierce County’s preservation program includes conservation of the established historic Home community.

In preserving our far-ranging cultural resources, these policies are to be as inclusionary as possible. Buildings, structures, districts, and historic and prehistoric archeological sites, as well as landscapes and traditional cultural properties, should be considered.

As historical knowledge progresses, it is important to examine different properties for their potential significance, and to re-examine some that may not have been fully understood at an earlier time. Older surveys may have focused only on architectural significance or more obvious historic themes, missing significant resources that can be evaluated in another context.

GOAL CR-1 Identify, protect, and enhance historic properties and cultural landscapes throughout unincorporated Pierce County.

CR-1.1 Use current professional standards for cultural resource management of historic properties.
IDENTIFICATION

GOAL CR-2  Recognize the importance of resources that reflect the uniqueness and diversity of Pierce County in surveys, inventories, and local, state, and national registration programs.

CR-2.1  Identify and evaluate archeological and historic sites for potential historic landmarks status.

CR-2.2  Expand the focus of preservation efforts beyond that of the physical environment to include the cultures and stories behind the resources.

PROTECTION

GOAL CR-3  Protect cultural resources through land use actions.

CR-3.1  Consider cultural resources as part of initial project planning, review, and development.

CR-3.2  Develop and enforce protections for cultural resources.

CR-3.3  Protect sacred sites to preserve people’s cultural roots and connections to the past.

CR-3.4  Integrate historic preservation activities with those activities that share mutually supportive goals such as recreation, tourism, economic development, environmental protection, natural resource protection, and affordable housing.

CR-3.5  Balance growth with preservation by emphasizing it as a tool for revitalizing communities.

CR-3.6  Ensure consistency with the goal of protecting historic character of the properties listed in the Pierce County Register of Historic Places.

CR-3.7  Use the Pierce County Landmarks Commission as a resource to review alterations to listed properties.

CR-3.8  Use the Washington State Historic Building Code when the Pierce County Landmarks Commission reviews alterations, additions, and change in use occupancy to structures listed on the National Register of Historic Places and the Pierce County Register of Historic Places.

CR-3.9  Encourage the nomination of cultural resources to the local, state, and federal historic registers.

CR-3.10  Maintain a cultural resource inventory to be used in the identification of significant structures and places eligible for nomination.

There are three historic registers for which properties may be eligible:
- National Register of Historic Places
- Washington Heritage Register
- Pierce County Register of Historic Places

Each register is guided by its own set of codes.
CR-3.11 Maintain the Pierce County Register of Historic Places to recognize and preserve cultural resources of local significance.

CR-3.12 Design regulations and standards that provide flexibility to accommodate preservation and re-use of historic properties.

CR-3.13 Support the preparation and use of local design guidelines/standards for rehabilitation (consistent with the Secretary of the Interior’s standards) and new development in historic and traditional communities.

### INCENTIVES

GOAL CR-4 Establish incentives that encourage maintenance and preservation of historic properties.

CR-4.1 Apply Current Use Taxation to historic properties.

CR-4.2 Use a portion of historic document (HDOC) funds to assist with preservation planning, training, and funding the Pierce County Historic Preservation grant cycle.

### STEWARDSHIP

GOAL CR-5 Provide stewardship of County owned cultural resources.

CR-5.1 Maintain County owned cultural resources appropriately by following the Secretary of the Interior’s Standards for Rehabilitation, in consultation with Pierce County.

CR-5.2 Acquire and preserve historic properties for priority use by the County and other public agencies.

### SUSTAINABILITY

Stewardship of existing building stock can reduce environmental impacts. Re-using a building preserves the energy and resources invested in its construction, avoids landfill impacts, and reduces the need to produce new construction materials. The economic benefits of protecting local historic districts are well documented. These include higher property values, job creation in rehabilitation industries, and increased heritage tourism.

GOAL CR-6 Encourage adaptive reuse of resources that no longer serve the community’s needs, such as encouraging reuse of old structures.

CR-6.1 Encourage building renovation and redevelopment which are compatible with the historic character of each community.

### ECONOMIC DEVELOPMENT AND TOURISM

GOAL CR-7 Encourage historic themes in economic development plans that protect historic character.
CR-7.1 Develop and promote heritage tourism as a means for economic development.

CR-7.2 Establish the resources to develop trade and marketing programs that work in coordination with cultural events.

CR-7.3 Establish or expand partnerships with agencies and entities involved in economic development.

CR-7.4 Develop methods to link cultural resource preservation with local economic development strategies, such as rehabilitation of commercial buildings, neighborhood revitalization, and tourism.

**OUTREACH AND EDUCATION**

GOAL CR-8 Foster collaboration between the community and property owners to nominate important eligible historic properties to the Pierce County Register of Historic Places or other applicable historic registers.

CR-8.1 Ensure there is early consultation with tribal organizations and other interested parties.

CR-8.2 Increase collaboration and partnerships between preservationists and a diverse array of nontraditional partners.

CR-8.3 Collaborate with stakeholders to highlight and identify best practices for productive use and greater appreciation of historic properties.

CR-8.4 Establish and maintain government-to-government relations with local Tribal Preservation Officers (TPO) for the preservation of archeological sites and traditional cultural properties.

CR-8.5 Identify mutual benefits of state and federal agency programs and budgets that can be achieved by cooperating and coordinating on preservation-related issues.

GOAL CR-9 Provide increased opportunities to access and interact with historical and cultural resources to help people recognize, embrace, and actively participate in the management of their heritage.

CR-9.1 Protect, preserve, restore, and maintain historical and cultural resources throughout the County for the education, enjoyment, and enrichment of present and future generations.

CR-9.2 Keep the public informed about County historic preservation activities.

CR-9.3 Continue to educate communities about the strong connections among preservation, community character, quality of life, environmental stewardship, and economic competitiveness.

CR-9.4 Explore opportunities to educate the public about the importance of historical and cultural resources, and ways to use and protect them.
Chapter 5: Design and Character Element

Contents

Introduction ............................................................................................................................ 5-2

Urban ..................................................................................................................................... 5-3

Urban Residential .................................................................................................................. 5-3
Site Design ............................................................................................................................ 5-4
Urban Commercial .................................................................................................................. 5-5
Urban Industrial ..................................................................................................................... 5-6

Rural ...................................................................................................................................... 5-7
Rural Industrial Center .......................................................................................................... 5-7

Urban, Rural, and Resource ................................................................................................. 5-8

Home Occupations .............................................................................................................. 5-8
Outdoor Lighting .................................................................................................................. 5-8
Signs ...................................................................................................................................... 5-8
Sustainable Design .............................................................................................................. 5-9
INTRODUCTION

The Design and Character Element is a new addition to the Pierce County Comprehensive Plan, and a direct result of community planning. Community character and design are further defined within the community plans with more detailed policies that are truly specific to each community. Design values and intentions differ between different County communities. Development projects should be designed in a manner that responds to the unique characteristics of their individual community and specific site, but also to fit into the wider context of the County.

The character and design found within a community reflects many aspects of the citizens who live there. Some areas feel urban while others have a distinctly rural flavor. The character and design of an area often provides a glimpse into fundamental values and preferences for social interactions. Simply put, character reflects the heart and soul of a community.

Design deals with the physical elements that compose the character of our communities—the streets, parks, buildings, open space, and neighborhoods that determine the way our community looks and feels. It is a blending of land use planning, architecture, landscape architecture, and environmental protection. Design looks at the way in which buildings, streets, public places, natural features, and other development relate to one another and the people who use them.

While the regulation of appearance and design is often a basic component of urban regulatory systems, it is also one of controversy. Many people feel that such regulation is inherently subjective and hence inappropriate for government. However, design regulation is not only capable of making a substantial difference in the character of a community and its quality of life, but it also plays an important role in how the community perceives itself and how it is perceived by visitors.

Through proper design methods, improvements such as street construction, park development, and commercial, industrial, residential, and civic development can be effectively coordinated with each other to promote a unified image. Design directly affects land use patterns, transportation planning, community and neighborhood livability, and overall quality of life.

This element provides policies for site and building design which will enhance the image the County would like to portray to its own residents and visitors. The policies in this element are intended to create a basis for design, and be built upon using further defined community standards and design regulations.
GOAL D-1  Encourage development that is visually attractive, consistent with the community’s identity, compatible with surrounding uses, and respectful of the natural environment.

D-1.1  Encourage an orderly arrangement of buildings, landscaping, and circulation elements that support the functions of a site.

D-1.2  Ensure that landscape designs meet the functional requirements of developments by reinforcing site design, and providing adequate on-site screening and buffering.

GOAL D-2  Enhance the aesthetics of major roadways by utilizing streetscape and boulevard concepts.

D-2.1  Encourage streetscape design on major roadways.

D-2.1.1  Use tree planting and native vegetation to enhance the visual quality of streetscapes.

D-2.1.2  Separate pedestrian walkways from roads with planting strips near schools, commercial, recreation, and other high use areas.

D-2.1.3  Design and locate drainage grates to minimize bicycle and wheelchair hazards.

GOAL D-3  Enhance residential neighborhood quality and promote a strong sense of community.

D-3.1  Encourage modulation of multifamily buildings to make the building mass appear smaller.

D-3.1.1  Discourage multifamily buildings consisting of large blank walls, particularly when visible from adjacent streets.

D-3.2  Encourage dwelling units with a variety of architectural features such as porches, stoops, balconies, decks, or other well-defined pedestrian entrances.

D-3.2.1  Features should be visible from the street.

D-3.2.2  Emphasize each unit through variations in details such as trim, roofline and pitch, porch design, and color.

D-3.3  Promote common recreation and open space areas within residential developments.

D-3.4  Allow residential units to be oriented toward the street.

D-3.5  Design high density developments to be compatible with surrounding lower density residential uses.

D-3.6  Ensure that accessory dwelling units comply with design standards.
D-3.7 Design standards for moderate density single-family development should consider:

D-3.7.1 A range of housing types, costs, and densities;
D-3.7.2 Pedestrian and vehicular access and circulation;
D-3.7.3 Transit strategies; and
D-3.7.4 Environmental constraints.

GOAL D-4 Improve overall mobility through the location and design of residential developments.

D-4.1 Discourage vehicular access points in multifamily developments onto shared streets with lower density residential areas.

D-4.2 Locate new multiple-level, multifamily development close to the right-of-way in a Mixed Use or High Density Residential District.

D-4.2.1 When any multifamily development of two or more levels abuts or is across a residential or collector arterial from a MSF designation, the development shall be set back a distance equal to or greater than the height of the building.

SITE DESIGN

GOAL D-5 Encourage creative and innovative solutions to housing issues through quality design which is functional as well as livable.

D-5.1 Increase density while maintaining desirability.
D-5.2 Encourage development of mixed-use communities and housing to diversify and increase density of housing developments.
D-5.3 Make use of zero-lot-line provisions to further implement new site layout and design.
D-5.4 Encourage cluster development of residential lands, preserving environmental quality and providing facilities and services more efficiently and economically.
D-5.5 Harmoniously situate new housing developments within existing neighborhoods.
D-5.6 Carefully design new residential buildings which extend higher than the adjacent buildings to minimize impacts on privacy and solar access.
D-5.7 Encourage housing development in close proximity to public transit.
D-5.8 Preserve existing housing units, when appropriate and feasible, with special emphasis on historically significant structures.
D-5.9 Design a model residential development site that incorporates innovative design and layout techniques.

GOAL D-6 Encourage design of multifamily developments that provides residents a safe, friendly living environment.
D-6.1 Organize buildings, open space, and circulation to provide opportunities for residents to experience or express a sense of territory around a housing unit.

D-6.2 Locate pedestrian pathways around and through a development to minimize visual and physical intrusion into the private areas of each housing unit.

D-6.3 Use lighting to increase visibility at night and to increase security and safety.

D-6.4 Locate residential buildings to create usable open space and to improve a development’s visual qualities.

D-6.5 Design parking lot entries into multifamily developments to complement pedestrian entry.

Urban Commercial

Goal D-7 Commercial areas should be functional, display aesthetic value, and create a safe environment that meets the needs of all users.

D-7.1 Promote high quality, market-feasible architecture.

D-7.2 Encourage an appropriate display of scale and proportion.

D-7.3 Encourage commercial developments to include:

- D-7.3.1 Signage;
- D-7.3.2 Building design;
- D-7.3.3 Sidewalks and crosswalks;
- D-7.3.4 Artwork;
- D-7.3.5 Landscaping;
- D-7.3.6 Common areas;
- D-7.3.7 Street furniture;
- D-7.3.8 Lighting; and
- D-7.3.9 Open space.

D-7.4 Strongly encourage architectural and site design when the development is visible from a major roadway.

D-7.5 Encourage joint development of sites where there is potential for shared facilities.

D-7.6 Promote amenities within commercial developments that address safety.

- D-7.6.1 Include techniques in building and site design that reduce vandalism.

D-7.7 Encourage a visual and physical transition in setbacks, landscaping, and architectural style between differing land uses.

Shared facilities may include (D-7.5):
- Common building walls
- Shared driveways
- Landscaping

Safety elements may include (D-7.6):
- Adequate lighting
- Easily accessible parking
- Cleanliness
D-7.8 Minimize visual, noise, and odor impacts of service areas and utility maintenance areas on surrounding uses and streets through site design, landscaping, and screening.

D-7.9 Enhance the quality of outdoor gathering spaces within commercial areas with pedestrian amenities.

GOAL D-8 Emphasize user safety in the design and location of interior transportation facilities.

D-8.1 Encourage compatibility between drivers and pedestrians.

D-8.2 Minimize the space devoted to vehicular circulation by encouraging shared driveways and ensuring efficient internal circulation.

D-8.3 Provide pedestrian walkways and bikeways that connect to all buildings, surrounding sidewalks, parking areas, adjacent properties, transit stops, and trails.

D-8.4 Separate pedestrian facilities to the greatest extent possible from motorized traffic.

D-8.5 Discourage large expanses of parking areas through a variety of techniques.

D-8.6 Use texture, lighting, raising, or signing to make marked, established crosswalks and trails more visible to motorists.

D-8.7 Provide direct access for pedestrian and bicycle traffic to destinations without having to traverse parking areas.

Techniques include (D-8.5):
- Landscaping within and around parking areas
- Creating a distinct street edge with landscaping and building placement
- Minimizing parking between structures and the street
- Distributing smaller parking areas around the site
- Connecting parking areas in adjoining commercial developments where possible
- Underground parking
- Orienting at least one building entry to a major public street

URBAN INDUSTRIAL

GOAL D-9 Ensure functional industrial areas without adversely affecting surrounding properties.

D-9.1 Include landscaping, plazas, and other amenities.

D-9.2 Define building heights in consideration of anticipated land use, surrounding land use, safety and emergency measures, transportation networks, and efficient use of land.

D-9.3 Minimize the impacts on adjacent, non-industrial land uses through appropriate landscaping, screening, buffer strips, graduated intensity, and similar methods.
GOAL D-10  Minimize aesthetic impacts of activities, and maintain rural character.

D-10.1  Protect significant natural, scenic, and historic resources.
D-10.2  Maintain the character of established commercial areas.
D-10.3  Discourage billboards and off-site advertising.
  D-10.3.1  Ensure commercial design standards are financially feasible for small business.
D-10.4  Encourage the use of wood or other natural materials finished in natural colors.
D-10.5  Project a small-scale character in building mass through choice of materials.
  D-10.5.1  Reduce the visual scale of commercial, civic, or industrial structures adjacent to residential development.
D-10.6  When adequate right-of-way exists, separate pedestrian pathways from the road by the drainage way or other buffer.

RURAL INDUSTRIAL CENTER

GOAL D-11  Ensure proposed industrial uses are functionally and visually compatible with the surrounding rural character.

D-11.1  Reinforce the set boundaries of the Rural Industrial Center (RIC) through strict site design, landscaping, and the construction of external roads.
D-11.2  Design industrial buildings to appear smaller from adjacent streetscapes.
D-11.3  Articulate public entrances through architectural detail.
D-11.4  Prohibit reflective glass.

GOAL D-12  Use signage for business identification purposes only rather than for advertising.

D-12.1  Design and locate building and freestanding signs in a manner that is compatible with the rural character and neighborhood.
D-12.2  Prohibit pole signs.
D-12.3  Choose building and freestanding signs without internal illumination.
D-12.4  Limit the size of individual business signs to be consistent with the rural character.
D-12.5  Identify an industrial park with only one sign along SR 162.
D-12.6  Identify an industrial park using a monument style sign.
URBAN, RURAL, AND RESOURCE

GOAL D-13  Consider and protect important environmental features in the design of any development.

D-13.1  Promote the retention of clusters of trees.
D-13.2  Minimize the obstruction of territorial views and scenic vistas.
D-13.3  Protect and enhance scenic routes.
D-13.4  Protect viewsheds, skylines, and ridgelines.
D-13.5  Screen or remove negative elements.

HOME OCCUPATIONS

GOAL D-14  Harmoniously integrate home occupations and cottage industries within the existing residential surroundings.

D-14.1  Encourage landscaping and screening to blend uses.
D-14.2  Require site design to mitigate noise, lighting, and visual impacts to neighboring properties.
D-14.2.1  Provide incentives for new and existing structures to conform to design guidelines.

OUTDOOR LIGHTING

GOAL D-15  Utilize lighting to assist with vehicle and pedestrian safety and accentuate special features of buildings without imposing on neighboring residential properties or wasting energy.

D-15.1  Promote a consistent visual image in the use of lighting.
D-15.2  Maintain street lighting in areas of safety concern, such as at intersections and on arterials near facilities.
D-15.3  Avoid using roadway illumination in rural areas unless required to enhance safety.
D-15.3.1  Ensure that street lighting is consistent with safety requirements and the rural character.

SIGNS

GOAL D-16  Establish a system of sign controls that is uniform, balanced, and minimizes the number and size of signs while ensuring an opportunity for effective advertising.

D-16.1  Adequately control the size, type, design, and location of signs.
D-16.2 Address the removal of nonconforming signs over time.
D-16.3 Promote the clear identification of and direction to businesses.
D-16.4 Complement site and building design.
D-16.5 Encourage visual consistency at street level and for passing motorists.

Sustainable Design

GOAL D-17 Conserve energy through materials and systems that reduce energy and resource consumption.
D-17.1 Promote the capture and re-use of existing on-site resources.
D-17.2 Encourage energy-efficient lighting solutions.
D-17.3 Promote materials and systems with long life cycles to reduce replacement waste.
D-17.4 Encourage the use of recycled building materials.
D-17.5 Promote recyclable or conservation-oriented building materials and techniques.
D-17.6 Encourage water quality treatment techniques within overall site design.
D-17.7 Encourage building, landscaping, and site design that maximize passive solar gain.
Chapter 6: ECONOMIC DEVELOPMENT ELEMENT

CONTENTS

Introduction.........................................................................................................................6-2
  Commute Trends ........................................................................................................6-2
  Industries ....................................................................................................................6-3
  Wages and Earnings....................................................................................................6-5
  Employment and Education .......................................................................................6-6
  Resource-Based Industries .........................................................................................6-8
  Goods Movement .......................................................................................................6-9

Economic Vitality ..........................................................................................................6-12
  Industrial Uses and Freight Movement ......................................................................6-12
  Commercial Areas ......................................................................................................6-13
  Resource-Based Uses ..................................................................................................6-13
  Business and Workforce Education and Training ......................................................6-14
INTRODUCTION

Pierce County strives to strengthen existing business and industry and assist new business to locate in the County. This adds to the diversity of economic opportunity and employment, increasing the ratio of jobs to housing, and decreasing the proportion of workers commuting long distances to work.

The main goal of the Economic Development Element is to support the business community. This is done through policies and programs that protect companies from incompatible neighboring uses; connect them with available resources; help them navigate government regulations; assure room for new or expanding companies; protect and enhance freight corridors; support resource-based uses, and; provide and support educational opportunities for businesses and the labor force. Those areas of focus are intended to enhance the ability of businesses to operate profitably in Pierce County and thereby increase opportunities for employment and improve the *jobs-housing balance*. Businesses are the entities that create jobs. Increasing employment opportunities within the county requires more than making sure there is sufficient land to accommodate businesses. It requires proactively working with companies so they can be as competitive as possible. By increasing the number jobs close to where people live and play, the proportion of the workforce that commutes out of the county for work can be decreased, with a simultaneous increase in quality of life.

COMMUTE TRENDS

Table 6-A shows that just over 70% of the labor force living in Pierce County also work in Pierce County. The vast majority of workers who commute out of Pierce County for employment work in King and Snohomish counties. About 86,000 people, or nearly 28% of the labor force, regularly commute north. Another 11,000 workers travel to Kitsap and Thurston counties, with about 5,500 traveling to other locations. Having those workers who commute out of the county work closer to home would reduce traffic congestion and air pollution, as well as make more time available for them to spend with their families or be involved in civic life.

<table>
<thead>
<tr>
<th>Total Labor Force</th>
<th>363,698</th>
<th>100.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in Pierce County</td>
<td>261,035</td>
<td>71.8%</td>
</tr>
<tr>
<td>Work in King or Snohomish</td>
<td>86,223</td>
<td>23.7%</td>
</tr>
<tr>
<td>Work in Kitsap</td>
<td>4,025</td>
<td>1.1%</td>
</tr>
<tr>
<td>Work in Thurston</td>
<td>6,829</td>
<td>1.9%</td>
</tr>
<tr>
<td>Work Elsewhere</td>
<td>5,586</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2006-2010 American Community Survey
INDUSTRIES

Pierce County’s economy is anchored by three main industry clusters, including healthcare and medical services, commerce related to the Port of Tacoma, and the military operations at Joint Base Lewis-McChord. While manufacturing still provides an important base of economic activity that exports value and therefore brings new dollars into the county, the service sector has steadily increased as a proportion of total employment for the last four decades. Most recently, earnings from goods-producing industries have declined from 18.4% of non-farm earnings in 2001, to 13.6% in 2013. At the same time, the non-goods-producing sectors increased from 81.6% of non-farm earnings to 86.4%.

Comparison of industry employment in Pierce County to the United States as a whole reflects the core anchor industries, but also reflects the diversity of the local economy. The top five private-sector industries according to location quotient (LQ), a measure of relative employment concentration, are: Construction with 7.75% of private employment; Transportation and Warehousing with 5.59% of private employment; Health Care and Social Assistance with 20.65% of private employment; other Services with 4.51% of private employment, and; Retail Trade with 14.91% of private employment. Manufacturing accounts for 7.75% of private employment which is substantially lower than the national proportion of 10.62%.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Pierce County LQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Industry: Total, all industries</td>
<td>1.00</td>
</tr>
<tr>
<td>NAICS 11 Agriculture, forestry, fishing and hunting</td>
<td>0.35</td>
</tr>
<tr>
<td>NAICS 21 Mining, quarrying, and oil and gas extraction</td>
<td>0.10</td>
</tr>
<tr>
<td>NAICS 22 Utilities</td>
<td>0.58</td>
</tr>
<tr>
<td>NAICS 23 Construction</td>
<td>1.50</td>
</tr>
<tr>
<td>NAICS 31-33 Manufacturing</td>
<td>0.75</td>
</tr>
<tr>
<td>NAICS 42 Wholesale trade</td>
<td>1.08</td>
</tr>
<tr>
<td>NAICS 44-45 Retail trade</td>
<td>1.12</td>
</tr>
<tr>
<td>NAICS 54 Professional and technical services</td>
<td>0.51</td>
</tr>
<tr>
<td>NAICS 55 Management of companies and enterprises</td>
<td>0.24</td>
</tr>
<tr>
<td>NAICS 56 Administrative and waste services</td>
<td>0.93</td>
</tr>
<tr>
<td>NAICS 61 Educational services</td>
<td>0.78</td>
</tr>
<tr>
<td>NAICS 62 Health care and social assistance</td>
<td>1.33</td>
</tr>
<tr>
<td>NAICS 48-49 Transportation and warehousing</td>
<td>1.49</td>
</tr>
<tr>
<td>NAICS 51 Information</td>
<td>0.55</td>
</tr>
<tr>
<td>NAICS 52 Finance and insurance</td>
<td>0.75</td>
</tr>
<tr>
<td>NAICS 53 Real estate and rental and leasing</td>
<td>1.08</td>
</tr>
<tr>
<td>NAICS 71 Arts, entertainment, and recreation</td>
<td>1.02</td>
</tr>
</tbody>
</table>
Industries in Pierce County with the greatest relative industry concentration or total share of employment are not the industries with the highest average annual wages. Construction, which ranks first in LQ, ranks 10th in average annual wage, Transportation and Warehousing ranks 11th, Health Care and Social Assistance ranks 12th, Other Services ranks 18th and Retail Trade ranks 17th. Of those five industries, Other Services and Retail trade pay well below the overall county average and account for 17.4% of the total employment. The highest compensated industries, Utilities, Finance and Insurance, and Management of Companies, account for only 3.5% of total employment. Federal, state and local government employment accounts for 20.5% of total employment and ranks 9th in average annual wage, while manufacturing, which ranks 4th in wages accounts for 6.3% of total employment.

| Table 6-C: Average Annual Wages and Employment by Industry |
|---|---|---|---|---|---|---|---|
| 2 digit | Industry description | Firms | Total 2013 wages paid | Average Annual Employment | Average annual wage |
| NAICS | | Count | % | Total | % | Total | % | Average | Rank |
| TOTAL | Total | 21,185 | 100.0 | $12,020,527,868 | 100.0 | 269,877 | 100.0 | $44,541 |
| 11 | Agriculture, forestry, fishing and hunting | 124 | 0.6 | $27,416,362 | 0.2 | 809 | 0.3 | $33,889 | 15 |
| 21 | Mining | 10 | 0.0 | $8,691,832 | 0.1 | 162 | 0.1 | $53,653 | 8 |
| 22 | Utilities | 26 | 0.1 | $45,589,550 | 0.4 | 601 | 0.2 | $75,856 | 1 |
| 23 | Construction | 2,180 | 10.3 | $867,733,383 | 7.2 | 16,643 | 6.2 | $52,138 | 10 |
| 31-33 | Manufacturing | 555 | 2.6 | $1,025,740,197 | 8.5 | 17,015 | 6.3 | $60,284 | 4 |
| 42 | Wholesale trade | 1,104 | 5.2 | $667,231,009 | 5.6 | 11,824 | 4.4 | $56,430 | 6 |
| 44-45 | Retail trade | 1,516 | 7.2 | $963,996,982 | 8.0 | 32,163 | 11.9 | $29,972 | 17 |
| 48-49 | Transportation and warehousing | 449 | 2.1 | $625,811,996 | 5.2 | 12,006 | 4.4 | $52,125 | 11 |
| 51 | Information | 122 | 0.6 | $156,427,120 | 1.3 | 2,834 | 1.1 | $55,197 | 7 |
| 52 | Finance and insurance | 498 | 2.4 | $525,180,538 | 4.4 | 8,027 | 3.0 | $65,427 | 2 |
| 53 | Real estate and rental and leasing | 661 | 3.1 | $133,692,069 | 1.1 | 4,095 | 1.5 | $32,648 | 16 |
| 54 | Professional and technical services | 1,341 | 6.3 | $467,864,819 | 3.9 | 7,803 | 2.9 | $59,960 | 5 |
### Table 6-D: Industry Analysis

<table>
<thead>
<tr>
<th>2 digit NAICS</th>
<th>Industry description</th>
<th>Firms</th>
<th>Total 2013 wages paid</th>
<th>Average Annual Employment</th>
<th>Average annual wage</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Management of companies and enterprises</td>
<td>41</td>
<td>$58,392,892</td>
<td>932</td>
<td>$62,653</td>
<td>3</td>
</tr>
<tr>
<td>56</td>
<td>Administrative and waste services</td>
<td>974</td>
<td>$590,144,634</td>
<td>14,592</td>
<td>$40,443</td>
<td>13</td>
</tr>
<tr>
<td>61</td>
<td>Educational services</td>
<td>205</td>
<td>$150,266,599</td>
<td>3,897</td>
<td>$38,560</td>
<td>14</td>
</tr>
<tr>
<td>62</td>
<td>Health care and social assistance</td>
<td>1,535</td>
<td>$1,915,524,857</td>
<td>39,210</td>
<td>$48,853</td>
<td>12</td>
</tr>
<tr>
<td>71</td>
<td>Arts, entertainment, and recreation</td>
<td>224</td>
<td>$82,389,695</td>
<td>3,949</td>
<td>$20,863</td>
<td>19</td>
</tr>
<tr>
<td>72</td>
<td>Accommodation and food services</td>
<td>1,259</td>
<td>$400,687,728</td>
<td>23,276</td>
<td>$17,215</td>
<td>20</td>
</tr>
<tr>
<td>81</td>
<td>Other services, except public administration</td>
<td>8,168</td>
<td>$352,871,128</td>
<td>14,787</td>
<td>$23,864</td>
<td>18</td>
</tr>
<tr>
<td>GOV</td>
<td>Government</td>
<td>193</td>
<td>$2,954,874,478</td>
<td>55,252</td>
<td>$53,480</td>
<td>9</td>
</tr>
</tbody>
</table>


One of the most striking shifts in the structure and composition of industrial activity can be attributed to the Federal civilian and military sectors. Federal civilian and military operations constituted the largest industry category in the County in 1970, accounting for fully 24.2% of non-farm earnings. By 2001, this had dipped to 12.3%. With the advent of two wars in the Middle East and Army transformation, the sector increased steadily until 2011 when it represented 21.7% of total non-farm earnings.

### Wages and Earnings

As shown in Table 6-D, the average wage per job in Washington as a percent of the national average has fluctuated in the past four decades from a high of 110% in 1999 to a low of 96.5% in 1988. Pierce County's percentage of national average wage per job has stayed fairly stable during that time, averaging 92.5%. The county's percentage of Washington's average wage per job also remained fairly stable from 1970 through 1995, averaging 92.6%. It then fell sharply from 1996 through 2000 and hovered around that lower rate through 2013, averaging just 86.2%, indicating that some benefits from a stronger economy in parts of Washington have not been felt across all areas.
Trends in employment, wages and industry change have been long-standing. With data from the U.S. Bureau of Economic Analysis, components of income were compared with the State, the nation and other Washington counties. Pierce County, with the 2nd largest population in Washington also had the second highest total personal income in 2013. The County had 11.8% of the State’s population and captured 10.5% of the total State personal income. Average annual change in total personal income in Pierce County, adjusted for inflation, has remained fairly steady in each of the successive past four decades, from 2.7% in the 1970s, to 2.9% in the 1980s, and 1990s, returning to 2.7% in the 2000’s. Pierce County ranked 34th in income growth in the State in the 1970s, 10th during the 1980s, 17th in the 1990’s, and 9th in the 2000’s.

Paralleling a national trend, net industry earnings grew much less than property income and transfer payments in Pierce County. Transfer payments (income from retirement or social service sources) increased 233% in real terms between 1970 and 2000, and another 106% from 2001 through 2013. Property income (income from dividends, interest, rents and royalties) grew by 211% and 74% respectively. Net industry earnings (wages from employment), in comparison, increased a modest 75% in the earlier period and 57% most recently. By 1989, roughly one out of every three dollars of Pierce County personal income came from either transfer payments or property income. That proportion stayed fairly steady through the 1990s, but had increased to 36% by 2013. Part of this change is due to the presence of military installations in the County which contributes to a high concentration of military retirement pensions and veterans’ benefit payments.

In 2013, per capita income in Pierce County was $43,982. Per capita income was $783 or 1.7% below that of the national average and $3,735 or 7.8% below the Washington average. Pierce County ranked 8th among Washington’s 39 counties in per capita income in 2013. The difference between per capita income in Pierce County and the nation grew fairly steadily from the 70’s through the 90’s. Per capita income was 106% of the national average in 1970, but slipped to a four-decade low of 91% in 1988 and 1989, before rising to 103% in 2009 and dropping somewhat to 98% in 2013. During the same period, State per capita income fluctuated relative to the national average from a low of 101% to a high of 109%.

**EMPLOYMENT AND EDUCATION**

One correlate of the very low industry concentrations in industries such as Information, Professional and Technical Services and Management of Companies is low levels of educational attainment relative to other counties in the region, shown in Table 6-E. Of the 5 counties that border the southern end of Puget Sound, Pierce County has the highest proportion of 18- to 24-
year-olds with less than a high school diploma, and at 17.4%, a rate higher than the state as a whole. It also has the second lowest rate in the region of young people with a Bachelor’s degree or higher, and at 6.2% that rate is lower than the state as a whole. For the population 25 years and older, Pierce County has a higher rate of people who have completed 9th through 12th grade without achieving a diploma than other counties in the region and the State as a whole, and lower rates of attaining Bachelor’s and Graduate degrees, and has the highest proportion of people who’s highest level of educational attainment is high school.

Table 6-E: Educational Attainment

<table>
<thead>
<tr>
<th>Subject</th>
<th>Washington Estimate</th>
<th>King Estimate</th>
<th>Kitsap Estimate</th>
<th>Pierce Estimate</th>
<th>Snohomish Estimate</th>
<th>Thurston Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 18 to 24 years</td>
<td>659,539</td>
<td>178,915</td>
<td>26,483</td>
<td>80,727</td>
<td>63,774</td>
<td>23,663</td>
</tr>
<tr>
<td>Less than high school graduate</td>
<td>16.40%</td>
<td>13.00%</td>
<td>13.90%</td>
<td>17.40%</td>
<td>16.80%</td>
<td>15.80%</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>29.70%</td>
<td>23.50%</td>
<td>38.70%</td>
<td>34.30%</td>
<td>33.50%</td>
<td>30.70%</td>
</tr>
<tr>
<td>Some college or associate’s degree</td>
<td>44.50%</td>
<td>45.70%</td>
<td>41.50%</td>
<td>42.10%</td>
<td>41.90%</td>
<td>46.10%</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>9.30%</td>
<td>17.80%</td>
<td>5.90%</td>
<td>6.20%</td>
<td>7.90%</td>
<td>7.50%</td>
</tr>
<tr>
<td>Population 25 years and over</td>
<td>4,575,140</td>
<td>1,375,760</td>
<td>170,748</td>
<td>526,671</td>
<td>487,130</td>
<td>174,318</td>
</tr>
<tr>
<td>Less than 9th grade</td>
<td>4.10%</td>
<td>3.50%</td>
<td>1.80%</td>
<td>3.00%</td>
<td>2.90%</td>
<td>2.20%</td>
</tr>
<tr>
<td>9th to 12th grade, no diploma</td>
<td>5.90%</td>
<td>4.40%</td>
<td>4.50%</td>
<td>6.50%</td>
<td>6.10%</td>
<td>4.80%</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>23.60%</td>
<td>17.00%</td>
<td>23.50%</td>
<td>28.90%</td>
<td>24.40%</td>
<td>23.20%</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>25.10%</td>
<td>20.40%</td>
<td>30.00%</td>
<td>27.40%</td>
<td>27.10%</td>
<td>27.50%</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>9.50%</td>
<td>8.10%</td>
<td>10.60%</td>
<td>10.10%</td>
<td>10.60%</td>
<td>9.90%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>20.40%</td>
<td>29.10%</td>
<td>19.00%</td>
<td>15.60%</td>
<td>20.30%</td>
<td>19.70%</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>11.50%</td>
<td>17.40%</td>
<td>10.50%</td>
<td>8.40%</td>
<td>8.60%</td>
<td>12.60%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

The impact of lower education levels on poverty and earnings is dramatic and persistent, as shown in Table 6-F. In all five South Sound counties and the State as a whole, between 22% and 27% of people age 25 and older with less than a high school degree are in poverty, while for people with a Bachelor’s degree or higher the rate ranges from 3.2% to 4.2%. Just achieving a high school equivalency is associated with a poverty rate half that of non-completers.
Earnings follow a similar pattern. In Pierce County, people with less than a high school diploma have median earnings just over half that of people who have completed high school equivalency. Earnings continue to rise with increased levels of education. For Pierce County residents, having some college or an associate’s degree, which includes certification from a vocational/technical program, is associated with median earnings nearly equal to the countywide median for all workers 25 years and older.

Table 6-F: Poverty Rate for the Population 25 Years and Over for Whom Poverty Status is Determined by Educational Attainment Level

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Washington</th>
<th>King</th>
<th>Kitsap</th>
<th>Pierce</th>
<th>Snohomish</th>
<th>Thurston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school graduate</td>
<td>26.20%</td>
<td>27.40%</td>
<td>25.00%</td>
<td>25.30%</td>
<td>21.80%</td>
<td>22.40%</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>12.50%</td>
<td>13.00%</td>
<td>12.40%</td>
<td>11.20%</td>
<td>10.40%</td>
<td>9.40%</td>
</tr>
<tr>
<td>Some college or associate's degree</td>
<td>9.70%</td>
<td>9.40%</td>
<td>7.80%</td>
<td>8.90%</td>
<td>7.90%</td>
<td>9.60%</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>4.20%</td>
<td>4.10%</td>
<td>3.20%</td>
<td>3.70%</td>
<td>3.30%</td>
<td>3.90%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Table 6-G: Median Earnings in the Past 12 Months (In 2013 Inflation-Adjusted Dollars)

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Washington</th>
<th>King</th>
<th>Kitsap</th>
<th>Pierce</th>
<th>Snohomish</th>
<th>Thurston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 25 years and over with earnings</td>
<td>$39,381</td>
<td>$46,534</td>
<td>$40,666</td>
<td>$40,098</td>
<td>$43,102</td>
<td>$41,757</td>
</tr>
<tr>
<td>Less than high school graduate</td>
<td>$20,821</td>
<td>$22,231</td>
<td>$19,979</td>
<td>$22,713</td>
<td>$25,775</td>
<td>$20,543</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>$30,768</td>
<td>$31,350</td>
<td>$30,558</td>
<td>$32,973</td>
<td>$34,546</td>
<td>$32,995</td>
</tr>
<tr>
<td>Some college or associate's degree</td>
<td>$36,596</td>
<td>$39,568</td>
<td>$39,708</td>
<td>$39,104</td>
<td>$41,239</td>
<td>$39,549</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>$53,044</td>
<td>$58,811</td>
<td>$53,083</td>
<td>$52,513</td>
<td>$58,618</td>
<td>$51,759</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>$67,443</td>
<td>$75,879</td>
<td>$66,513</td>
<td>$65,282</td>
<td>$71,376</td>
<td>$65,716</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Resource-Based Industries

Resource-based industries represent a relatively small portion of employment, wages and economic output in Pierce County. But they play an important role in the overall land use strategy and economic activities in rural areas. Farming, ranching, aquaculture, mining and forestry make use of living landscapes to generate goods and raw materials for the urban areas, as well as export out of the county which brings in new money. Food and landscape plants find their way into farmers markets, stores and restaurants. Clams, oysters and geoduck are served.
in local restaurants and are favorite imports in Asian countries. Sand and gravel from Pierce County has been used in the construction of the region’s cities for over a century, and the timber harvested here is used to frame and furnish homes and make paper products for everyday life. In addition to their realized economic contribution, the rural resource lands also assist with natural functions such as storm water control, carbon uptake and biological diversity.

GOODS MOVEMENT

Seventy percent of the goods that arrive at the Port of Tacoma by ship are transported to markets in other parts of the nation, and those that are manufactured by local industry are mainly shipped to markets outside of Pierce County. Given the importance to the Pierce County economy of activities at the Port of Tacoma and the manufacturing and the transportation and warehousing industry clusters, it follows that the area is dependent on a robust transportation network. Freight transportation networks, like any networks, are most efficient and robust when redundancy is built into the system. Existing freight corridors that connect the Frederickson Manufacturing and Industrial Center with the Port of Tacoma, and connect all of the areas of industrial concentration in Pierce County to markets in other regions are incomplete and lack redundancy. A complete freight transportation network, including the completion of SR 167, SR 704 and the Canyon Road northerly extension, would increase system efficiency and reliability, and facilitate the creation of well-paying jobs in the County.

Businesses create jobs, and an operating environment supportive of new and expanding businesses is also conducive to job creation. The challenges facing Pierce County’s economy, such as lower levels of educational attainment, lower concentrations of high-paying industries and lower average wages contribute to a high level of out-commuting by the local labor force. The policies contained in the Economic Development Element are intended to address some of the core issues of workforce and business development, as well as support the completion of the County’s freight transportation network and recognize the importance of resource-based industries to the rural areas. (See Map 6-1 and Map 6-2)
Map 6-1: Existing Incomplete Freight Transportation Network
Map 6-2: Connections Needed to Complete the Freight Network
ECONOMIC VITALITY

GOAL EC-1  Encourage employment growth within designated areas throughout the County.

   EC-1.1  Protect existing viable business activities from incompatible neighboring uses.

   EC-1.1.1  Recognize the urban or rural context of the area where business development efforts are pursued.

   EC-1.2  Create and encourage partnerships between government and business.

   EC-1.2.1  Develop coordinated programs that provide a variety of assistance to small businesses.

   EC-1.2.2  Develop an inventory of available business assistance programs.

   EC-1.2.3  Provide information and technical assistance to aid the retention and expansion of existing business.

   EC-1.2.4  Create new mechanisms to fund infrastructure and support commercial and industrial development.

   EC-1.2.5  Encourage redevelopment to convert outdated and underutilized land and buildings to high-valued or appropriate land uses, when such ventures provide public benefits.

   EC-1.3  Assist businesses with government regulation.

   EC-1.4  Consider the cumulative financial impacts on businesses when adopting new regulations, policies, and decision making processes.

   EC-1.4.1  Coordinate with other local and regional jurisdictions and organizations to minimize duplication of efforts and maximize resources.

   EC-1.5  Expand economic activity and diversify the economic base by encouraging growth opportunities and recruiting new business to the region.

   EC-1.5.1  Support the work of the Puget Sound Regional Council’s Prosperity Partnership and regional economic development strategy.

   EC-1.5.2  Support the work of the Economic Development Board in promoting local industry clusters.

   EC-1.6  Support work to enhance the military value of Joint Base Lewis-McChord.

   EC-1.7  Encourage programs that support tourism and recreation.

   EC-1.7.1  Encourage the development of appropriate facilities for tourist use.

INDUSTRIAL USES AND FREIGHT MOVEMENT

GOAL EC-2  Emphasize new industrial development and expansion of existing uses within industrial areas.
EC-2.1 Support the state’s allowance of industrial revenue bonds.
EC-2.2 Determine the long-range demand for commercial and industrial space and identify suitable areas for commercial and industrial development.
EC-2.3 Reserve land for future industrial development on large sites well suited for industrial uses based on current population growth forecasts and recent trends in industrial job density.
EC-2.4 Work closely with Pierce County cities and towns to assist with industrial development throughout the County.
EC-2.5 Ensure that Frederickson is maintained as a Regional Manufacturing/Industrial Center under the Puget Sound Regional Council criteria for centers.
EC-2.6 Support PSRC designation of a Manufacturing/Industrial Center as proposed by the cities of Sumner and Pacific.
EC-2.7 Support and actively engage in efforts to complete the freight movement transportation network throughout the County, concentrating on completion of State Routes 167 and 704, and congestion relief for Interstate 5.
EC-2.8 Provide sufficient road capacity in commercial/industrial areas to allow freight traffic to flow smoothly and be kept away from residential areas.
EC-2.9 Develop regulations and zoning which encourage industrial development.

COMMERCIAL AREAS

GOAL EC-3 Develop programs that support economically vibrant commercial areas throughout the County.
EC-3.1 Provide education and marketing assistance,
EC-3.2 Encourage programs that highlight property maintenance and façade improvement.
EC-3.3 Support community events.
EC-3.4 Work with existing business associations.
EC-3.5 Evaluate the needs unique to each area.
EC-3.6 Provide a point of contact within County government to help address needs.

RESOURCE-BASED USES

GOAL EC-4 Emphasize the importance of resource industries as a part of Pierce County’s heritage, which provide public benefit, including open space, hydrologic function, and food security.
EC-4.1 Enhance and protect resource-based industries and promote their ability to provide public goods.

EC-4.2 Raise awareness of and facilitate consumer access to local resource products.

- **EC-4.2.1** Reduce barriers to resource production.
- **EC-4.2.2** Include resource industries in business development programs.
- **EC-4.2.3** Promote the Transfer of Development Rights (TDRs).
- **EC-4.2.4** Provide information regarding Current Use Assessment and other such programs to reduce operational costs.
- **EC-4.2.5** Consider requiring title notification for parcels adjoining resource uses where such protections could help avoid conflicts.
- **EC-4.2.6** Support development of accessory and associated uses such as non-timber forest products, custom saw mills, food processing, and resource tourism.
- **EC-4.2.7** Coordinate with applicable organizations to assist local resource-based businesses.

EC-4.3 Promote the sale of primarily locally grown agricultural products between May and November as they are harvested.

EC-4.4 Consider and mitigate potential negative impacts to existing agricultural operations.

- **EC-4.4.1** Locate new development to minimize or prevent future conflicts.

EC-4.5 Commit resources to improving the viability of agriculture.

EC-4.6 Investigate and implement a variety of methods to provide funding for agricultural viability.

**BUSINESS AND WORKFORCE EDUCATION AND TRAINING**

**GOAL EC-5** Actively participate in the development of a properly educated and trained workforce.

- **EC-5.1** Encourage all levels of educational opportunities and training for Pierce County citizens such as universities, colleges, vocational schools, and apprenticeship programs.
- **EC-5.2** Provide educational opportunities to businesses on topics that are not sufficiently addressed through other venues.

**GOAL EC-6** Encourage business owners to participate in local programs and educational seminars.

- **EC-6.1** Target and promote educational opportunities that teach small business operation.

**Industries include (EC-4.1):**
- Agriculture
- Aquaculture
- Forestry
- Mining
- Marine-related businesses
EC-6.2 Promote available information, technical assistance, and loans for business expansion and job creation.

EC-6.3 Provide information and technical assistance to aid expansion of existing businesses.

EC-6.3.1 Coordinate business assistance activities with other local organizations.

EC-6.4 Utilize the resources of local organizations to provide business services.

GOAL EC-7 Promote job search and skills training opportunities for employers and potential employees.
Chapter 7: Environment Element

Contents

Introduction .................................................................................................................................7-2
Vegetation Retention .................................................................................................................7-3
Air Quality ................................................................................................................................7-3
Water Quality ..............................................................................................................................7-4
Shorelines .................................................................................................................................7-5
Fish and Wildlife .........................................................................................................................7-6
Terrestrial and Aquatic Ecosystems .........................................................................................7-7
Hazardous Areas .........................................................................................................................7-7
Wetlands ....................................................................................................................................7-8
Light Pollution ............................................................................................................................7-9
Noise Pollution ...........................................................................................................................7-9
Best Available Science, Review, and Adaptive Management .....................................................7-9
Adaption / Mitigation ..................................................................................................................7-10
INTRODUCTION

The Environment Element emphasizes maintaining our natural environment and protecting people's lives and properties through responsible land use management. Pierce County has historically been an attractive area to live in because of attributes of the natural environment; clean air and water, lush forest areas, and a beautiful physical setting situated between saltwater and mountains. Protection of clean air, land, and water is essential if residents of Pierce County are to maintain a healthy lifestyle and have the resources to support population growth and economic development.

Critical areas are defined in the Growth Management Act (GMA) to include wetlands, areas with a critical recharging effect on aquifers used for potable water (aquifer recharge areas), fish and wildlife habitat areas, frequently flooded areas, and geologically hazardous areas. These areas are further defined in Washington Administrative Code (WAC) 365-190.

Achieving conservation and restoration of the environment and protection of lives and property are possible through responsible land use management. Strategies emphasized in this element which achieve these goals include maintenance or improvement of water and air quality, noise control regulations, protection of critical areas, and education to further awareness of environmental issues.

GOAL ENV-1  Conserve and protect critical and environmentally sensitive areas.

ENV-1.1 Recognize the importance of critical areas in supporting and protecting human life and safety.

ENV-1.2 Recognize the importance of critical areas in contributing to a high quality of life.

ENV-1.3 Adopt appropriate regulations and processes to protect environmental resources.

ENV-1.4 Establish annual countywide and agency-specific performance goals included within a sustainability plan or strategic (business) plan, and budgets.

ENV-1.5 Coordinate with other entities to protect critical areas, address environmental issues, and fulfill ecosystem restoration obligations.

ENV-1.6 Explore partnerships with agencies to provide public awareness and educational opportunities that promote environmental stewardship.

RESOURCES:

- Chapter 17A.40 PCC Stormwater Drainage
- Title 18D PCC Development Regulations – Environmental
- Title 18E PCC Development Regulations – Critical Areas
- Title 18J PCC Development Regulations – Design Standards
- Chapter 19D.120 PCC Pierce County Coordinated Water System Plan
- Puget Sound Clean Air Agency
- Tacoma-Pierce County Health Department
ENV-1.7 Provide current and future property owners information regarding land use restrictions associated with the property.

ENV-1.8 Coordinate with state, federal, educational institutions, and Tribal agencies to access the most current and best available science.

VEGETATION RETENTION

GOAL ENV-2 Ensure native vegetation is retained and protected in public and private development.

ENV-2.1 Accurately identify pre-project vegetative conditions through the use of aerial photographs and site visits.

ENV-2.2 Conserve and restore native vegetation with emphasis on riparian vegetation.

ENV-2.3 Provide education on the environmental functions and processes provided by native vegetation.

ENV-2.4 Determine reasonable standards for clearing that can be done for development.

ENV-2.4.1 Require mitigation for vegetation removal.

AIR QUALITY

Pierce County is working to improve winter time air quality. Winter time wood smoke from people heating their homes contributes the majority of pollution in the air. The concerns are both human health and economic development.

GOAL ENV-3 Attain a high level of air quality to ensure a reduction in adverse health impacts and to provide clear visibility for the scenic views.

ENV-3.1 Continue to work to meet federal and state air quality requirements.

ENV-3.2 Encourage use of clean heating sources to decrease air pollution.

ENV-3.3 Provide information to the public on proper use of wood stoves.

ENV-3.4 Develop land use practices which improve air quality, including infill development and concentrating high density land uses which reduce vehicle trips.

ENV-3.5 Recognize the relationship between reducing vehicle trips and reducing carbon emissions.

ENV-3.6 Encourage development and implementation of transportation-based strategies that reduce pollutants, smog, and diesel air-toxins.

Puget Sound Clean Air Agency is a special purpose, regional government agency chartered by state law in 1967 under the Washington Clear Air Act.

Strategies include (ENV-3.6):

- The increased usage of transit
- Nonmotorized transportation modes
- The promotion and accommodation of high occupancy vehicles
- The promotion of alternative energy-based transportation infrastructure and fuels
ENVI-3.7 Pursue the use of alternative cleaner-burning fuels.

ENVI-3.8 Eliminate residential burning of garbage and yard debris by providing curbside solid and organic waste collection services.

ENVI-3.9 Consider air quality benefits when reviewing mandatory garbage collection or organic waste subscription services.

GOAL ENV-4 Coordinate air quality improvement efforts with agencies and jurisdictions to monitor transportation demand management programs benefits, share technical information on air quality, and integrate land use and transportation policies.

ENV-4.1 Coordinate with local agencies and jurisdictions to develop transportation control measures and similar mobile source emission reduction programs that may be warranted to attain or maintain air quality health standards.

ENV-4.2 Coordinate with agencies to provide information on air quality problems and measures to improve air quality.

**WATER QUALITY**

The water quality of streams, lakes, groundwater, and Puget Sound influences the economic, recreational, and natural environments of Pierce County.

Aquifers provide the primary source of domestic and industrial water for most of Pierce County. Aquifer recharge area soils are highly permeable and allow for the infiltration of surface waters into groundwater. Below the surface, the infiltrating water enters the aquifer, a saturated geologic layer which can yield sufficient quantities of water to be used as a source of public or private water supply. The use of low impact development is a priority in order to help protect and enhance the environment, air and water quality, and the availability of water.

GOAL ENV-5 Protect aquifers and surface waters to ensure that water quality and quantity are maintained or improved.

ENV-5.1 Ensure coordination among all appropriate County departments and other agencies in the review and analysis of water quality.

ENV-5.2 Identify and map important aquifers, aquifer recharge areas, and surface waters.

ENV-5.3 Ensure adequate recharge of aquifers utilized for domestic water supplies, and protect the quality of water in those aquifers.

ENV-5.4 Manage and plan water resources on a watershed basis.

ENV-5.5 Develop standards for activities that may adversely impact water quality or quantity in aquifers, watersheds, and surface waters, consistent with state and federal laws.

ENV-5.6 Require performance standards for new development and retrofitting of existing facilities.
ENV-5.7  Encourage the incorporation of permit information from the Tacoma-Pierce County Health Department into the County’s permit review system.

ENV-5.8  Encourage the proper disposal of agricultural animal waste.

ENV-5.9  Require the correction of failing septic systems to prevent contamination of surface water and groundwater.

ENV-5.10 Protect water quality in commercial and recreational shellfish areas.

ENV-5.11 Protect water quality and quantity necessary to support healthy fish populations.

ENV-5.12 Give preference to natural solutions for maintaining aquifer recharge quantity and quality, including the maintenance of undisturbed vegetation for new developments located within mapped aquifer recharge areas.

ENV-5.13 Reduce runoff pollutants into surface and groundwater.

ENV-5.13.1 Address stormwater runoff and problems of nonpoint source pollution.

ENV-5.14 Require the use of low impact development principles and best management practices for stormwater drainage including use of infiltration systems, such as bioretention, rain gardens, and permeable pavement, to maintain water quality for fish and wildlife.

ENV-5.14.1 Examine local factors such as densities and soil types when determining appropriate standards and technologies.

ENV-5.14.2 Design new developments to minimize areas of impervious ground cover.

ENV-5.15 Coordinate with other interested agencies and groups to strengthen educational programs on practices that protect groundwater and surface water quality and methods to conserve water resources.

ENV-5.16 Ensure information regarding saltwater intrusion and techniques for prevention are available.

ENV-5.17 Promote public education on the appropriate type, amount, time, and location for application of pesticides.

ENV-5.18 Conservation measures and best management practices should include a range of technical and land use options.

ENV-5.19 Applicants for building permits, subdivisions, and divisions of land must demonstrate that the potable water needed to support the new development is available and meets drinking water standards.

SHORELINES

GOAL ENV-6 Recognize the adopted Pierce County Shoreline Master Program is the Shoreline Element of the Comprehensive Plan.

ENV-6.1 Implement the approved Shoreline Master Program.
GOAL ENV-7  Establish a long-term plan to evaluate and mitigate the cumulative impacts of land use activities on shorelines.

ENV-7.1  Ensure coordination among all appropriate County departments in regards to regulated activities along shorelines.

ENV-7.2  Implement a tracking process to monitor shoreline development, unauthorized activities, mitigation, and restoration.

ENV-7.3  Establish a review and analysis process to assess the efficiency of the County’s shoreline regulations.

FISH AND WILDLIFE

Pierce County contains a rich diversity of fish and wildlife habitats. Preservation of a full range of habitats provides numerous benefits to county residents, including: ensuring the preservation of rare species and maintaining ecosystems; significant economic benefits from commercial and recreational fishing and hunting; preservation of cultures, lifestyles, and livelihood which center on fish and wildlife resources; and providing aesthetic and open space values which contribute to the overall quality of life in a community.

GOAL ENV-8  Maintain and protect habitat conservation areas for fish and wildlife.

ENV-8.1  Adopt criteria to determine the presence or absence of fish and wildlife, and their habitat areas.

ENV-8.2  Place regulatory emphasis on protecting and achieving no net loss of critical habitat areas.

ENV-8.3  Maintain fish and wildlife movement corridors.

ENV-8.4  Emphasize the importance of healthy riparian corridors.

ENV-8.5  Discourage incompatible land uses near habitat conservation areas.

ENV-8.6  Pursue the permanent protection of fish and wildlife habitat conservation areas through various financing and acquisitions strategies.

ENV-8.7  Encourage landowners to maintain and enhance habitat areas.

ENV-8.8  Educate landowners on the importance of habitat conservation areas.

ENV-8.9  Work with other jurisdictions to address species and habitat restoration and recovery issues.

ENV-8.10  Encourage public education and outreach efforts that educate the public on ecosystem resources.

ENV-8.11  Seek cooperation with all entities on issues impacting fish and wildlife habitat.

ENV-8.11.1  Support efforts for research and monitoring fish and wildlife species and habitat quality.
**TERRESTRIAL AND AQUATIC ECOSYSTEMS**

**GOAL ENV-9** Maintain and where necessary improve terrestrial and aquatic ecosystems so that they maintain viable, reproducing populations of plants and animals

**ENV-9.1** Implement the recommendation of the watershed action plans as adopted by County Council.

**ENV-9.2** Coordinate ecosystem restoration strategies with federal, state, and non-profit organizations in watersheds regulated or managed by the County.

**ENV-9.3** Identify lands that represent the highest level of biological diversity and promote conservation of these ecosystems.

**ENV-9.4** Establish a program to identify long term cumulative impacts and identify mitigation options.

**HAZARDOUS AREAS**

Flooding is the most common natural disaster to occur in Pierce County, posing threats to lives, properties, and resources. Floods occur when a stream or river receives more water than its channel can accommodate. Severe flood damage can occur when river channels migrate to new locations. Floodways are areas that can be the greatest direct risk to life and property. Floods can originate from natural causes such as heavy rainfall, snowmelt or high groundwater. However, human activities can often increase the frequency and magnitude of flood events. Frequently flooded areas are normally adjacent to rivers or other water bodies and include the entire 100-year floodplain, that area which has a 1% chance of flooding in a given year. The floodplain receives water which overflows from the main channel of a stream or river.

Landslide and erosion hazards are common in hillside areas with steep and unstable slopes. The entire County is at risk in the event of an earthquake. However, areas underlain by certain geologic materials are more prone to ground shaking or liquefaction (the collapse of the ground caused by liquefied soil)—these areas are considered seismic hazard areas. Mine hazard areas are found in the old coal mining regions in eastern Pierce County. Hazards commonly associated with these areas are abandoned open mine shafts and the risk of ground collapse because of failure of underground mine tunnels. Volcanic hazards are found in the river valleys which originate on Mount Rainier. The major volcanic hazard to populous regions of Pierce County is catastrophic mudflows which periodically inundate these valleys.

**GOAL ENV-10** Avoid endangerment of lives, property, and resources in hazardous areas.

**ENV-10.1** Adopt criteria to determine the presence or absence of hazardous area including geologic and flood hazards.

**ENV-10.1.1** Provide public access to available data for known hazardous and critical areas.

**ENV-10.2** Develop standards so that future development minimizes threats to lives, property, and resources.
ENV-10.2.1 Require appropriate standards for site development and structural design in areas where the effects of the hazards can be mitigated.

ENV-10.2.2 Encourage low densities and low intensity land use activities in hazardous areas.

ENV-10.2.3 Direct critical and community facilities away from areas subject to catastrophic, life-threatening hazards where the hazards cannot be mitigated.

ENV-10.2.4 Direct sewer lines, utilities, and public facilities away from hazardous areas.

ENV-10.3 Maintain existing flood hazard reduction facilities on rivers and streams including dams, dikes, levees, and revetments.

ENV-10.4 Maintain natural river channel configurations whenever possible.

ENV-10.5 Pursue the public acquisition of flood hazard areas to minimize fiscal, environmental, property, and human loss.

ENV-10.6 Continue to participate in the National Flood Insurance Program Community Rating System so residents can obtain flood insurance.

ENV-10.7 Ensure damage to property and people is minimized.

ENV-10.7.1 Maintain an evacuation plan and lahar warning system for volcanic hazard areas.

ENV-10.7.2 Ensure that evacuation routes, procedures, and actions are in place.

ENV-10.7.3 Educate residents about hazards and what to do and where to go in the event of a natural disaster.

**Wetlands**

Wetlands are areas which have saturated soils or standing water for a part of the year, soils categorized as hydric, and vegetation associated with wetlands. Areas such as swamps, marshes, and bogs are generally considered wetlands.

**GOAL ENV-11** Establish appropriate long-term protection to ensure no net loss of wetlands.

ENV-11.1 Adopt criteria to determine the presence or absence of wetland areas.

ENV-11.2 Allow flexibility in wetland management or mitigation methods.

ENV-11.2.1 Allow the option of mitigation banking.

ENV-11.3 Allow innovation and equitable wetland management methods which protect public health, safety, or welfare.

ENV-11.4 Require wetland mitigation for impacts that cannot be avoided.

ENV-11.4.1 Consider regional needs for wetland functions when identifying mitigation requirements.
ENV-11.4.2  Locate mitigation actions within the same watershed, or ideally within the same sub-basin, if it is the best option for wetland function.

ENV-11.5  Consider regional needs when evaluating mitigation proposals.

ENV-11.6  Allow the management of wetland sites that have been legally altered.

ENV-11.7  Educate landowners on the importance of wetland systems.

ENV-11.8  Pursue the permanent protection of important wetland areas in Pierce County.

**LIGHT POLLUTION**

**GOAL ENV-12**  Reduce light pollution.

ENV-12.1  Encourage the use of reflectors and appropriate aiming on new outdoor lighting to minimize the upward scattering of light.

**NOISE POLLUTION**

**GOAL ENV-13**  Reduce, mitigate, and where possible eliminate noise problems.

ENV-13.1  Allow innovative methods of reducing or mitigating noise.

ENV-13.2  Reduce, mitigate, and where possible eliminate problems associated with noise-generating land uses.

ENV-13.3  Promote cooperation between Joint Base Lewis-McCord and Pierce County to address the reduction or mitigation of noise generating uses.

ENV-13.3.1  Establish a disclosure process advising property owners of possible noise impacts to property around JBLM.

**BEST AVAILABLE SCIENCE, REVIEW, AND ADAPTIVE MANAGEMENT**

The GMA (RCW 36.70A.172) requires that local jurisdictions include the best available science (BAS) in developing policies to designate critical areas and adopt development regulations. Pierce County is required to update, as necessary, these regulations based on BAS as part of the Comprehensive Plan Update. Original regulations for protection of geologically hazardous areas, aquifer recharge areas, wetlands, fish and wildlife habitat areas and frequently flooded areas were adopted in 1991 and 1992 and underwent a BAS review and update in 2002. An additional review during the 2015 update of Pierce County policies and regulations, it indicates that the regulations are based on BAS.

**GOAL ENV-14**  Designate and protect all critical areas using best available science.

ENV-14.1  Give special consideration to conservation and protection of anadromous fisheries.

**GOAL ENV-15**  Recognize the value of adaptive management for providing flexibility in administering critical area and shoreline regulations.
ENV-15.1 Establish a review and analysis process to assess the efficiency and effectiveness of County environmental regulations.

ENV-15.2 Prioritize post-project compliance monitoring.

ENV-15.3 Utilize new technologies and methodologies where appropriate to resolve environmental problems.

ENV-15.4 Ensure that staff members with expertise are involved in the review process for all critical area matters and all shoreline application types, including exemptions.

ENV-15.5 Require that regulated activities occur with avoidance of impacts as the highest priority, and apply lower priority measures only when higher priority measures are determined to be infeasible or inapplicable (see Table 7-A).

Table 7-A: Mitigation Sequencing

<table>
<thead>
<tr>
<th>Higher Priority</th>
<th>Mitigation Sequencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid the impact altogether by not taking a certain action or parts of actions.</td>
<td></td>
</tr>
<tr>
<td>Minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts.</td>
<td></td>
</tr>
<tr>
<td>Rectify the impact by repairing, rehabilitating, or restoring the affected environment.</td>
<td></td>
</tr>
<tr>
<td>Reduce or eliminate the impact over time by preservation and maintenance operations.</td>
<td></td>
</tr>
<tr>
<td>Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.</td>
<td></td>
</tr>
<tr>
<td>Monitor the impact and compensation of projects and take appropriate corrective measures.</td>
<td></td>
</tr>
</tbody>
</table>

Adaption / Mitigation

The County recognizes environmental conditions change. The adaption to these changes is best addressed using an interdisciplinary approach. Policies which provide methods to address these changes can be found in various Elements such as:

- Surface Water Management - Utilities Element
- Flood Hazard Reduction – Environment Element

Mitigation, including the reduction of greenhouse gases is addressed through the various policies of the Comprehensive Plan. These policies promote reduction in the vehicle miles traveled and the use of alternative energy sources. They can be found in various Elements such as:

- Multi-modal Transportation System – Transportation Element
- Compact Communities – Land Use Element
- Air Quality – Environment Element
- Alternative Energy – Utilities Element

Pierce County Comprehensive Plan | Environment Element
Chapter 8: ESSENTIAL PUBLIC FACILITIES ELEMENT

CONTENTS

Introduction ..................................................................................................... 8-2
Identification ................................................................................................... 8-2
Siting Considerations ....................................................................................... 8-2
Recognition of Existing Facilities ...................................................................... 8-4
Participation .................................................................................................... 8-4
INTRODUCTION

Essential Public Facilities are defined in the Growth Management Act (GMA) and include large, usually difficult to site facilities such as prisons, solid waste facilities, wastewater facilities, and airports. The County and its cities and towns may have additional public facilities that are essential to providing services to Pierce County residents.

GMA requires that comprehensive plans set out a process for identifying Essential Public Facilities to ensure that they are not precluded from being sited. This element outlines the process for identifying Essential Public Facilities, defines location criteria for siting facilities, and establishes appropriate development standards. The process recognizes and builds upon objectives and approaches adopted in the Pierce County Development Regulations implementing the Comprehensive Plan. The Development Regulations provide for sufficient, properly zoned land to accommodate any potential land use that may be wanted or needed in Pierce County.

IDENTIFICATION

GOAL EPF-1 Establish a process for identifying and siting Essential Public Facilities.

EPF-1.1 The facility meets the definition of an Essential Public Facility consistent with the GMA provision in RCW 36.70A.200; or

EPF-1.2 The facility is a public facility of statewide significance and is identified in the State Office of Financial Management list of capital projects consistent with RCW 36.70A.200(4).

SITING CONSIDERATIONS

GOAL EPF-2 Ensure that siting criteria reflect the facility needs to support projected population growth over at least 20 years and provide flexibility to accommodate technological advances.

EPF-2.1 Site new facilities or expansions to existing facilities to be consistent with the Pierce County Comprehensive Plan.

EPF-2.2 Work cooperatively with jurisdictions and agencies throughout the region to equitably site Essential Public Facilities.

EPF-2.3 Establish an interjurisdictional approach to siting Essential Public Facilities.

EPF-2.4 Consider land use compatibility when siting facilities.

EPF-2.4.1 Establish development regulations that make facilities compatible with their surroundings.

EPF-2.4.2 Enable the facility to be permitted outright in appropriate zoning classifications.
EPF-2.5 Require a new permit application when a proposed expansion of a designated Essential Public Facility exceeds the parameters specified in the original permit approval.

EPF-2.6 Essential Public Facilities shall not be precluded from locating in the County and shall be permitted when meeting applicable policies and regulations.

EPF-2.6.1 Conduct an analysis when a specific land use or category of land uses is proposed to be precluded from locating within Pierce County. To be precluded, the analysis must show that the proposal is not an Essential Public Facility or not an allowed use.

EPF-2.7 Establish means for mitigating a disproportionate financial burden and public health on jurisdictions caused by the siting of Essential Public Facilities.

EPF-2.7.1 The County shall review:

EPF-2.7.1.1 Forecasted needs based on the facility's service area and the level of service standard, with an allowance for technological innovations that may affect the forecasted needs;

EPF-2.7.1.2 Existing capacity at similar public facilities located elsewhere in the local community, county, region, or state, based on the service area and the level of significance;

EPF-2.7.1.3 The distribution of similar facilities to demonstrate that no one host community, county, or region is unduly burdened by concentration of such facilities;

EPF-2.7.1.4 Alternative sites that may include locations outside the unincorporated portion of the County;

EPF-2.7.1.5 The long and short-term public benefits and costs stemming from the social, economic, public health, and fiscal impacts from the development of the facility on the surroundings;

EPF-2.7.1.6 Public facilities, services, and utilities needed to support the proposed facility;

EPF-2.7.1.7 Public health and safety;

EPF-2.7.1.8 Nuisance effects from the facility to the surroundings;

EPF-2.7.1.9 Description of site requirements;

EPF-2.7.1.10 Operational and other requirements of the facility, including state and federal requirements, if applicable; and

EPF-2.7.1.11 Public involvement.
ReCOGNITION OF EXISTING FACILITIES

GOAL EPF-3 Recognize the solid waste disposal facility located at 304\textsuperscript{th} St. E. and east of SR 161, the Tacoma Narrows Airport, and the McNeil Island Corrections Center as existing Essential Public Facilities, consistent with definitions in the GMA and the Countywide Planning Policies.

EPF-3.1 Designate the property at the Tacoma Narrows as Essential Public Facility-Rural Airport.

EPF-3.1.1 Allow for airport related uses on that portion of the Tacoma Narrows Airport located south of Stone Road.

EPF-3.1.2 Allow R10 uses, other than residential uses, on that portion of the Tacoma Narrows Airport property located north of Stone Road.

EPF-3.2 Include within the Essential Public Facility-State Corrections Overlay on McNeil Island only the main institution located on approximately 89 acres and the existing north complex facility on approximately 87 acres (not any other land on McNeil Island).

EPF-3.2.1 Establish allowed facilities and uses, including those facilities and uses typically associated with a state corrections center, but not including facilities associated with a sexual offender program.

EPF-3.2.2 Provide measures to ensure that the uses and activities associated with the Essential Public Facility-State Corrections Overlay are compatible with the land uses and natural systems on adjacent lands and shorelines.

EPF-3.3 Establish an Essential Public Facility-Solid Waste Facility Overlay for the existing solid waste facility located at 304\textsuperscript{th} St. E. and east of SR 161.

EPF-3.3.1 Consider designating future solid waste facilities using the Essential Public Facility-Solid Waste Facility Overlay.

PARTICIPATION

GOAL EPF-4 Provide broad participation by affected agencies, interests, and citizens.

EPF-4.1 Consult with affected agencies, utilities, and interested citizens of the County in preparing recommendations.

EPF-4.2 Provide opportunities for effective review and comment.

EPF-4.3 In communications with state agencies, emphasize the importance of their compliance with County policies adopted pursuant to the Growth Management Act.
Chapter 9: HOUSING ELEMENT

CONTENTS

Introduction .............................................................................................................. 9-2

Housing Profile ...................................................................................................... 9-2

  Condition ................................................................................................................. 9-3
  Market and Affordability ....................................................................................... 9-4
    Home Values ........................................................................................................... 9-4
  Future Housing Need ............................................................................................. 9-5
  Special Needs Populations ..................................................................................... 9-5
    Homeless ................................................................................................................ 9-5
    Aging and Disabled .............................................................................................. 9-6
    Severe Mental Illness ......................................................................................... 9-6
    Persons with AIDS and Related Disease(s) .................................................... 9-7

  Need by Income .................................................................................................... 9-7
    Low Income .......................................................................................................... 9-7
    Very Low Income ............................................................................................... 9-8
    Extremely Low Income ....................................................................................... 9-8

  Affordable Housing ............................................................................................. 9-10
  Pierce County Consolidated Plan ....................................................................... 9-10

Solutions to Housing Issues ....................................................................................... 9-11

  Affordable Housing ............................................................................................. 9-12
  Manufactured/Mobile Home Parks ...................................................................... 9-14
  Housing Education and Awareness ................................................................... 9-14
  Existing Housing Stock ....................................................................................... 9-14
  Diversity in Housing ............................................................................................ 9-15
  Monitoring ............................................................................................................ 9-15
**INTRODUCTION**

Housing is one of the most regulated commodities in our society to ensure the health, safety, and general welfare of its inhabitants. Housing of all types is closely related to economic and social conditions. Availability is influenced by national, regional, and local conditions. A complex series of costs affecting housing production result from changes to government assistance programs, private investment, interest rates, lending practices, local government zoning codes, environmental regulations, development and building costs, market, and availability. Price increases adversely affect the ability of households at or below median income levels to obtain adequate housing.

Housing is typically thought of in terms of multifamily apartment developments, duplexes and triplexes, and single-family homes. It includes stick-built homes, modular housing, manufactured housing, and mobile homes. The arrangement of dwelling units includes traditional units, accessory units, and a variety of non-traditional housing techniques designed to provide for people's wants and needs at a wide range of costs.

Other types of housing are necessary to meet the needs of the changing population and social conditions. Planning for housing means more than providing enough land for residential development; it means encouraging the construction of housing to meet the needs of a changing population.

**HOUSING PROFILE**

The housing stock in unincorporated Pierce County comprised of 140,160 dwelling units in 2010. This was a 21.6% increase from the 2000 housing unit estimate of 115,227. Table 9-A shows that single-family (one unit) housing was the predominant housing type equaling 72.8% of the total housing stock.

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Number of Units</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Unit</td>
<td>102,070</td>
<td>72.8%</td>
</tr>
<tr>
<td>Two or More Unit</td>
<td>15,722</td>
<td>11.2%</td>
</tr>
<tr>
<td>Mobile Homes and Specials</td>
<td>22,368</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>140,160</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: OFM reporting of 2010 Census

Table 9-B shows that of the total dwelling units, 129,236 were occupied. The 2010 vacancy rate of 7.79% exceeded what is considered a *healthy* vacancy rate (6%). Household size decreased from 2.81 persons per household in 2000 to 2.77 in 2010.
Table 9-B: Occupancy/Vacancy Status (Unincorporated Pierce County)

<table>
<thead>
<tr>
<th>Status</th>
<th>Number of Units</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied</td>
<td>129,236</td>
<td>92.21%</td>
</tr>
<tr>
<td>Vacant</td>
<td>10,924</td>
<td>7.79%</td>
</tr>
<tr>
<td>Total</td>
<td>140,160</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: 2010 Census

**Housing Condition Definitions:**
- **Good/Average:** Items need no major repair to serve as decent and livable housing.
- **Fair:** Much repair is needed. Many items need refinishing or overhauling.
- **Poor:** Repairs and overhaul needed on painted surfaces, roofing, plumbing, heating, etc.
- **Very Poor:** All items need repair.
- **Extremely Poor:** Barely livable.
- **Unlivable:** Condemned.

CONDITION

According to the single-family housing unit data shown in Table 9-C, 3,519 homes (3.7%) are in fair to extremely poor condition, and 197 of those are considered unlivable. These are homes that will require moderate to substantial rehabilitation of major elements to maintain a safe and decent condition. The remaining 92,059 units are in good or average condition, needing no major repair to serve as decent and livable housing stock.

Table 9-C: Condition of Single-Family Housing Stock (Unincorporated Pierce County)

<table>
<thead>
<tr>
<th>Year</th>
<th>Good/Average</th>
<th>Fair</th>
<th>Poor</th>
<th>Very Poor</th>
<th>Extremely Poor</th>
<th>Uninhabitable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1900</td>
<td>38</td>
<td>11</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>61</td>
</tr>
<tr>
<td>1900-1909</td>
<td>892</td>
<td>127</td>
<td>51</td>
<td>24</td>
<td>20</td>
<td>31</td>
<td>1,145</td>
</tr>
<tr>
<td>1910-1919</td>
<td>515</td>
<td>91</td>
<td>32</td>
<td>17</td>
<td>10</td>
<td>16</td>
<td>681</td>
</tr>
<tr>
<td>1920-1929</td>
<td>1,250</td>
<td>192</td>
<td>63</td>
<td>26</td>
<td>15</td>
<td>36</td>
<td>1,582</td>
</tr>
<tr>
<td>1930-1939</td>
<td>1,260</td>
<td>195</td>
<td>67</td>
<td>24</td>
<td>18</td>
<td>18</td>
<td>1,582</td>
</tr>
<tr>
<td>1940-1949</td>
<td>2,756</td>
<td>333</td>
<td>92</td>
<td>26</td>
<td>20</td>
<td>34</td>
<td>3,261</td>
</tr>
<tr>
<td>1950-1959</td>
<td>3,380</td>
<td>283</td>
<td>59</td>
<td>23</td>
<td>12</td>
<td>15</td>
<td>3,772</td>
</tr>
<tr>
<td>1960-1969</td>
<td>8,050</td>
<td>370</td>
<td>75</td>
<td>20</td>
<td>14</td>
<td>24</td>
<td>8,553</td>
</tr>
<tr>
<td>1970-1979</td>
<td>13,695</td>
<td>423</td>
<td>61</td>
<td>21</td>
<td>15</td>
<td>11</td>
<td>14,226</td>
</tr>
<tr>
<td>1980-1989</td>
<td>13,235</td>
<td>243</td>
<td>36</td>
<td>15</td>
<td>5</td>
<td>3</td>
<td>13,537</td>
</tr>
<tr>
<td>1990-1999</td>
<td>23,139</td>
<td>129</td>
<td>17</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>23,294</td>
</tr>
<tr>
<td>2000-2010</td>
<td>23,849</td>
<td>22</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>23,884</td>
</tr>
<tr>
<td>Total</td>
<td>92,059</td>
<td>2,419</td>
<td>560</td>
<td>205</td>
<td>138</td>
<td>197</td>
<td>95,578</td>
</tr>
</tbody>
</table>

% of Total         | 96.32%      | 2.53% | 0.59% | 0.21%      | 0.14%          | 0.21%         | 100.00%

Source: Pierce County Assessor-Treasurer improvement data, 2014

Opportunity exists for housing to be rehabilitated or redeveloped. Three resources are available to assist in rehabilitation: government assisted programs, private non-profit organizations, and private financial institutions. The total 1,100 dwelling units that comprise the poor, very poor,
extremely poor and unlivable categories can be examined for the purpose of identifying possible redevelopable dwelling units.

**MARKET AND AFFORDABILITY**

Assuming that 30% of a household's annual income will be expended for rent or mortgage payments, the annual income required to afford the average monthly payment for each type of dwelling unit is portrayed in Table 9-D.

**Table 9-D: Market Affordability for Pierce County**

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Monthly Payment</th>
<th>Annual Required Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family House¹</td>
<td>$1,625</td>
<td>$65,000</td>
</tr>
<tr>
<td>Condo¹</td>
<td>$1,168</td>
<td>$46,720</td>
</tr>
<tr>
<td>4 Bedroom Rental</td>
<td>$1,587</td>
<td>$63,480</td>
</tr>
<tr>
<td>3 Bedroom Rental</td>
<td>$1,410</td>
<td>$56,400</td>
</tr>
<tr>
<td>2 Bedroom Rental</td>
<td>$968</td>
<td>$38,720</td>
</tr>
<tr>
<td>1 Bedroom Rental</td>
<td>$776</td>
<td>$31,040</td>
</tr>
<tr>
<td>Studio Rental</td>
<td>$665</td>
<td>$26,600</td>
</tr>
</tbody>
</table>

*Source: HUD; The Final FY 2010 Tacoma, WA HUD Metro FMR Area FMRs for All Bedroom Sizes*

¹*Source: Zillow; Based on the Pierce County median home value of $239,000 and median condo value of $169,000*

**HOME VALUES**

In program years 2013-14 and 2014-2015 the County undertook a market study for the HOME program to determine 95% of median value of homes in the Urban County (Excluding the cities of Tacoma, Lakewood, and Bonney Lake). Note that the survey determined the median values for existing housing and housing newly constructed separately. The results of that survey are listed below:

- Median value on October 30, 2013 for existing housing was $225,000.
- Median value on October 30, 2013 for new construction housing was $279,990.
- Median value on July 15, 2014 for existing housing was $227,500.
- Median value on July 15, 2014 for new construction housing was $289,450.

In the Urban County from October 2013 to July 2014 the market rose 1.1% for existing housing and 3.27% for new construction housing.

**Table 9-E: Monthly Rent (Urban Pierce County)**

<table>
<thead>
<tr>
<th>Monthly Rent</th>
<th>Efficiency (no bedroom)</th>
<th>1 Bedroom</th>
<th>2 Bedroom</th>
<th>3 Bedroom</th>
<th>4 Bedroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Market Rent</td>
<td>$689</td>
<td>$839</td>
<td>$1,093</td>
<td>$1,611</td>
<td>$1,936</td>
</tr>
<tr>
<td>High HOME Rent</td>
<td>$638</td>
<td>$767</td>
<td>$999</td>
<td>$1,178</td>
<td>$1,295</td>
</tr>
<tr>
<td>Low HOME Rent</td>
<td>$615</td>
<td>$658</td>
<td>$790</td>
<td>$913</td>
<td>$1,018</td>
</tr>
</tbody>
</table>

*Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma and Lakewood*
**Future Housing Need**

Based on the adopted housing targets compared to the existing housing stock, there is a need for an additional 37,773 additional housing units within the 20-year planning period. Of this total, 28,270 dwelling units would be needed in urban unincorporated Pierce County, and 9,503 housing units would be needed in rural lands. Housing capacity is further outlined in the Buildable Lands Report.

**Table 9-F: Housing Needs (Unincorporated Pierce County)**

<table>
<thead>
<tr>
<th>Area</th>
<th>2010 Housing Estimate(^1)</th>
<th>Adopted Housing Target(^2)</th>
<th>Additional Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unincorporated Urban</td>
<td>76,303</td>
<td>104,573</td>
<td>28,270</td>
</tr>
<tr>
<td>Rural</td>
<td>63,857</td>
<td>73,360</td>
<td>9,503</td>
</tr>
<tr>
<td>Unincorporated Pierce County Total</td>
<td>140,160</td>
<td>177,933</td>
<td>37,773</td>
</tr>
</tbody>
</table>

\(^1\)2010 Census.  
\(^2\)Pierce County Council Resolution No. 2011-36s. Does not include displaced units associated with underutilized parcels identified in the 2014 Buildable Lands Report.

**Special Needs Populations**

There are groups of the population requiring special housing accommodations. Special accommodations include group housing with a shared living space, or accessible housing for people with disabilities. Special needs populations include homeless, single parents, physical or mentally disabled, and other individuals or groups as designated by HUD. A special needs housing project is housing that is specifically targeted to provide shelter and appropriate supportive services for those with special needs.

**Homeless**

People become homeless for many reasons. The type of housing and related support services needed depends on the individual's needs.

Three general categories of homelessness are:

- Temporary homeless
- Short-term homeless
- Long-term homeless

Emergency shelters are needed for all categories to provide individuals and families with a safe, warm place to sleep. Temporary and short-term homeless people also need reliable temporary housing to get back on their feet financially. Transitional housing assistance should be from three to twenty-four months to allow them to stabilize their living situation and develop the necessary skills to live independently in non-assisted housing.
The most difficult population of homeless to provide for is those with severe mental illness or drug addictions. A number of strategies may be required before any permanent housing situation can be obtained. In all circumstances, appropriate supportive services are needed when working with these populations:

- Medical care is needed at shelters to meet emergency needs.
- Safe havens are needed for persons who are severely dependent on drugs or alcohol.
- Transitional housing is needed for persons with personal behaviors or mistrust of systems that must be overcome before permanent housing is appropriate.

**AGING AND DISABLED**

In some cases, physically disabled people need physical barriers removed and other modifications made to their residences to move about safely and maintain normal daily life activities.

The elderly population of the County continues to grow and is distributed among owner-occupied and rental units. The low-income elderly who own their homes do not always have resources to maintain them. As a result, their residences have a high incidence of deferred maintenance. Many elderly persons are disabled and in need of special housing assistance, including the removal or modification of barriers that will allow them to live safely and independently at home.

State policies are encouraging and developing in-home care as a method by which many persons can remain in their homes. Financial issues, including the payment of property taxes, insurance, and utilities, also need to be addressed. There are cases where it is no longer possible for individuals to live in their own residence by themselves even with in-home care. Alternatives include adult family homes, nursing homes, or convalescent centers.

**SEVERE MENTAL ILLNESS**

Individuals with severe mental illness may require the services of institutionalized care either in a group home, nursing facility, congregate care, or other form of housing. Due in part to the high cost of the operation of mental health institutions and the changes in federal and state laws, more persons with mental

**Temporarily homeless** include people who have experienced:

- A loss of income
- An illness in the family
- Unanticipated bills which prevents rent from being paid

**Short-term homeless** are primarily single people or couples without minor children who are:

- Lacking permanent employment
- Pregnant teenagers who have left the family home
- Homemakers who have been displaced due to separation or divorce
- Victims of domestic violence

**Long-term homeless** can include people with:

- Mental or physical disabilities
- Alcohol or drug addiction
- Mental illness
- Chronic unemployment
- Released offenders
illness are being placed in supervised supportive housing that is based in the community. Permanent supportive housing is needed for disabled or mentally ill persons who have certain capacities to live in a semi-independent environment.

**Persons with AIDS and Related Disease(s)**

People with AIDS and related diseases often require a variety of housing types depending on the nature and severity of their condition. Affordable housing that is close to necessary services and integrated into the community is needed. Housing options include transitional housing, assisted living, permanent housing, and shared housing.

**Need by Income**

**Low Income**

Low income is defined as households whose income at or below 80% of the average median income (AMI). Those that fall within this economic level are often faced with paying more than 30% of their gross annual income for housing, which is considered to be "cost burdened," and many are considered to have special needs as described below. Many of these households are severely cost burdened whereby they pay more than 50% of gross income for housing expenses.

Households in this category include homeowners, renters, and those who own manufactured housing and lease the land on which the dwelling is sited. Often on fixed incomes or working at lower paying jobs, their incomes do not keep pace with the rate of escalating housing costs.

<table>
<thead>
<tr>
<th>Housing Problems</th>
<th>Has 1+ of the 4 housing problems</th>
<th>Has none of the 4 housing problems</th>
<th>Household has no/negative income, but none of the other housing problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction as a whole</td>
<td>17,589</td>
<td>13,302</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>14,349</td>
<td>10,857</td>
<td>0</td>
</tr>
<tr>
<td>Black / African American</td>
<td>931</td>
<td>428</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>651</td>
<td>566</td>
<td>0</td>
</tr>
<tr>
<td>American Indian, Alaska Native</td>
<td>117</td>
<td>178</td>
<td>0</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>145</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>868</td>
<td>842</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: 2006-2010 Comprehensive Housing Affordability Strategy
Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma, Lakewood, and Bonney Lake

Table 9-G shows the majority of low income households have one or more of the four housing problems. By far the biggest housing problem is cost burden.
**Very Low Income**

Very low income is defined as households whose income at or below 50% of the median income. Those that fall within this economic level are often faced with paying more than 30% of their gross annual income for housing, which is considered to be "cost burdened," and many are considered to have special needs as described below. Many of these households are severely cost burdened whereby they pay more than 50% of gross income for housing expenses.

Households in this category include homeowners, renters, and those who own manufactured housing and lease the land on which the dwelling is sited. Often on fixed incomes or working at lower paying jobs, their incomes do not keep pace with the rate of escalating housing costs.

**Table 9-H: Disproportionally Greater Need 30 - 50% AMI (Urban Pierce County)**

<table>
<thead>
<tr>
<th>Housing Problems</th>
<th>Has 1+ of the 4 housing problems</th>
<th>Has none of the 4 housing problems</th>
<th>Household has no/negative income, but none of the other housing problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction as a whole</td>
<td>12,089</td>
<td>3,936</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>9,269</td>
<td>3,251</td>
<td>0</td>
</tr>
<tr>
<td>Black / African American</td>
<td>807</td>
<td>118</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>710</td>
<td>149</td>
<td>0</td>
</tr>
<tr>
<td>American Indian, Alaska Native</td>
<td>88</td>
<td>69</td>
<td>0</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>158</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>725</td>
<td>243</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: 2006-2010 Comprehensive Housing Affordability Strategy
Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma, Lakewood, and Bonney Lake

Table 9-H shows the majority of very low income households have one or more of the four housing problems. By far the biggest housing problem is cost burden.

**Extremely Low Income**

Extremely low-income is defined as households whose income at or below 30% of the median income. Those that fall within this economic level are more than likely faced with paying more than 30% of their gross annual income for housing, which is considered to be "cost burdened," and many are considered to have special needs as described below. Most of these households are severely cost burdened whereby they pay more than 50% of gross income for housing expenses.

Households in this category include homeowners, renters, and those who own manufactured housing and lease the land on which the dwelling is sited. Often on fixed incomes or working at lower paying jobs, their incomes do not keep pace with the rate of escalating housing costs.

Table 9-I shows the majority of extremely low income households have one or more of the four housing problems. By far the biggest housing problem is cost burden. Table 9-J and Table 9-K outline the cost burden of lower income households.
### Table 9-I: Disproportionally Greater Need 0 - 30% AMI (Urban Pierce County)

<table>
<thead>
<tr>
<th>Housing Problems</th>
<th>Has 1+ of the 4 housing problems</th>
<th>Has none of the 4 housing problems</th>
<th>Household has no/negative income, but none of the other housing problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction as a whole</td>
<td>12,543</td>
<td>1,547</td>
<td>1,255</td>
</tr>
<tr>
<td>White</td>
<td>9,636</td>
<td>1,297</td>
<td>964</td>
</tr>
<tr>
<td>Black / African American</td>
<td>682</td>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>Asian</td>
<td>650</td>
<td>20</td>
<td>63</td>
</tr>
<tr>
<td>American Indian, Alaska Native</td>
<td>190</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>100</td>
<td>24</td>
<td>35</td>
</tr>
<tr>
<td>Hispanic</td>
<td>833</td>
<td>85</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: 2006-2010 Comprehensive Housing Affordability Strategy

Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma, Lakewood, and Bonney Lake

### Table 9-J: Cost Burden > 30% (Urban Pierce County)

<table>
<thead>
<tr>
<th>Number Of Households</th>
<th>Renter 0-30% AMI</th>
<th>Renter &gt;30-50% AMI</th>
<th>Renter &gt;50-80% AMI</th>
<th>Total Renter</th>
<th>Owner 0-30% AMI</th>
<th>Owner &gt;30-50% AMI</th>
<th>Owner &gt;50-80% AMI</th>
<th>Total Owner</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Related</td>
<td>2,952</td>
<td>3,535</td>
<td>3,854</td>
<td>10,341</td>
<td>1,251</td>
<td>1,225</td>
<td>4,390</td>
<td>6,866</td>
<td></td>
</tr>
<tr>
<td>Large Related</td>
<td>404</td>
<td>1,079</td>
<td>824</td>
<td>2,307</td>
<td>227</td>
<td>441</td>
<td>1,379</td>
<td>2,047</td>
<td></td>
</tr>
<tr>
<td>Elderly</td>
<td>1,328</td>
<td>1,280</td>
<td>1,092</td>
<td>3,700</td>
<td>1,762</td>
<td>2,259</td>
<td>2,560</td>
<td>6,581</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2,291</td>
<td>2,213</td>
<td>2,127</td>
<td>6,631</td>
<td>1,107</td>
<td>691</td>
<td>1,404</td>
<td>3,202</td>
<td></td>
</tr>
<tr>
<td>Total need by income</td>
<td>6,975</td>
<td>8,107</td>
<td>7,897</td>
<td>22,979</td>
<td>4,347</td>
<td>4,616</td>
<td>9,733</td>
<td>18,696</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2006-2010 Comprehensive Housing Affordability Strategy

Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma, Lakewood, and Bonney Lake

### Table 9-K: Severe Cost Burden > 50% (Urban Pierce County)

<table>
<thead>
<tr>
<th>Number Of Households</th>
<th>Renter 0-30% AMI</th>
<th>Renter &gt;30-50% AMI</th>
<th>Renter &gt;50-80% AMI</th>
<th>Total Renter</th>
<th>Owner 0-30% AMI</th>
<th>Owner &gt;30-50% AMI</th>
<th>Owner &gt;50-80% AMI</th>
<th>Total Owner</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Related</td>
<td>2,798</td>
<td>1,653</td>
<td>508</td>
<td>4,959</td>
<td>1,083</td>
<td>988</td>
<td>2,205</td>
<td>4,276</td>
<td></td>
</tr>
<tr>
<td>Large Related</td>
<td>367</td>
<td>504</td>
<td>105</td>
<td>976</td>
<td>193</td>
<td>303</td>
<td>468</td>
<td>964</td>
<td></td>
</tr>
<tr>
<td>Elderly</td>
<td>1,095</td>
<td>586</td>
<td>405</td>
<td>2,086</td>
<td>1,311</td>
<td>1,000</td>
<td>1,167</td>
<td>3,478</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2,178</td>
<td>1,128</td>
<td>319</td>
<td>3,625</td>
<td>973</td>
<td>553</td>
<td>899</td>
<td>2,425</td>
<td></td>
</tr>
<tr>
<td>Total need by income</td>
<td>6,438</td>
<td>3,871</td>
<td>1,337</td>
<td>11,646</td>
<td>3,560</td>
<td>2,844</td>
<td>4,739</td>
<td>11,143</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2006-2010 Comprehensive Housing Affordability Strategy

Urban Pierce County: All of urban Pierce County, including cities/towns except Tacoma, Lakewood, and Bonney Lake
AFFORDABLE HOUSING

The Growth Management Act does not provide a definition of affordable housing; it is the responsibility of each jurisdiction to define this term in a manner consistent with its Countywide Planning Policies. It is Pierce County's perception that affordable housing encompasses all economic segments of the community; However, low-income households with incomes less than 80%, and specifically very low-income households with incomes less than 50%, of the Pierce County median income have much less ability to find housing that is affordable. Pierce County defines affordable housing as housing for which a household does not pay more than 30% of their gross income for housing costs which includes rent or mortgage and utilities.

The U.S. Department of Housing and Urban Development (HUD) publishes The Metropolitan Statistical Area Income Limits. The development of affordable housing for very low-income households who are below 50% of median income shall be given special emphasis in the policy section of the Housing Element.

The HUD defined income limits for the Pierce County area as of 2014 are shown in Table 9-L.

<table>
<thead>
<tr>
<th>Gross Annual Income</th>
<th>Number of Persons in Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30% AMI</td>
<td>1</td>
</tr>
<tr>
<td>14,100</td>
<td>16,100</td>
</tr>
<tr>
<td>&gt;30-50% AMI</td>
<td>23,450</td>
</tr>
<tr>
<td>&gt;50-80% AMI</td>
<td>37,550</td>
</tr>
</tbody>
</table>

Source: HUD program income limits (Section 8, Section 221(d)(3) BMIR, Section 235 and Section 236). Tacoma HMFA 2014, effective 12/18/2013. Revised for Extremely Low Income Limits, effective 07/01/2014.

Shown in Table 9-M, there were a total of 182 subsidized housing projects in unincorporated Pierce County by 2013, totaling 2,382 units. The majority of these units (59.4%) were affordable to households earning between 30%-51% of the adjusted median income.

<table>
<thead>
<tr>
<th>Number of Projects</th>
<th>Total Units</th>
<th>Total Units Affordable to Households Earning:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 30% AMI</td>
<td>Between 31%-50% AMI</td>
</tr>
<tr>
<td>182</td>
<td>2,382</td>
<td>248</td>
</tr>
</tbody>
</table>

Source: PSRC Subsidized Housing Summary Table, 2013

PIERCE COUNTY CONSOLIDATED PLAN

The County prepares a Consolidated Plan for submission to HUD every five years that details how the County plans to use the entitlement funds it receives from HUD including HOME, CDBG and ESG. The plan includes an affordable housing needs assessment, a housing market analysis, and a strategic plan for affordable housing. The current plan covers 2015 through 2019. As part
of the market analysis section of the plan, the County conducted a countywide survey of subsidized affordable rental housing units. Note that the County will continue to update the survey a minimum of every five years to coincide with the preparation of the Consolidated Plan.

The strategic plan section of the Consolidated Plan includes goals for the number of affordable housing units to be developed and/or preserved over the five year period of the plan. The goals are reviewed and updated annually at the end of HUD's program year. The revised goals are submitted to HUD through the annual action plan. The actual number of affordable housing units developed and/or preserved are included in the year-end report (CAPER) submitted to HUD and the end of each program year. The 2015-2019 Consolidated Plan, annual action plans, CAPER and affordable housing survey can be located on the Community Connections website.

In addition, the Washington State Department of Commerce conducted a statewide needs assessment of affordable housing by County. The Department of Commerce affordable housing needs assessment for Pierce County can be located on the Community Connections website.

SOLUTIONS TO HOUSING ISSUES

The Housing and Land Use Elements provide direction to accommodate enough affordable housing for all economic segments of the community. Land use strategies may include: allowance for accessory dwelling units; infill development; rehabilitation of existing housing; mixed use development; and smaller lot sizes. Regulatory strategies may include streamlined approval processing and priority permit processing.

The Land Use Designations Map in the Land Use Element identifies ten land use designations within an Urban Growth Area to accommodate projected housing needs: Moderate Density Single-Family, High Density Single-Family, Master Planned Communities, Activity Centers, Community Centers, Neighborhood Centers, Mixed Use Districts, High Density Residential Districts, and Urban Villages. Of these designations, the Moderate Density Single-Family, High Density Single-Family, and the High Density Residential Districts are to accommodate only residential uses.

Low income and government assisted households can be provided single-family or multifamily structures. Housing policies in this Comprehensive Plan encourage income diversity within neighborhoods and guarantee an adequate supply of housing for all economic segments of the population.

It is the intent of the policies within the Housing Element to create solutions for affordable housing that collectively address all economic segments of the population, emphasizing low income, very low income, and extremely low income households (≤ 80% area median income, ≤ 50% area median income, and ≤ 30% area median income, respectively).

RESOURCES:

- Housing Affordability Report and Recommendations from the Pierce County Housing Affordability Task Force
- 2010-2015 CDBG Consolidated Plan
- Plan to End Homelessness
GOAL H-1  Allow for a range of housing types in appropriate areas of the County.

H-1.1  Encourage a variety of housing types that allow high densities and creative use of land within the urban area.

H-1.2  Ensure that housing types within the rural and resource areas retain the rural character, and respect the features of the lands.

H-1.3  Encourage creative solutions to housing issues through quality design which is functional as well as livable.

GOAL H-2  Encourage the development of new housing within the Urban Growth Areas where facilities and services exist or are planned.

H-2.1  Increase density in communities with existing infrastructure.

H-2.2  Allow for accessory dwelling units, cottage housing, and Katrina cottages to reduce housing costs for residents.

H-2.3  Redevelop properties where infrastructure exists.

H-2.3.1  Ensure that housing structures do not exceed infrastructure capabilities.

H-2.3.2  Identify County surplus property that could be used for developments that provide for affordable housing.

H-2.3.3  Develop a process for disposing of County surplus properties for affordable housing purposes.

GOAL H-3  Consider the economic implications of regulations and practices on housing costs.

GOAL H-4  Promote and assist in the development of the necessary financial tools to address affordable housing for County citizens.

GOAL H-5  Seek way to prevent discrimination in the development and maintenance of housing.

GOAL H-6  Promote the availability of special needs housing.

AFFORDABLE HOUSING

GOAL H-7  Create solutions for affordable housing issues that benefit all economic segments of the population.

H-7.1  Investigate and implement planning and zoning tools that have been identified as techniques to achieve affordable housing, including:

H-7.1.1  Transfer of Development Rights;

H-7.1.2  Development and redevelopment of vacant, blighted properties that are already utilizing existing infrastructure;

H-7.1.3  Construction of accessory dwelling units, cottage housing, and Katrina cottages as ways to realize affordable housing; and
H-7.1.4 Voluntary and inclusionary housing methods to require housing attainable by households earning 80% or less of the County median household income within developments.

H-7.2 Promote innovative programs and techniques that minimize the cost of affordable housing.

H-7.2.1 Provide incentives for developers to construct affordable housing for households earning 80% or less of the median household income for the County.

H-7.2.2 Consider fee exemptions for residential projects that incorporate housing affordable to households earning 80% or less of the County median household.

H-7.3 Seek funding for nonprofit developers to build affordable housing.

H-7.4 Ensure consistent, streamlined regulations and procedures.

H-7.4.1 Consider allowing bonus densities.

H-7.4.2 Consider allowing reduced design standards such as parking, height restrictions, and bulk requirements.

H-7.4.3 Provide for expedited permitting.

H-7.4.4 Ensure building practices do not compromise human health, structural integrity, or longevity.

H-7.5 Implement the federally funded program, which provides assistance to households earning below the County median income, who are willing to help build or remodel their own housing.

H-7.6 Coordinate with Pierce County cities and towns to ensure a fair share distribution of affordable housing within new master planned communities.

H-7.7 Require inclusionary housing provisions in future developments associated with Comprehensive Plan amendments to increase development potential.

H-7.8 Identify specific development fees and processes that may be waived if a residential development guarantees inclusionary housing provisions.

H-7.9 Integrate required affordable housing units within a development.

H-7.9.1 Encourage provision of units through various types of housing structures.

H-7.9.2 Ensure the architectural features of the affordable units are consistent with the overall project.

H-7.10 Regulatory amendments to implement inclusionary housing provisions should define:

H-7.10.1 The number of affordable units;

Various types of housing structures include (H-7.9.1):
- Accessory dwelling units
- Single-family detached
- Single-family attached
- Duplex
- Triplex
- Fourplex
- Multifamily
H-7.10.2 The level of affordability achieved for low income households;
H-7.10.3 The duration of time that the units would be maintained as affordable; and
H-7.10.4 A method for monitoring and maintaining affordability over time.

H-7.11 Pierce County’s goal is to, at a minimum, provide low-income affordable housing for 25 percent of the adopted population growth target.

**Manufactured/Mobile Home Parks**

**GOAL H-8** Consider allowing mobile home parks in Moderate Density Single-Family areas, Mixed Use Districts, and High Density Residential Districts.

  **H-8.1** Allow for the placement of manufactured housing within mobile home parks in addition to the traditional single-wide mobile home units.

**GOAL H-9** Advocate state legislative actions addressing manufactured/mobile home communities.

  **H-9.1** Support state legislation that promotes long-term preservation of existing manufactured/mobile home parks in their present use, and the ability of residents to purchase their park.

  **H-9.2** Consider a current use tax incentive conditioned on maintaining the land use as a manufactured/mobile home park and requiring repayment of abated taxes in the event of a manufactured housing community closure or change of use.

**Housing Education and Awareness**

**GOAL H-10** Promote education and awareness addressing compatibility between various dwelling types and community standards.

**GOAL H-11** Encourage training, seminars, programs, and partnerships that educate about middle and lower income housing options.

  **H-11.1** Provide information on alternative housing markets, advantages of smaller, higher density housing developments, and on nontraditional dwelling types, occupancy styles, and construction methods.

**Existing Housing Stock**

**GOAL H-12** Reuse the existing housing stock to help meet the housing demand.

  **H-12.1** Explore and identify opportunities to reutilize and redevelop existing parcels where rehabilitation of existing buildings is not cost-effective.

  **H-12.2** Review regulatory restrictions prohibiting rehabilitation of existing housing stock.

  **H-12.3** Develop and implement rehabilitation programs and opportunities to reuse existing housing stock.
DIVERSITY IN HOUSING

GOAL H-13 Recognize the different physical, social, and economic needs of the residents.

H-13.1 Provide a broad range of housing choices in terms of cost, size, design, and suitability for various household types, e.g., families, elderly, couples, and persons with disabilities or special needs.

H-13.2 Review and revise the development code to permit temporary shelter and transitional housing and supportive services that assist homeless individuals and families.

H-13.3 Review and revise the development code to permit single room occupancy units that are defined separately from group homes.

GOAL H-14 Promote the availability of special needs housing and the necessary supportive services, and support the availability of this housing for all individuals and households.

H-14.1 Encourage and support the development of affordable special needs housing in Pierce County by providing incentives and technical assistance for housing development.

H-14.2 Strengthen inter-jurisdictional efforts to ensure a fair, equitable and rationale distribution of low-income, moderate-income and special needs housing consistent with land use policies, transportation, and employment locations.

MONITORING

GOAL H-15 Monitor the success of the housing policies in accomplishing the goals

H-15.1 Conduct an assessment of the housing demands and monitor the achievement of the housing policies not less than once every 5 years.

H-15.2 Develop a series of benchmarks to measure the development of affordable housing units for low income populations.
Chapter 10: OPEN SPACE ELEMENT

CONTENTS

Introduction .................................................................................................................... 10-2

Definition ...................................................................................................................... 10-2

Policies ......................................................................................................................... 10-3
INTRODUCTION

Multiple Pierce County agencies acquire and manage land for open space purposes - from recreation, to habitat conservation, to flood hazard reduction.

Pierce County’s definition of open space is organized into categories around functional attributes of open space, or the expressed reason for preservation of the value attributed to that type of open space. Policies for the management and preservation of open space for habitat are very different than policies for working lands or outdoor recreation.

For example, a property with a high value wetland may be acquired for preservation for the stormwater function provided by the wetland, and would be classified as open space for public health and safety. The property would be managed first for stormwater function. It may have secondary value as wildlife habitat, and partial value as part of a trail system, but the secondary values are implemented only if they do not interfere with the primary stormwater function.

DEFINITION

Open Space - any parcel or area of land or water which is devoted to a functional open space use as defined by any one of the following categories:

A. Habitat. Open space for the preservation of plant and animal habitat may include habitat for fish and wildlife species; rivers, streams, bays, and estuaries; and coastal beaches, lakeshores, and banks of rivers and streams.

B. Working Lands. Open space used for the managed production of working lands may include forest lands, agricultural lands, and areas of economic importance for the production of food or fiber.

C. Outdoor Recreation. Open space for outdoor recreation may include athletic fields, recreation facilities, playgrounds, picnic areas, meadows, wooded areas, and trails; and access to beaches and shorelines for swimming, fishing, boating, and beachcombing.

D. Community-Defined Values. Open space for community-defined values may include areas used for buffers between communities, respites from the built environments, and for connecting with nature; and areas of outstanding scenic, historic, and cultural value.

E. Public Health and Safety. Open space for public health and safety may include areas used for stormwater management, flood control, water quality for public use, air quality, and carbon sequestering.
Policies for the protection and management of each category of open space will reside in the appropriate element(s) of the Comprehensive Plan.

This section lists general open space policies that pertain to all types of open space. Policies for specific types of open space are listed in various elements of the Comprehensive Plan that relate to the different categories of open space.

**GOAL OS-1** County programs that provide for the acquisition and/or preservation of open space shall have established priorities.

**OS-1.1** Priorities for the preservation of open space shall be in conformance with the policies established in Chapter 19D.170, Pierce County Open Space Priorities.

**OS-1.2** These priorities shall be coordinated with any subsequent updates of the Parks and Recreation Plan for the County.

**OS-1.3** At a minimum, the priorities will be used for the following programs and regulations:

- **OS-1.3.1** Conservation Futures Program (open space acquisition);
- **OS-1.3.2** Current Use Assessment Program-Public Benefit Rating System (tax incentive); and
- **OS-1.3.3** Development Regulations-Zoning (density bonus incentive).

**GOAL OS-2** Ensure that Pierce County open space properties, open space passive recreation parks, conservation easements, and conservation futures covenants are managed and maintained to provide long-term stewardship of the open space function and value.
OS-2.1  Publicly-owned or acquired open space properties may be transferred to a local land trust for long-term management and stewardship where appropriate.

OS-2.2  Pierce County should work closely with local and national land trusts and with other private and nonprofit organizations interested in open space in the management of Pierce County open space properties.

OS-2.3  Pierce County should review its land holdings to determine if any parcels fall within the adopted open space/greenbelt network that might be suitable for transfer to a local land trust.

OS-2.4  Linkages between open space and screening buffers occur, encourage the provision of public easements.

OS-2.5  Where possible, open spaces should be located contiguous to other open space areas creating the potential for open space corridors.
Chapter 11: PARKS AND RECREATION ELEMENT

CONTENTS

Introduction ................................................................................................... 11-2

Park System ................................................................................................... 11-2
  Prioritization of Facilities and Projects ....................................................... 11-3
  Location Criteria .......................................................................................... 11-4
  Development Standards ............................................................................... 11-4
  Stewardship ............................................................................................... 11-5
  Funding ........................................................................................................ 11-5
  Regional Coordination ............................................................................... 11-6
  Education and Outreach ............................................................................. 11-6

Trails .............................................................................................................. 11-7
  Design .......................................................................................................... 11-7
  Facilities and Services .............................................................................. 11-7
  Maintenance ................................................................................................ 11-8
  Regional Connectivity ................................................................................ 11-8

Water Access ................................................................................................. 11-8

Recreation Programming ............................................................................. 11-9

Open Space ................................................................................................... 11-9
INTRODUCTION

The values of Pierce County residents and their aspirations for the future are guiding forces in this Park, Recreation, and Open Space Element. This element defines the vision, goals, and objectives that illustrate the preferred future for the parks, open spaces, trails, facilities, and programs provided by Pierce County Parks and Recreation (PCParks).

For consistency and clarity, the term ‘park system’ will be used throughout this document to refer to all parks, open spaces, trails, facilities, and recreation programs managed by PCParks.

A vision is an aspirational description of what an organization would like to achieve or accomplish in the future. It is intended to serves as a clear guide for choosing current and future courses of action. The Pierce County Vision for parks, recreation, and open space is:

Create livable communities by providing opportunities for people to:

- Connect with Nature
- Live Healthy Lifestyles
- Share Vibrant Community Spaces
- Learn about Sustainable Practices

PARK SYSTEM

GOAL PR-1  Provide a regional park system that supports opportunities for active and passive recreation, promotes healthy lifestyles, and conserves and enhances significant environmental or historical resources.

PR-1.1  Assume direct responsibility for the development, operation, and maintenance of facilities that have regional benefits and align with PC Parks’ vision and primary role as a regional service provider.

PR-1.1.1  Support countywide sports, recreation programs, and special events through the provision of facilities.

PR-1.1.2  Support objectives in adopted Community Plans that align with the role of a regional park provider and meet identified countywide needs.

PR-1.2  Plan for the annexation or incorporation of unincorporated Urban Growth Areas.

PR-1.2.1  Land-bank sites for local parks identified in Community Plans if capital funding is designated for that purpose.

PR-1.2.2  Land-bank sites should only be developed in partnership with a local jurisdiction as part of an agreement to transfer the site to the local jurisdiction.

PR-1.2.3  Establish a list of transitional properties that are not part of the regional system and may be transferred to other jurisdictions.

“Transitional properties” (PR-1.2.3): Those properties that are better served by a local jurisdiction.
PR-1.2.4 Actively seek opportunities to transfer local parks to jurisdictions associated with potential annexation areas.

PR-1.3 Ensure the park system is integrated with and complements other park and recreation service providers in Pierce County.

PR-1.3.1 Forge partnerships for park development with local jurisdictions or park districts when regional facilities are consistent with meeting the needs of city and county residents.

PR-1.3.2 Develop where appropriate a select number of regional facilities that are oriented to the highest competitive playing standard for multi-agency use.

PR-1.3.3 Focus development of new ball fields on field complexes developed in partnership with a school district or other service provider.

PR-1.4 Ensure land acquisitions, donated property and land-banked sites are consistent with the vision set forth in this Plan.

PR-1.5 Ensure an equitable distribution of park facilities across the County.

PR-1.6 Develop new facilities only if on-going operation and maintenance funding is provided at a level necessary to safely operate and maintain the facility at adopted levels of service.

PR-1.7 Implement a whole system management approach to improving and maintaining the park system through integration of long term sustainability; promoting flexibility of uses and activities; ensuring equity across the system; providing a variety of activities; ensuring adequate support facilities; and, designing with cost effective methods and partnerships.

GOAL PR-2 Promote active, healthy lifestyles through the development of park system facilities and programs that reduce obesity and enhance the health of County residents.

PR-2.1 Ensure facilities and programs are available for all people regardless of ability, age, race, ethnicity, or income.

PR-2.2 Ensure healthy food and snacks choices when provided at events and within park facilities.

PR-2.3 Prohibit the use of tobacco within the park system.

PR-2.4 Work toward an interconnected system of parks and trails in the urban area that safely connects to schools, civic facilities, shopping, and recreational facilities.

PRIORITIZATION OF FACILITIES AND PROJECTS

GOAL PR-3 Prioritize the use of park capital facility funding sources.

PR-3.1 Capital projects should be prioritized based on:

PR-3.1.1 First maintain the system by preserving the quality and capacity of the existing facilities.
**PR-3.1.1.1** Capital replacement decisions should be based on safety, loss of function, regulatory upgrades, end of useful life and a balance of cost benefit.

**PR-3.1.2** Second, increase the capacity at existing park sites by upgrading or adding new facilities to flexibility for multiple uses or increase public use.

**PR-3.1.3** Third, increase system capacity by developing new park facilities at new park sites.

**PR-3.2** Prioritize development of new park sites based on:

- **PR-3.2.1** Demonstrated need.
- **PR-3.2.2** Population served.
- **PR-3.2.3** Ability to implement programming which advances PCParks vision.
- **PR-3.2.4** Improves equity of service.

### Location Criteria

**GOAL PR-4** PCParks sites will be located in consideration of the following:

- **PR-4.1** Readily accessible via public roads or where roads can be reasonably extended to access the site.
- **PR-4.2** Located close to prospective users.
- **PR-4.3** Within the Urban Areas of the County, sewer, potable water and other utilities should be available within reasonable distance from the site.
- **PR-4.4** Sites should be suitable for the type of recreation proposed.

### Development Standards

**GOAL PR-5** Develop facilities that exemplify sustainable practices, connect to surrounding neighborhoods, universally accessible, safe, and cost effective to maintain.

- **PR-5.1** Provide attractive, vibrant community facilities and spaces that promote opportunities for citizens to learn about sustainable practices.
- **PR-5.2** Incorporate sustainability practices into the development, management, and maintenance of the park system.
- **PR-5.3** Development of facilities should contribute to community identity.
- **PR-5.4** Provide facilities that are accessible for all populations and are adaptable to changing recreational, demographic, and economic trends.
- **PR-5.5** Provide park system properties that are connected to the surrounding communities through safe pedestrian and bicycle routes.
PR-5.6  Incorporate scenic viewpoints.
PR-5.7  Buffer facilities from incompatible uses.
PR-5.8  Develop and manage the park system to maximize opportunities for recreation, public access, and participation without high cost capital investments.
PR-5.9  Design recreation facilities with the flexibility and capacity to support increased programming, respond to changing needs, and provide year-round opportunities.
PR-5.10  Develop and implement unified standards to minimize future design and maintenance costs and to promote an identifiable image for the park system.
PR-5.11  Use Master Plans to guide park development and ensure public support. Plans should identify types of uses and development, public access, stewardship, and restoration.
PR-5.11.1  Ensure capital projects are consistent with the Master Plan in type of use and intensity.

**Stewardship**

**GOAL PR-6**  Manage the park system in a sustainable and environmentally beneficial manner that contributes to a healthy, livable community, and a rich natural park experience.

PR-6.1  Stewardship management plans should be prepared for all park system properties.
PR-6.1.1  Management of park properties and open space lands should be based on the purpose for which they were acquired and consider the regional context of ecosystems and adjacent land uses.
PR-6.1.2  Management of individual open space lands should follow good stewardship practices that protect and preserve natural and cultural resources.
PR-6.2  Develop minimum park standards that would allow public access to undeveloped properties on a limited basis.

**Funding**

**GOAL PR-7**  Develop secure funding strategies to adequately build, maintain, operate, and promote the park, recreation, and open space system.

PR-7.1  Develop partnerships with public and private agencies to increase park and recreation benefits for County citizens.
PR-7.2  Establish protocol for accepting donations for the park system.
PR-7.3  Periodically evaluate park impact fees and other revenue sources to meet increased system demands due to growth.
PR-7.4  Implement asset management system to support cost effective long term maintenance of the park system.
PR-7.4.1 Implement and fund maintenance protocols that maximize the life of park assets.

PR-7.4.2 Invest in preventative maintenance and upgrades to the park system to maximize long-term benefits.

PR-7.5 Ensure operation and maintenance costs are included when acquiring, developing, or renovating parks facilities and open space lands.

PR-7.5.1 Adjust the operating budget accordingly to maintain clean, safe, and inviting parks.

**Regional Coordination**

GOAL PR-8 Serve as a regional coordinator, leading the effort to forge partnerships and foster opportunities for countywide collaboration for parks, open space, trails, water access, programs, and services.

PR-8.1 Provide leadership in the joint planning and provision of programs with other park and recreation providers to meet County recreation needs.

PR-8.2 Coordinate with other park agencies and districts to provide a range and supply of formal recreation facilities and programs in Pierce County.

PR-8.3 Lead efforts to coordinate and partner with county departments, cities and other agencies to define, identify, retain, and conserve open space lands and recreational opportunities.

PR-8.4 Provide technical assistance to local jurisdictions for the conservation, development, operation and maintenance of parks and recreational facilities of interest to local communities.

**Education and Outreach**

GOAL PR-9 Engage Pierce County residents in the planning, stewardship, and programming of the park system.

PR-9.1 Provide effective community outreach and marketing to increase public awareness and support of recreation services.

PR-9.2 Promote Pierce County as a recreation and tourist destination by increasing name recognition and marketing the region’s system of open spaces, park facilities and activities.

PR-9.3 Increase public awareness of the County amenities, location, and value of the park system.

PR-9.4 Enhance customer service by making information and registration more accessible to the community.
PR-9.5 Promote volunteerism to enhance community ownership and stewardship of the County’s park system.

PR-9.6 Provide opportunities for public input in park planning and design decisions.

**TRAILS**

**GOAL PR-10** Provide a connected system of trails that link communities to parks, open spaces, public facilities, and areas of interest and provide nonmotorized transportation and recreation opportunities.

PR-10.1 Create healthy communities by promoting active lifestyles, reducing reliance on the automobile and offering opportunities for recreation through the trail system.

PR-10.2 Accommodate nonmotorized transportation modes safely and comfortably.

PR-10.3 Improve transportation by completing the regional interconnected trail system and encouraging its use for commuting.

**DESIGN**

**GOAL PR-11** Develop regional trail routes, crossings and trail facilities that are accessible to all.

PR-11.1 Reduce accessibility barriers and provide safe crossing of streets and other transportation routes.

PR-11.2 Ensure safety of all users through the provision of well maintained, visible, and well signed trail corridors with adequate emergency access.

**GOAL PR-12** Incorporate design techniques that offer a variety of experiences while minimizing impacts to the natural environment and neighboring uses.

**GOAL PR-13** Provide access for equestrian use in the rural area on routes that serve public stables or other equestrian pathways and do not limit other transportation uses in the corridor.

**GOAL PR-14** Develop planting standards that prohibit vegetation from negatively impacting the long term maintenance of the trail network.

**FACILITIES AND SERVICES**

**GOAL PR-15** Provide facilities and trail support services to accommodate the needs of trail users.

PR-15.1 Provide rest stations, restrooms, seating, picnic tables, water fountains, bike racks and recycling/trash receptacles at reasonable distances.
PR-15.2 Site trailheads in areas that allow for shared parking and infrastructure with other community facilities or major destination points such as libraries, schools, community centers, and shopping complexes.

PR-15.3 Provide for wildlife or scenic viewing opportunities where appropriate.

**MAINTENANCE**

**GOAL PR-16** Provide trail maintenance that is responsive, cost effective and resourceful for the long term success of the regional trails system.

**REGIONAL CONNECTIVITY**

**GOAL PR-17** Provide and enhance connectivity to important County and regional destinations, between multiple jurisdictions, and to neighboring counties.

PR-17.1 Create connections between key community destinations.

PR-17.2 Connect to trails in neighboring counties and to trails in local jurisdictions.

PR-17.3 Work with Federal, State, and local agencies to identify and procure public property to further the regional trail system.

**GOAL PR-18** Coordinate with cities and local communities, federal agencies, tribes, park districts, user groups, and neighboring counties to develop a successful regional trail system.

PR-18.1 Coordinate and cooperate with surrounding jurisdictions and providers to create a seamless regional trail system.

PR-18.2 Encourage special purpose districts, cities, towns, ports, tribes, and community plan areas to provide trail connections and provide access to the regional trail system.

PR-18.3 Encourage developers and private land owners to provide trail connections through developments to the regional trails system.

PR-18.4 Promote public/private partnerships in development, implementation, operation, and maintenance trail projects.

**WATER ACCESS**

**GOAL PR-19** Provide public waterfront access through the provision of public piers, swimming beaches, motorized and nonmotorized boat launches, public boat moorage, and water viewpoints.

PR-19.1 Cooperate with other agencies to acquire and preserve shoreline access.
PR-19.2 Enhance the existing system of water trails to support recreation opportunities for nonmotorized watercraft users.

PR-19.3 Provide access to shorelines in a manner that is aesthetically compatible with the adjacent properties and sensitive to ecological function.

PR-19.4 Provide for increased shoreline and water access in concert with increased demand from growth and development.

PR-19.5 Promote appropriate water access to help inspire appreciation and stewardship of aquatic resources and habitat.

PR-19.6 Support the development of the Kitsap Peninsula Water Trails Management Plan in collaboration with jurisdictions in Kitsap and Mason Counties.

PR-19.7 Explore implementation of the Kitsap Peninsula Water Trails Management Plan as applicable to facilities in Pierce County.

**RECREATION PROGRAMMING**

**GOAL PR-20** Provide recreation programs that serve regional needs and encourage greater participation in areas not served by other providers.

**PR-20.1** Focus on core program areas that support PCParks’ vision of encouraging active, healthy lifestyles, connecting people to nature, supporting vibrant communities, and providing opportunities to learn about sustainability practices.

**PR-20.1.1** Provide or collaborate with multidisciplinary health partners in developing programs that support improved physical activity, health, and well-being.

**PR-20.1.2** Provide environmental programming that accommodates direct exposure to nature as a means of contributing to physical and emotional health.

**PR-20.1.3** Educate the public about how they may achieve health and wellness.

**PR-20.2** Provide innovative, facility-based special events to provide social and cultural recreation opportunities.

**PR-20.3** Tailor programs and services to the demographics and needs of the community.

**PR-20.4** Identify and reduce physical and financial barriers to participation.

**PR-20.5** Ensure equitable programming for all regardless of age, abilities, race, ethnicity, or income.

**OPEN SPACE**

**GOAL PR-21** Provide a system of open space experiences and corridors to support livable communities, offer relief from the built environment, allow people to connect with nature and ensure the long-term health of the natural environment and citizens.
PR-21.1 Provide leadership for the planning, coordination and conservation of open space corridors that include unique environmental systems and scenic vistas on a countywide basis.

PR-21.2 Incorporate natural areas and unique ecological features into the park system to protect threatened species, conserve significant resources and habitat, and retain migration corridors that are unique and important to local wildlife.

PR-21.3 Provide open space corridors within the unincorporated Urban Growth Area (UGA) to protect wildlife corridors, provide open spaces for people to enjoy and to create buffers between communities.

PR-21.4 Coordinate and support open space identification, acquisition, and management with other County departments and agencies to look for opportunities to leverage resources and reduce expenditures.

PR-21.5 Protect property valued for plant, fish, and wildlife habitat rarity, diversity, or connectivity.

  PR-21.5.1 Preserve opportunities for people to observe and enjoy fish and wildlife.

  PR-21.5.2 Prioritize acquisition of habitats that are considered unique in the Puget Trough or West Cascade ecoregion, are identified biodiversity management areas, contain listed species, or provide habitat connection to these areas.

  PR-21.5.3 Prioritize the acquisition of habitat that completes an interconnected network of corridors or spaces.

PR-21.6 Acquire habitat that is supported by multiple county goals in adopted county or inter-jurisdictional plans.

PR-21.7 Develop partnerships with public agencies and jurisdictions, private organizations and businesses for implementation of habitat conservation across the county.

PR-21.8 Manage, restore, and maintain publicly owned habitat and open space lands.

  PR-21.8.1 Develop and implement stewardship management plans for open space properties.

For other Open Space policies see the Open Space Element
Chapter 12: TRANSPORTATION ELEMENT

CONTENTS

Multi-Modal Transportation System .............................................................. 12-6
  Transportation System Development.............................................................. 12-6
  Right-of-Way ................................................................................................. 12-8
Roadways ............................................................................................................. 12-9
  Access .............................................................................................................. 12-9
Active Transportation ....................................................................................... 12-10
Transit ............................................................................................................... 12-11
Ferry .................................................................................................................... 12-12
Rail and Freight ............................................................................................... 12-12
Air Transport .................................................................................................... 12-12
Concurrency and Level of Service .............................................................. 12-13
Transportation Demand Management ....................................................... 12-14
Environmental and Public Health ............................................................... 12-14
Coordination, Implementation, and Funding ............................................. 12-15

TECHNICAL SECTIONS

Preface ........................................................................................................ 12-19
  So What Has Changed and Where are We Now?.................................. 12-19
  The Political Geography .................................................................... 12-19
  People ..................................................................................................... 12-19
  The Planning Setting .......................................................................... 12-19
  The Reality ............................................................................................. 12-20
  The Aspiration ...................................................................................... 12-20

Existing Conditions and Trends .............................................................. 12-20
  Demographics and Travel .................................................................. 12-20
  Population .............................................................................................. 12-20
  Age ......................................................................................................... 12-21
Travel Mode ..................................................................................................................... 12-21
Travel Time ....................................................................................................................... 12-21
County to County Travel ................................................................................................. 12-25
Travel Performance and Level of Service ........................................................................ 12-25
Service Level Methodology ............................................................................................. 12-25
Arterial Service Levels ................................................................................................. 12-26
End-of-Year 2010 Traffic Volume Estimation .................................................................. 12-26
Forecasted Traffic Volumes ............................................................................................. 12-27
County Arterial Performance .......................................................................................... 12-27
State Level of Service ..................................................................................................... 12-27
Highways of Statewide Significance and Regionally Significant State Highways .......... 12-27
Evaluation of Current County Maintained Arterial System .......................................... 12-28
County Arterial Performance 2010 ............................................................................... 12-29
2010 State Highway Performance .................................................................................. 12-32
Pierce County Transit Service Providers .......................................................................... 12-34

Current Transportation Plans, Programs, and Projects ............................................. 12-38
Background ...................................................................................................................... 12-38
Transportation Plans and Projects .................................................................................. 12-38
  Washington State Department of Transportation ........................................................ 12-38
  The Puget Sound Regional Council .............................................................................. 12-38
  Pierce County ............................................................................................................... 12-39

Population, Jobs, Travel Characteristics and Performance ...................................... 12-44
Background ...................................................................................................................... 12-44
Population and Job Growth ............................................................................................. 12-44
Summary of Key Land Use Assumptions and Inputs: .................................................... 12-47
Travel ............................................................................................................................... 12-47
Types of Proposed Motorized Roadway Improvements ................................................. 12-49
Intersection Improvement Projects .................................................................................. 12-49
Analysis of Future Roadway System Performance ....................................................... 12-50
Analysis of 2030 County Roadway System .................................................................. 12-50
Analysis of 2030 Federal and State Roadway System .................................................. 12-57
The Recommended Plan .......................................................................................... 12-61

The Key Components .......................................................................................... 12-61

Financing the Transportation Future ................................................................... 12-65

Transportation Needs and Resources .................................................................. 12-66
Key Finance Actions ............................................................................................... 12-66
Transportation Revenue Sources ......................................................................... 12-67
Transportation Expenditures .................................................................................. 12-68
The Transportation Improvement Costs – Element Recommendation ............... 12-68

The Full Cost Accounting for Transportation .......................................................... 12-69
Maintenance ............................................................................................................ 12-69
Operations ............................................................................................................... 12-70
Preservation ............................................................................................................. 12-71
Improvements .......................................................................................................... 12-71

Safety Improvements .............................................................................................. 12-71
Capacity Improvements ......................................................................................... 12-71
Administration ........................................................................................................ 12-71
Revenues .................................................................................................................. 12-72
Revenue Shortfall .................................................................................................... 12-72

Active Transportation/Nonmotorized Transportation ........................................ 12-73

Background ............................................................................................................. 12-73
Active Transportation Planning Requirements ...................................................... 12-73
Existing Nonmotorized Projects ............................................................................ 12-74
Programs and Strategies ....................................................................................... 12-78

Complete Streets .................................................................................................... 12-78
Safe Routes to Schools .......................................................................................... 12-78
Transportation Demand Management .................................................................. 12-79
Trail Development ................................................................................................. 12-79
Americans with Disabilities Act ............................................................................ 12-80
Implementation ........................................................................................................ 12-80
Ultimate Capacity ................................................................................................. 12-82

Transportation Demand Management (TDM) ...................................................... 12-82
Active Transportation ........................................................................................................ 12-100

Appendix B ......................................................................................................................... 12-101

- B-1 – Florida Department of Transportation Level of Service Table .............................. 12-102
- B-2 – State and City 2030 Assumed Roadway Projects ................................................... 12-106
- B-3 – Highways of Statewide Significance ...................................................................... 12-108
- B-4 – Regionally Significant State Highways ................................................................... 12-109

Appendix C - Summary Statistics for Limited and Preferred Action Scenarios...12-110

Appendix D – Transportation Projects from Adopted Plans........................................... 12-113

- Outside Community Plan Areas ..................................................................................... 12-116
- Alderton-McMillin ............................................................................................................ 12-120
- Anderson – Ketron Islands ............................................................................................... 12-122
- Browns Point – Dash Point ............................................................................................ 12-124
- Frederickson .................................................................................................................... 12-126
- Gig Harbor ..................................................................................................................... 12-130
- Graham .......................................................................................................................... 12-135
- Key Peninsula ................................................................................................................ 12-140
- Mid-County .................................................................................................................... 12-145
- Parkland-Spanaway-Midland ........................................................................................ 12-152
- South Hill ....................................................................................................................... 12-157
MULTI-MODAL TRANSPORTATION SYSTEM

The population of Pierce County and the demand on the transportation system are both expected to increase significantly over the 20-year planning period. To keep our economy and environment healthy, it is essential for the transportation system to be able to meet the demands of tomorrow. The challenges of addressing transportation needs include population growth, transportation financing, and the variety of policy options for addressing issues. The County strives to meet the transportation needs of the community while achieving the lowest long-term costs.

In order to accommodate needs of all aspects of moving people and goods, it is becoming increasingly important to consider all modes of travel and a wide range of transportation options. The County supports an increase in the use of transit and other alternatives to the single-occupant vehicle. Alternatives to single-occupant vehicles are needed to reduce the cost of transportation and to provide the infrastructure to attract and retain businesses.

Transportation improvements include the information and infrastructure to change travel habits. Transit strategies include improved bus service, high occupancy vehicle lanes, vanpools, and carpools with safe and convenient access to park-and-ride lots. Active transportation systems include facilities to support activities such as bicycling, walking, and skating. It is anticipated that Transportation Demand Management will play a greater role in integrating transit, ride sharing, and active transportation systems.

Pierce County's urban travel needs are met by a system of freeways and arterials, bike trails and bike lanes, a bus transit system, commuter rail, and light rail. In addition, the County is served by a maritime port, several general aviation airports, and ferry services. Joint Base Lewis-McChord (JBLM) is a major military facility with complex transportation systems and travel needs.

TRANSPORTATION SYSTEM DEVELOPMENT

GOAL T-1

Collaborate in the development of a countywide multimodal transportation system that considers the mobility needs of all residents, emphasizes safety, minimizes impacts to the natural and built environments, and facilitates goods movement.

T-1.1

Strategically expand capacity and increase efficiency of the system to move goods, services, and people to and within the Urban Growth Area.

T-1.2

Focus on investments that produce the highest benefits with the least amount of environmental impacts.

The urban transportation system includes (T-1.1):

- Roadways
- Fixed-route public transit and shuttle services
- Bicycle and pedestrian facilities
- Water, rail, air, and industrial port and intermodal facilities
- Passenger and freight rail

For more background and technical information see the Technical Sections of this Element
GOAL T-2  
Forecast traffic to plan for transportation infrastructure that accommodates planned growth and maintains service standards.

T-2.1  
Base traffic forecasts on assumptions from the Land Use Element of the Comprehensive Plan and adopted County population, housing, and employment growth targets, which are consistent with the Vision 2040 Regional Growth Strategy.

GOAL T-3  
Invest in all five categories of MOPIA (Maintenance, Operations, Preservation, Improvements, and Administration) in stewardship of the transportation system. Maintenance, Operations, and Preservation are the highest priorities.

T-3.1  
Lower the overall life-cycle costs through effective maintenance and preservation programs.

T-3.2  
Adequately maintain roadways, rights-of-way, and associated County property, while adhering to established levels of service.

T-3.3  
Promote an efficient roadway system through operational activities, improvements, and education.

T-3.3.1  
Recognize that operational improvements can lead to a reduction in the need for new project construction.

T-3.4  
Preserve the County roadway system.

T-3.4.1  
Repave and overlay roadways in a timely manner.

T-3.4.2  
Replace or refurbish infrastructure when needed.

T-3.5  
Improve roadways through widening and extensions to keep pace with growth and enhance safety, particularly in urban areas.

T-3.6  
Provide adequate staffing to administer the maintenance, operations, preservation, and improvement activities.

GOAL T-4  
Place a high priority on roadway safety.

T-4.1  
Complement Washington State’s zero death and disabling injury target through safety improvements and education.

GOAL T-5  
Prioritize transportation capacity improvements in the following order:

T-5.1  
Upgrade or build new transportation facilities to encourage and support growth and economic development in urban areas of the County.

T-5.2  
Upgrade or build new transportation facilities in the more rural areas of the County to serve large lot, low density residential development at appropriate service levels.

T-5.2.1  
Construction of new roads and addition of travel lanes should be avoided in the rural area, except when essential for safe and efficient interurban travel.
GOAL T-6  Place particular emphasis on the development of an interconnected, multimodal transportation system within designated centers and along corridors connecting centers.

T-6.1  Provide for the needs of freight movement and employees to and from the Frederickson Manufacturing/Industrial Center by ensuring a variety of transportation modes, and designing and funding road improvements to accommodate freight movement.

RIGHT-OF-WAY

The land that contains transportation corridors is referred to as right-of-way. Right-of-way exists for roads, trails, rail lines, and access to navigable waters.

GOAL T-7  Acquire and preserve rights-of-way.

T-7.1  Preserve right-of-way for future transit alignments and high capacity transit.

T-7.2  Require dedication of right-of-way as a condition for development.

T-7.3  Request donations of right-of-way to the County.

T-7.4  Include donated right-of-way in development density calculations so developers who donate are not penalized.

T-7.5  Purchase rights-of-way.

T-7.6  Purchase development rights from property owners.

T-7.7  Require property owners to grant public easements.

T-7.8  Preserve County rights-of-way that terminate at navigable waters.

T-7.9  Preserve rail rights-of-way for future rail or other transportation purposes.

T-7.9.1  Identify abandoned or to be abandoned rail lines and rights-of-way.

T-7.9.2  Support and encourage the State allocate funds for the preservation of identified rail lines and rights-of-way.

T-7.10  Protect public rights-of-way from encroachment by any structure, vegetation, landscaping materials, or other obstruction.

T-7.11  Establish minimum setbacks for property improvements to preserve sufficient right-of-way to serve future transportation needs.

T-7.12  Assess the potential uses of rights-of-way for all forms of travel to preserve and implement their highest and best transportation use.

Right-of-way can be used to (T-7):

- Protect access and provide safety for all users
- Preserve the integrity of County roads, drainage systems, and other publicly-provided and maintained facilities
ROADWAYS

The road system in Pierce County consists of Federal, State, County, city, and privately-owned facilities. The County’s road system connects with the interstate and state highway system, and city streets, as well as numerous privately constructed and owned roads throughout the County.

GOAL T-8  Encourage direct routing and greater connectivity of the arterial road system, while minimizing impacts to residential neighborhoods and the environment.

GOAL T-9  Utilize traffic calming measures, as appropriate, to reduce high traffic volumes and speeds through residential neighborhoods.

T-9.1  Allow on-street parking on minor local and residential streets.

GOAL T-10  Provide for the safe use and presence of farm vehicles on the rural roadway network.

T-10.1  Coordinate with the farming community to understand the specific operational needs of their industry.

T-10.2  Encourage discussion and analysis of impacts of connectivity as it relates to agricultural lands.

ACCESS

GOAL T-11  Consolidate access to state highways, and major and secondary arterials in order to complement the highway and arterial system.

T-11.1  Identify access to private developments through a system of collector arterials and local access streets.

T-11.2  Consolidate access in developing commercial and high density residential areas through shared-use driveways, frontage roads, and local access streets.

T-11.3  Encourage landowners developing property along highways, and major and secondary arterials to jointly prepare comprehensive access plans that emphasize efficient internal circulation and discourage multiple access points to major roadways.

T-11.4  Consider access management to reduce the number of conflict points between pedestrians and vehicles, with the intention of improving pedestrian safety.

T-11.5  Discourage gated communities that impair emergency vehicle access.

Access control is intended to (T-11):

• Reduce interference with traffic flow on arterials
• Reduce conflicts between motor vehicles and active transportation users
• Discourage through traffic on local access streets or private access roadways
ACTIVE TRANSPORTATION

Active transportation systems (nonmotorized) include sidewalks, trails, bike lanes, and roadway shoulders to accommodate pedestrians, bicyclists, and skaters for both transportation and recreational purposes.

GOAL T-12  Develop an interconnected countywide system of active/nonmotorized transportation facilities that provide travel options, promote physical activity and well-being, contribute to a healthier population and cleaner environment, and enhance safety.

T-12.1  Prioritize trail development to form the core of the active transportation system, linking communities, centers, tourist attractions, and other destinations.

T-12.1.1  Work collaboratively with other organizations, including Pierce County Parks and Recreation to develop the Pierce County Regional Trail System, community nonmotorized connections, and local access.

T-12.2  Endorse the concept of complete streets, which promotes roadways that are safe and convenient for all users.

T-12.3  Design and construct complete streets wherever feasible and practicable.

T-12.4  Work to construct missing links in the active transportation system and access to the network.

T-12.5  Inform the community about the economic transportation system performance, and environmental, health, and social benefits of active transportation.

T-12.6  Develop improved programs to encourage increased levels of active transportation.

GOAL T-13  Require the installation of bicycle racks and secure bicycle parking at larger employment sites and within designated centers.

GOAL T-14  Develop, maintain, and improve pedestrian amenities for routes connecting commercial areas to residential neighborhoods, civic uses, and schools.

T-14.1  Realize both the recreational and transportation value of these routes.

T-14.2  Accommodate students’ travel to school and bus stops using safe walking corridors.

T-14.3  Accommodate pedestrians and bicyclists on arterials unless precluded by environmental or physical constraints.

T-14.4  Require developers to include active transportation elements (non-motorized) in all projects.

GOAL T-15  Support active transportation travel modes as a trip reduction strategy.

Active transportation facilities include (T-12):
- Trails
- Pathways
- Sidewalks
- Bike lanes
- Paved shoulders
- Wide curb lanes
- Shared use roadways
T-15.1 Provide facilities for bicyclists and pedestrians to access public transit.

**T R A N S I T**

Transit service in Pierce County is provided by Pierce Transit, Intercity Transit, and Sound Transit. Pierce Transit provides local fixed-route bus service, express bus service to Gig Harbor, a demand response SHUTTLE service for persons with disabilities who are unable to use the fixed-route system, a rideshare program that includes vanpooling, and park-and-ride facilities to support these services. Intercity Transit provides express bus service between Olympia and Tacoma. Sound Transit provides express bus service to Seattle, south King County, and Sea-Tac International Airport, Sounder commuter rail between multiple Pierce and King County cities, and the Tacoma Link light rail.

**GOAL T-16** Encourage and cooperate with transit agencies to provide services that meet the needs of residents.

- **T-16.1** Coordinate with transit agencies to increase the number of routes and frequency, as funding becomes available, especially to underserved areas and designated centers within the unincorporated area.
- **T-16.2** Cooperate with transit agencies in the location of transit centers, park and ride lots, rail stations, and bus stops.
- **T-16.3** Support efforts to develop tourist-related transit service that reduces vehicle trips to local attractions, especially Mount Rainier.
- **T-16.4** Work with transit agencies to improve bus and rail connections to popular bicycle and pedestrian routes and ferry terminals.
- **T-16.5** Encourage transit agencies to add bicycle lockers and other amenities to accommodate multimodal connections.
- **T-16.6** Work with transit agencies to identify improvements within the County right-of-way to support transit operations and rider access to transit facilities.
- **T-16.7** Support the development of the regional park-and-ride lot system.
- **T-16.8** Encourage the placement of transit shelters that are well lit, clearly visible, well marked, posted with easy-to-read schedules and route maps, equipped with litter receptacles, and that protect users from inclement weather.
- **T-16.9** Coordinate with the Pierce County Coordinated Transportation Services Coalition to address mobility for people with special transportation needs and to implement the countywide Coordinated Transportation Plan recommendations.

**GOAL T-17** Encourage residential developers to provide waiting areas, including bus shelters, for the safe congregation of children transported by bus to school.

**GOAL T-18** Encourage transit oriented development and prioritize facilities that help connect people to transit, such as sidewalks, trails, crosswalks, and bicycle parking.
FERRY

Pierce County is served by two ferry routes, one operated by the County and the other by the Washington State Department of Transportation (WSDOT). The WSDOT ferry route is between Point Defiance in Tacoma and Vashon Island. The Pierce County ferry route connects Anderson and Ketron Island to the mainland in the town of Steilacoom. Both routes accommodate both motor vehicles and passengers.

GOAL T-19  Consider the Pierce County Ferry System an extension of the County roadway system.

RAIL AND FREIGHT

The efficient movement of freight is a priority for supporting economic development and providing living wage jobs. Movement of goods and services can be achieved using rail systems, trucking, and shipping.

GOAL T-20  Work with local communities, the Washington State Department of Transportation, railroads, labor groups, and shippers to:

T-20.1  Identify and preserve all rail lines and services;
T-20.2  Coordinate and implement passenger and freight rail service preservation projects consistent with a regional transportation program; and
T-20.3  Consider localized rail service as a means of public transportation.

GOAL T-21  Provide for the needs of freight movement and employees within the Frederickson Manufacturing/Industrial Center by ensuring a variety of transportation modes and funding road improvements to accommodate freight movement.

GOAL T-22  Work in cooperation with WSDOT, cities, JBLM, Port Authorities, and other entities to plan and implement projects and programs to meet freight mobility and access needs.

GOAL T-23  Support efforts to construct transportation facilities that will benefit freight movement, including the proposed extensions of the SR 167 freeway and SR 704 (Cross-Base Highway).

AIR TRANSPORT

Pierce County is served by Seattle-Tacoma International Airport in south King County, two military base airports, and a number of smaller airports owned by the public and private sector.

The largest airports located in the County are the military air facilities on Joint Base Lewis McChord (JBLM) - McChord Field and Gray Field. General aviation is served by the County-owned Tacoma Narrows Airport and Thun Field and several other small private airports.

GOAL T-24  Participate in regional airport planning to ensure that County needs are met and that County concerns are addressed.

T-24.1  Support the preservation of air navigation resources and facilities.
T-24.2 Provide adequate ground transportation to move people and goods to and from airports.

**Concurrency and Level of Service**

Level of service standards exist for all arterials and transit routes to serve as a gauge to judge performance of the system. These service standards should be regionally coordinated.

To gauge the performance of the County road system, Pierce County Council adopts level of service standards (hereafter referred to as service standards or standards). The standards are set according to the Capital Facilities Element of this Plan. The standards reflect the maximum acceptable level of congestion throughout the County.

**Goal T-25** Establish service standards for County arterials and reflect the level of service standards for state highways to monitor the performance of the system, evaluate improvement strategies, and facilitate coordination for funding.

T-25.1 Annually report transportation concurrency on County roadways based on the adopted County service standard, which reflects the maximum allowable level of congestion on roadways.

T-25.2 Consider the impacts on neighboring jurisdictional roadway facilities, inclusive of the Washington State Department of Transportation (WSDOT), when developing and administering service standards.

T-25.3 Pursue the concept of Ultimate Capacity as applicable to the county roadways. Roadways designated as ultimate capacity facilities would be improved to certain specified levels. These types and levels of improvements would not necessarily meet current or future Pierce County Roadway Concurrency Management System standards. Provisions should be made for providing adequate operational safety and nonmotorized improvements when appropriate. Targeted Transportation Demand Management measures may also be considered.

**Goal T-26** Transportation improvements or strategies to accommodate the impacts of development must be made concurrent with the development.

T-26.1 Consider varied strategies in the concurrency program to address substandard service standards.

T-26.2 Consider targeted application of transportation demand strategies on roadways that exceed service standard thresholds.

T-26.3 Prohibit development in areas that are served by facilities that do not meet concurrency standards.

**Goal T-27** Tailor concurrency programs for centers to encourage transit-oriented development.
TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) involves strategies that are targeted towards reducing drive-alone travel. TDM efforts include education, incentives, and the provision of infrastructure.

GOAL T-28
Encourage alternate travel modes within an efficient multimodal transportation system that reduces and shifts travel demand to improve the flow of people and goods.

T-28.1 Partner with other agencies to implement travel demand management (TDM) programs.

T-28.2 Emphasize transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within centers, and along corridors connecting centers.

ENVIRONMENTAL AND PUBLIC HEALTH

GOAL T-29
Impacts on health and the natural and built environments shall be important considerations when designing and implementing facilities.

T-29.1 Use low impact development practices or environmentally appropriate approaches for the design, construction, and operation of facilities to reduce and mitigate environmental impacts.

T-29.2 Locate and construct improvements to discourage adverse impacts on water quality and other environmental resources.

T-29.3 Design facilities to fit within the context of the built or natural environment in which they are located.

T-29.4 Strive to use and encourage the use of cleaner fuels and lower-emission vehicles.

T-29.5 Mitigate unavoidable environmental and health impacts, including cumulative impacts.

T-29.6 Where appropriate, use recycled materials in the construction of facilities.

T-29.7 Consider landscaping and other types of buffers along major facilities, where appropriate.

T-29.7.1 Preserve the natural environment and existing vegetation as much as possible.

Strategies to implement TDM include (T-28.1):

- Assist employers and employment centers to promote alternatives to commuting in single-occupant vehicles.
- Inform the public about the benefits of alternative travel modes, especially those relating to physical health and the environment.
- Provide tools and technology, including social media, to disseminate travel options and route information.
- Invest in capital facilities that support alternative modes of travel including park and ride lots, transit amenities, and bicycle and pedestrian projects.
- Focus TDM and TSM strategies to address travel behavior in congested corridors and urban centers.
- Encourage developers to provide bus shelters and stops, bicycle parking, and carpool parking.
T-29.8 Solicit and incorporate the concerns and comments of interested parties regarding environmental issues into the planning, design, construction, operation, and maintenance of the system.

T-29.9 Minimize changes to existing topography and impacts to critical areas.

T-29.9.1 Avoid the removal of trees outside the safety perimeter of roadways in the rural areas.

T-29.9.2 Relocate or replace any trees removed as part of any roadway projects if feasible.

T-29.10 Include roadside native vegetation and trees in the buffer areas adjacent to arterials.

T-29.10.1 Ensure that any plantings do not affect driver visibility or line of sight.

GOAL T-30 Develop a system that minimizes negative impacts to human health and provides opportunities for healthy, non-polluting travel options.

T-30.1 Protect the system against disaster.

T-30.1.1 Develop prevention and recovery strategies, and plan for coordinated responses.

T-30.2 Consider the impacts of noise on both the transportation facility user and the larger population when locating and designing future transportation facilities.

COORDINATION, IMPLEMENTATION, AND FUNDING

GOAL T-31 Coordinate the planning, design, and implementation of improvements with other agencies.

T-31.1 Coordinate with the Puget Sound Regional Council, Pierce County Regional Council, transportation agencies, other organizations, and other jurisdictions in developing and updating the regional plan and the programming efforts that cross jurisdictional lines.

T-31.2 Create interlocal agreements that address development impacts on one another’s facilities, including potential developer mitigation measures.

T-31.3 Coordinate with social service organizations and transit agencies to provide services that meet the needs of transit-dependent residents.

GOAL T-32 Develop a multi-year financing plan that identifies sustainable funding sources adequate to construct and maintain the system.

T-32.1 Prioritize funding transportation improvements in designated regional, local, and manufacturing/industrial centers and in the transportation corridors that provide linkages to these centers.

T-32.1.1 Create a reassessment strategy if revenue forecasts fall short of expectations.
The reassessment strategy should include a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that service standards will be met.

**GOAL T-33** Reduce the need for new capital improvements through investments in operations, pricing programs, demand management strategies, and system management activities that improve the efficiency of the current system.

**GOAL T-34** Address anticipated revenue shortfalls through such forums as the newly formed Transportation Benefit District and programs such as the updating of the Traffic Impact Fee Program. This forum and program will assess how to develop additional funding in the context of current land use assumptions and adopted service standards.

**T-34.1** Consider the following funding options and possibilities in developing additional revenue for the comprehensive plan time horizon:

**T-34.1.1** Changes in state law to allow additional funding sources such as road utilities and additional local option financing mechanisms;

**T-34.1.2** Lobbying the state legislature for a more equitable distribution of state funds generated by a jurisdiction and received by that jurisdiction;

**T-34.1.3** Reduction or elimination of either/both the Traffic Law Enforcement transfer from the Road Fund (currently $2.65 million per year), or the voter-approved Road Fund Levy Shift (currently over $12 million per year), and further restricting the use of the Road Fund levy to the maintenance, operation, preservation, administration, and improvement of transportation facilities;

**T-34.1.4** Encouraging public/private partnerships for financing transportation projects;

**T-34.1.5** Sharing costs with other jurisdictions for needed improvements that solve shared transportation objectives;

**T-34.1.6** Maximize opportunities when appropriate to utilize the cost recovery mechanism as found in Chapter 12.36 PCC. The cost recovery mechanism would facilitate the cost sharing of projects among private developers and possibly, the County. This would potentially accelerate construction of particular transportation improvements or for additional transportation facilities and services needed to serve new developments, in proportion to the impacts and needs generated by individual projects;

**T-34.1.7** When cost effective, encourage the use of Road Improvement Districts by local residents to upgrade public and private roads and develop new roads consistent with County public road standards;

**T-34.1.8** Continue to seek federal funding for transportation projects that support the military mission and fund the mitigation of its traffic impacts;
T-34.1.9 Continue to leverage County funds to the highest level by pursuing non-County funding sources for transportation funds and using County funds as matching funds.
The following sections are technical information to supplement the policies and background in the previous section.
PREFACE

This Pierce County Transportation Element represents the first major revision in the County’s transportation plan since June 1992. The Transportation Element has been kept current through the twenty three years since the adoption of that plan through a series of amendments. Some of the amendments were technical in nature, many substantive. This Transportation Element is notable in that it is offered within the context of a larger Comprehensive Plan Update.

SO WHAT HAS CHANGED AND WHERE ARE WE NOW?

Much has changed since 1992. The planning landscape has changed in terms of the people, political geography, regulatory environment, technologies, economy, finance, and environment. Let us review some of the key developments since 1992 that affect how we look at transportation planning in Pierce County today.

THE POLITICAL GEOGRAPHY

The boundaries and land area of unincorporated Pierce County have changed in the past twenty three years. State legislation has set the table for the emergence of new cities and the continued expansion of older ones through annexation of unincorporated lands. Since the first Transportation Plan came three new cities, Lakewood, University Place, and Edgewood. It is notable that this update of the County Comprehensive Plan offers policies that reinforce and encourage the continued process of annexation and incorporations.

PEOPLE

The concept of political geography as described above is important in transportation planning as the boundaries and coverage of this county directly relates to the population and facilities that the County serves. As the unincorporated land areas of this county decrease, so does the population within those areas. This Transportation Element will discuss the changing demography and trends of the County that will influence the demand for transportation and how it will be served.

THE PLANNING SETTING

The transportation planning policies and practices of all levels of agencies and governments have changed enormously. New terms such as Sustainability, Smart Growth, Concurrency, Project Prioritization, MAP 21, Intelligent Transportation Systems, and Climate Change have been added to the lexicon of the transportation planning profession. These are only few of the new terms.
THE REALITY

The on the ground reality for transportation planning is somewhat of a mix of possibilities. There are enormous opportunities in such things as new high speed transit in nearby cities and a more extensive network of regional bus services developed since 1992. But there is also the almost doubling of traffic and resultant congestion on our state freeway system. There are also the budgetary realities at all levels of government and transportation agencies that have affected both the revenue and expenditure sides.

THE ASPIRATION

This Transportation Element considers the current planning setting and projects to the future. It does this through a largely data driven process of assessing travel needs, demographics, understanding its financial resources, and proposing approaches to addressing these needs.

It aspires to deliver a transportation future for Pierce County that is safe, sustainable, financially balanced and viable. The strategies presented in this Element are consistent with state law, and regional and countywide policies. It is in this context and more, that we offer the Transportation Element.

EXISTING CONDITIONS AND TRENDS

DEMOGRAPHICS AND TRAVEL

Pierce County has a mix of demographic and travel patterns that strongly affect the demand for transportation services. This demand or use for the system then influences this jurisdiction’s actions in providing for those services. This section examines current demographic and travel related trends extracted from Census data for the time periods of 1990 and 2010. This cross-section of census periods provides a perspective of demographic change occurring between the adoption of the first transportation plan (1992) to the present day condition.

POPULATION

The population of Pierce County in 2010 was 795,225 residents reflecting an increase of more than 200,000 people from 1990. In 1990, the population in cities/unincorporated was 246,278/339,925 respectively. In 2010 the balance changed to 428,487/366,738. These figures at face value may lead one to believe that a significant number of unincorporated residents simply moved to the cities. However, the reality is that the population shift is primarily due to the incorporation of the cities of Lakewood, University Place, and Edgewood in that time period. In 1990 these three jurisdiction’s populaces were counted as unincorporated, whereas in 2010 they were counted as incorporated.
**Age**

According to US Census Bureau data, the distribution in population among age brackets between 1990 and 2010 has changed slightly with increasing elderly population as displayed in Figure 12-A. Note the 30 to 44 years category appears more significant in the graphs due to representing a 15 year age span (versus ten years for most other categories). The 65+ age group also represents a larger age span. The difference in age span of the groups acts to skew the graph.

**Travel Mode**

Pierce County single-occupant-vehicle (SOV) mode for commute trips share falls between 75% and 80% according to Census data. The distribution in mode share has not changed significantly over the 20-year period. The share of carpool and public transportation has remained relatively similar, as shown in Figure 12-B.

**Travel Time**

Figure 12-C shows that the average commute travel time continues to increase in Pierce County. The graphs show that travel times have increased significantly in the unincorporated area, while city travel times have remained relatively stable over the 20-year period.
Figure 12-A: Pierce County Age Distribution

1990

- 65+ years
- 55 to 64 years
- 45 to 54 years
- 30 to 44 years
- 20 to 29 years
- 10 to 19 years
- Under 10 years

2010

- 65+ years
- 55 to 64 years
- 45 to 54 years
- 30 to 44 years
- 20 to 29 years
- 10 to 19 years
- Under 10 years
Figure 12-B: Pierce County Commute Trip Mode Share

1990 (%)

- Drove alone: 70% (Unincorporated), 75% (Cities)
- Carpoled: 10% (Unincorporated), 5% (Cities)
- Public Transportation: 5% (Unincorporated), 3% (Cities)
- Walked: 2% (Unincorporated), 1% (Cities)
- Other: 1% (Unincorporated), 1% (Cities)
- Worked at home: 4% (Unincorporated), 4% (Cities)

2010 (%)

- Drove alone: 75% (Unincorporated), 80% (Cities)
- Carpoled: 15% (Unincorporated), 10% (Cities)
- Public Transportation: 5% (Unincorporated), 3% (Cities)
- Walked: 2% (Unincorporated), 1% (Cities)
- Other: 1% (Unincorporated), 1% (Cities)
- Worked at home: 5% (Unincorporated), 5% (Cities)
Figure 12-C: Pierce County Travel Time to Work

1990 (%)

- Less than 5 minutes
- 5 to 9 minutes
- 10 to 14 minutes
- 15 to 19 minutes
- 20 to 29 minutes
- 30 to 44 minutes
- 45 to 59 minutes
- 60 or more minutes

2010 (%)

- Less than 5 minutes
- 5 to 9 minutes
- 10 to 14 minutes
- 15 to 19 minutes
- 20 to 29 minutes
- 30 to 44 minutes
- 45 to 59 minutes
- 60 or more minutes
County to County Travel

A significant portion of Pierce County’s residents’ travel is to King County for work. Another significant and growing trend is Pierce County providing jobs for Thurston and King County residents.

Table 12-A: County to County Travel from 1980 to 2010

<table>
<thead>
<tr>
<th>County</th>
<th>Residents Work In</th>
<th>Workers Live In</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pierce</td>
<td>151,846</td>
<td>197,816</td>
</tr>
<tr>
<td>King</td>
<td>26,254</td>
<td>53,657</td>
</tr>
<tr>
<td>Kitsap</td>
<td>2,244</td>
<td>3,626</td>
</tr>
<tr>
<td>Snohomish</td>
<td>354</td>
<td>2,526</td>
</tr>
<tr>
<td>Thurston</td>
<td>2,120</td>
<td>3,750</td>
</tr>
<tr>
<td>Other</td>
<td>21,791</td>
<td>12,214</td>
</tr>
</tbody>
</table>

Travel Performance and Level of Service

Pierce County’s Transportation Concurrency Management System (TCMS) addresses the Washington State Growth Management Act (GMA) requirement that directs certain counties and cities to set and maintain level of service standards for the arterial roadway system. Pierce County TCMS has been applied for the Transportation Plan Update to identify County-maintained arterial roadways that have projected concurrency deficiencies in 2030 based on the modeled roadway improvement assumptions, estimated population and employment changes, and the adopted Service Standard. This analysis informs and provides recommendations to Pierce County staff and policymakers regarding present and future arterial roadway concurrency issues.

Service Level Methodology

Pierce County measures traffic conditions on pre-defined arterial segments. Pierce County’s system analyzes County-maintained arterials in a unit called concurrency segment. A concurrency segment may consist of one or more roadway links, whose limits are usually defined by either intersecting arterials (existing or proposed) or jurisdictional boundaries. A link is a single section of roadway as represented in context of the travel demand model. The Transportation Plan Update 2030 modeled roadway network includes 1,018 concurrency segments, comprised of over 2,000 modeled arterial links in unincorporated Pierce County. Defining a concurrency segment is based on the following principles. First, the variation of traffic volumes within a segment should be minimized. Second, the required data for the concurrency analysis should be relatively easy to collect and process. Third, the service level of
the measured segment should be easily interpreted and understood. Lastly, the measurement should realistically reflect the daily operating condition of the facility.

**ARTERIAL SERVICE LEVELS**

The Service Level of an arterial, as defined by Pierce County, is the observed daily traffic volume divided by a Service Threshold, which produces a Volume/Service (V/S) ratio. The Service Threshold is similar to a capacity measure and varies depending on the number of lanes of a facility and the presence of adequate channelization (turn lanes and/or turn pockets). Table 12-B lists the adopted Pierce County Service Thresholds.

**Table 12-B: Service Threshold (S)**

<table>
<thead>
<tr>
<th>Travel Lanes (both directions)</th>
<th>Without Turn Channelization¹</th>
<th>With Turn Channelization¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban</strong>³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>17,600</td>
<td>22,000</td>
</tr>
<tr>
<td>3</td>
<td>24,600</td>
<td>30,800</td>
</tr>
<tr>
<td>4</td>
<td>35,200</td>
<td>44,000</td>
</tr>
<tr>
<td>6</td>
<td>49,300</td>
<td>61,600</td>
</tr>
<tr>
<td><strong>Rural</strong>²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15,800</td>
<td>19,800</td>
</tr>
<tr>
<td>4</td>
<td>31,600</td>
<td>39,600</td>
</tr>
</tbody>
</table>

Service Threshold was defined by Annualized Average Daily Traffic (AADT).

1. Urban Classifications include arterials with Federal Urban Arterial status and/or within the County’s Urban Growth Area.
2. Rural Classifications include arterials that are not classified as Urban per the above definition.
3. Turn Channelization consists of a roadway having a center two-way left turn lane or exclusive turn pockets at key locations.
4. Three-lane thresholds pertain to uneven 3-lane arterials, which have one lane in one direction and two lanes in the other. Assumes 60% of a 2-lane capacity is in the direction with one lane (e.g. 0.6*17,600=10,560), plus 40% of a 4-lane capacity in the direction with two lanes (e.g. 0.4*35,200=14,080). Example total = 10,560+14,080=24,640 or 24,600. If turn channelization is present, the Service Threshold increases to 30,800.
5. An additional capacity Service Threshold of 47,400 was derived for 4-lane arterials possessing access control. This capacity is applied to 176th St E after completion of capacity improvement.
6. Details of the methods used to create Service Thresholds can be found in the Pierce County Traffic Impact Fee Rate Study and the Technical Memorandum #3 of the Pierce County Traffic Impact Fee Notebook (September 30, 2005)


While the Service Threshold measures the traffic saturation level based on daily V/S ratio, the adopted Allowable Arterial Service Standard sets the threshold at which a roadway is considered to have failed concurrency. The Allowable Arterial Service Standard for long range planning in the Transportation Plan is 1.0.

**END-OF-YEAR 2010 TRAFFIC VOLUME ESTIMATION**

The current daily V/S ratio is derived by dividing the observed or estimated end-of-year 2010 daily traffic volume by the Service Threshold for each link. It is not viable to collect traffic counts on every link in the concurrency system, so a subset of County arterials was identified for annual count collection. After the data was assembled, it was further processed to match the count data with the corresponding model links. For those links that have 2009 traffic
counts but not 2010, regression equations were developed to estimate 2010 daily volumes. The remaining link volumes were estimated based on traffic volumes of adjacent roadways.

**Forecasted Traffic Volumes**

The forecasted daily volumes were post-processed by applying the net change between 2010 and 2030 model outputs to the 2010 observed or estimated counts. This procedure is intended to minimize the impacts of individual link based forecasting errors that are inevitable in almost all travel demand models.

**County Arterial Performance**

The Service Level of a concurrency segment is based on the weighted average of daily V/S ratio which is defined as:

\[
\text{Weighted Segment Daily V/S} = \frac{\sum (\text{Link Volume} \times \text{Link Length})}{\sum (\text{Link Length})} / \frac{\sum (\text{Link Threshold} \times \text{Link Length})}{\sum (\text{Link Length})}
\]

The use of the weighted average is designed to smooth data variations among individual model links contained in a concurrency segment. The V/S ratios resulting from these calculations are then compared with the Pierce County Service Standard of 1.0 to determine whether a particular segment is out of compliance with the Standard. Details and examples of TCMS procedures and outputs can be found in the latest published Transportation Concurrency Management System Annual Report.

**State Level of Service**

As per [WAC 365-196-430](1)(iii) regarding *level of service standards for highways*, the condition of state highways was examined in this Transportation Element. The methodology used is consistent with the County methodology listed above with some approved changes to capacity thresholds. This methodology is based on [Florida Department of Transportation (FDOT) Level of Service methodology](#). Washington State Department of Transportation (WSDOT) has reviewed the methodology and outputs and has given consent.

**Highways of Statewide Significance and Regionally Significant State Highways**

The LOS standards for [Highways of Statewide Significance](#) (HSS) are determined by Washington State Department of Transportation (WSDOT). WSDOT and the Puget Sound Regional Council together determine the Regionally Significant State Highways (non-HSS). These roadways are graphically depicted in Appendix B-3 and Appendix B-4. Per WSDOT staff comments, HSS tables
and maps with V/S in urbanized areas refers to V/SVd, which is equivalent to LOS D and in rural areas V/SVc which is equivalent to LOS C. Non-HSS have been categorized into 3 tiers:

- Tier 1 – Inner urban area: state routes within a 3-mile buffer around the most heavily travelled freeways and designated urban centers.
- Tier 2 – Outer urban area: state routes outside the 3-mile buffer that connect the main urban growth areas to the first set of satellite urban growth areas.
- Tier 3 – Rural areas: regionally significant state routes in rural areas that are not in Tier 2.

Table 12-C lists LOS standards applied to the different categories. Appendix Table B-1 lists the Florida Department of Transportation (FDOT) LOS threshold tables for the different standards.

### Table 12-C: State Facility LOS Standards

<table>
<thead>
<tr>
<th>Area Type</th>
<th>Highways of Statewide Significance (HSS)</th>
<th>Regionally Significant State Highways (non-HSS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 - Inner Urban Area</td>
<td>D (SVd)</td>
<td>E Mitigated&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Tier 2 - Outer Urban Area</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Tier 3 - Rural Area</td>
<td>C (SVc)</td>
<td>C</td>
</tr>
</tbody>
</table>

Note 1: Congestion should be mitigated when PM peak hour LOS falls below LOS E.

Source: WSDOT (2010)

### Evaluation of Current County Maintained Arterial System

In 2010, the entire County maintained arterial system consisted of approximately 700 roadway miles in the unincorporated area. Urban arterials accounted for about two-thirds of the roadway miles and rural arterials account for the other one-third. Figure 12-D exhibits the detailed breakdown of each functional class in both urban and rural areas. It is observed that there are significantly more urban roadway miles across each functional class.

### Figure 12-D: Roadway Miles by Functional Class
The estimated total daily vehicle miles traveled (VMT) in 2010 was over 2,850,000 on the County arterial system. The estimated total vehicle hours traveled (VHT) is about 81,000. Table 12-D presents a detailed breakdown of VMT and VHT by roadway functional classes in urban and rural areas. Generally, the percentages of VMT and VHT on both urban and rural arterials are closely matched to the hierarchy system of road functional classification. Urban major arterials carry the highest amount of VMT and VHT than any other sub-group, followed by urban secondary and collector.

Table 12-D: Unincorporated Area 2010 Daily VMT and VHT Summary - Pierce County, WA

<table>
<thead>
<tr>
<th>Functional Class</th>
<th>VMT</th>
<th>VMT %</th>
<th>VHT</th>
<th>VHT %</th>
<th>Implied Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>1,150,509</td>
<td>46.43%</td>
<td>31,968</td>
<td>44.79%</td>
<td>35.99</td>
</tr>
<tr>
<td>Secondary</td>
<td>901,581</td>
<td>36.38%</td>
<td>25,960</td>
<td>36.38%</td>
<td>34.73</td>
</tr>
<tr>
<td>Collector</td>
<td>426,046</td>
<td>17.19%</td>
<td>13,438</td>
<td>18.83%</td>
<td>31.70</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>2,478,136</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>71,366</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>34.72</strong></td>
</tr>
<tr>
<td>Major</td>
<td>185,356</td>
<td>47.81%</td>
<td>4,349</td>
<td>43.38%</td>
<td>42.62</td>
</tr>
<tr>
<td>Secondary</td>
<td>141,213</td>
<td>36.43%</td>
<td>3,731</td>
<td>37.21%</td>
<td>37.85</td>
</tr>
<tr>
<td>Collector</td>
<td>61,108</td>
<td>15.76%</td>
<td>1,947</td>
<td>19.42%</td>
<td>31.39</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>387,677</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>10,027</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>38.66</strong></td>
</tr>
<tr>
<td>Major</td>
<td>1,335,865</td>
<td>46.61%</td>
<td>36,317</td>
<td>44.62%</td>
<td>36.78</td>
</tr>
<tr>
<td>Secondary</td>
<td>1,042,794</td>
<td>36.39%</td>
<td>29,690</td>
<td>36.48%</td>
<td>35.12</td>
</tr>
<tr>
<td>Collector</td>
<td>487,154</td>
<td>17.00%</td>
<td>15,385</td>
<td>18.90%</td>
<td>31.66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,865,813</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>81,392</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>35.21</strong></td>
</tr>
</tbody>
</table>

1County arterials within Federal Urban Boundary or within County’s Urban Growth Area.
2County arterials outside Federal Urban Boundary or outside County’s Urban Growth Area.

COUNTY ARTERIAL PERFORMANCE 2010

The 2010 roadway performance measurement is determined by the ratio of daily traffic counts and the assumed arterial capacity (see Table 12-B for generalized capacities). The computation was calculated for every modeled County classified arterial in the unincorporated area. Map 12-1 graphically portrays 2010 daily V/S ratios on all County arterials. Table 12-E reveals that there were twelve segments with daily V/S ratios of 0.95 or over in 2010. Ten of twelve segments surpass the daily V/S 1.0 ratio threshold, thus were out of compliance with the Standard. The remaining two segments had ratios below the threshold.

All identified 2010 deficient roadways were improved and brought into compliance. However, Spanaway Loop Rd S. from Military Rd S to approximately 820 feet south of Military Rd fell out of compliance again in 2012, shortly after striping to add a southbound lane. It is noted that Table 1-5 as shown below reflects more current segment limits used in the analysis. This Transportation Element proposes an approach to address this capacity issue with a concept
referred to as Ultimate Capacity defined in the Population, Jobs, Travel Characteristics, and Performance section.

Table 12-E: County Segments with Daily V/S Equal to Greater than 0.95 in 2010

<table>
<thead>
<tr>
<th>Segment Name</th>
<th>Segment Limit</th>
<th>Daily Statistics</th>
<th>Improvement Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Count</td>
<td>Capacity</td>
</tr>
<tr>
<td>176th St E</td>
<td>Waller Rd E to 36 Ave E</td>
<td>17,350</td>
<td>17,600</td>
</tr>
<tr>
<td>176th St E</td>
<td>36 Ave E to 38 Ave E</td>
<td>17,575</td>
<td>17,600</td>
</tr>
<tr>
<td>176th St E</td>
<td>Canyon Rd E to 63 Ave E</td>
<td>23,316</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>63 Ave E to 70 Ave E</td>
<td>22,992</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>70 Ave E to 74 Ave E</td>
<td>22,668</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>74 Ave E to 78 Ave E</td>
<td>22,668</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>78 Ave E to 82 Ave E</td>
<td>22,345</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>82 Ave E to 86 Ave E</td>
<td>22,345</td>
<td>22,000</td>
</tr>
<tr>
<td>176th St E</td>
<td>86 Ave E to Gem Heights Dr E</td>
<td>22,345</td>
<td>22,000</td>
</tr>
<tr>
<td>Spanaway Loop Rd S</td>
<td>Approx. 3,208 ft. S of Military Rd S to 174 St S</td>
<td>24,975</td>
<td>22,000</td>
</tr>
<tr>
<td>Spanaway Loop Rd S</td>
<td>Military Rd S to Approx. 3,208 ft. south of Military Rd S</td>
<td>24,975</td>
<td>22,000</td>
</tr>
<tr>
<td>Wollochet Dr NW</td>
<td>Artondale Dr NW to East Bay Dr NW</td>
<td>22,675</td>
<td>22,000</td>
</tr>
</tbody>
</table>

Table 12-F provides a summary of VMT and VHT grouped by daily V/S ranges. The arterials that exceed the 1.0 V/S Standard account for less than 4% of VMT and 5% of VHT of the totals for County arterial roadways. It should be noted that capacity related improvements have been completed for all of the deficient roadways since 2010. Map 12-1 displays the daily V/S ratios County maintained arterials in 2010.

Table 12-F: Summary of Daily Statistics for County Roads – 2010 Base

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>VMT Summary</th>
<th>VHT Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VMT</td>
<td>%</td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>2,670,152</td>
<td>92.92%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>85,858</td>
<td>2.99%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>8,370</td>
<td>0.29%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>109,349</td>
<td>3.81%</td>
</tr>
<tr>
<td>Total</td>
<td>2,873,728</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
Map 12-1: County Roads – 2010 Daily V/S Ratios

Legend

Highways
County Boundary
Other Roads
Water Bodies
Federal/State Lands
Cities

Note: County facilities outside the extent of this map do not exceed a daily V/S ratio of 0.3

Daily V/S Ratio
0.01 - 0.79
0.80 - 0.94
0.95 - 0.99
1.00 or Over

0
1.0
2.0
3.0 Miles

Tacoma
Renton
Lake Tapps
Bonne Lake
Lake Samish
Lake Washington
Lake Union
Lake Washington

County Roads: 2010 Daily V/S Ratios
2010 State Highway Performance

While Pierce County is responsible for maintaining, operating, and monitoring its own local network of roadways, it is important to acknowledge the importance and function of the state roadways. The state highways perform a critical role in carrying traffic within and outside the county. It is important to understand the operations of the state highway network in assessing the overall performance of the transportation system.

State highway performance for 2010 was post-processed and analyzed in a separate database developed specifically for this analysis. The daily V/S ratios were calculated by using the same method as for County arterials. Table 12-G portrays base year (2010) highway performance in terms of daily V/S ratios. It shows that highway segments with daily V/S ratios of 1.0 or above account for more than 51% of VMT and over 55% of VHT of the totals for State highways.

Map 12-2 graphically depicts the daily V/S ratios on State highways. The figure shows congestion on most of the regional freeways including I-5, SR 167, and SR 512. Numerous segments on the surface highways of SR 7, SR 161, SR 162, and SR 410 also show congestion.

Table 12-G: Summary of Daily Statistics for Federal/State Roads-2010 Base

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>Daily VMT Summary VMT¹</th>
<th>%</th>
<th>Daily VHT Summary VHT¹</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01 - 0.79</td>
<td>2,363,811</td>
<td>27.29%</td>
<td>50,133</td>
<td>24.99%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>1,384,878</td>
<td>15.99%</td>
<td>28,797</td>
<td>14.35%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>462,441</td>
<td>5.34%</td>
<td>9,800</td>
<td>4.89%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>4,451,399</td>
<td>51.39%</td>
<td>111,889</td>
<td>55.77%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8,662,528</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>200,619</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

¹Highway Ramps were not included in this analysis.
Since the completion of the 1992 Transportation Plan, transit in this County has both expanded and contracted. The formation and initiation of Sound Transit has brought light rail into downtown Tacoma, Commuter rail into a number of cities of Pierce County, and express bus service to many areas of the County. Local and regional networks are depicted in Map 12-4 and Map 12-5, respectively. While there has been an expansion of regional transit service, there has also been a decrease of the transit area coverage offered by Pierce Transit. The Pierce Transit Benefit Area (PTBA) is shown in Map 12-3, which is the area where an incremental sales tax is collected to fund Pierce Transit operations. The cities of Bonney Lake, Buckley, DuPont, Sumner, and Orting as well a portion of the unincorporated county, are no longer part of the PBTA. Figure 12-E shows annual boardings by service type.

Pierce Transit provides local fixed route bus service and is also contracted by Sound Transit to operate some express bus service. In addition, Pierce Transit coordinates vanpool service and provides SHUTTLE (paratransit specialized) service. Map 12-3 shows the service area for SHUTTLE.

Figure 12-E: Annual Boardings (Pierce Transit)

Source: Pierce Transit Development Plan 2014-2019
Map 12-3: Pierce Transit SHUTTLE (Paratransit Specialized) Service Area

Shuttle Service Areas based on Fixed Route Service Changes
Effective September 28, 2014

This map was developed by Pierce Transit. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features.
Map 12-4: Pierce Transit System Map (as of February 15, 2015)
Map 12-5: Sound Transit System Map
CURRENT TRANSPORTATION PLANS, PROGRAMS, AND PROJECTS

BACKGROUND

In order to understand and effectively engage in the transportation future of Pierce County, it is important to understand the many plans and programs that influence, both directly and indirectly, the future of transportation in this County. This section provides information on a select number of the transportation plans that have been consulted in the development of this Transportation Element. Also referenced here are a number of programs and projects that directly relate to and sometimes implement the transportation plans.

TRANSPORTATION PLANS AND PROJECTS

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

The Washington State Department of Transportation (WSDOT) has a wide range of transportation plans and programs relating to almost all modes of travel. Among these plans and programs are:

- The 2015-2018 Statewide Transportation Improvement Program - This document is required in order for the State and jurisdictions to receive more than $2 Billion in funding within the program time period.

- The 2007-2026 Washington Transportation Plan - This is described as a *data driven guide to transportation priorities*. It is a compendium of the state of the State’s transportation services and facilities that culminates in policy recommendations for moving forward.

- The 2007-2026 Highway System Plan focuses on the state highways and is a component of the State Multimodal Transportation Plan. It is currently undergoing revision.

WSDOT has a number of other plans covering ferries, nonmotorized, rail, and generalized freight transport.

THE PUGET SOUND REGIONAL COUNCIL

The Puget Sound Regional Council (PSRC) covers the four counties of Kitsap, Snohomish, King and Pierce and their respective incorporated areas. Plans and projects of special note include:

- Vision 2040 - Built around the theme of *People, Prosperity, and Planet*, this plan adopted by the constituent jurisdictions in 2008, provides both a policy and a technical template around which member jurisdictions develop their local plans.

- Transportation 2040 - This plan is the transportation companion to Vision 2040 and identifies how the additional 1.5 million people and 2.2 million jobs will be accommodated by our transportation system.
• It should be noted that PSRC, like WSDOT, has a wide range of plans covering modes or programs such as Transportation Demand Management and Nonmotorized Travel.

• Transportation Prioritization – PSRC staff and constituent jurisdictions developed a methodology that takes all regional transportation projects and evaluates them using criteria derived from current plans. The resultant scoring from this process results in projects being categorized as being within the Constrained or Unprogrammed portion of the regional plan. Within the category of the Constrained portion of the plan are the subcategories of approved, conditionally approved, and unprogrammed. This categorization was used to balance the regional plan’s financial strategy. It is important to note that only the Constrained List projects are eligible to apply for the competitive federal transportation funding that PSRC administers.

Pierce County

• The 1992 Transportation Plan – The plan was developed over a four year period and involved extensive technical studies and examined a variety of land use scenarios. This plan preceded the development and adoption of the comprehensive plan. This was originally a standalone document, until it later became was incorporated into the Transportation Element of the 1994 Pierce County first Comprehensive Plan. This document developed both policies and projects that carried over into the subsequent Transportation Element updates.

• The Pierce County Nonmotorized Transportation Plan – Pierce County council adopted this plan in June 1997, at which time it became part of the Transportation Element of the Comprehensive Plan. This plan created a vision, policies, and projects focusing on nonmotorized travel in the county. Nonmotorized transportation planning is exclusively discussed in the Active Transportation/Nonmotorized Transportation section of this Element.

• Various Pierce County Community Plans – There are 11 community plans that contain a transportation component and are listed in the previous section of this Element. The County facilitated meetings with communities reaching and documenting consensus on transportation policies and project needs.

• Traffic Impact Fee Program – Adopted in 2006, the Traffic Impact Fee Program is currently active in the County.

• The Transportation Concurrency Management System.

• Six-Year Transportation Improvement Program - Describes future plans for transportation programs, projects and priorities.

• Corridors and Connectors – This is an Ordinance adopted by the County Council in 2012 (Ordinance No. 2012-81), promoting the preservation of Right-of-Way for projects that allow additional connections within our roadway system (See Map 12-8 and Map 12-9). These maps are adopted as part of the Ordinance.
The Traffic Impact Fee (TIF) Program identifies 2025 corridor and intersection needs for County roadways. The TIF includes a schedule of fees for developers based on their location and proposed land use action. The TIF Program will be updated in the near future. Map 12-6 shows the 2025 roadway improvement needs that are part of the current system.

**Map 12-6: Road Improvements Needed by 2025**

Pierce County’s Transportation Concurrency Management System (TCMS) plays a vital role in maintaining system performance by identifying and monitoring currently congested locations and predicting potential near term congestion. Solutions are typically identified and prioritized in the Pierce County Six-Year Transportation Improvement Program (TIP). For currently identified congested locations see Map 12-7.
Map 12-7: 2012 Daily V/S Ratios

Figure 3-1
2012 Daily V/S Ratios

Legend:
- Concurrency Segment Limit
- Other Road
- Highway
- Pierce County Boundary
- Water Surface
- Incorporated Area
- State/Federal Land
- Unincorporated Area

2012 Daily Traffic Volume:
- 0.01 - 0.15
- 0.00 - 0.07
- 0.00 - 0.06
- 1.00 - 1.04
- 1.05 - 1.14
- 1.15 or Over

Peninsula Inset
Map 12-8: Transportation Corridors and Connectors Right of Way Preservation Map

EXHIBIT A-1 to ORDINANCE No. 2012-01
Effective JANUARY 13, 2012
Page 1 of 2

Transportation Corridors and Connectors Right of Way Preservation Map
DECEMBER 2012

Legend
- Conceptual Alignment
- Preliminary Alignment
- Defined Alignment
- Intersections
- New Road Projects

Map 12-8: Transportation Corridors and Connectors Right of Way Preservation Map

Pierce County Comprehensive Plan | Transportation Element 12-42
Map 12-9: Transportation Corridors and Connectors Right of Way Preservation Map
POPULATION, JOBS, TRAVEL CHARACTERISTICS AND PERFORMANCE

BACKGROUND

To understand trends in transportation demand we must understand why people travel. Common reasons include commuting to work, traveling to school, to shop, vacation, visiting friends, and for business purposes. Future demographic and travel predictions, informed by past trends and policy driven targets, inform transportation policies and investment decisions. This section examines forecasted land use and predicted travel patterns for the current 2010 to 2030 planning horizon.

POPULATION AND JOB GROWTH

Pierce County expects to accommodate more than 200,000 new residents and 150,000 new jobs within the 20-year planning period, as shown in Figure 12-F. The majority of growth is expected within cities and concentrated within regional centers consistent with the Puget Sound Regional Council’s (PSRC) Vision 2040 Regional Growth Strategy (RGS).

Figure 12-F: Pierce County- Population and Employment History and Forecasts

The Pierce County Council adopted Growth Targets are reflected in the Land Use and Transportation Elements. These targets align with the Office of Financial Management (OFM).
County projections from 2007 (used in target setting) and more recent 2012 projections. (RCW 43.62.035). Figure 12-G depicts the relationship between the OFM numbers and County Target.

**Figure 12-G: Adopted Growth Targets**

![Graph showing adopted growth targets](image)

OFM cohort data reveals elderly population grows significantly within the 20-year planning period. The proportion of population ages 65+ grows from 87,785 (11% of total) in 2010 to 185,413 (19% of total) by 2030. See Figure 12-H.

**Figure 12-H: The Growing Elderly Population**

![Bar chart showing age distribution](image)
We expect more than 75,000 new residents and nearly 30,000 jobs within the 20-year planning period in unincorporated Pierce County. Pierce County’s cities combined expect approximately 144,000 jobs and 134,000 population growth as shown in Figure 12-I.

Unincorporated growth is mostly expected within the urban area. For details see Pierce Ordinance No. 2011-36s for adopted growth targets.

Figure 12-I: Population and Employment Growth Projections in Pierce County 2010-2030

Population and job growth targets are distributed to small areas referred to as traffic analysis zones (TAZs), shown in Figure 12-J, to support transportation forecast modeling and analysis.

Pierce County developed an allocation model to estimate the proportion of growth by TAZ using buildable lands capacities and constraints. A schematic of the process and inputs is shown in Figure 12-K.

Figure 12-J: Pierce TAZ

Figure 12-K: Schematic of the process and inputs
Planned developments are allocated directly to TAZs in proportion to site development plans and/or land capacity. The Frederickson Manufacturing/Industrial Center (M/IC) is included as an employment control total allocation for multiple TAZs. Table 12-H shows the number of housing units and jobs allocated to major developments.

<table>
<thead>
<tr>
<th>Regional Manufacturing/Industrial Center</th>
<th>Housing Units</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frederickson Manufacturing Industrial Center</td>
<td>-</td>
<td>6,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Planned Development (MPD)</th>
<th>Housing Units</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehaleh</td>
<td>4,000</td>
<td>2,200</td>
</tr>
<tr>
<td>Lipoma</td>
<td>1,700</td>
<td>-</td>
</tr>
<tr>
<td>Sunrise</td>
<td>2,200</td>
<td>-</td>
</tr>
<tr>
<td><strong>MPD Total</strong></td>
<td><strong>7,900</strong></td>
<td><strong>2,200</strong></td>
</tr>
</tbody>
</table>

**MPD% of Total Adopted Growth Target Unincorporated Urban Growth Target**

<table>
<thead>
<tr>
<th>Regional Manufacturing/Industrial Center</th>
<th>Housing Units</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frederickson Manufacturing Industrial Center</td>
<td>-</td>
<td>6,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Planned Development (MPD)</th>
<th>Housing Units</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehaleh</td>
<td>4,000</td>
<td>2,200</td>
</tr>
<tr>
<td>Lipoma</td>
<td>1,700</td>
<td>-</td>
</tr>
<tr>
<td>Sunrise</td>
<td>2,200</td>
<td>-</td>
</tr>
<tr>
<td><strong>MPD Total</strong></td>
<td><strong>7,900</strong></td>
<td><strong>2,200</strong></td>
</tr>
</tbody>
</table>

**Summary of Key Land Use Assumptions and Inputs:**

- Adopted growth targets consistent with PSRC Vision 2040 RGS forecasts used in Land Use and Transportation Elements.
- Targets coordinated and used regionally.
- Buildable lands data provided land capacity information for allocating future growth consistent with future planned land use, zoning, observed densities, and development regulations.
- Environmental constraints developed for buildable lands data limit/prohibit growth where appropriate.
- Planned developments are directly allocated using latest expectations.
- Growth allocation is modeled in rough proportion to buildable lands capacity.
- The land use allocation model is consistent with planned land use, zoning and observed densities in buildable lands, urban growth areas, and all zoning and development regulations.

**TRAVEL**

To understand trends in transportation demand we must understand why people travel. Common reasons include commuting to work, traveling to school, to shop, vacation, visiting friends, and for business purposes. Pierce County’s analysis tools are structured to consider these and other reasons for travel to predict current and future travel behavior. Figure 12-L shows the major steps in the travel demand model process.
GMA requires *Forecasts of traffic for at least ten years based on the adopted land use plan to provide information on the location, timing, and capacity needs of future growth (RCW 36.70A.070(6)(a)(iii)(E)).*

Twenty years of forecasted land use growth as contained in the Land Use Element were used to predict future travel conditions. Travel models predict current and forecasted travel using occupied housing units also referred to as *households*. The adopted countywide housing unit target (440,588) is modeled as 411,000 households consistent with a natural vacancy rate of 6.5%. Unincorporated housing unit growth adopted at 29,714 is modeled as a 27,783 increase in households. An employment growth target of just over 160,000 jobs was distributed by jurisdiction, roughly maintaining today’s employment breakdown by employment sector. Jobs are expected to increase at a faster rate than population within Pierce County.
Pierce County has developed a customized set of computer programs and mathematical procedures, referred to as the *travel model* that implements the steps shown in Figure 12-L, to simulate current and future travel patterns and conditions within the four counties of the Puget Sound region. The travel model provides detailed information on travel characteristics, system usage, and potential impacts of future growth and development. The travel model projects transportation conditions for the year 2030. Existing and future conditions are then analyzed and solutions to projected congestion explored.

**TYPES OF PROPOSED MOTORIZED ROADWAY IMPROVEMENTS**

The list of proposed motorized projects is divided into 5 categories: Assumed County Projects, Corridors and Connectors, Economic Development, Concurrency Needs and Ultimate Capacity projects. The types of proposed motorized projects are be found in Table 12-I.

<table>
<thead>
<tr>
<th>Project Categories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assumed County Projects</strong></td>
<td>This list is a summary of projects completed on county facilities from the base year (2010) to current year. It also includes a few projects that are currently assumed to be constructed by 2030.</td>
</tr>
<tr>
<td><strong>Corridors and Connectors</strong></td>
<td>Projects within this category are derived directly from the Corridors and Connectors program (Ordinance No. 2012-81). Not all Corridor and Connector projects were added to the proposed list. Projects perceived to provide a greater corridor level connection and projects with a higher probability of completion have been added to this category.</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td>These corridor improvements promote regional mobility and help to facilitate connectivity between industrial/manufacturing centers within the county. They enhance interaction between state, county, and city facilities.</td>
</tr>
<tr>
<td><strong>Concurrency Needs</strong></td>
<td>Review of existing and forecast traffic data such as AADT, operations, and Level of Service to provide added capacity to road segments that are projected to fall below the County’s LOS standard by 2030.</td>
</tr>
<tr>
<td><strong>Ultimate Capacity</strong></td>
<td>This list identifies corridors that are assumed to be built out to their full road configuration with no foreseeable capacity improvements provided by the county. For further details on <em>Ultimate Capacity</em> refer to Pierce County policy T-24.3</td>
</tr>
</tbody>
</table>

**INTERSECTION IMPROVEMENT PROJECTS**

For the purpose of developing a financial plan that would consider all capital improvements in the future years, intersection improvements will be examined in a programmatic approach, assuming an average of 3 signalized intersection projects and 4 channelization projects per year. The assumed cost for these improvements is $10 million a year. Capacity, safety, and
operational concerns will be taken into account when determining intersection improvement priorities.

**Analysis of Future Roadway System Performance**

The outlined V/S analysis methodology and process in the *Existing Conditions and Trends* section was also applied to analyze the 2030 roadway performance. Similar measurements were used to identify future congested roadway segments for both County and State roadways. For the purposes of the future roadway network configuration a list of state and city projects were held fixed in the different county scenarios. Discussion with Washington State Department of Transportation staff provided a list of projects with high probability of completion by 2030. Six-year Transportation Improvement Program lists were examined for city projects and those city projects with sufficient funding secured were included. These projects are mapped in Appendix B-2, Map 12-14.

Two different county roadway networks were tested under the 20-year housing and employment targets in our analysis and can be found on Map 12-12.

- **A. Limited Action** – 2010 roadway network plus assumed roadway projects (Appendix Table C for the detailed list of roadways included in the analysis).
- **B. Preferred Action** – Limited Action roadway network plus County identified future improvements which include *Corridor and Connector*, *Economic Development*, *Concurrency Needs*, and *Ultimate Capacity*.

**Analysis of 2030 County Roadway System**

One of the key measurements for future roadway performance analysis is to understand the distributions or usages of different roadway segments by their daily V/S ratios which directly reflect the service conditions of our roadway system. In this section of analysis, only County maintained arterials were included. Highways were analyzed separately and are reported in the following section.

Table 12-J presents a breakdown of daily V/S ratio ranges by VMT and VHT for both *Limited Action* and *Preferred Actions* scenarios. Map 12-10 and Map 12-11 depict the V/S for these two scenarios. In general, the *Preferred Action* networks provide better traffic flows in terms of service level due to the additional County road improvements. Another important observation is the total VMT and VHT on those segments with daily V/S ratios approaching 1.0 or above. In both network scenarios, only small percentage of the total unincorporated VMT and VHT occurs on these segments. The majority of future usage, 90% or above, will be on roadways with relatively lower daily V/S ratios in 2030. Roadways that show a V/S greater than 1.0 after the improvements are completed will be monitored and analyzed further through the Transportation Concurrency Management System Annual Report.
### Table 12-J: Summary of Daily Statistics for County Roads

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>Daily VMT Summary</th>
<th>Daily VHT Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VMT¹</td>
<td>%</td>
</tr>
<tr>
<td>Limited Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>3,260,107</td>
<td>82.38%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>435,499</td>
<td>11.00%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>61,387</td>
<td>1.55%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>200,416</td>
<td>5.06%</td>
</tr>
<tr>
<td>Total</td>
<td>3,957,409</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

| Preferred Action |       |     |        |     |
| 0.01 - 0.79  | 3,297,446 | 81.33% | 92,105 | 80.54% |
| 0.80 - 0.94  | 550,553   | 13.58% | 15,427 | 13.49% |
| 0.95 - 0.99  | 65,878    | 1.62%  | 1,846  | 1.61%  |
| 1.00 or Over | 140,337   | 3.46%  | 4,977  | 4.35%  |
| Total        | 4,054,214 | 100.00% | 114,355 | 100.00% |

Future transportation improvement needs were identified in a manner similar to base year analysis. However, the future year analysis requires not only the forecasted 2030 daily traffic volumes for different network alternatives but also the intended improvements to address the needs for the new growth. Appendix Table C lists all identified County roadway improvements that are needed by 2030. Map 12-12 graphically depicts the locations of projects on County roadways.
**Table 12-K: County Road Improvement Needs to Serve New Growth by 2030**

<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Facility Name</th>
<th>Facility Limits</th>
<th>Proposed Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>92nd Ave E</td>
<td>152 St E to 160 St E</td>
<td>2 new lanes w/center turn lane &amp; add channelization to a 2 lane road</td>
</tr>
<tr>
<td>C2</td>
<td>86th Ave E</td>
<td>152 St E to 160 St E</td>
<td>2 new lanes w/center turn lane &amp; add channelization to a 2 lane road</td>
</tr>
<tr>
<td>C3</td>
<td>86th Ave E</td>
<td>170 St E to 175 St E</td>
<td>2 new lanes</td>
</tr>
<tr>
<td>C4</td>
<td>78th Ave E</td>
<td>160 St E to 176 St E</td>
<td>2 new lanes w/center turn lane &amp; add center turn lane to a 2 lane road</td>
</tr>
<tr>
<td>C5</td>
<td>124th St E</td>
<td>74 St E to 73 Ave E</td>
<td>2 new lanes</td>
</tr>
<tr>
<td>E1</td>
<td>Canyon Rd North E Ext</td>
<td>99 St Ct E to N Levee Rd E</td>
<td>4 new lanes w/center turn lane &amp; widen to 4 lanes w/center turn lane</td>
</tr>
<tr>
<td>E2</td>
<td>Canyon Rd South Ext</td>
<td>196 St E to 224 St E</td>
<td>Widen to 4 lanes w/center turn lane &amp; add channelization to a 2 lane road</td>
</tr>
<tr>
<td>N1</td>
<td>122nd St E/Military Rd E</td>
<td>Military Rd E to 120 St E</td>
<td>Add center turn lane to a 2 lane road</td>
</tr>
<tr>
<td>N2</td>
<td>Military Rd E/Shaw Rd E</td>
<td>Reservoir Rd E to Puyallup C/L</td>
<td>Add center turn lane to a 2 lane road</td>
</tr>
<tr>
<td>N3</td>
<td>122nd Ave E</td>
<td>136 St E to Sunrise Pkwy E</td>
<td>Add center turn lane to a 2 lane road</td>
</tr>
<tr>
<td>N4</td>
<td>94th Ave E/152nd St E</td>
<td>136 St E to SR 161</td>
<td>Widen to 4 lanes w/center turn lane &amp; add channelization to a 2 lane road</td>
</tr>
<tr>
<td>N5</td>
<td>160th St E</td>
<td>58 Ave E to 70 Ave E &amp; 78 Ave E to 86 Ave E</td>
<td>Add center turn lane or channelization to a 2 lane road</td>
</tr>
<tr>
<td>N6</td>
<td>Portland Ave E</td>
<td>97 St E to 99 St E &amp; approx. 1,342 ft. S of 72 St E to 80 St E</td>
<td>Add center turn lane to a 2 lane road</td>
</tr>
<tr>
<td>N7</td>
<td>Spanaway Loop Rd S/Steele St S</td>
<td>Tule Lake Rd S to 112 St S</td>
<td>Widen to 4 lanes w/center turn lane</td>
</tr>
</tbody>
</table>

It should be noted that Table 12-K does not list County roadway improvements within the Assumed Projects and Ultimate Capacity categories. For a complete list of road improvements by segments including all project categories, please refer to Appendix Table C.

An additional analysis was conducted to understand the changes between Limited and Preferred scenarios. Table 12-L displays results of this comparison. The segments with daily V/S ratios of 1.0 or over show the largest percentage decreases of both VMT and VHT. In other words, the identified 2030 road improvement projects effectively address our future congestion by providing additional roadway capacity or connections, which greatly improve the future mobility for all drivers.
### Table 12-L: VMT/VHT Changes for County Roads (Limited Action vs. Preferred)

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>Daily VMT Summary</th>
<th></th>
<th>Daily VHT Summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VMT</td>
<td>%</td>
<td>VHT</td>
<td>%</td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>37,339</td>
<td>1.15%</td>
<td>772</td>
<td>0.85%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>115,054</td>
<td>26.42%</td>
<td>3,246</td>
<td>26.65%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>4,491</td>
<td>7.32%</td>
<td>27</td>
<td>1.47%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>-60,080</td>
<td>-29.98%</td>
<td>-1,758</td>
<td>-26.10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>96,804</strong></td>
<td><strong>2.45%</strong></td>
<td><strong>2,287</strong></td>
<td><strong>2.04%</strong></td>
</tr>
</tbody>
</table>
The analyses of the Federal/State highway system focus on the highway daily V/S ratios by its daily usage through the measurements of VMT and VHT. Table 12-M displays the detailed V/S ratios breakdown by Limited Action and Preferred Action. In both scenarios, the VMT and VHT data display a similar pattern in terms of percentage of these metrics that occur on highways with the highest daily V/S ratios. It reveals that around 50% of future VMT will occur on those highway segments with V/S ratios equal to or over 1.0. More dramatically, close to 60% of VHT will occur on those highways with daily V/S ratios equal to or greater than 1.0 in 2030 for both network scenarios. Daily V/S ratios resulting from the two scenarios can be viewed on Map 12-13 and Map 12-14.

Table 12-M: Summary of Daily Statistics for Federal/State Roads in 2030

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>Daily VMT Summary</th>
<th>Daily VHT Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VMT¹</td>
<td>%</td>
</tr>
<tr>
<td>Limited Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>2,470,282</td>
<td>24.06%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>1,940,078</td>
<td>18.89%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>638,380</td>
<td>6.22%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>5,220,111</td>
<td>50.83%</td>
</tr>
<tr>
<td>Total</td>
<td>10,268,851</td>
<td>100.00%</td>
</tr>
<tr>
<td>Preferred Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>2,484,462</td>
<td>24.34%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>1,987,833</td>
<td>19.48%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>726,142</td>
<td>7.11%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>5,007,522</td>
<td>49.06%</td>
</tr>
<tr>
<td>Total</td>
<td>10,205,959</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Table 12-N compares the changes of VMT and VHT between two scenarios (Limited vs. Preferred). It shows the decreases of both VMT and VHT on the highway system with the improvements of additional County roadway facilities in the Preferred Action, although no additional improvements are identified for highways within Pierce County. It implies that the highway system will benefit greatly by the County’s roadway improvements identified in the Preferred Action scenario. Overall, the estimated VMT travel on the highway system will decline by roughly 62,900 miles. More noticeably, there will be large reductions of VMT and VHT for those highway segments with the worst congestion. Table 12-M shows that highway segments with daily V/S ratios of 1.0 or are expected to experience decreases of approximately 212,600 miles and nearly 8,000 hours, largely due to County roadway improvements.
### Table 12-N: VMT/VHT Changes for Federal/State Roads (Limited Action vs. Preferred)

<table>
<thead>
<tr>
<th>Daily V/S</th>
<th>Daily VMT Summary</th>
<th></th>
<th>Daily VHT Summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VMT</td>
<td>%</td>
<td>VHT</td>
<td>%</td>
</tr>
<tr>
<td>0.01 - 0.79</td>
<td>14,180</td>
<td>0.57%</td>
<td>363</td>
<td>0.74%</td>
</tr>
<tr>
<td>0.80 - 0.94</td>
<td>47,755</td>
<td>2.46%</td>
<td>1,044</td>
<td>2.72%</td>
</tr>
<tr>
<td>0.95 - 0.99</td>
<td>87,762</td>
<td>13.75%</td>
<td>2,164</td>
<td>16.25%</td>
</tr>
<tr>
<td>1.00 or Over</td>
<td>-212,588</td>
<td>-4.07%</td>
<td>-7,963</td>
<td>-5.23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-62,891</strong></td>
<td><strong>-0.61%</strong></td>
<td><strong>-4,392</strong></td>
<td><strong>-1.73%</strong></td>
</tr>
</tbody>
</table>

1Highway Ramps were not included in this analysis.
State Facilities Limited Action Scenario: 2030 Daily V/S Ratios


Legend

- **0.01 - 0.79**
- **0.80 - 0.94**
- **0.95 - 0.99**
- **1.00 or Over**

County Boundary
Other Roads
Water Bodies
Federal/State lands
Cities

---

Pierce County Comprehensive Plan | Transportation Element | 12-59
THE KEY COMPONENTS

The key components for the continuing planning, administration, operation and improvement of the future transportation system are the following:

1. The transportation policies that are updated in this Comprehensive Plan
2. The County’s highest regional project priorities includes the following:
   a. The Puget Sound Gateway Project- This is the package of projects that would complete the SR 509 and SR 167 connections to I-5. This project advances regional mobility and completes critical freight links between the ports of Seattle and Tacoma. This project supports the regional economy and promotes job growth. While this is a state highway project, the County fully endorses it. A critical piece of the larger Gateway Project is the extension of SR 167 to the Port of Tacoma as shown in Map 12-15.

Map 12-15: Puget Sound Gateway Project

Source: WSDOT
b. The Completion of the Canyon Road East Corridor – This project would serve the Frederickson and Port of Tacoma Regional Manufacturing Industrial Centers.

Map 12-16: Canyon Road East Corridor Project

The Canyon Road East Corridor Project would increase connectivity to the Port of Tacoma and also capitalize on the SR 167 Completion or “Gateway” Project
c. I-5 Interchange improvements – Starting from SR 16 and moving down to the Joint Base Lewis McChord interchanges, the traffic congestion has become more acute not simply due to JBLM traffic but also due to growth in background traffic.

Map 12-17: I-5 Interchange Improvements

3. The County’s Arterial Network

This list of candidate projects is comprised of the compendium of project recommendations gathered from the Transportation Plan of 1992, The past County Community Plans, the Corridors and Connectors Study, the ongoing Transportation Concurrency Management Program, and the Traffic Impact Fee Program. It is notable that while some of the County road needs relate to transportation concurrency, there are projects are targeted to build more connectivity into our roadway network. These projects are recommended to provide better mobility options for residents in the urban areas.
The Population, Jobs, Travel Characteristics, and Performance section recommends a specific set of improvements that are categorized as Concurrency, Economic Development, and Corridors and Connectors. These project costs are found in the Financing the Transportation Future section.

**Map 12-18: County Road Improvement Projects**

It should be noted that among these recommendations are roads that would be designated as “Ultimate Capacity.” A roadway with the designation of ultimate capacity would be improved to a certain operational capacity and would indicate the need to make certain that the full operational and safety needs are met. Also required is a stronger understanding and linkage between the motor vehicular circulation, nonmotorized needs, and transit and ridesharing opportunities.

4. Nonmotorized Planning and Transportation Demand Management

These topics are covered in the Active Transportation/Nonmotorized Transportation and Transportation Demand Management (TDM) sections.

5. Last here, but in certain terms first, the primary priority of this Element is the maintenance, operations, and preservation of the transportation system. The safety of the system is served in part by sound operations and maintenance but there are also specific safety projects that are part of the larger program.
FINANCING THE TRANSPORTATION FUTURE

Figure 12-M: Forecasted Transportation Revenues and Expenditures (2015-2030)

Forecasted Total Transportation Revenues

Revenue TBD
Pierce County Council formed a Transportation Benefit District (TBD) in December 2014. The TBD provides an opportunity for the Council to discuss the longer term transportation funding shortfall and how to address it.
$151,400,000

TIF (Traffic Impact Fee)
The TIF charges new development for a share of their impact upon the County road network.
$142,000,000

Grants
The County applies to a large number of grant sources. Many of these grants are competition based.
$179,000,000

Miscellaneous
Includes revenue generated from property sales and fees.
$4,100,000

Forestry Tax
The County receives revenues from timber harvests.
$5,800,000

Fuel Tax
The County allocation of State Gas Tax.
$167,700,000

Property Tax
This is the County’s key transportation funding source for its maintenance and operations of the road system
$204,000,000

Forecasted Total Transportation Expenditures

Improvement Costs
These costs include new corridors, connecting roadways, widening existing roadways and nonmotorized and safety improvements.
$451,000,000

Preservation
These projects include asphalt overlay and shoulder restoration. Preservation assures that the County achieves the "lowest lifecycle cost" of its infrastructure.
$265,000,000

Maintenance & Operations
This covers a wide array of activities addressing various activities such as repairing potholes, bridges, guardrail and sidewalks. It also encompasses snow and ice removal, refreshing the paint on roadway striping, controlling vegetation, and repairing signs.
$524,000,000

Administration
This includes the staff and facilities necessary to manage transportation services, acquire grant money, and comply with federal and state grant rules.
$50,000,000

$1.4B
$1.3B
$1.2B
$1.1B
$1.0B
$0.9B
$0.8B
$0.7B
$0.6B
$0.5B
$0.4B
$0.3B
$0.2B
$0.1B
$0.0B
TRANSPORTATION NEEDS AND RESOURCES

It is anticipated that in future years, Pierce County will face more difficult choices in how it spends its transportation funds. As discussed earlier, the past Community Plan forums have voiced that the improvement needs are important for both motorized and nonmotorized travel. It has become more apparent that the transportation needs will continue to be greater than the financial resources at hand.

Figure 12-M above compares the forecasted aggregate transportation needs (expenditures) with the revenues (resources). A key value of the above graphic is in comparing the aggregate future revenues with the expenditures for the same time period. The graphic indicates that the aggregate expenditures are greater than the revenues by an estimated $151,400,000. This potential “imbalance” between the revenues and expenditures is identified in the above graphic on the revenue side as Revenue TBD (Transportation Benefit District). This section offers more detail in the nature of both the current revenue sources and the expenditure categories.

KEY FINANCE ACTIONS

Pierce County will address the revenue shortfall through a variety of forums and programs such as the already formed Transportation Benefit District (TBD) and the Traffic Impact Fee Program revision effort. The TBD is a forum that will allow a more detailed understanding of the revenue and expenditure options and resultant impacts on the County’s finances and transportation service delivery. It is anticipated that the TBD discussion will advance a financial plan in approximately two years. This plan will more fully describe the options for financing the desired projects and programs for the planning period.

The County has also recently initiated efforts to revise its Traffic Impact Fee (TIF). The update of the TIF would assist in understanding a number of important revenue assumptions, the amount for which new development should pay for additional capacity with the transportation system. The TIF is in the "critical path" of financial decision making as it has been designed to pay for a significant share of roadway capacity costs in the long term.
The following table summarizes transportation revenues and the aggregate levels anticipated by 2030:

**Table 12-O: Transportation Revenue Sources and Amounts**

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>2030 Forecasted (Total)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Impact Fee</td>
<td>$142,000,000</td>
<td>The traffic impact fee (TIF) was first collected in 2007. These fees go towards capital improvements that bring new capacity to the transportation system. The TIF cannot be used toward existing deficiencies in the system.</td>
</tr>
<tr>
<td>Grants</td>
<td>$179,000,000</td>
<td>Pierce County has received significant grant amounts from both federal and state funding sources. While it is recognized that the competitive environment has significantly increased for grant opportunities, the expectation is that in order to raise the indicated amount, Pierce County would need to raise significantly more grants funds in the future.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$4,100,000</td>
<td>This revenue category includes funds generated by the issuance of ROW permits and revenues through property sales.</td>
</tr>
<tr>
<td>Forest Tax</td>
<td>$9,800,000</td>
<td>This is also known as the “Timber Tax” and represents the County’s share applied toward its roads.</td>
</tr>
<tr>
<td>Property Tax</td>
<td>$784,000,000</td>
<td>In 2014, Pierce County collected a maximum of $2.11 per $1000 of assessed valuation on property within the boundaries of unincorporated Pierce County. These funds go to activities associated with the maintenance, operations, and improvement of the roadway and bridge systems within the county.</td>
</tr>
<tr>
<td>Fuel Tax</td>
<td>$167,700,000</td>
<td>While there is only one “fuel tax” within the State of Washington, the funds from this tax are distributed from three legislative measures that starts with the “Pre-2003” State Motor Vehicle Fuel Tax.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,286,600,000</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Transportation Expenditures

Table 12-P below details the forecasted expenditure levels found in Figure 12-M.

**Table 12-P: Forecasted Expenditures**

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>2030 Forecasted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance and Operations</td>
<td>624,000,000</td>
</tr>
<tr>
<td>Administration</td>
<td>98,000,000</td>
</tr>
<tr>
<td>Preservation</td>
<td>265,000,000</td>
</tr>
<tr>
<td>Improvement</td>
<td>451,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,438,000,000</strong></td>
</tr>
</tbody>
</table>

### The Transportation Improvement Costs – Element Recommendation

**Table 12-Q: Estimated Total County Road Improvement Costs by 2030**

<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Facility Name</th>
<th>Facility Limits</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>92nd Ave E</td>
<td>152 St E to 160 St E</td>
<td>$5,033,000</td>
</tr>
<tr>
<td>C2</td>
<td>86th Ave E</td>
<td>152 St E to 160 St E</td>
<td>$1,541,000</td>
</tr>
<tr>
<td>C3</td>
<td>86th Ave E</td>
<td>170 St E to 175 St E</td>
<td>$4,325,000</td>
</tr>
<tr>
<td>C4</td>
<td>78th Ave E</td>
<td>160 St E to 176 St E</td>
<td>$13,359,000</td>
</tr>
<tr>
<td>C5</td>
<td>124th St E</td>
<td>74 St E to 73 Ave E</td>
<td>$1,806,000</td>
</tr>
<tr>
<td>E1</td>
<td>Canyon Rd North E Ext</td>
<td>99 St Ct E to N Levee Rd E</td>
<td>$194,400,000</td>
</tr>
<tr>
<td>E2</td>
<td>Canyon Rd South Ext</td>
<td>196 St E to 224 St E</td>
<td>$15,514,000</td>
</tr>
<tr>
<td>N1</td>
<td>122nd St E/Military Rd E</td>
<td>Military Rd E to 120 St E</td>
<td>$6,679,000</td>
</tr>
<tr>
<td>N2</td>
<td>Military Rd E/Shaw Rd E</td>
<td>Reservoir Rd E to Puyallup C/L</td>
<td>$13,905,000</td>
</tr>
<tr>
<td>N3</td>
<td>122nd Ave E</td>
<td>136 St E to Sunrise Pkwy E</td>
<td>$12,944,000</td>
</tr>
<tr>
<td>N4</td>
<td>94th Ave E/152nd St E</td>
<td>136 St E to SR 161</td>
<td>$15,202,000</td>
</tr>
<tr>
<td>N5</td>
<td>160th St E</td>
<td>58 Ave E to 70 Ave E &amp; 78 Ave E to 86 Ave E</td>
<td>$8,448,000</td>
</tr>
<tr>
<td>N6</td>
<td>Portland Ave E</td>
<td>97 St E to 99 St E &amp; approx. 1,342 ft. S of 72 St E to 80 St E</td>
<td>$3,711,000</td>
</tr>
<tr>
<td>N7</td>
<td>Spanaway Loop Rd S/Steele St S</td>
<td>Tule Lake Rd S to 112 St S</td>
<td>$4,171,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$301,038,000</strong></td>
</tr>
</tbody>
</table>

This Transportation Element estimates the future improvement needs of the County roadway network at $451M. This amount assumes that improvements are categorized and funded in the following manner: Economic Development projects ($210M), Intersections ($100M), Transportation Concurrency ($65M), Nonmotorized ($20M), Corridor and Connector Projects.
(26M), and Safety ($30M). Figure 12-N below shows the percentage distribution of these projects.

Three relevant roadway projects relating to Concurrency, Corridors and Connectors, and Economic Development, are graphically depicted in Map 12-12. The other project categories are more programmatic at this time.

**Figure 12-N: Project Type Percentages – Improvement Costs**

![Pie chart showing project type percentages]

- Corridor & Connector: 22%
- Concurrency Needs: 14%
- Nonmotorized: 6%
- Economic Development: 47%
- Intersections: 7%
- Safety: 4%

**THE FULL COST ACCOUNTING FOR TRANSPORTATION**

The earlier sections of this report focus upon the improvement of the transportation system. Often the tendency is to pay particular attention to the infrastructure, such as where new roads might be constructed or widened. That is the improvement component of the plan. The improvement projects stand out in aggregate and sometimes individually relative to the rest of the larger basket of transportation services that the County provides the community.

While building new capacity is important, it is not the most important deliverable offered by the County. By policy and in practice, the most important services provided by the County are in taking care of what is in place (maintenance), seeing to the day to day tasks (operations), and replacing the existing assets in the optimal time frame (preservation). The following narrative describes some of the maintenance, operations and preservation activities performed by the County.

**MAINTENANCE**

Maintaining, operating, and preserving the County’s 1,500 centerline miles of roadway is a long-term investment. It may at times be attractive to local governments to prioritize the
improvement projects ahead of sound maintenance and operations programs. However, the long-term outcomes of deferred road maintenance are often financially devastating and unpopular with citizens. For these reasons, this Plan takes into account what will be needed to maintain, operate, and preserve the County’s existing roadway network. The overall goal of the County’s transportation program is to maintain our transportation system assets with the lowest overall lifecycle cost.

The County continues to maintain its existing transportation assets by:

- Repairing potholes, damaged pavement, bridges, storm drainage systems, guardrail, and sidewalks;
- Grading gravel roads and shoulders;
- Controlling roadside vegetation;
- Inspecting and repairing as needed County traffic signs, luminaires, and traffic signal control components;
- Repainting and refurbishing pavement markings (such as crosswalks, arrows, etc) and restriping roadways;
- Replacing raised pavement markers;
- Responding to citizen calls; and,
- Maintaining the County’s ferry system, including the ferry boats, docks, and terminals.

**OPERATIONS**

Operations include activities required to safely operate the County’s transportation system. These include:

- Street sweeping;
- Roadside mowing;
- Cleaning storm drains;
- Removing snow and ice from roadways;
- Removing roadside litter and dead animals;
- Responding to roadway emergencies such as floods, wind storms, mudslides, hazardous materials spills, earthquakes, and volcanic events;
- Responding to citizen concerns and inquiries;
- Collecting data about the County’s transportation system, such as information related to traffic counts and crashes;
- Completing traffic studies and analysis as needed, as well as reviewing traffic impacts from new developments;
- Paying power costs needed to run the County’s traffic signals and lighting systems; and,
- Operating the County’s ferry system, which includes costs such as fuel for the ferries, staff to run the ferries and operate the facilities, and insurance.
PRESERVATION

Preservation is the replacement or repair of an asset; whereas maintenance is considered to be a routine activity. Examples of preservation activities are:

- Repaving or overlaying existing roadways, and
- Replacing or refurbishing bridges; sidewalks; retaining walls; guardrails; electrical systems (traffic signals, roadway lighting, etc.); boat launches; pavement markings; and traffic signs.
- Preserving the County’s transportation system also includes replacing or refurbishing the ferries, ferry docks, terminals, and the ferry ticket system.

IMPROVEMENTS

SAFETY IMPROVEMENTS

- Projects that work toward safety for the travelling public include:
- Intersection improvements (turn lanes and traffic signals);
- Pedestrian improvements;
- Rural road improvements, such as shoulders, guardrail, and rumble strips; and,
- Traffic enforcement and education.

CAPACITY IMPROVEMENTS

The Population, Jobs, Travel Characteristics, and Performance section of this document shows the roadway needs within the 20-year planning period. These projects do the following:

- Address anticipated traffic congestion (Concurrency);
- Attract employers to add jobs (Economic Development);
- Add to the continuity of our roadway network (Corridors and Connectors);
- Facilitate travel to future developments (typically paid by the development community) or are assumed to be already in place, such as the 176th Street East widening (Assumed Projects).
- The above projects will cost approximately $300M. It is also assumed that the County will continue to improve intersections throughout the planning horizon. It is anticipated that the County will expend approximately $150M in this endeavor.

ADMINISTRATION

The County provides maintenance and operations staff; personnel to manage the County’s transportation budget and apply and administer federal and state grants; and the engineering...
and planning staff needed to maintain the current transportation system as well as respond to future County transportation needs. Administration costs also include the physical space staff needs to complete their day-to-day work.

### Revenues

The major source of revenues for transportation in our County are:

- Property Tax (tax on private and commercial real estate);
- Fuel Tax (tax per gallon of motor vehicle fuel);
- Forest Tax (tax on logging sales);
- Ferry Receipts (fares);
- Transportation Impact Fees (TIF – fees paid by developers);
- Grants (revenue granted from state or federal agencies).

Some of the revenue sources are subject to fluctuations in the economy (REET, TIF, development), people’s changing habits (fuel tax), or changes in outside agency priorities (grants). Even property tax, which has historically been a stable source of revenue, is capped as of 2002 at a 1% growth rate, plus the value of new construction. This cap has significantly affected receipts, and the gap between receipts and inflation is growing. Given the unpredictability of these revenue sources, the transportation budget will need to be updated periodically to identify needed adjustments in spending or revenue.

### Revenue Shortfall

**RCW36.70A.70(6) requires as follows:**

A transportation element that implements, and is consistent with, the land use element.

(a) The transportation element shall include the following subelements:

(iv) Finance, including:

(C) If probable funding falls short of meeting identified needs, a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that level of service standards will be met;

The above state law gives certain guidance to jurisdictions facing financial shortfalls in the transportation system. Among the responses that may be considered by the County:

- The County could review its current land use and decide how to reduce the future demand on the roadways;
- The Service Standards could be changed either on a global or selective basis. One notes that the use of **Ultimate Capacity** is used for targeted and specific use that requires other actions from the County;
- The transportation budget could be altered to reduce certain types of services;
- Additional funds may be raised for transportation using existing or new sources.
ACTIVE TRANSPORTATION / NONMOTORIZED TRANSPORTATION

BACKGROUND

Active transportation, also known as nonmotorized transportation, is increasingly recognized as an important consideration when planning and designing transportation systems. Active transportation modes include walking, bicycling, skating, skateboarding, and travel in wheelchairs and other mobility assistive devices. Active transportation occurs on trails, sidewalks, bike lanes, roadway shoulders, and within the travel lanes. Transit service is an important counterpart to many active transportation trips, since access to and from bus and rail is often made by a nonmotorized means.

Pierce County began formally planning for nonmotorized travel in the 1990s. The 1992 Pierce County Transportation Plan included policy language instructing the County to develop a comprehensive plan for nonmotorized transportation. After an extensive public involvement process, the Pierce County Nonmotorized Transportation Plan (NMTP) was adopted in 1997. The latter plan contains policies and an extensive list of prioritized project recommendations, both on road and off road. The NMTP later became a section of the Transportation Element of the Pierce County Comprehensive Plan.

Subsequent to the NMTP, Pierce County has adopted Community Plans for 11 different unincorporated areas of the county. Most of the Community Plans have included nonmotorized project recommendations which primarily have either reinforced or supplemented the nonmotorized project recommendations in the NMTP. The Community Planning efforts revised the NMTP project descriptions and relative priorities in many cases. A more detailed discussion on project recommendations occurs later in this section.

ACTIVE TRANSPORTATION PLANNING REQUIREMENTS

In 2005, the Growth Management Act (GMA) was amended with the passage of Engrossed Substitute Senate Bill 5186 (ESSB 5186). This amendment requires the transportation element of a comprehensive plan to include a pedestrian and bicycle component to include collaborative efforts to identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote healthy lifestyles.

Under the GMA, the Puget Sound Regional Council (PSRC) is required to review and certify the transportation elements in comprehensive plans to ensure that they conform to GMA transportation planning requirements and are consistent with PSRC’s regional growth strategy and transportation plans (Vision 2040 and Transportation 2040). The PSRC Local Comprehensive Plan Checklist requires a pedestrian and bicycle component that includes strategies, programs, and projects to improve walking and bicycling. The Vision 2040 Multicounty Planning Policies (MPP) provide specific direction on the ways that Comprehensive
Plans need to be consistent with regional policy. The following MPPs are particularly pertinent to contents of the active transportation section of Comprehensive Plans:

- MPP-T-11 Prioritize investments in transportation facilities and services in the urban growth area that support compact, pedestrian- and transit-oriented densities and development.
- MPP-T-14 Design, construct, and operate transportation facilities to serve all users safely and conveniently, including motorists, pedestrians, bicyclists, and transit users, while accommodating the movement of freight and goods, as suitable to each facility’s function and context as determined by the appropriate jurisdictions.
- MPP-T-15 Improve local street patterns – including their design and how they are used – for walking, bicycling, and transit use to enhance communities, connectivity, and physical activity.
- MPP-T-16 Promote and incorporate bicycle and pedestrian travel as important modes of transportation by providing facilities and reliable connections.

The Pierce Countywide Planning Policies also include policies relating to active transportation. In particular, policy TR-12 states that the County shall plan and implement programs, as appropriate, for designing, constructing and operating transportation facilities for all users, including motorists, pedestrians, bicyclists, and transit users. Pierce County policies relevant to nonmotorized planning and implementation are found at the end of this section.

**EXISTING NONMOTORIZED PROJECTS**

As mentioned earlier, there are nonmotorized project recommendations with the Nonmotorized Transportation Plan (NMTP) and the 11 Community Plans. When a project is coincident in the NMTP and a Community Plan, the Community Plan project description and priority rating takes precedence since the Community Plans are more recent documents and are intended to provide detail to the countywide Plan.

The projects in all of the plans were selected by citizen committees. To give projects a relative sense of priority, the committees were asked to place each project in one of four categories: Premier, High, Medium, and Low. The NMTP projects by category are listed in Table 12-R.

**Table 12-R: Nonmotorized Transportation Plan Projects**

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Premier</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing County Road</td>
<td>31</td>
<td>69</td>
<td>92</td>
<td>68</td>
<td>260</td>
</tr>
<tr>
<td>New County Road</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>22</td>
<td>49</td>
</tr>
<tr>
<td>County Trail or Path</td>
<td>5</td>
<td>15</td>
<td>19</td>
<td>54</td>
<td>93</td>
</tr>
<tr>
<td>City or Town</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>156</td>
</tr>
<tr>
<td>State or Federal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
</tbody>
</table>
As Table 12-R shows, the roads in the unincorporated area (County) are classified in the NMTP as three different project types. The proposals on an Existing County Road consist of paved shoulders, sidewalks, wide curb lanes, and/or a trail or pathway adjacent to the roadway. The proposals on a New County Road refer to new roads that are proposed for construction that will have pedestrian and bicycle facilities when built. The County Trail or Path category encompasses proposals for exclusive nonmotorized facilities that are not within a County road right-of-way. In total, there are 402 projects in the unincorporated area proposed within the NMTP. It should be noted that some of these projects have now been constructed or have been annexed by Cities.

Table 12-R also lists projects in the NMTP that are planned by municipalities and the State or Federal government. These were not given a priority rating, since they are out of the control of Pierce County.

The Community Plan projects are listed in Table 12-S, identified by the area and priority rating. Only those Community Plan projects that included nonmotorized elements are listed.

<table>
<thead>
<tr>
<th>Community Plan</th>
<th>Premier</th>
<th>Number of Projects by Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Premier</td>
</tr>
<tr>
<td>Alderton-McMillin</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Anderson &amp; Ketron Islands*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Browns Point &amp; Dash Point*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frederickson</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Gig Harbor</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Graham</td>
<td>43</td>
<td>18</td>
</tr>
<tr>
<td>Key Peninsula</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Mid-County</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Parkland-Spanaway-Midland</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>South Hill</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

*Anderson & Ketron Islands and Browns Point & Dash Point did not assign priorities.

Map 12-19 and Map 12-20 show the location of NMTP and Community Plan projects. As noted, there is overlap between projects in the different plans, as well as overlap with the NMTP.
Map 12-19: Nonmotorized Project Recommendations in Adopted County Plans

The map illustrates various recommendations for nonmotorized transportation projects across Pierce County. The legend on the right side of the map provides specific details on different project categories and their locations.

Legend:
- Nonmotorized Transportation Plan
- Nonmotorized Project
- High Priority: Trail at Park
- High Priority: Trail at School
- Medium Priority: On-Road Nonmotorized Project
- Low Priority: On-Road Nonmotorized Project

Community Plan Projects:
- Major Road Project: Improvement to Existing Facility
- Major Road Project: New Facility
- Minor Road Project: Improvement to Existing Facility
- Minor Road Project: New Facility

Community Plan Boundaries:
- Alki-Anderson Community Plan
- Anderson-White Center Community Plan
- University Place Community

The map serves as a visual aid to understand where nonmotorized transportation projects are recommended and prioritized within the county.
Map 12-20: Nonmotorized Project Recommendations in Adopted County Plans

Legend

Nonmotorized Transportation Plan
- Bike Path Projects - On Road/Nonmotorized Project
- Bike Path Projects - Bike Path
- High Priority - New Road/Nonmotorized Project
- High Priority - Existing Road/Nonmotorized Project
- Moderate Priority - New Road/Nonmotorized Project
- Moderate Priority - Existing Road/Nonmotorized Project
- Low Priority - New Road/Nonmotorized Project
- Low Priority - Existing Road/Nonmotorized Project

Community Plan Projects
- Pedestrian Trails Project - Improvements to Existing Facility
- Pedestrian Trails Project - New Trail Facility
- Bike Path Project - Improvement to Existing Facility
- Bike Path Project - New Trail Facility
- Nonmotorized Project - Existing Facility
- Bike Path Project - Improvement to Existing Facility
- Bike Path Project - New Trail Facility

Community Plan Boundaries
- King County Improvement Commission
- Residential Neighborhood Commission
- Downtown Rainier Road Community Plan
- Puyallup Community Plan
- South Hill Community Plan
- north Park Community Plan
- Yelm Community Plan
- Yelm Community Plan
- Battle Ground Community Plan
- Tenino Community Plan
- Upper Tenino Valley Community Plan
- Upper Tenino Valley Community Plan

Where Land
PROGRAMS AND STRATEGIES

Pierce County has numerous existing programs and strategies that address the provision and promotion of active transportation facilities and travel. The effort to address and promote nonmotorized travel will increase and diversify over time. The following is a summary of existing and proposed programs related to active transportation.

COMPLETE STREETS

Policy 12.2 in this document instructs the County to endorse the concept of complete streets, which promotes roadways that are safe and convenient for all users. In 2014, the Pierce County Council adopted Ordinance 2014-44s, pertaining to the provision of complete streets. Complete streets is a term used to describe project implementation that provides for safe and convenient roadways for all users, including pedestrians, bicyclists, transit riders, and motor vehicle drivers of all ages and abilities. The ordinance was listed in The Best Complete Streets Policies of 2014, a report published by the National Complete Streets Coalition, a program of Smart Growth America.

The ordinance specifically pertains to newly constructed or reconstructed roads and directs Pierce County to provide features for all users when building new roadway connections or completing major reconstruction of a road. In the urban area, these roadway elements typically would include paved shoulders for bicyclists and sidewalks for pedestrians and other users. In the rural area, where sidewalks are not typically constructed, the improvement would typically consist of a paved shoulder. In some cases, a gravel shoulder or roadside trail or pathway might be constructed.

The Complete Streets ordinance includes provisions for precluding the construction of elements for all modes where there are extreme technical, fiscal, or environmental challenges or other reasons where such improvements are not in the best interests of the County or residents. In these cases, the ordinance recommends that the County consider nearby facilities where nonmotorized users can travel in absence of complete streets implementation on the facility that is under construction.

The ordinance also directs the County to consider projects on roadways that are not undergoing major construction, such as standalone shoulder paving and sidewalk construction. Pierce County has several standalone active transportation projects listed in the 2015 Transportation Programs document, which is a six-year program of projects that is published annually. One of these projects, Park Avenue South between 125th Street South and Garfield Street South, was awarded a $429,000 grant from the 2014 Washington State Transportation Improvement Board Urban Sidewalk Program.

SAFE ROUTES TO SCHOOLS

Pierce County coordinates with school districts to plan and implement safe routes to school for students who travel by nonmotorized means. The three elements of a successful program are engineering and infrastructure improvements, education and encouragement activities, and
enforcement. The County regularly applies for grant funding through the State’s Safe Routes to School grant program, but has had limited success in the funding competition. The County strives to expand upon this program and achieve more success in obtaining funding. In 2015, Pierce County has allocated $200,000 for staff support for developing a plan with public school districts for identifying priorities, feasibility, and financing options for walking routes near schools.

**TRANSPORTATION DEMAND MANAGEMENT**

Pierce County has been involved in Transportation Demand Management (TDM) activities since the 1990s. The primary focus has been on working with large employers to reduce the number of drive-alone commute trips, as required by the Washington State Commute Trip Reduction (CTR) Act.

Pierce County is now investing in more all-inclusive strategies to encourage travel behavior changes for all types of trip purposes. Bicycling and walking to destinations are important components of any TDM program. **Goal T-27** in this document instructs the County to encourage alternate travel modes within an efficient multimodal transportation system that reduces and shifts travel demand to improve the flow of people and goods. In order to develop a successful TDM program, there must be connectivity to other modes such as walking bicycling, cars, and transit. A combination of modes often come into play when taking transit (i.e., walking or bicycling to a transit stop or station). Or sometimes the TDM strategy is simply planning for one mode, such as bicycling or walking. The Transportation Demand Management (TDM) section describes the Pierce County TDM Plan and strategies in greater detail.

**TRAIL DEVELOPMENT**

The Pierce County Parks and Recreation Department is the lead agency developing trails in the unincorporated areas of the County. Pierce County Public Works provides support in this effort, including project design and right-of-way acquisition activities. Pierce County coordinates with municipalities and organizations such as ForeverGreen Trails and the Foothills Rails-to-Trails Coalition in planning and implementing trail projects.

Natural and built environmental constraints preclude trail construction in some areas, making sidewalks and roadway shoulders essential extensions of the trail system. **Policy 12.1.1** in this document instructs Public Works to work collaboratively with other organizations, including Pierce County Parks and Recreation to develop the Pierce County Regional Trail System, community nonmotorized connections, and local access.

Trail development in the County has largely focused on the Regional Trail System, through the guidance of the Pierce County Parks, Recreation, and Open Space Plan. The 25-mile long Foothills Trail in eastern Pierce County, seventeen of which is currently paved, is the most notable example of trail development in the unincorporated area. More recently, the Public Works and Parks and Recreation Departments are collaborating to identify a system of community connectors that would link schools, parks, and neighborhoods in Pierce County and tie into the Regional Trail System. The desire is to develop a system of trails where possible;
however, it is clear that constraints will require some of the connectors to be sidewalks and/or roadway shoulders.

**Americans with Disabilities Act**

The *Americans with Disabilities Act* (ADA) became Federal law in 1990 and has been updated numerous times over the years. ADA requires public entities to inventory facilities for deficiencies and create a transition plan to bring facilities into compliance with accepted standards. In 2014, Pierce County inventoried all sidewalks, curb ramps, pedestrian crossings, and traffic signal systems located on public roadways in unincorporated Pierce County to determine whether they were in compliance.

In 2015 the County initiated an ADA Transition Plan to document the strategy and timeline for bringing pedestrian facilities into ADA compliance. Ultimately, all facilities will need to be compliant. It should be noted that the ADA Transition Plan will only address existing facilities, not the construction of new facilities.

**Implementation**

As noted earlier, there are a number of roadway improvement projects that have constructed nonmotorized improvements as part of the larger project. Key examples of such projects are the Canyon Road East corridor south of SR 512 and the 176th Street East corridor. Both of these projects increased the number of through lanes and added significant sections of sidewalk for the community.

While these projects are significant in scope, it is evident that there is strong community support for more nonmotorized facilities. This desire for additional walkways and paths has been (and continues to be) expressed in numerous meetings held in community forums. As noted earlier, there are many plan recommendations within the Community Plans and the Nonmotorized Transportation Plan, but very few specifically nonmotorized projects are funded and implemented. The strategy for this Transportation Element calls for the targeting of approximately $20 million through 2030 for the purpose of constructing nonmotorized facilities. These funds may also be used to address projects that may be required as part of the Transition Plan efforts.

One target for expending the above noted $20 million may focus on the needs arising from the ongoing work with the schools, communities, and other stakeholders to build more facilities under the Safe Routes to School Program. The County Council has already tasked staff with reporting on the issue of Safe Routes to School. This Transportation Element suggests that both the short and long term funding capacity of the County be examined to support a program that would work with the local schools and other interested parties to develop partnerships and apply for grant opportunities that would strengthen the chances of winning awards for such a program. For example, in developing this nonmotorized section, Public Works staff worked with the Parks Department in developing a very conceptual network of possible candidate active transportation facilities that could link not only schools to communities but other places.
Figure 12-O below shows a very preliminary product that requires more stakeholders to discuss not just the need for specific types and location of active transportation facilities but also the funding and scoping of tasks involved in achieving success in realizing these valued facilities. It is anticipated that the conversations with nonmotorized stakeholders and an understanding of the needs and resources will result in an updated nonmotorized/Active Living strategy.

**Figure 12-O: Conceptual Graphic – Active Living Facilities**
ULTIMATE CAPACITY

This Transportation Element recommends that the County endorse and adopt measures that would enable the designation of Ultimate Capacity Roadways. As noted earlier, the end result of this designation would allow certain roadways to carry traffic above their designated service standard without being subject to the transportation concurrency requirements. It is important to note that such roadways in being Ultimate Capacity would be reviewed for their operational and safety needs for all users, both motorists and pedestrians. Identification of these needs may also bring certain nonmotorized projects forward for possible implementation.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

INTRODUCTION

Previous sections of this Transportation Element describe a number of both current and future challenges to the mobility of Pierce County and others. As noted earlier, our community is experiencing longer travel times on a number of our state highways and county arterials. The 1992 Transportation Plan recommended an extensive list of highway improvement projects to address the current and anticipated deficiencies. Important capacity projects were constructed in the subsequent years.

This Transportation Element notes that there are still appropriate times to build additional capacity into the roadway system. Also, this Element recommends a more complete roadway network that provides both accessibility and higher levels of mobility within the County. There are a number of connectors and corridors that would serve that purpose.

WHAT IS TRANSPORTATION DEMAND MANAGEMENT (TDM)?

The term Transportation Demand Management (TDM) is no single program or strategy but refers to actions that allow us to use our transportation system more efficiently. High Occupancy Vehicle (HOV) lanes are a long standing example of TDM on our state freeway system. The designation of lanes for carpools and buses allow more people to move in the same amount of space and time. While there are presently no HOV lanes on Pierce County jurisdiction roadways, there is strong evidence of Ridesharing. Ridesharing covers a wide range of transportation evident through our region, including Pierce Transit buses, vanpools, carpools, and taxis. TDM is used in the form of pricing in the High Occupancy Toll (HOT) lanes that are seen north on SR 167.
WHY IS TDM A GOOD IDEA?

All of the TDM strategies can help achieve the following:

- Saves Money – Building additional lanes and new roads has become more expensive. Well designed TDM programs may have a role in decreasing the need for certain types of infrastructure improvements.

- Increase Mobility Opportunities for All – As noted earlier in this Plan, it is estimated there will be approximately 185,400 people between the ages of 65 and above living in Pierce County by the 20-year planning horizon. In 2010 there were 87,800 of that same age group living in the county. This demographic will grow from approximately 11% to 19% of the respective total population. If there are improvements in such services as transit, this type of group could benefit.

- Decrease Energy Consumption and Total Cost – Generally, more people in fewer vehicles equate to less energy used and lower overall costs. It is important to note that while there is a cost savings to a collective group of the population, there may be significant individual savings to each commuter who takes a bus and does not incur costs for gasoline, wear and tear on the vehicle and in some cases, increasing parking costs.

- Improve the Environment – Fewer overall vehicles on the roads equates to lower emission levels and less pollution of air and water.

- Make the community more livable – TDM becomes more significant in a community, the greater presence of ridesharing and other services such as transit orients a community to a higher level of activity.

PIERCE COUNTY NEEDS A SUCCESSFUL TDM PROGRAM

The collective sum of needed County road improvement projects are not environmentally viable and/or exceed our ability to pay. The Financing the Transportation Future describes the high costs associated with building additional capacity on the roadway network within the county. It may easily cost up to $5 M dollars per mile to add one lane on a roadway. As noted earlier in this Element, the roadway improvement costs cannot come at the expense of the cornerstone of a financially responsible and constrained approach of managing our transportation system.

There may also be environmental impacts to adjacent communities that are not proportionate to the benefits of road projects. This Transportation Element recommends that the County designate certain roadways as having Ultimate Capacity. In those corridors where such a designation is indicated, there would be a high level of study and possibly strategies that would attempt to understand if alternative actions such as TDM would play a role in giving affected travelers options for travelling specific corridors.
Pierce County Has Experience in Developing TDM Programs

Pierce County is the lead agency for state required Commute Trip Reduction (CTR) efforts in Pierce County. As the lead agency, Pierce County provides the administration oversight, coordinates commuter programs and services, and partners with WSDOT, PSRC, Pierce Transit, Downtown On the Go and the CTR-affected cities. All of the CTR-affected cities, except for the City of Tacoma, contract with Pierce County for basic administration of their CTR Ordinances.

The passage of the state CTR law in 1991, spurred the most populous counties into the TDM arena. Since then, CTR has been the cornerstone of Pierce County’s TDM program.

In the beginning extensive work was completed to develop zones and goals, identify affected employment sites, and develop employer and commute support services. To this day, a TDM/CTR Work Group oversees the CTR efforts in Pierce. The Work Group formally operates under the name Pierce Trips.

Several employer services and programs are in place to help employers with development and implementation of their CTR programs. These services and programs were developed to help employers meet commute trip reduction goals established in the CTR law. Pierce Trips continues to be able to provide these services at no cost to employers through successful federal Congestion Mitigation and Air Quality (CMAQ) grant awards. These programs include:

- Employer site visits and commute options program development assistance
- Training and networking opportunities
- Marketing materials such as posters and brochures
- Campaigns, promotions and incentives
- Emergency Ride Home
- Ridematching and transit trip planning assistance
- Recognition and Awards
- Commuter Information Centers, HOV parking signs and hangtags
- Trip tracking calendar and database
- Online support services

Trip reduction efforts are expanding in Pierce County. Pierce County recognizes that the commute trip is a percentage of the total trips on our roadways. In order to more efficiently manage our network and contribute positively to the livability of our communities, Pierce County must provide more access to all modes for all trips. Initial expansion efforts include:

- Supporting partner endeavors
  - Downtown On the Go, a transportation advocate for Downtown Tacoma
  - University of Washington-Tacoma Trip Options Program enhancements
- Carshare growth in Pierce County
- Focus on the I-5 TDM Corridor between the Thurston/Pierce border and City of Tacoma
  - Formation of JBLM TDM Working Group consisting of JBLM, Pierce County and Pierce Transit staff
  - Formation of a JBLM Stakeholders Group consisting of partner agencies
Development of a JBLM TDM Strategic Implementation Plan

Collaborating on the Neighborhood based outreach programs

- City of Tacoma resident outreach program, Stadium In Motion
- Joint Base Lewis-McChord outreach program, JBLM In Motion
- City of Puyallup outreach program with a transit/train emphasis, Puyallup In Motion

THE CONSTRAINTS

TRANSIT IS NOT EVERYWHERE

Pierce Transit has cut its routing and frequencies through most of its service area. This makes the concept of leveraging transit as part of a TDM program more challenging.

LAND USE

Unincorporated Pierce County’s historic and current residential development pattern generally conforms to low and moderate density single-family housing. A few major arterials provide for the majority of the commercial and office uses many miles removed from the bulk of the residences in Pierce County. The lack of significant mixed use developments results in a situation where many unincorporated residents drive to their destinations.

Unincorporated Pierce County accounted for over 53% of the overall County housing growth from 2001 to 2010. The low density spread of population makes it challenging to achieve a critical mass of riders along certain corridors.

Figure 12-P: Development Patterns

The Transportation Plan Preview studied five corridors within Pierce County. In all five corridors the residential density was far below the standard threshold levels to sustain transit service.

MOVING THE TDM PROGRAM – THE OPPORTUNITIES

TDM by definition encapsulates strategies that attempt to reduce or redirect the demand for travel. Congestion occurs when the demand for the roadway network exceeds the available supply. Traditional strategies have focused on the supply side such as increasing lanes or...
constructing new roads. These have provided for short term relief but demand will eventually outpace these efforts. By replacing or supplementing this with TDM Pierce County may reduce the need for costly construction projects as TDM decreases roadway demand thereby relieving congestion. Pierce County is currently focusing TDM efforts in certain corridors and subareas, which will hopefully be effective in reducing traffic in specific areas.

A well managed TDM program within Pierce County will expand upon the Commute Trip Reduction (CTR) laws currently in effect. The CTR laws target large employers who establish programs to help their employees find alternate mode choices for their commutes. The program has proven successful already and we continue to extend its reach. By encouraging rideshare or nonmotorized commute options we alleviate congestion throughout peak periods when it matters the most.

In comparison to typical supply side strategies, TDM strategies often cost significantly less. While large TDM infrastructure projects such as rail can incur an expense comparable to the expansion of roadways, TDM often employs inexpensive solutions. This allows planners to experiment with a mix of TDM strategies to target different audiences without too much financial commitment. Some TDM efforts such as CTR rely on more private investment than on government and public funding.

TDM can also boost a project’s ability to receive funding. Some grant funds such as CMAQ largely apply to TDM related activities. Other funding sources award points to projects that incorporate TDM that could make or break an award of funds. Such funding has already allowed us to continue and expand our TDM program. Road projects generally receive much more funding than TDM projects. As a counter, our history has shown that we have a higher probability to gain TDM funding compared with our ability to attain roadway funding. In the future we may see a comparative advantage in TDM funding as opposed to roadway construction funding because of the relatively low costs of TDM and effectiveness in gaining funds.

JBLM

As noted above the County is now working with JBLM in identifying strategies for removing some of the approximately 100,000 daily trips that cross its boundaries. While funds may be more readily available than before to construct a number of important roadway projects in the JBLM area, it is unlikely that given the magnitude of roadway congestion that a total fix will be implemented in the near future.

There is a potential for additional work to move forward on this front.

Sound Transit Success

Sound Transit (ST) has made an impact on how Pierce County residents travel. The scatter plot in Figure 12-Q shows the residential origins of a sample of Sumner commuter rail station riders. This is a parking lot survey showing that unincorporated residents do use the rail station.
This scatter plot of residential location shows that the travel shed or the area of influence of the rail station goes well beyond the five mile ring. The attraction of commuter rail to points north is strong. Fuel costs, traffic, and parking costs of travelling to Seattle are strong incentives for Pierce County residents to share a ride. It is recommended that the County work with Sound Transit, Pierce Transit, and the local residential communities to encourage the use of Sound Transit rail and bus express service. Ideally, riders would use transit or rideshare to these heavily utilized station parking lots.
Figure 12-Q: Sumner Station License Plate Survey

Source: Pierce Transit
OTHER RECOMMENDED ACTIONS

Other actions for the County to pursue include:

- Developing and heavily marketing *catchment* lots in Pierce County that would help galvanize the formation of carpools and vanpools. This would be a residentially based program that may be especially considered in the *Ultimate Capacity* corridors.

- Strengthening existing agency and organizational connections and supporting new alliances in the TDM field. Pierce County has worked with Pierce Transit, Tacoma, and a number of other jurisdictions on TDM. These connections need to be strengthened and augmented.

- Pursuing more grant opportunities. As earlier noted the County has had good success in receiving grants that develop and maintain TDM.

- Reinforcing the land use and transportation connection. As noted above the typical housing density is so low that many areas within unincorporated urban county have difficulty providing base level ridership that would make transit viable in the communities. The question in the long term is how does Pierce County achieve the densities required to attract adequate ridership, hence become financially sustainable.

In short, TDM makes good sense in terms of its benefit to the environment, individual, operations of our roadways and transit systems. TDM makes good business sense.

IMPLEMENTING THE PLAN

SELECTED KEY MESSAGES

1. Protect the Core Functions. Assuming a *stable* revenue and cost scenario, the financial analysis indicates that there are likely enough resources to cover the *core functions* of maintaining and operating the County transportation system. Given this, the County will need to be selective in the number and magnitude of projects that focus on improving the infrastructure.

2. Consider Ultimate Capacity. In the past twenty years this County has been able to build a number of projects that significantly increased the capacity of certain roadways. In the future, there is a need to review, assess, and potentially act on the concept of limiting the expansion of capacity of certain roadways due to cost, impacts on the built and natural environment, and the need to align with state policy.

3. Transportation Demand Management. Single occupant vehicle travel is the most common travel mode. The key challenge will be to develop meaningful ways to change how we shop, do errands, and go to work. This Element proposes to focus on specific areas of need (continue the JBLM focused TDM effort) and work with other jurisdictions and agencies to form more carpooling, vanpooling, and accessing transit stations. It is
noted in this Element that TDM may have a very functional role should Ultimate Capacity be implemented in this County.

4. Nonmotorized: A More Determined Program. Most people agree that nonmotorized facilities are important to have in their community. There are many nominated projects but the costs are high and the prospects for funding are less than stellar. It is suggested that a programmatic approach be tested that would identify partners and use seed money to draw down more grant dollars. These efforts could focus on schools and activity centers that have a critical mass of usage and interaction with communities.

**Steps to Consider**

1. Understand Technology and Leverage it. The County uses Global Positioning technologies, software, and communication to conduct standard field operations and uses asset management to optimize county resources and save money. There is a need to stay cognizant of technologies that may make carpooling, vanpooling, or fixed route transit more practical.

2. Continue working on all levels with other jurisdictions and agencies. Pierce County works with many jurisdictions and agencies on transportation issues at both the policy and technical level. While much of this interaction may be agency to agency, Pierce County is active at the PSRC policy boards and their technical committees. This interaction has been of benefit both regionally and locally as there is the opportunity to align planning and program objectives. These conversations will become important as PSRC begins to prepare for the next update of Vision. Also, the County needs to work with the local and regional transit agencies to develop successful Transportation Demand Management Programs. While there are some residents who now fall outside of the Pierce Transit Benefit Area, many are still served by that agency. Pierce County should be active in the monitoring and development of services associated with Sound Transit. ST provides significant long haul service to residents on a countywide basis.

**Metrics**

It is suggested that the County periodically review a number of indicators that relate to key policy, planning, and program objectives. These may be aggregated into a report.

The following is a selected list of measurable products and services and behaviors that may be considered. It should be noted that some of measures or data are already being collected and monitored by various agencies while some information may only be periodically available.

**Transportation Demand Management**

a. Transit Ridership- Detailed by line
b. Transit Route Miles, Service Miles
c. Mode Share
d. Formation of carpools/vanpools

**ROADWAYS**

- a. Roadway Congestion- Reported now by County and WSDOT
- b. Accidents
- c. Condition of roadways
- d. Safety projects initiated/completed
- e. Projects completed that provide interconnectivity

**FINANCE**

- a. Transit fares
- b. Parking fees in key locations
- c. Costs and Revenue trends for transportation – example: What are trends for roadway and sidewalk construction relative to factors such as inflation

**NONMOTORIZED**

- a. Nonmotorized projects as part of roadway projects
- b. Nonmotorized projects that are independent of roadway projects i.e., new corridors, reconstruction of existing roads

**LAND USE**

- a. Trends in residential development and employment construction. In order to develop the most efficient services, it is helpful to have a critical mass of demand, or higher density. It may be useful to monitor the short and long term densities as they relate to TDM and nonmotorized Transportation. It is fairly certain that until the residential densities increase in the County that fixed route transit serving neighborhoods will not be significantly more viable.

The above metrics are suggested as a starting point for conversation about transportation planning in the County. There are many more candidate measures or metrics that may be considered. The discussion of metrics is an appropriate ending point for this planning element. It is important to periodically look in the past to determine how to move forward.

**MEETING VEHICLE MILES TRAVELLED (VMT) POLICY**

Vehicle Miles Travelled (VMT) is a key transportation planning metric. VMT is one indicator of the magnitude or extent that a population uses the transportation system. It is acknowledged that the proposed Transportation Element does not reduce the per capita Vehicle Miles Travelled on the Pierce County roads between 2010 and 2030. This increase in VMT may not be consistent with current regional and state policy that call for overall reductions in VMT per capita.
While VMT is an important indicator of the use of the transportation system, it should not be the only one in which Pierce County should use as a baseline for assessing the transportation system nor for determining future policy and programs. There are a number of difficulties in using VMT in the Pierce County transportation planning setting as a metric for the effectiveness of County planning actions. It is suggested that the following factors make VMT a less than ideal measure for measuring the level of effort and effectiveness of Pierce County’s efforts to reduce future VMT:

1. **The Roadway Network Is Not Entirely Our Own**

   This County’s analysis of current and future roadway conditions clearly indicates that most of the state arterials and freeways are now congested. These levels of congestion increase in 2030 and will spill over onto the local (County) roadway network. While we will continue to work with the state on our respective planning efforts, we do not have programming and operational authority on these facilities.

2. **The Roadway Demand is Not Entirely Our Own**

   Pierce County users are the primary users of our local roadway network. However, the VMT for specific roadway facilities is affected also by residents in other jurisdictions who may find the "path of least resistance" to their destination through County roads.

3. **The Supply of Transit Services Is Not Our Own**

   One important tool in reducing VMT is through encouraging and developing alternative modes of transportation for residents. Transit can play an important role in reducing the VMT on the roadway network with adequate coverage and frequencies. However, Pierce Transit and Sound Transit own the primary transit systems in this area. Pierce County will continue to look for opportunities to coordinate usage of their services by County residents but does not make operational decisions for the systems.

**Meeting the Intent of Reducing VMT**

While this current Transportation Element does not reduce VMT in 2030, Pierce County proposes the following strategies that would work toward reducing VMT:

1. **Creating Additional Employment Opportunities within the County**

   The Census data from past years indicate that there is a trend for Pierce County residents to live further from their workplace. The increased distance between home and employment contributes would likely contribute to increased aggregate VMT. The land
use/economic development component of this Comprehensive Plan calls for the continued realization of the Frederickson Manufacturing/Industrial Center. Bringing employment closer to Pierce County residents will decrease the latter’s VMT.

2. **Both the Transportation Demand Management (TDM) and Nonmotorized Strategies Reduce VMT**

Pierce County has actively worked to develop its Commute Trip Reduction in compliance with state law and regional policy. Pierce County will explore additional opportunities to reduce VMT through increased usage of transit and rideshare. Complimenting these efforts will be a greater emphasis on delivering standalone nonmotorized improvements. It is notable that the Finance Plan calls for $20 million to be targeted toward standalone pedestrian and bicycle facilities.

3. **Ultimate Capacity**

The proposed designation of Ultimate Capacity roadways supports the examination and possible implementation of additional TDM and nonmotorized improvements. As discussed earlier, the County will investigate and apply where appropriate, the use of TDM and the development of nonmotorized facilities in corridors designated as Ultimate Capacity roadways.

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**Developing Multimodal Level of Service Standards**

It is noted that regional policy calls for level of service standards to be focused on movement of people and goods rather than just that of vehicles. There is also a call for concurrency programs to address multimodal transportation options in each jurisdiction’s programs. This element does not yet offer such a multimodal level of service standard. The development of such a standard will be considered in the course of implementing Ultimate Capacity and also in revising the Traffic Impact Fee Program. Such a standard would be useful in understanding the effectiveness of implementing certain nonmotorized and TDM strategies that would respond to the address the roadway congestion of certain facilities.
APPENDIX A – TRANSPORTATION INVENTORY

BACKGROUND

Pierce County’s transportation system consists of State highways and freeways, arterials and local streets and roads, bike trails and bike lanes, bus transit systems, paratransit, commuter rail, and light rail. In addition, the County is served by a maritime port, several general aviation airports, and ferry services. Joint Base Lewis McChord (JBLM) is a major military facility with its own transportation system.

GMA requires an inventory of air, water, and ground transportation facilities and services, including transit alignments and general aviation airport facilities, to define existing capital facilities and travel levels as a basis for future planning. This inventory must include state-owned transportation facilities within the city or county’s jurisdictional boundaries. A section of the Washington Administrative Code, WAC 365-196-430(2)(c), provides recommendations on specific inventories to include in Comprehensive Plans. Many of the WAC recommendations are used in this inventory.

ROADWAY SYSTEMS

The term roadway is used generically here to encompass all roads, streets, freeways, and highways under Federal, State, and local jurisdiction. GMA requires the County to inventory State and County owned facilities.

Interstate and State freeways form the backbone of the Pierce County transportation system, including I-5, I-705, SR 16, SR 167, SR 410, SR 509, and SR 512. The freeways provide intrastate and interstate linkages to and from Pierce County. There are number State surface highways crossing County. The following Interstate and State highways that are wholly or partially within Pierce County:

- Interstates 5 and 705
- State Highways 7, 16, 99, 123, 161, 162, 163, 165, 167, 302, 410, 507, 509, 512, 702, and 706

County-maintained roadways can be classified into three primary types – arterials, local access, and primitive. Roads are further categorized by whether they are in the urban or rural area. Table 12-T lists the number of centerline miles by category.
Table 12-T: Centerline Miles

<table>
<thead>
<tr>
<th>Roadway Type</th>
<th>Urban Centerline Miles*</th>
<th>Rural Centerline Miles*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Arterial</td>
<td>96</td>
<td>70</td>
</tr>
<tr>
<td>Secondary Arterial</td>
<td>165</td>
<td>95</td>
</tr>
<tr>
<td>Collector Arterial</td>
<td>185</td>
<td>94</td>
</tr>
<tr>
<td>Local Access</td>
<td>601</td>
<td>236</td>
</tr>
<tr>
<td>Primitive</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,047</strong></td>
<td><strong>503</strong></td>
</tr>
</tbody>
</table>

*Rounded to the nearest mile.

*LOCAL AND REGIONAL TRANSIT AND RAIL*

Pierce County is served by three transit agencies: Pierce Transit, Intercity Transit, and Sound Transit. Pierce Transit is the agency that provides local transit service within the County, consisting of 38 bus routes, a seasonal trolley serving Gig Harbor, specialized routes to serve events such as the Washington State Fair in Puyallup, and SHUTTLE service that provides door-to-door transportation for those who meet criteria established by the Federal Americans with Disabilities Act. Pierce Transit also operates a system of transit centers and park and ride lots. Intercity Transit has five routes that connect from Thurston County to various locations in Pierce County. Sound Transit, the regional transit agency for the Central Puget Sound, operates eight express bus routes in Pierce County, the Tacoma Link light rail, and Sounder commuter rail service.

Intercity Transit routes 603, 605, 609, 612, and 620 serve Pierce County. These are all express routes that serve Lakewood and Tacoma. All of the routes terminate in downtown Tacoma, except the 620, which ends at the Tacoma Mall. Route 620 is a weekend only route, while the other four routes are weekday only.

Sound Transit operates the Sounder commuter train, which makes ten daily weekday trips northbound and southbound to and from downtown Tacoma. Six of these trains in each direction also serve the Lakewood and South Tacoma station. The Sounder also runs on weekends on select days to serve travelers attending Seattle Seahawks and Mariners games.

The Tacoma Link light rail is operated seven days a week by Sound Transit. The termini are the Tacoma Dome station and the Theater District at South 9th and Commerce streets. The light rail frequencies are between 12 and 24 minutes, depending on the time of day and day of the week.

Sound Transit operates the following eight express bus routes within Pierce County that primarily travel to various destinations in King County:

1. **Route 574**: Lakewood – SeaTac
2. **Route 578**: Puyallup – Seattle
3. **Route 586**: Tacoma – U. District
4. **Route 590**: Tacoma – Seattle
5. **Route 592**: Olympia/Dupont – Seattle
6. **Route 594**: Lakewood – Seattle
7. **Route 595**: Gig Harbor – Seattle
8. **Route 596**: Bonney Lake – Sumner

Pierce Transit’s service area is 292 square miles, with a population base of over 557,000 (2013). There are seven transit centers located at the Tacoma Dome, Lakewood Town Center, Parkland, 72nd Street at Portland Avenue, South Hill Mall, Tacoma Mall, and Tacoma Community College. The 38 bus routes operated by Pierce Transit are shown in Table 12-U.

**Table 12-U: Pierce Transit Bus Routes**

<table>
<thead>
<tr>
<th>Route</th>
<th>Route Termini</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6th Avenue-Pacific Avenue</td>
</tr>
<tr>
<td>2</td>
<td>S 19th Street - Bridgeport Way</td>
</tr>
<tr>
<td>3</td>
<td>Lakewood-Downtown Tacoma</td>
</tr>
<tr>
<td>10</td>
<td>Pearl Street</td>
</tr>
<tr>
<td>11</td>
<td>Point Defiance</td>
</tr>
<tr>
<td>13</td>
<td>N. 30th Street</td>
</tr>
<tr>
<td>14</td>
<td>Proctor District</td>
</tr>
<tr>
<td>16</td>
<td>Downtown Tacoma-Tacoma Community College</td>
</tr>
<tr>
<td>28</td>
<td>S 12th Street</td>
</tr>
<tr>
<td>41</td>
<td>Portland Avenue</td>
</tr>
<tr>
<td>42</td>
<td>McKinley Avenue</td>
</tr>
<tr>
<td>45</td>
<td>Yakima Avenue</td>
</tr>
<tr>
<td>48</td>
<td>Sheridan-S. M Street</td>
</tr>
<tr>
<td>51</td>
<td>Union Avenue</td>
</tr>
<tr>
<td>52</td>
<td>Tacoma Community College-Tacoma Mall</td>
</tr>
<tr>
<td>53</td>
<td>University Place</td>
</tr>
<tr>
<td>54</td>
<td>38th Street</td>
</tr>
<tr>
<td>55</td>
<td>Tacoma Mall-Parkland</td>
</tr>
<tr>
<td>56</td>
<td>56th Street</td>
</tr>
<tr>
<td>57</td>
<td>Tacoma Mall</td>
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<tr>
<td>Route</td>
<td>Route Termini</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>62</td>
<td>NE Tacoma to Pacific Highway and S 348th Street</td>
</tr>
<tr>
<td>100</td>
<td>Tacoma Community College Transit Center to Purdy Park &amp; Ride</td>
</tr>
<tr>
<td>102</td>
<td>Purdy Park &amp; Ride and Kimball Drive Park &amp; Ride to Downtown Tacoma</td>
</tr>
<tr>
<td>202</td>
<td>Lakewood Transit Center to 72nd Street Transit Center</td>
</tr>
<tr>
<td>204</td>
<td>Lakewood Transit Center to Parkland Transit Center</td>
</tr>
<tr>
<td>206</td>
<td>Lakewood Transit Center to Tillicum to Madigan Hospital (JBLM)</td>
</tr>
<tr>
<td>212</td>
<td>Lakewood Transit Center to Steilacoom</td>
</tr>
<tr>
<td>214</td>
<td>Pierce College at Fort Steilacoom to Lakewood Transit Center</td>
</tr>
<tr>
<td>300</td>
<td>Tacoma Mall to McChord Commissary</td>
</tr>
<tr>
<td>400</td>
<td>Downtown Tacoma to South Hill Mall Transit Center</td>
</tr>
<tr>
<td>402</td>
<td>Federal Way Transit Center to 171st Street and S Meridian Ave (WA 161)</td>
</tr>
<tr>
<td>409</td>
<td>72nd Street Transit Center to Puyallup</td>
</tr>
<tr>
<td>410</td>
<td>Parkland Transit Center to South Hill Mall Transit Center and Pierce College Puyallup</td>
</tr>
<tr>
<td>425</td>
<td>Loop connects with Routes 400, 402, 409, 410, and 495</td>
</tr>
<tr>
<td>495</td>
<td>Puyallup Sounder Station to South Hill Mall Transit Center</td>
</tr>
<tr>
<td>497</td>
<td>Lakeland Hills to Auburn Sounder Station</td>
</tr>
<tr>
<td>500</td>
<td>Downtown Tacoma to Federal Way Transit Center</td>
</tr>
<tr>
<td>501</td>
<td>Downtown Tacoma to Federal Way Transit Center via Milton</td>
</tr>
</tbody>
</table>

Map 12-4 shows the alignments of Pierce Transit routes along with locations of transit centers, rail stations, park and ride lots, and popular destinations.

Pierce Transit owns several park-and-ride lots and utilizes many others that are owned by separate entities. The list of Park and rides lots is shown in Table 12-V.

Pierce Transit also operates the SHUTTLE service that provides door-to-door transportation for those who meet criteria established by the Federal Americans with Disabilities Act, which make taking normal transit buses functionally impossible for the individual. SHUTTLE service only operates within ¾ of a mile of local bus routes, leaving much of the County without this service. There are a number of other entities that offer shuttle service outside of the Pierce Transit service area. These services included Beyond the Borders which serves Sumner, Spanaway, and South Hill and the Mustard Seed project, serving the Key Peninsula.
### Table 12-V: Pierce Transit Park-n-Ride Lots

<table>
<thead>
<tr>
<th>Park-and-Ride Lots Owned or Leased by Pierce Transit</th>
<th>Park-and-Ride Lots Owned by Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility</strong></td>
<td><strong>Stalls</strong></td>
</tr>
<tr>
<td>72nd Street Transit Center</td>
<td>68</td>
</tr>
<tr>
<td>72nd Street E &amp; E. Portland Avenue - Tacoma</td>
<td></td>
</tr>
<tr>
<td>Kimball Drive Park-and-Ride</td>
<td>306</td>
</tr>
<tr>
<td>SR 16 at Kimball Drive – Gig Harbor</td>
<td></td>
</tr>
<tr>
<td>Parkland Transit Center</td>
<td>62</td>
</tr>
<tr>
<td>121st Street E &amp; Pacific Avenue S</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Park-and-Ride Lots Owned by Others</th>
<th>Park-and-Ride Lots Owned by Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility (Owner)</strong></td>
<td><strong>Stalls</strong></td>
</tr>
<tr>
<td>Center Street (WSDOT)</td>
<td>75</td>
</tr>
<tr>
<td>SR 16 at Center Street - Tacoma</td>
<td></td>
</tr>
<tr>
<td>Narrows/Skyline (City of Tacoma)</td>
<td>195</td>
</tr>
<tr>
<td>Lakewood Sounder Station (Sound Transit)</td>
<td>600</td>
</tr>
<tr>
<td>11424 Pacific Highway SW</td>
<td></td>
</tr>
<tr>
<td>North Purdy (WSDOT)</td>
<td>200</td>
</tr>
<tr>
<td>144th Street NW at Purdy Drive NW</td>
<td></td>
</tr>
<tr>
<td>South Purdy (WSDOT)</td>
<td>20</td>
</tr>
<tr>
<td>SR 16 at Goodnough Drive NW</td>
<td></td>
</tr>
<tr>
<td>Puyallup Sounder Station (Sound Transit)</td>
<td>364</td>
</tr>
<tr>
<td>131 W. Main Avenue</td>
<td></td>
</tr>
<tr>
<td>South Hill (Sound Transit)</td>
<td>350</td>
</tr>
<tr>
<td>9th Street SW at 31st Avenue SW - Puyall</td>
<td></td>
</tr>
</tbody>
</table>

**Intrastate and Interstate Transit and Rail**

Pierce County is served by the Greyhound buses and Amtrak rail. Both of these companies provide service south to Portland, Oregon, north to Vancouver, Canada, and east to Spokane and points beyond. The stations for both of these services are located near the Tacoma Dome.
WATERBORNE TRANSPORTATION

Pierce County is served by two ferry routes, one operated by the County and the other by the Washington State Department of Transportation (WSDOT). The WSDOT ferry route is between Point Defiance in Tacoma and Vashon Island. The Pierce County ferry route connects Anderson and Ketron Island to the mainland in the Town of Steilacoom. Both routes accommodate both motor vehicles and passengers.

The Port of Tacoma is a one of the top 10 container ports in the country. In 2013, $48.7 billion in combined import/export commodities passed through the port. Top export commodities include food products, industrial machinery, and wood and paper products. The top import commodities are industrial machinery, vehicles and parts, electronics, and toys, games, and sporting equipment. The top trading partner is China/Hong Kong, accounting for nearly half of the combined import/export trade value. Japan accounts for nearly a third of the combined value.

AIR TRANSPORT

Pierce County is served by Seattle-Tacoma International Airport in south King County, two military base airports, and a number of smaller airports owned by the public and private sector.

The largest airports located in the County are the military air facilities on JBLM - McChord Field and Gray Field. General aviation is served by the County-owned Narrows Airport and Thun Field and several other small private airports. Characteristics of the larger Pierce County airports are shown in Table 12-W.

Table 12-W: Operational Characteristics of Larger Airports within Pierce County

<table>
<thead>
<tr>
<th>Airport Name</th>
<th>Ownership</th>
<th>Runway Length (ft)</th>
<th>Annual Operations</th>
<th>Annual Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Lake</td>
<td>Commercial</td>
<td>5,500</td>
<td>700</td>
<td>60,000</td>
</tr>
<tr>
<td>Gray Army Airfield</td>
<td>Military</td>
<td>6,125</td>
<td>Not Available</td>
<td>180,000</td>
</tr>
<tr>
<td>McChord AFB</td>
<td>Military</td>
<td>10,100</td>
<td>Not Available</td>
<td>180,000</td>
</tr>
<tr>
<td>Thun Field</td>
<td>County</td>
<td>3,650</td>
<td>90,006</td>
<td>240,000</td>
</tr>
<tr>
<td>Ranger Creek State</td>
<td>State</td>
<td>2,700</td>
<td>3,600</td>
<td>140,000</td>
</tr>
<tr>
<td>Spanaway</td>
<td>Commercial</td>
<td>2,724</td>
<td>19,380</td>
<td>19,380</td>
</tr>
<tr>
<td>Swanson</td>
<td>City</td>
<td>3,000</td>
<td>5,594</td>
<td>150,000</td>
</tr>
<tr>
<td>Tacoma Narrows</td>
<td>County</td>
<td>5,002</td>
<td>44,057</td>
<td>240,000</td>
</tr>
</tbody>
</table>

Source: Regional Airport System Plan, Puget Sound Regional Council Staff, 2001; Tacoma Narrows Airport: Final Draft of Master Plan Update, October 2014; WSDOT 2012 Airport Economic Impact Study
ACTIVE TRANSPORTATION

Pierce County inventoried County-owned sidewalks in 2013/2014 as part of the Transition Plan for bringing facilities into compliance with the Americans with Disabilities Act. The inventory results are shown in Table 12-X. More information in the Transition Plan.

Table 12-X: Pedestrian Facilities on Pierce County Roadways

<table>
<thead>
<tr>
<th></th>
<th>237 miles of sidewalk</th>
<th>3,256 curb ramp locations</th>
<th>844 pedestrian push buttons at crosswalks</th>
</tr>
</thead>
</table>

Table 12-Y shows the number of accidents involving pedestrians on Pierce County maintained roadways from 2010-2014. As shown, there were four pedestrian fatalities during this period.

Table 12-Y: Accidents Involving Pedestrians on Pierce County Maintained Roadways

<table>
<thead>
<tr>
<th>Year</th>
<th>Disabling Injury</th>
<th>Fatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>37</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 12-Z shows the number of accidents involving bicyclists on Pierce County maintained roadways from 2010-2014. As shown, there was only one bicycle fatality during this period.

Table 12-Z: Accidents Involving Bicyclists on Pierce County Maintained Roadways

<table>
<thead>
<tr>
<th>Year</th>
<th>Disabling Injury</th>
<th>Fatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>1</td>
</tr>
</tbody>
</table>
APPENDIX B

B-1 – Florida Department of Transportation Level of Service Table
B-2 – State and City 2030 Assumed Roadway Projects
B-3 – Highways of Statewide Significance
B-4 – Regionally Significant State Highways
## Generalized Annual Average Daily Volumes for Florida’s Urbanized Areas

<table>
<thead>
<tr>
<th>Interrupted Flow Facilities</th>
<th>Uninterrupted Flow Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE SIGNALIZED ARTERIALS</strong></td>
<td><strong>FREeways</strong></td>
</tr>
<tr>
<td>Lanes</td>
<td>Median</td>
</tr>
<tr>
<td>2</td>
<td>16,800</td>
</tr>
<tr>
<td>4</td>
<td>37,900</td>
</tr>
<tr>
<td>6</td>
<td>58,400</td>
</tr>
<tr>
<td>8</td>
<td>78,800</td>
</tr>
<tr>
<td><strong>Class II (35 mph or slower posted speed limit)</strong></td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>Median</td>
</tr>
<tr>
<td>2</td>
<td>7,300</td>
</tr>
<tr>
<td>4</td>
<td>14,500</td>
</tr>
<tr>
<td>6</td>
<td>23,300</td>
</tr>
<tr>
<td>8</td>
<td>32,000</td>
</tr>
<tr>
<td><strong>Non-State Signalized Roadway Adjustments</strong></td>
<td><strong>Ramp</strong></td>
</tr>
<tr>
<td>(After corresponding state volumes by the indicated percent)</td>
<td>Present in Both Directions</td>
</tr>
<tr>
<td>Non-State Signalized Roadways</td>
<td>-10%</td>
</tr>
</tbody>
</table>

### Median & Turn Lane Adjustments

<table>
<thead>
<tr>
<th>Exclusive Adjustment Factors</th>
<th>Lanes</th>
<th>Median</th>
<th>Left Lanes</th>
<th>Right Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Divided</td>
<td>Yes</td>
<td>No</td>
<td>-5%</td>
<td></td>
</tr>
<tr>
<td>2 Undivided</td>
<td>No</td>
<td>No</td>
<td>-20%</td>
<td></td>
</tr>
<tr>
<td>Multi Undivided</td>
<td>Yes</td>
<td>No</td>
<td>-5%</td>
<td></td>
</tr>
<tr>
<td>Multi Undivided</td>
<td>No</td>
<td>No</td>
<td>-25%</td>
<td></td>
</tr>
</tbody>
</table>

### One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way minimum service volumes.)

<table>
<thead>
<tr>
<th>Paved Shoulder/Bicycle Lane Coverage</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-49%</td>
<td>2,100</td>
<td>6,700</td>
<td>19,700</td>
<td></td>
</tr>
<tr>
<td>50-84%</td>
<td>9,300</td>
<td>19,700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-100%</td>
<td>9,300</td>
<td>19,700</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PEDESTRIAN MODE

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way minimum service volumes.)

<table>
<thead>
<tr>
<th>Sidewalk Coverage</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-49%</td>
<td>2,800</td>
<td>9,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-84%</td>
<td>8,700</td>
<td>15,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-100%</td>
<td>10,700</td>
<td>17,400</td>
<td>19,700</td>
<td></td>
</tr>
</tbody>
</table>

### BUS MODE (Scheduled Fixed Route)

(Buses in peak hour in peak direction)

<table>
<thead>
<tr>
<th>Sidewalk Coverage</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-84%</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>85-100%</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table Notes:

1. Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for control or design decision, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

2. Source: Florida Department of Transportation System Planning Office: www.dot.state.fl.us/planning/systems/av/cr/levelofserv.html

---

Appendix B-1

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2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES
### TABLE 1 (continued)

<table>
<thead>
<tr>
<th>ROADWAY CHARACTERISTICS</th>
<th>Uninterrupted Flow Facilities</th>
<th>Interrupted Flow Facilities</th>
<th>Class I</th>
<th>Class II</th>
<th>Bicycle</th>
<th>Ped</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area type (u,a)</td>
<td>Freedom</td>
<td>Core Freeways</td>
<td>Highways</td>
<td>Freedom</td>
<td>Core Freeways</td>
<td>Highways</td>
<td>Freedom</td>
</tr>
<tr>
<td>Number of through lanes (both dir.)</td>
<td>4-10</td>
<td>4-12</td>
<td>2</td>
<td>4-6</td>
<td>2</td>
<td>4-6</td>
<td>2</td>
</tr>
<tr>
<td>Posted speed (mph)</td>
<td>70</td>
<td>65</td>
<td>50</td>
<td>50</td>
<td>45</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>Free flow speed (mph)</td>
<td>75</td>
<td>70</td>
<td>55</td>
<td>55</td>
<td>50</td>
<td>55</td>
<td>35</td>
</tr>
<tr>
<td>Auxiliary Lanes (u,y)</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>Median (n, m, t)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Terrain (L)</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Traffic Characteristics</td>
<td>Planning analysis hour factor (C)</td>
<td>0.090</td>
<td>0.015</td>
<td>0.000</td>
<td>0.000</td>
<td>0.090</td>
<td>0.090</td>
</tr>
<tr>
<td>Directional distribution factor (D)</td>
<td>0.7</td>
<td>0.7</td>
<td>0.55</td>
<td>0.55</td>
<td>0.55</td>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>Peak hour factor (PHF)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Base saturation flow rate (pcphl)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Heavy vehicle percent</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Local adjustment factor</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>% left turns</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>% right turns</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

### CONTROL CHARACTERISTICS

- Number of signals
- Arrival type (1-6)
- Signal type (a, c, p)
- Cycle length (C)
- Effective green ratio (g/C)

### MULTIMODAL CHARACTERISTICS

- Paved shoulder/bicycle lane (a, y)
- Outside lane width (n, t, w)
- Pavement condition (d, t, u)
- On-street parking (a, y)
- Sidewalk (n, y)
- Sidewalk/roadway separation (a, t, w)
- Sidewalk protective barrier (a, y)

### LEVEL OF SERVICE THRESHOLDS

<table>
<thead>
<tr>
<th>Freeways</th>
<th>Highways</th>
<th>Arterials</th>
<th>Bicycle</th>
<th>Ped</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>Two-Lane %ats</td>
<td>Multiline Density</td>
<td>Class I</td>
<td>Class II</td>
<td>Score</td>
</tr>
<tr>
<td>B</td>
<td>≤ 17</td>
<td>≥ 83.3</td>
<td>≤ 17</td>
<td>≥ 31 mph</td>
<td>&gt; 22 mph</td>
</tr>
<tr>
<td>C</td>
<td>≤ 24</td>
<td>≥ 75.0</td>
<td>≤ 24</td>
<td>≥ 23 mph</td>
<td>&gt; 17 mph</td>
</tr>
<tr>
<td>D</td>
<td>≤ 31</td>
<td>≥ 66.7</td>
<td>≤ 31</td>
<td>≥ 18 mph</td>
<td>&gt; 13 mph</td>
</tr>
<tr>
<td>E</td>
<td>≤ 39</td>
<td>≥ 58.3</td>
<td>≤ 39</td>
<td>≥ 15 mph</td>
<td>&gt; 10 mph</td>
</tr>
</tbody>
</table>

% fsv = Percent free flow speed  
% ats = Average travel speed
**TABLE 2**

Generalized Annual Average Daily Volumes for Florida's Transitioning Areas and Areas Over 5,000 Not In Urbanized Areas

<table>
<thead>
<tr>
<th>Interrupted Flow Facilities</th>
<th>Uninterrupted Flow Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE SIGNALIZED ARTERIALS</strong></td>
<td><strong>FREEWAYS</strong></td>
</tr>
<tr>
<td>Class I (40 mph or higher posted speed limit)</td>
<td>Lanes</td>
</tr>
<tr>
<td>Lanes</td>
<td>Median</td>
</tr>
<tr>
<td>2</td>
<td>Undivided</td>
</tr>
<tr>
<td>4</td>
<td>Divided</td>
</tr>
<tr>
<td>6</td>
<td>Divided</td>
</tr>
<tr>
<td>Class II (35 mph or slower posted speed limit)</td>
<td>Lanes</td>
</tr>
<tr>
<td>2</td>
<td>Undivided</td>
</tr>
<tr>
<td>4</td>
<td>Divided</td>
</tr>
<tr>
<td>6</td>
<td>Divided</td>
</tr>
<tr>
<td><strong>Non-State Signalized Roadway Adjustments</strong></td>
<td><strong>FREEWAYS</strong></td>
</tr>
<tr>
<td>(After corresponding state volumes by the indicated percent)</td>
<td><strong>FREEWAYS</strong></td>
</tr>
<tr>
<td>Non-State Signalized Roadways</td>
<td>- 10%</td>
</tr>
<tr>
<td><strong>Median &amp; Turn Lane Adjustment</strong></td>
<td><strong>UNINTERRUPTED FLOW HIGHWAYS</strong></td>
</tr>
<tr>
<td>Exclusive Left Lanes</td>
<td>Lanes</td>
</tr>
<tr>
<td>2</td>
<td>Divided</td>
</tr>
<tr>
<td>2</td>
<td>Undivided</td>
</tr>
<tr>
<td>Multi</td>
<td>Undivided</td>
</tr>
<tr>
<td>Multi</td>
<td>Undivided</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>One-Way Facility Adjustment</strong></td>
<td><strong>UNINTERRUPTED FLOW HIGHWAYS</strong></td>
</tr>
<tr>
<td>(Multiply the corresponding two-directional volumes in this table by 0.6)</td>
<td>Lanes</td>
</tr>
<tr>
<td>2</td>
<td>Divided</td>
</tr>
<tr>
<td>Multi</td>
<td>Undivided</td>
</tr>
<tr>
<td>Multi</td>
<td>Undivided</td>
</tr>
</tbody>
</table>

**BICYCLE MODE**

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes)

<table>
<thead>
<tr>
<th>Pavement Shoulder/Bicycle</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Coverage</td>
<td>0-49%</td>
<td>2,600</td>
<td>6,100</td>
<td>19,500</td>
</tr>
<tr>
<td>50-84%</td>
<td>1,000</td>
<td>5,500</td>
<td>14,800</td>
<td>&gt;19,500</td>
</tr>
<tr>
<td>85-100%</td>
<td>7,500</td>
<td>19,500</td>
<td>&gt;19,500</td>
<td></td>
</tr>
</tbody>
</table>

**PEDESTRIAN MODE**

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes)

<table>
<thead>
<tr>
<th>Sidewalk Coverage</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-49%</td>
<td>2,800</td>
<td>9,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-84%</td>
<td>1,600</td>
<td>8,600</td>
<td>15,600</td>
<td></td>
</tr>
<tr>
<td>85-100%</td>
<td>3,800</td>
<td>10,500</td>
<td>17,100</td>
<td>&gt;19,500</td>
</tr>
</tbody>
</table>

**BUS MODE (Scheduled Fixed Route)**

(Buses in peak hour inbound direction)

<table>
<thead>
<tr>
<th>Sidewalk Coverage</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-84%</td>
<td>&gt; 5</td>
<td>≥ 4</td>
<td>≥ 3</td>
<td>≥ 2</td>
</tr>
<tr>
<td>85-100%</td>
<td>&gt; 4</td>
<td>≥ 3</td>
<td>≥ 2</td>
<td>≥ 1</td>
</tr>
</tbody>
</table>

*Values shown are presented as two-way annual average daily volumes for levels of service and areas for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. This table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.*

1 Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

2 Base per hour shown are only for the peak hour in the single direction of the highest traffic flow.

3 Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become E because intersection capacities have not been reached. For the bicycle mode, the level of service letter grade (including F) is not applicable because there is no maximum vehicle volume threshold using table input values.

4 Pct. cannot be achieved using table input values.

5 **Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become E because intersection capacities have not been reached. For the bicycle mode, the level of service letter grade (including F) is not applicable because there is no maximum vehicle volume threshold using table input values.**

Source:
Florida Department of Transportation
System Planning Office
www.dot.state.fl.us/planning/systems/ars/leveldef.html
### TABLE 2
(continued)

<table>
<thead>
<tr>
<th>INPUT VALUE ASSUMPTIONS</th>
<th>Uninterrupted Flow Facilities</th>
<th>Interrupted Flow Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freeways</td>
<td>Highways</td>
</tr>
<tr>
<td>ROADWAY CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area type (t, u, s)</td>
<td>t t t</td>
<td>t t t</td>
</tr>
<tr>
<td>Number of through lanes (both dir.)</td>
<td>4-10 2 4-6</td>
<td>2 4-6 2 4-6</td>
</tr>
<tr>
<td>Posted speed (mph)</td>
<td>70 50</td>
<td>50 50</td>
</tr>
<tr>
<td>Free flow speed (mph)</td>
<td>75 55</td>
<td>55 55</td>
</tr>
<tr>
<td>Auxiliary lanes (n, y)</td>
<td>n n</td>
<td>n n</td>
</tr>
<tr>
<td>Median (n, m, r)</td>
<td>n r</td>
<td>n r</td>
</tr>
<tr>
<td>Terrain (L, r)</td>
<td>1 1 1</td>
<td>1 1 1</td>
</tr>
<tr>
<td>%’s no passing zone</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Exclusive left turn lane impact (u, y)</td>
<td>[u] y y y y y y</td>
<td>y y y y y y y y</td>
</tr>
<tr>
<td>Exclusive right turn lanes (n, y)</td>
<td>n n</td>
<td>n n</td>
</tr>
<tr>
<td>Facility length (mi)</td>
<td>8 5 5</td>
<td>18 2 2</td>
</tr>
<tr>
<td>Number of basic segments</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TRAFFIC CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning analysis hour factor (E)</td>
<td>0.090</td>
<td>0.090</td>
</tr>
<tr>
<td>Directional distribution factor (D)</td>
<td>0.555 0.550 0.550</td>
<td>0.550 0.570 0.570</td>
</tr>
<tr>
<td>Peak hour factor (PHF)</td>
<td>1.000 1.000 1.000</td>
<td>1.000 1.000 1.000</td>
</tr>
<tr>
<td>Base saturation flow rate (pcvph)</td>
<td>1.700 2.100</td>
<td>1.950 1.950</td>
</tr>
<tr>
<td>Heavy vehicile percent</td>
<td>0.0 0.0 0.0</td>
<td>2.0 3.0 2.0</td>
</tr>
<tr>
<td>Local adjustment factor</td>
<td>0.85 0.97 0.95</td>
<td>0.85 0.97 0.95</td>
</tr>
<tr>
<td>%’s left turns</td>
<td>12 12 12</td>
<td>12 12 12</td>
</tr>
<tr>
<td>%’s right turns</td>
<td>12 12 12</td>
<td>12 12 12</td>
</tr>
<tr>
<td>CONTROL CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of signals</td>
<td>5 4 10 10 4 6</td>
<td></td>
</tr>
<tr>
<td>Arrival type (1-6)</td>
<td>4 3 4 4 4 4</td>
<td></td>
</tr>
<tr>
<td>Signal type (a, c, p)</td>
<td>c c c c c c</td>
<td></td>
</tr>
<tr>
<td>Cycle length (C)</td>
<td>120 150 120 150 120 120</td>
<td></td>
</tr>
<tr>
<td>Effective green ratio (g/C)</td>
<td>0.44 0.45 0.44 0.45 0.44 0.44</td>
<td></td>
</tr>
<tr>
<td>MULTIMODAL CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paved shoulder/bicycle lane (n, y)</td>
<td>n, 50% y n</td>
<td></td>
</tr>
<tr>
<td>Outside lane width (n, t, w)</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>Pavement condition (d, t, u)</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>On-street parking (n, y)</td>
<td>n n</td>
<td></td>
</tr>
<tr>
<td>Sidewalk (n, y)</td>
<td>n n</td>
<td></td>
</tr>
<tr>
<td>Sidewalk/roadway separation (t, t, w)</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>Sidewalk protective barrier (n, y)</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>LEVEL OF SERVICE THRESHOLDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Service</td>
<td>Freeways</td>
<td>Highways</td>
</tr>
<tr>
<td>Density</td>
<td>Two-Lane Density</td>
<td>Multile</td>
</tr>
<tr>
<td>Density</td>
<td>Density</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>≤ 17</td>
<td>&gt; 83.3</td>
</tr>
<tr>
<td>C</td>
<td>≤ 24</td>
<td>&gt; 75.0</td>
</tr>
<tr>
<td>D</td>
<td>≤ 31</td>
<td>&gt; 66.7</td>
</tr>
<tr>
<td>E</td>
<td>≤ 39</td>
<td>&gt; 58.3</td>
</tr>
</tbody>
</table>

% ffs = Percent free flow speed  
as = Average travel speed
B-2 – **State and City 2030 Assumed Roadway Projects**

See Map 12-21 below.
### APPENDIX C - SUMMARY STATISTICS FOR LIMITED AND PREFERRED ACTION SCENARIOS

<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Segment Name</th>
<th>Segment Limits</th>
<th>Project Description</th>
<th>Limited Action Scenario</th>
<th>Preferred Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Capacity</td>
<td>Volume</td>
<td>V/S</td>
</tr>
<tr>
<td>A1</td>
<td>176TH ST E</td>
<td>WALLER RD E TO 22 AV E</td>
<td>WIDE TO 4 LANES W/ ACCESS CONTROL</td>
<td>47,400</td>
<td>25,480</td>
</tr>
<tr>
<td>A1</td>
<td>176TH ST E</td>
<td>22 AV E TO 14 AV E</td>
<td>WIDE TO 4 LANES W/ ACCESS CONTROL</td>
<td>47,400</td>
<td>21,682</td>
</tr>
<tr>
<td>A1</td>
<td>176TH ST E</td>
<td>14 AV E TO 5 AV E</td>
<td>WIDE TO 4 LANES W/ ACCESS CONTROL</td>
<td>47,400</td>
<td>22,028</td>
</tr>
<tr>
<td>A1</td>
<td>176TH ST E</td>
<td>5 AV E TO B ST E</td>
<td>WIDE TO 4 LANES W/ ACCESS CONTROL</td>
<td>47,400</td>
<td>23,179</td>
</tr>
<tr>
<td>A2</td>
<td>184TH ST E</td>
<td>81 AV CT E TO 86 AV E</td>
<td>2 NEW LANES</td>
<td>17,600</td>
<td>5,730</td>
</tr>
<tr>
<td>A3</td>
<td>78TH AV E</td>
<td>182 ST E TO 184 ST E</td>
<td>ADD CHANNELIZATION TO A 2 LANE ROAD</td>
<td>22,000</td>
<td>16,932</td>
</tr>
<tr>
<td>A4</td>
<td>136TH ST E</td>
<td>62 AV E TO WOODLAND AV E</td>
<td>2 NEW LANES</td>
<td>17,600</td>
<td>2,179</td>
</tr>
<tr>
<td>A5</td>
<td>38TH AV E</td>
<td>200 ST E TO 208 ST E</td>
<td>2 NEW LANES W/ CHANNELIZATION</td>
<td>22,000</td>
<td>2,547</td>
</tr>
<tr>
<td>A6</td>
<td>50TH AV E</td>
<td>176 ST E TO 180 ST E</td>
<td>2 NEW LANES</td>
<td>17,600</td>
<td>1,519</td>
</tr>
<tr>
<td>A6</td>
<td>52ND AV E</td>
<td>176 ST E TO 180 ST E</td>
<td>REMOVE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A7</td>
<td>198TH AV E</td>
<td>120 ST E TO RHODES LAKE RD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>14,799</td>
</tr>
<tr>
<td>A7</td>
<td>198TH AV E</td>
<td>RHODES LAKE RD E TO 112 ST E</td>
<td>2 NEW LANES W/ CENTER TURN LANE</td>
<td>22,000</td>
<td>13,755</td>
</tr>
<tr>
<td>A7</td>
<td>198TH AV CT E</td>
<td>112 ST E TO 104 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>22,000</td>
<td>15,083</td>
</tr>
<tr>
<td>A8</td>
<td>126 ST E</td>
<td>198 AV E TO CANYON VIEW BLVD E</td>
<td>2 NEW LANES</td>
<td>17,600</td>
<td>1,492</td>
</tr>
<tr>
<td>A8</td>
<td>128TH ST E</td>
<td>5R 162 TO MCCUTCHEON RD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>24,037</td>
</tr>
<tr>
<td>A8</td>
<td>198TH AV E</td>
<td>120 ST E TO CASCADIA BLVD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>9,574</td>
</tr>
<tr>
<td>A8</td>
<td>198TH AV E</td>
<td>CASCADIA BLVD E TO 160 ST E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>7,176</td>
</tr>
<tr>
<td>A8</td>
<td>CANYON VIEW BLVD E</td>
<td>VILLAGE PKWY E TO CASCADIA BLVD E</td>
<td>2 NEW LANES</td>
<td>17,600</td>
<td>537</td>
</tr>
<tr>
<td>A8</td>
<td>CASCADIA BLVD E</td>
<td>198 AV E TO TEHALEH BLVD</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>4,233</td>
</tr>
<tr>
<td>A8</td>
<td>FALLING WATER BLVD E</td>
<td>TEHALEH BLVD TO END OF FALLING WATER BLVD E</td>
<td>2 NEW LANES W/ CENTER TURN LANE</td>
<td>24,600</td>
<td>6,753</td>
</tr>
<tr>
<td>A8</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>7,999</td>
</tr>
<tr>
<td>A8</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>6,152</td>
</tr>
<tr>
<td>A8</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>NA - TEHALEH DEVELOPMENT T</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>5,816</td>
</tr>
<tr>
<td>A8</td>
<td>RLR BY PASS</td>
<td>128 ST E TO FALLING WATER BLVD E</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>22,175</td>
</tr>
<tr>
<td>A8</td>
<td>TEHALEH BLVD</td>
<td>CASCADIA BLVD E TO FALLING WATER BLVD E</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>44,000</td>
<td>15,085</td>
</tr>
<tr>
<td>C1</td>
<td>92ND AV E</td>
<td>152 ST E TO 157 ST E</td>
<td>2 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C1</td>
<td>92ND AV E</td>
<td>157 ST E TO 160 ST E</td>
<td>ADD CHANNELIZATION TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>1,639</td>
</tr>
<tr>
<td>C2</td>
<td>86TH AV E</td>
<td>152 ST E TO 158 ST E</td>
<td>2 NEW LANES W/ CHANNELIZATION</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
### Summary Statistics for Limited Action and Preferred Scenarios

<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Segment Name</th>
<th>Segment Limits</th>
<th>Project Description</th>
<th>Limited Action Scenario</th>
<th>Preferred Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Capacity</td>
<td>Volume</td>
</tr>
<tr>
<td>C2</td>
<td>86TH AV E</td>
<td>158 ST E TO 160 ST E</td>
<td>ADD CHANNELIZATION TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>1,008</td>
</tr>
<tr>
<td>C3</td>
<td>86TH AV E</td>
<td>170 ST E TO 175 ST CT E</td>
<td>2 NEW LANES</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C4</td>
<td>78TH AV E</td>
<td>160 ST E TO 170 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>600</td>
</tr>
<tr>
<td>C4</td>
<td>78TH AV E</td>
<td>170 ST E TO 176 ST E</td>
<td>2 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C5</td>
<td>184TH ST E</td>
<td>74 AV E TO 73 AV E</td>
<td>2 NEW LANES</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E1</td>
<td>52ND ST E</td>
<td>CANYON RD E EXT TO 66 AV E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>17,600</td>
<td>4,580</td>
</tr>
<tr>
<td>E1</td>
<td>CANYON RD E EXT</td>
<td>66 AV E TO SR 167</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E1</td>
<td>99 ST CT E TO 96 ST E</td>
<td>CANYON RD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>30,800</td>
<td>20,305</td>
</tr>
<tr>
<td>E1</td>
<td>96 ST E TO 90 ST E</td>
<td>CANYON RD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>22,000</td>
<td>19,364</td>
</tr>
<tr>
<td>E1</td>
<td>80 ST E TO 72 ST E</td>
<td>CANYON RD E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>17,600</td>
<td>17,076</td>
</tr>
<tr>
<td>E1</td>
<td>72 ST E TO PIONEER WY E</td>
<td>CANYON RD E EXT</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>17,600</td>
<td>11,318</td>
</tr>
<tr>
<td>E1</td>
<td>52 ST E TO PIONEER WY E</td>
<td>CANYON RD E EXT</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E1</td>
<td>196 ST E TO 200 ST E</td>
<td>CANYON RD E EXT</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>22,000</td>
<td>18,559</td>
</tr>
<tr>
<td>E1</td>
<td>200 ST E TO 208 ST E</td>
<td>CANYON RD E EXT</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E2</td>
<td>208 ST E TO 224 ST E</td>
<td>CANYON RD E EXT</td>
<td>4 NEW LANES W/ CENTER TURN LANE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N1</td>
<td>MILITARY RD E</td>
<td>130 AV CT E TO 134 AV E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>17,880</td>
</tr>
<tr>
<td>N1</td>
<td>122ND ST E</td>
<td>134 AV E TO MILITARY RD E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>17,244</td>
</tr>
<tr>
<td>N2</td>
<td>MILITARY RD E</td>
<td>RESERVOIR RD E TO SHAW RD E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>16,662</td>
</tr>
<tr>
<td>N2</td>
<td>SHAW RD E</td>
<td>MILITARY RD E TO 122 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>13,468</td>
</tr>
<tr>
<td>N2</td>
<td>SHAW RD E</td>
<td>122 ST E TO PUYALLUP C/L</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>21,986</td>
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<tr>
<td>N3</td>
<td>122ND AV E</td>
<td>136 ST E TO 144 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>17,445</td>
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<tr>
<td>N3</td>
<td>122ND AV E</td>
<td>144 ST E TO 145 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>18,080</td>
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<tr>
<td>N3</td>
<td>122ND AV E</td>
<td>145 ST E TO 152 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
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<tr>
<td>N3</td>
<td>122ND AV E</td>
<td>152 ST E TO SUNRISE PKWY E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
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<tr>
<td>N4</td>
<td>94TH AV E</td>
<td>136 ST E TO 144 ST E</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>17,600</td>
<td>19,227</td>
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<td>Proj. ID</td>
<td>Segment Name</td>
<td>Segment Limits</td>
<td>Project Description</td>
<td>Limited Action Scenario</td>
<td>Preferred Scenario</td>
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<td>Capacity</td>
<td>Volume</td>
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<tr>
<td>N4</td>
<td>94TH AV E</td>
<td>144 ST E TO 152 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>12,475</td>
</tr>
<tr>
<td>N4</td>
<td>152ND ST E</td>
<td>94 AV E TO SR 161</td>
<td>ADD CHANNELIZATION TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>15,346</td>
</tr>
<tr>
<td>N5</td>
<td>160TH ST E</td>
<td>58 AV E TO 66 AV E</td>
<td>ADD CHANNELIZATION TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>18,376</td>
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<tr>
<td>N5</td>
<td>160TH ST E</td>
<td>66 AV E TO 70 AV E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>18,662</td>
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<tr>
<td>N5</td>
<td>160TH ST E</td>
<td>78 AV E TO 86 AV E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>18,270</td>
</tr>
<tr>
<td>N6</td>
<td>PORTLAND AV E</td>
<td>97 ST E TO 99 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>17,076</td>
</tr>
<tr>
<td>N6</td>
<td>PORTLAND AV E</td>
<td>APPROX. 1342' S OF 72 ST E TO 90 ST E</td>
<td>ADD CENTER TURN LANE TO A 2 LANE ROAD</td>
<td>17,600</td>
<td>18,111</td>
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<tr>
<td>N7</td>
<td>SPANAWAY LOOP RD S</td>
<td>TULE LAKE RD S TO 116 ST S</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>35,200</td>
<td>36,892</td>
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<tr>
<td>N7</td>
<td>STEELE ST S/116TH ST S</td>
<td>116 ST S TO 112 ST S</td>
<td>WIDE TO 4 LANES W/ CENTER TURN LANE</td>
<td>35,200</td>
<td>39,251</td>
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<th>Ultimate Capacity</th>
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<td>U1 SPANAWAY LOOP RD S</td>
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<td>U1 SPANAWAY LOOP RD S</td>
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<tr>
<td>U1 SPANAWAY LOOP RD S</td>
</tr>
<tr>
<td>U1 SPANAWAY LOOP RD S</td>
</tr>
<tr>
<td>U2 PIONEER WY E</td>
</tr>
<tr>
<td>U3 CANYON RD E</td>
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</table>

**Color Legend for Daily V/S Ratio**

- 0.80 <= V/S < 0.94
- 0.95 <= V/S < 0.99
- V/S >= 1.00
APPENDIX D – TRANSPORTATION PROJECTS FROM ADOPTED PLANS

Outside Community Plan Areas................................................................. 12-116
Alderton-McMillin...................................................................................... 12-120
Anderson – Ketron Islands ....................................................................... 12-122
Browns Point – Dash Point .................................................................... 12-124
Frederickson............................................................................................ 12-126
Gig Harbor ............................................................................................... 12-130
Graham ...................................................................................................... 12-135
Key Peninsula .......................................................................................... 12-140
Mid-County .............................................................................................. 12-145
Parkland-Spanaway-Midland ................................................................. 12-152
South Hill .................................................................................................. 12-157

The 1992 Pierce County Transportation Plan (PCTP) included the first adopted list and map of long-range transportation projects. Many of these projects were eliminated from the Plan during the 1990s due to the incorporation of the Cities of Edgewood, Lakewood, and University Place. The adoption of the Nonmotorized Transportation Plan in 1997 and later adoption of 11 Community Plans added to the list of adopted projects envisioned for both motorized and nonmotorized travel. It is worth noting that some Community Planning Boards decided to remove a significant number of the PCTP projects, especially those that recommended new roadway alignments. The current make-up of adopted projects can be characterized as follows:

- Adopted Community Plan projects within Community Planning Area boundaries.
- Pierce County Transportation Plan projects for areas outside of the Community Planning Areas.
- Nonmotorized Transportation Plan (NMTP) projects.

Map 12-22 and Map 12-23 show a composite of projects from the Pierce County Transportation Plan and Community Plans. Projects from the ten Community Plans have been inserted into their respective areas in the two maps. Table 12-AA and Table 12-BB list the projects from the Pierce County Transportation Plan outside of Community Plan areas.

Map 12-24 through Map 12-33 and Table 12-CC through Table 12-LL are the maps and project listings that are adopted within each of the ten Community Plans. It is worth noting that there were no specific roadway projects contained in the Upper Nisqually Valley Community Plan, so there is not a map or table for that area.

The NMTP improvements are depicted in Map 12-19 and Map 12-20, in the body of the Transportation Appendix. Due to the vast number of projects, they are not listed in this document. The entire NMTP, including project listings, can be found online.
Map 12-22: Projects from Community Plans and Pierce County Transportation Plan
Map 12-23: Projects from Community Plans and Pierce County Transportation Plan
### Table 12-AA: County Projects from Pierce County Transportation Plan not in Community Plans

<table>
<thead>
<tr>
<th>Project</th>
<th>Project Name</th>
<th>Project Limits</th>
<th>Proposed Improvement</th>
<th>Priority</th>
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<tbody>
<tr>
<td>C15</td>
<td>Lake Tapps Parkway</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; St E/East Valley Hwy to 182&lt;sup&gt;nd&lt;/sup&gt; Ave E</td>
<td>New Arterial</td>
<td>Premier</td>
</tr>
<tr>
<td>E10</td>
<td>112&lt;sup&gt;th&lt;/sup&gt; St E Connector</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E to 198&lt;sup&gt;th&lt;/sup&gt; Ave E arterial</td>
<td>New Arterial</td>
<td>Medium</td>
</tr>
<tr>
<td>E11</td>
<td>230&lt;sup&gt;th&lt;/sup&gt; Ave E/243&lt;sup&gt;th&lt;/sup&gt; Ave E Arterial</td>
<td>Buckley-Tapps Hwy E/230&lt;sup&gt;th&lt;/sup&gt; Ave E to SR410/234&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>New Arterial</td>
<td>Medium</td>
</tr>
<tr>
<td>E19</td>
<td>East Valley Hwy E</td>
<td>Sumner City Limits to King County Line</td>
<td>Add additional lanes, geometric and intersection improvements</td>
<td>Premier</td>
</tr>
<tr>
<td>E21</td>
<td>South Prairie Rd E</td>
<td>South Prairie City Limits to 198&lt;sup&gt;th&lt;/sup&gt; Ave E arterial intersection</td>
<td>Intersection and geometric improvements</td>
<td>Medium</td>
</tr>
<tr>
<td>E22</td>
<td>Forest Canyon Rd E</td>
<td>Sumner City Limits to Sumner-Tapps Hwy E</td>
<td>Geometric, shoulder, and grade improvements</td>
<td>Low</td>
</tr>
<tr>
<td>E23</td>
<td>Sumner-Tapps Hwy E</td>
<td>SR410 to South Tapps Dr E</td>
<td>Intersection, geometric, and shoulder improvements. Turn lanes</td>
<td>Low</td>
</tr>
<tr>
<td>E24</td>
<td>West Tapps Dr E</td>
<td>Bonney Lake City Limits to Sumner-Tapps Hwy E</td>
<td>Widen lanes and shoulders, geometric improvements</td>
<td>Low</td>
</tr>
<tr>
<td>E26A</td>
<td>210&lt;sup&gt;th&lt;/sup&gt; Ave E/214&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>Edwards Rd E to Snag Island Dr E</td>
<td>Intersection, geometric and shoulder improvements, realign 40&lt;sup&gt;th&lt;/sup&gt; St E/214&lt;sup&gt;th&lt;/sup&gt; Ave E intersection</td>
<td>High</td>
</tr>
<tr>
<td>E26B</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E/218&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>Snag Island Dr E to Sumner-Buckley Hwy E</td>
<td>Intersection, geometric and shoulder improvements</td>
<td>Medium</td>
</tr>
<tr>
<td>E26C</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E: North section</td>
<td>Sumner-Buckley Hwy E to SR 410</td>
<td>Widen lanes and shoulders, realign and reconstruct</td>
<td>Medium</td>
</tr>
<tr>
<td>E26D</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E: South section</td>
<td>SR 410 to 120&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>Add additional lanes from South Prairie Rd E to SR 410. Geometric and shoulder improvements</td>
<td>Medium</td>
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<tr>
<td>E28</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>East Valley Hwy E to SR 167</td>
<td>Add additional lanes, geometric and intersection improvements</td>
<td>Premier</td>
</tr>
<tr>
<td>E29</td>
<td>Connells-Prairie Rd E</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E to Sumner-Buckley Hwy E</td>
<td>Reconstruct to road and drainage design standards</td>
<td>Low</td>
</tr>
<tr>
<td>E31A</td>
<td>112&lt;sup&gt;th&lt;/sup&gt; St E: West section</td>
<td>214&lt;sup&gt;th&lt;/sup&gt; Ave E to 254&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>Rehabilitate and reconstruct, shoulder improvements</td>
<td>Low</td>
</tr>
<tr>
<td>Project</td>
<td>Project Name</td>
<td>Project Limits</td>
<td>Proposed Improvement</td>
<td>Priority</td>
</tr>
<tr>
<td>---------</td>
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<td>----------</td>
</tr>
<tr>
<td>E31B</td>
<td>122th St E: East section</td>
<td>254&lt;sup&gt;th&lt;/sup&gt; Ave E to Buckley City Limits</td>
<td>Rehabilitate and reconstruct, shoulder improvements</td>
<td>Low</td>
</tr>
<tr>
<td>E32</td>
<td>Mundy-Loss Rd E</td>
<td>Sumner-Buckley Hwy E to SR 162</td>
<td>Rehabilitate and reconstruct.</td>
<td>Medium</td>
</tr>
<tr>
<td>E4</td>
<td>9&lt;sup&gt;th&lt;/sup&gt; St E/12&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>182&lt;sup&gt;nd&lt;/sup&gt; Ave E to 210&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>Upgrade 9&lt;sup&gt;th&lt;/sup&gt;/12&lt;sup&gt;th&lt;/sup&gt; Sts E between 210&lt;sup&gt;th&lt;/sup&gt; Ave E and 182&lt;sup&gt;nd&lt;/sup&gt; Ave E</td>
<td>Premier</td>
</tr>
<tr>
<td>E5</td>
<td>Sumner-Tapps Hwy E Extension</td>
<td>16&lt;sup&gt;th&lt;/sup&gt; St E/Sumner-Tapps Hwy E to 112&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>New Arterial</td>
<td>Premier</td>
</tr>
<tr>
<td>E8</td>
<td>254&lt;sup&gt;th&lt;/sup&gt; Ave E Arterial</td>
<td>Sumner-Buckley Hwy E/Buckley-Tapps Hwy E to 112&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>New Arterial</td>
<td>Low</td>
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<tr>
<td>E9</td>
<td>198&lt;sup&gt;th&lt;/sup&gt; Ave E Arterial</td>
<td>120&lt;sup&gt;th&lt;/sup&gt; St E to South Prairie Rd E; segment of South Prairie Rd E between 198&lt;sup&gt;th&lt;/sup&gt; Ave E</td>
<td>New Arterial</td>
<td>High</td>
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<tr>
<td>N25</td>
<td>96&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>Fruitland Ave E to SR 7</td>
<td>Realign from Golden Given Rd E to 24&lt;sup&gt;th&lt;/sup&gt; Ave E. improve intersections</td>
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<tr>
<td>N26</td>
<td>North Levee Rd E</td>
<td>Freeman Rd to Puyallup City Limits</td>
<td>Minor widening. Relocate road for trail construction. Improve shoulders, drainage, and intersections</td>
<td>Premier</td>
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<tr>
<td>N32</td>
<td>68&lt;sup&gt;th&lt;/sup&gt; Ave E/66&lt;sup&gt;th&lt;/sup&gt; Ave E/18&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>Tacoma City Limits to 12&lt;sup&gt;th&lt;/sup&gt; St E</td>
<td>Improve intersections. Minor widening.</td>
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<td>P17</td>
<td>100&lt;sup&gt;th&lt;/sup&gt; St KPN</td>
<td>178&lt;sup&gt;th&lt;/sup&gt; Ave KPN to Wright-Bliss Rd KPN</td>
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<td>150&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>82&lt;sup&gt;nd&lt;/sup&gt; Ave NW to Goodrich Dr NW</td>
<td>New Arterial</td>
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<td>P38</td>
<td>186&lt;sup&gt;th&lt;/sup&gt; Ave KPN</td>
<td>Herron Rd KPN to Whiteman Rd KPS</td>
<td>New Arterial</td>
<td>Low</td>
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<td>P4</td>
<td>94&lt;sup&gt;th&lt;/sup&gt; Ave NW</td>
<td>Key Peninsula Hwy NW to Danforth Rd NW</td>
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<td>Medium</td>
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<td>P57</td>
<td>38&lt;sup&gt;th&lt;/sup&gt; St KPS</td>
<td>150th Ave KPS to Mahncke Rd KPS</td>
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<td>P58</td>
<td>150&lt;sup&gt;th&lt;/sup&gt; Ave KPS</td>
<td>38&lt;sup&gt;th&lt;/sup&gt; St KPS to Key Peninsula Hwy KPN</td>
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<td>P6</td>
<td>74&lt;sup&gt;th&lt;/sup&gt; St KPN/57&lt;sup&gt;th&lt;/sup&gt; St KPN/82&lt;sup&gt;nd&lt;/sup&gt; St KPN Corridor</td>
<td>Lackey Rd KPN to Key Peninsula Hwy KPN</td>
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<td>Medium</td>
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<td>P8</td>
<td>64th St KPS</td>
<td>Whiteman Rd KPS to Key Peninsula Hwy KPS</td>
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<td>Low</td>
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<tr>
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<td>320th St E/336th St E Connector</td>
<td>336th St S/Kinsman Rd E to SR 7/320th St E</td>
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<td>Low</td>
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<tr>
<td>S23</td>
<td>8th Ave S</td>
<td>Harts Lake Loop Rd to SR 507</td>
<td>Rehabilitate and widen.</td>
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<tr>
<td>S25/S26</td>
<td>Alder Cutoff Rd E</td>
<td>SR 7 to Eatonville City Limits</td>
<td>Rehabilitate bridges. Geometric and shoulder improvements.</td>
<td>Premier</td>
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<tr>
<td>S28</td>
<td>Harts Lake Valley Rd S</td>
<td>Harts Lake Loop Rd S to southerly terminus</td>
<td>Widen, rehabilitate pavement, and intersection realignment</td>
<td>Medium</td>
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<td>S29</td>
<td>Harts Lake Loop Rd S</td>
<td>8th Ave S to Allen Rd S</td>
<td>Improve alignment, widen, and sight distance</td>
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<tr>
<td>S3</td>
<td>336th St S Connector</td>
<td>336th St S/ Locke Dr S to 336th St S/56th Dr S/Tisch Rd S</td>
<td>New arterial</td>
<td>Low</td>
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<tr>
<td>S30</td>
<td>Allen Rd S-40th Ave S</td>
<td>Harts Lake Loop Rd S to SR 702</td>
<td>Improve sight distance, widen, and pavement rehabilitation</td>
<td>Low</td>
</tr>
<tr>
<td>S32</td>
<td>Orville Rd E/Orting-Kapowsin Hwy</td>
<td>288th St E to SR 161</td>
<td>Improve alignment, widen shoulders, pavement structure</td>
<td>Medium</td>
</tr>
<tr>
<td>S34</td>
<td>304th St E</td>
<td>SR 7 to Schudy Rd S</td>
<td>Arterial improvement; pavement rehabilitation and widening</td>
<td>Medium</td>
</tr>
<tr>
<td>S35</td>
<td>416th St E</td>
<td>SR 7 to Dean Kreger Rd</td>
<td>Improve intersection at SR 7, alignment, and widening</td>
<td>Low</td>
</tr>
<tr>
<td>S37</td>
<td>Eatonville Cutoff Rd E</td>
<td>SR 7 to SR 161</td>
<td>Improve intersections, alignment and shoulders</td>
<td>High</td>
</tr>
<tr>
<td>S4</td>
<td>304th St S Extension</td>
<td>304th St S/Schudy Rd S to SR 507 at Murray Creek</td>
<td>New arterial</td>
<td>Medium</td>
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<tr>
<td>S43</td>
<td>384 St E/Rapjohn Lake Rd E</td>
<td>SR 7 to Lakeside S Extension</td>
<td>Road rehabilitation</td>
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<tr>
<td>S6</td>
<td>8th Ave S -- 416th St E</td>
<td>8th Ave S/Harts Lake Rd S to Dean Kreger Rd E</td>
<td>New arterial</td>
<td>Medium</td>
</tr>
<tr>
<td>S8</td>
<td>288th St E Extension</td>
<td>8th Ave E/288th St E to SR 7/288th St E</td>
<td>New arterial</td>
<td>Low</td>
</tr>
<tr>
<td>Project</td>
<td>Project Name</td>
<td>Project Limits</td>
<td>Proposed Improvement</td>
<td>Priority</td>
</tr>
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<td>---------</td>
<td>-------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------</td>
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<tr>
<td>W34</td>
<td>Yoman Rd A.I.</td>
<td>Ferry Terminal to Otso Point Rd A.I.</td>
<td>Reconstruct to road and drainage design standards</td>
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</tr>
<tr>
<td>W36</td>
<td>Old Nisqually Rd SW</td>
<td>I-5 to Thurston County Line</td>
<td>Reconstruct to road and drainage design standards; truck lane</td>
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</tr>
<tr>
<td>W6A</td>
<td>Mounts Rd SW</td>
<td>Lapsley Dr to I-5</td>
<td>Improve to road and drainage standards</td>
<td>Medium</td>
</tr>
<tr>
<td>W6B</td>
<td>Mounts Rd SW</td>
<td>I-5 to DuPont City Limits</td>
<td>Add additional lanes and realign</td>
<td>Medium</td>
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</table>

**Table 12-BB: State Projects from Pierce County Transportation Plan not in Community Plans**

<table>
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<tr>
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<th>Project Name</th>
<th>Project Limits</th>
<th>Proposed Improvement</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>SR 167 Freeway Extension</td>
<td>SR 161 to SR 509</td>
<td>New freeway. WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>C17</td>
<td>I-5</td>
<td>Thurston County Line to King County Line</td>
<td>Provide HOV lanes, improve interchanges, ramp meters. WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>C18</td>
<td>SR 16</td>
<td>I-5 to Kitsap County Line</td>
<td>Improve interchanges, provide HOV lanes. WSDOT project</td>
<td>High</td>
</tr>
<tr>
<td>C19</td>
<td>SR 167</td>
<td>SR 512 to King County Line</td>
<td>Capacity improvements (HOV and/or general purpose lanes). WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>C20</td>
<td>SR 512</td>
<td>I-5 to SR 167</td>
<td>Add HOV lanes. WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>C21</td>
<td>SR 410</td>
<td>166th Ave E (Sumner-Tapps Hwy E) to King County Line</td>
<td>Add additional lanes, geometric and intersection improvements. WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>C3</td>
<td>SR 7 Extension</td>
<td>38th St S to SR 512</td>
<td>Construct new freeway. WSDOT project</td>
<td>High</td>
</tr>
<tr>
<td>N11</td>
<td>SR 161</td>
<td>King County Line to SR 512</td>
<td>Widen and improve intersections. WSDOT project. In City of Edgewood</td>
<td>Premier</td>
</tr>
<tr>
<td>S14</td>
<td>SR 7</td>
<td>352nd St E to Alder Cutoff Rd E</td>
<td>Improve turn lanes, shoulders, slow vehicle turnouts. WSDOT project</td>
<td>Premier</td>
</tr>
<tr>
<td>S22</td>
<td>SR 706</td>
<td>Elbe to Mount Rainier National Park Entrance</td>
<td>Arterial improvement, turn lanes, pedestrian facilities, emergency vehicle signal, and railroad.</td>
<td>Premier</td>
</tr>
<tr>
<td>S24</td>
<td>SR 161</td>
<td>288th St E through Eatonville</td>
<td>Turn lanes and pullouts. WSDOT project</td>
<td>High</td>
</tr>
<tr>
<td>S44</td>
<td>SR 161 Eatonville City Limits</td>
<td>Center St to Eatonville City Limits</td>
<td>Realign and straighten. WSDOT project</td>
<td>Medium</td>
</tr>
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</table>

Pierce County Comprehensive Plan | Transportation Element 12-119
<table>
<thead>
<tr>
<th>Comp Plan ID</th>
<th>Project Name</th>
<th>Project Limits</th>
<th>Proposed Facility</th>
<th>Priority</th>
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<tbody>
<tr>
<td>C29*</td>
<td>SR 410 HOV</td>
<td>SR 167 to Church Lake Road Sumner-Buckley Hwy</td>
<td>Construct high occupancy vehicle lanes. WSDOT project.</td>
<td>Premier</td>
</tr>
<tr>
<td>C24 (E18)*</td>
<td>SR 162</td>
<td>Orting City Limits to SR 410</td>
<td>Widen from 2 to 4 lanes from 128th Street E to SR 410; Add additional lanes, geometric and shoulder improvements. WSDOT project.</td>
<td>Premier</td>
</tr>
<tr>
<td>C11A (M18)</td>
<td>Shaw Road E Extension</td>
<td>Pioneer Way E (Puyallup City Limits) to Main Avenue E (Puyallup City Limits)</td>
<td>New arterial.</td>
<td>Premier</td>
</tr>
<tr>
<td>C11B/M6</td>
<td>Shaw Road E/ Military Rd E/122nd Avenue E.</td>
<td>SR 410 to Orting-Kapowsin Hwy E.</td>
<td>Roadway widening, curb, gutter, sidewalks, bicycle facilities, intersection improvements</td>
<td>Premier</td>
</tr>
<tr>
<td>E20A</td>
<td>Rhodes Lake Road E</td>
<td>Angeline Road E to 198th Avenue E</td>
<td>Geometric, shoulder and grade improvements.</td>
<td>High</td>
</tr>
<tr>
<td>E20B</td>
<td>96th Street E/ Rhodes Lake Road E Improvements</td>
<td>SR 162 to Angeline Road E</td>
<td>Geometric, shoulder and grade improvements.</td>
<td>Medium</td>
</tr>
<tr>
<td>C12B</td>
<td>122 Street E/ Military Road E</td>
<td>130 Av Ct E to SR 162</td>
<td>Widen to four lanes, pedestrian and bicycle facilities</td>
<td>Medium</td>
</tr>
<tr>
<td>C13</td>
<td>176th Street E Extension</td>
<td>SR 161/176th Street E to City of Orting</td>
<td>New major arterial with nonmotorized facilities</td>
<td>High</td>
</tr>
<tr>
<td>E33</td>
<td>166th Avenue E-78th Street-Riverside Drive E</td>
<td>96th Street E to SR 410</td>
<td>Realign, reconstruct: shoulder improvements</td>
<td>Low</td>
</tr>
<tr>
<td>E27</td>
<td>Angeline Road E</td>
<td>Rhodes Lake Road E to Sumner-Buckley Hwy. E</td>
<td>Rehabilitate and reconstruct; shoulder improvements</td>
<td>Medium</td>
</tr>
<tr>
<td>G51</td>
<td>Orville Road E</td>
<td>Electron Rd E to SR 162</td>
<td>Add paved shoulders or wide lanes</td>
<td>Medium</td>
</tr>
<tr>
<td>AMCP1</td>
<td>Expanded capacity over the Puyallup River</td>
<td>Vicinity of the Calistoga Bridge</td>
<td>Work with the City of Orting to either widen the Calistoga Bridge or develop a new crossing</td>
<td>High</td>
</tr>
</tbody>
</table>

*State Highway- Our County Recommendations must be consistent with State Plans
Table 12-DD: Anderson and Ketron Islands Community Plan Project Recommendations

<table>
<thead>
<tr>
<th>ID#*</th>
<th>ROADWAY**</th>
<th>LIMITS***</th>
<th>DESCRIPTION****</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI-1</td>
<td>CAMUS ROAD AI</td>
<td>Burton Road AI to Otso Point Road AI</td>
<td>Reconstruct roadway</td>
</tr>
<tr>
<td>AI-2</td>
<td>ECKENSTAM-JOHNSON ROAD AI</td>
<td>Sandberg Road AI to Lake Josephine Boulevard AI</td>
<td>Add paved shoulders or roadside trail</td>
</tr>
<tr>
<td>AI-3</td>
<td>ECKENSTAM-JOHNSON ROAD AI</td>
<td>Lake Josephine Boulevard AI to Yoman Road AI</td>
<td>Add paved shoulders or roadside trail</td>
</tr>
<tr>
<td>AI-4</td>
<td>LAKE JOSEPHINE BLVD.-WAY AI</td>
<td>Eckenstam-Johnson Road AI to Riviera Drive AI</td>
<td>Add roadside trail</td>
</tr>
<tr>
<td>AI-5</td>
<td>STEFFENSEN ROAD AI</td>
<td>Camus Road AI to Lovass Road AI</td>
<td>Reconstruct roadway</td>
</tr>
<tr>
<td>AI-6</td>
<td>VILLA BEACH ROAD AI</td>
<td>Guthrie Road AI to Yoman Road AI</td>
<td>Reconstruct roadway and improve alignment</td>
</tr>
<tr>
<td>AI-7</td>
<td>YOMAN ROAD AI</td>
<td>Eckenstam-Johnson Road AI to Ferry Landing</td>
<td>Add paved shoulders or trail and improve alignment</td>
</tr>
<tr>
<td>KI-1</td>
<td>LESHI ST.-WEST MORRIS-KITSON ST.^</td>
<td>Leshi Street/Morris Blvd. to Kitson Street/Morris Blvd.</td>
<td>Upgrade to paved roadway</td>
</tr>
<tr>
<td>KI-2</td>
<td>MORRIS BOULEVARD^</td>
<td>Leshi Road to Ferry Landing</td>
<td>Upgrade to paved roadway</td>
</tr>
</tbody>
</table>

*Projects are not listed in specific priority order. ID numbers are intended for reference purposes only and to identify projects in the Transportation Project Recommendations map.

**Roadways are listed in alphabetical order by road name and by island with Anderson Island (AI) roadways listed first followed by Ketron Island (KI) roadways.

***Project limits are listed from west to east or from south to north depending upon the direction of the roadway.

****The following assumptions should be noted for project descriptions:

a. The reconstruction of a roadway assumes the widening of the existing traffic lanes pursuant to Pierce County’s standards (if feasible).

b. The addition of paved shoulders assumes the construction of standard-width striped shoulders on both sides of the roadway (if feasible).

c. The addition of a roadside trail assumes the construction of a 10-foot-wide paved trail on one side of the roadway only (if feasible).

d. The improvement of a roadway alignment may involve the realigning, straightening, and/or stabilizing of the roadway (if feasible).

^These roadways are currently private roads and would be maintained/improved by the owner(s) pursuant to Pierce County’s standards.

Adopted: March 17, 2009 (Ordinance No. 2009-9s)
BROWNS POINT – DASH POINT

Map 12-26: Browns Point - Dash Point Community Plan Project Recommendations
<table>
<thead>
<tr>
<th>ID #</th>
<th>Roadway</th>
<th>Project Limits</th>
<th>Proposed Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BPDP1 Tok-A-Lou Ave NE</td>
<td>Hyada Blvd NE to Hyada Blvd NE</td>
<td>Investigate for Traffic Calming</td>
</tr>
<tr>
<td>2</td>
<td>BPDP2 Hyada Blvd NE</td>
<td>Tok-A-Lou Av NE to Ton-A-Wana-Da Ave NE</td>
<td>Investigate for Traffic Calming</td>
</tr>
<tr>
<td>3</td>
<td>BPDP3 La-Hal-Da Ave NE</td>
<td>Hyada Blvd NE to Ton-A-Wana-Da Ave NE</td>
<td>Investigate for Traffic Calming</td>
</tr>
<tr>
<td>4</td>
<td>BPDP4 Hyada Blvd NE</td>
<td>SR 509 to Wan-I-Da Ave NE</td>
<td>Shoulder Improvements for nonmotorized use</td>
</tr>
<tr>
<td>5</td>
<td>BPDP5 Soundview Dr NE, Arthur St NE</td>
<td>In the Vicinity of SR 509</td>
<td>Creation of a one way loop with Arthur Street northbound only and Soundview Drive southbound only</td>
</tr>
<tr>
<td>6</td>
<td>BPDP6 Dash Point Blvd NE</td>
<td>SR 509 to Tacoma City Line</td>
<td>Shoulder Improvements for nonmotorized use</td>
</tr>
<tr>
<td>7</td>
<td>BPDP7 21st Ave NE</td>
<td>Norpoint Way NE to SR 509</td>
<td>Shoulder Improvements for nonmotorized use</td>
</tr>
<tr>
<td>8</td>
<td>BPDP8 Olympic Dr NE</td>
<td>SR 509 to Madrona Dr NE</td>
<td>Shoulder Improvements for nonmotorized use</td>
</tr>
<tr>
<td>9</td>
<td>BPDP9 Markham Ave NE and Soundview Dr NE</td>
<td>SR 509 to Beach Dr NE</td>
<td>Shoulder Improvements for nonmotorized use and Investigate for Traffic Calming</td>
</tr>
<tr>
<td>10</td>
<td>BPDP10 Markham Ave NE</td>
<td>SR 509 to Dash Point Dock</td>
<td>Investigate for Traffic Calming</td>
</tr>
<tr>
<td>11</td>
<td>BPDP11 Le-Lou Wa Place NE</td>
<td>SR 509 to Tok-A-Lou Ave NE</td>
<td>Investigate for Traffic Calming</td>
</tr>
<tr>
<td>ID</td>
<td>Project Location</td>
<td>Proposed Facility</td>
<td>Estimated Cost1</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>F1</td>
<td>22 Ave E – 181 St E to 208 St E</td>
<td>Add turn lane, improve drainage and horizontal alignment, add sidewalks and paved shoulders.</td>
<td>$3,130,000</td>
</tr>
<tr>
<td>F2</td>
<td>28 Ave E – 176 St E to 182 St E</td>
<td>Reconstruct to road design standards, add sidewalks and channelization.</td>
<td>$620,000</td>
</tr>
<tr>
<td>F3</td>
<td>36 Ave E – Military Rd E to 176 St E</td>
<td>Sidewalks and paved shoulders (possible bike route).</td>
<td>$930,000</td>
</tr>
<tr>
<td>F4</td>
<td>38 Ave E – Brookdale Rd E to Military Rd E</td>
<td>Sidewalks and paved shoulders.</td>
<td>$1,930,000</td>
</tr>
<tr>
<td>F5</td>
<td>38 Ave E – 176 St E to 200 St E</td>
<td>Add turn lane, improve intersections, add paved shoulders and add sidewalk on west side of road.</td>
<td>$2,830,000</td>
</tr>
<tr>
<td>F6</td>
<td>38 Ave E – 200 St E to Wright Rd E</td>
<td>New road with sidewalks and paved shoulders.</td>
<td>$5,600,000</td>
</tr>
<tr>
<td>F7</td>
<td>70 Ave E – 160 St E to 204 St E</td>
<td>New road with sidewalks and paved shoulders.</td>
<td>$25,497,000</td>
</tr>
<tr>
<td>F8</td>
<td>74 Ave E – 182 St E to 204 St E</td>
<td>New road with sidewalks and paved shoulders.</td>
<td>$2,506,000</td>
</tr>
<tr>
<td>F9</td>
<td>78 Ave E – 160 St E to 176 St E</td>
<td>New road with sidewalks and paved shoulders.</td>
<td>$7,120,000</td>
</tr>
<tr>
<td>F10</td>
<td>78 Ave E – 176 St E to 204 St E</td>
<td>Add turn lane, improve intersections, add sidewalks and paved shoulders.</td>
<td>$3,810,000</td>
</tr>
<tr>
<td>F11</td>
<td>86 Ave E – 152 St E to 176 St E</td>
<td>New road with sidewalks and paved shoulders.</td>
<td>$10,500,000</td>
</tr>
<tr>
<td>F12</td>
<td>152 St E – 27 Ave E to Brookdale Rd E</td>
<td>Sidewalks and paved shoulders.</td>
<td>$1,418,000</td>
</tr>
<tr>
<td>F13</td>
<td>160 St E – Canyon Rd E to 86 Ave E</td>
<td>Add lanes, sidewalks and paved shoulders.</td>
<td>$6,730,000</td>
</tr>
<tr>
<td>F14</td>
<td>176 St E – 25 Ave E to 86 Ave E</td>
<td>Add lanes, improve geometrics and intersections, add sidewalks or trail, and paved shoulders.</td>
<td>$18,610,000</td>
</tr>
<tr>
<td>F15</td>
<td>182 St E – 28 Ave E to 38 Ave E</td>
<td>Reconstruct to road design standards, add sidewalks and channelization.</td>
<td>$1,089,000</td>
</tr>
<tr>
<td>F16</td>
<td>192 St E – 22 Ave E to 38 Ave E</td>
<td>Paved shoulders.</td>
<td>$1,180,000</td>
</tr>
<tr>
<td>ID</td>
<td>Project Location</td>
<td>Proposed Facility</td>
<td>Estimated Cost</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>F17</td>
<td>192 St E – 38 Ave E to Canyon Rd E</td>
<td>Reconstruct to avoid flooding, add turn lane, sidewalks and paved shoulders.</td>
<td>$1,770,000</td>
</tr>
<tr>
<td>F18</td>
<td>192 St E – 70 Ave E to 86 Ave E</td>
<td>Add turn lane and sidewalks.</td>
<td>$1,990,000</td>
</tr>
<tr>
<td>F19</td>
<td>200 St E – 70 Ave E to 74 Ave E</td>
<td>New road with sidewalks.</td>
<td>$1,180,000</td>
</tr>
<tr>
<td>F20</td>
<td>200 St E/Knoble Rd E – 38 Ave E to Canyon Rd E</td>
<td>Add turn lane, sidewalks and paved shoulders (possible bike route).</td>
<td>$1,860,000</td>
</tr>
<tr>
<td>F21</td>
<td>200 St E/Knoble Rd E – Canyon Rd E to 204 St E</td>
<td>Sidewalks and paved shoulders (possible bike route).</td>
<td>$1,490,000</td>
</tr>
<tr>
<td>F22</td>
<td>204 St E – Knoble Rd E to 78 Ave E</td>
<td>Add turn lane, sidewalks and paved shoulders.</td>
<td>$1,340,000</td>
</tr>
<tr>
<td>F23</td>
<td>208 St E – 22 Ave E to 66 Ave E</td>
<td>Add turn lane and paved shoulders.</td>
<td>$5,100,000</td>
</tr>
<tr>
<td>F24</td>
<td>208 St E – 66 Ave E to 86 Ave E</td>
<td>New road with paved shoulders.</td>
<td>$8,270,000</td>
</tr>
<tr>
<td>F25</td>
<td>Brookdale Rd E – Waller Rd E to 152 St E</td>
<td>Add turn lane, sidewalks and paved shoulders.</td>
<td>$1,730,000</td>
</tr>
<tr>
<td>F26</td>
<td>Brookdale Rd E – 152 St E to Canyon Rd E</td>
<td>Add turn lane, sidewalks and paved shoulders.</td>
<td>$1,930,000</td>
</tr>
<tr>
<td>F27</td>
<td>Canyon Rd E – 160 St E to 192 St E</td>
<td>Add lanes, improve alignment, add channelization, signals, sidewalks and paved shoulders.</td>
<td>$11,300,000</td>
</tr>
<tr>
<td>F28</td>
<td>Canyon Rd E South Extension – 192 St E to 212 St E</td>
<td>New road with paved shoulders and sidewalks or trail.</td>
<td>$6,030,000</td>
</tr>
<tr>
<td>F29</td>
<td>Clover Creek Trail – Waller Rd E/ Brookdale Rd E to 164 St E/71 Ave E</td>
<td>Trail</td>
<td>$1,900,000</td>
</tr>
<tr>
<td>F30</td>
<td>Eustis Hunt Rd E – 204 St E to 208 St E</td>
<td>Add turn lane, sidewalks and paved shoulders.</td>
<td>$470,000</td>
</tr>
<tr>
<td>F31</td>
<td>Military Rd E – 27 Ave E to Canyon Rd E</td>
<td>Add turn lane and paved shoulders or wide curb lanes (possible bike route).</td>
<td>$3,350,000</td>
</tr>
<tr>
<td>F32</td>
<td>Tacoma Rail Trail – Waller Rd E/ Brookdale Rd E to 208 St E/70 Ave E</td>
<td>Rail with trail.</td>
<td>$2,170,000</td>
</tr>
<tr>
<td>F33</td>
<td>Tacoma Rail Trail – Canyon Rd E/180 St E to 208 St E/25 Ave E</td>
<td>Rail with trail.</td>
<td>$1,230,000</td>
</tr>
<tr>
<td>ID</td>
<td>Project Location</td>
<td>Proposed Facility</td>
<td>Estimated Cost¹</td>
</tr>
<tr>
<td>----</td>
<td>------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>F34</td>
<td>Waller Rd E – Brookdale Rd E to 176 St E</td>
<td>Add turn lane, sidewalks and paved shoulders.</td>
<td>$3,940,000</td>
</tr>
</tbody>
</table>

¹ Cost estimates are "order of magnitude" estimates for planning purposes only and are rounded to the nearest $1,000.
Map 12-28: Gig Harbor Peninsula Community Plan Project Recommendations
<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Road/Project Name</th>
<th>Project Limits</th>
<th>Proposed Improvement</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>P28</td>
<td>56&lt;sup&gt;th&lt;/sup&gt; St NW/ Fillmore Dr NW</td>
<td>Wollochet Dr NW to Gig Harbor City Limits</td>
<td>Add additional lanes; provide pedestrian/drainage improvements</td>
<td>$2,460,000</td>
</tr>
<tr>
<td>P29</td>
<td>Wollochet Dr NW</td>
<td>40&lt;sup&gt;th&lt;/sup&gt; St NW to Gig Harbor City Limits</td>
<td>Add additional lanes, geometric and intersection improvements</td>
<td>$8,950,000</td>
</tr>
<tr>
<td>P53</td>
<td>Sehmel Dr NW</td>
<td>70&lt;sup&gt;th&lt;/sup&gt; Av NW to Bujacich Rd NW</td>
<td>Improve intersections, alignment, and shoulders</td>
<td>$1,490,000</td>
</tr>
<tr>
<td>P63</td>
<td>38&lt;sup&gt;th&lt;/sup&gt; Av NW</td>
<td>36&lt;sup&gt;th&lt;/sup&gt; St NW to Gig Harbor City Limits</td>
<td>Minor widening, geometric and shoulder improvements</td>
<td>$430,000</td>
</tr>
<tr>
<td>P73</td>
<td>Jahn Av NW/32&lt;sup&gt;nd&lt;/sup&gt; St NW/22&lt;sup&gt;nd&lt;/sup&gt; Av NW</td>
<td>Stone Dr NW to 36&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>Pave shoulders, realignment, channelize, and traffic control</td>
<td>$710,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total $14,050,000</strong></td>
</tr>
<tr>
<td>P30</td>
<td>Point Fosdick Dr NW</td>
<td>36&lt;sup&gt;th&lt;/sup&gt; St NW to Stone Dr NW</td>
<td>Provide pedestrian and drainage improvements</td>
<td>$2,950,000</td>
</tr>
<tr>
<td>P31</td>
<td>East Bay Dr NW/25&lt;sup&gt;th&lt;/sup&gt; St NW/34&lt;sup&gt;th&lt;/sup&gt; Av NW</td>
<td>Wollochet Dr NW to Stone Dr NW</td>
<td>Improve alignment, intersections and shoulders</td>
<td>$4,030,000</td>
</tr>
<tr>
<td>P42</td>
<td>Hunt St NW</td>
<td>Lombard Dr NW to Gig Harbor City Limits</td>
<td>Improve intersections, alignment, and shoulders</td>
<td>$3,720,000</td>
</tr>
<tr>
<td>P50</td>
<td>Ray Nash Dr NW</td>
<td>36&lt;sup&gt;th&lt;/sup&gt; St NW to Rosedale St NW</td>
<td>Improve alignment, widen shoulders</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>P64</td>
<td>144&lt;sup&gt;th&lt;/sup&gt; St NW/62&lt;sup&gt;nd&lt;/sup&gt; Av NW</td>
<td>Intersection (Peninsula High School)</td>
<td>Channelization and possible traffic control</td>
<td>$550,000</td>
</tr>
<tr>
<td>P67</td>
<td>40&lt;sup&gt;th&lt;/sup&gt; St NW/70&lt;sup&gt;th&lt;/sup&gt; Av NW/32&lt;sup&gt;nd&lt;/sup&gt; St NW</td>
<td>Wollochet Dr NW to Warren Dr NW</td>
<td>Asphalt overlay, paved shoulders, drainage improvements</td>
<td>$400,000</td>
</tr>
<tr>
<td>P68</td>
<td>96&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>Crescent Valley Dr NW to Gig Harbor City Limits</td>
<td>Add paved shoulders</td>
<td>$70,000</td>
</tr>
<tr>
<td>P69</td>
<td>24&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>50&lt;sup&gt;th&lt;/sup&gt; Av NW to 62&lt;sup&gt;nd&lt;/sup&gt; Av NW</td>
<td>Improve intersections, alignment, and shoulders</td>
<td>$1,470,000</td>
</tr>
<tr>
<td>Proj. ID</td>
<td>Road/Project Name</td>
<td>Project Limits</td>
<td>Proposed Improvement</td>
<td>Estimated Cost</td>
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<tr>
<td>P76</td>
<td>Pt Fosdick Dr NW/Stone Dr NW/34th Av NW</td>
<td>Intersection</td>
<td>Channelization, traffic control, realignment</td>
<td>$750,000</td>
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<td><strong>Total</strong></td>
<td><strong>$17,940,000</strong></td>
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</tr>
<tr>
<td>P32</td>
<td>70th Av NW</td>
<td>Artondale Dr NW to 40th St NW</td>
<td>Reconstruct and realign</td>
<td>$1,060,000</td>
</tr>
<tr>
<td>P38A</td>
<td>Rosedale St NW</td>
<td>86th Av NW to Gig Harbor City Limits</td>
<td>Improve intersections and alignment</td>
<td>$2,540,000</td>
</tr>
<tr>
<td>P38B</td>
<td>86th Av/96th St/Chapman Dr/78th Av NW</td>
<td>Sehmel Dr NW to Rosedale St NW</td>
<td>Improve intersections, alignment, and shoulders</td>
<td>$4,150,000</td>
</tr>
<tr>
<td>P38C</td>
<td>Rosedale St NW/66th Av NW/Lombard Dr</td>
<td>At roadway intersection</td>
<td>Realign intersection</td>
<td>$1,230,000</td>
</tr>
<tr>
<td>P56</td>
<td>Warren Dr NW</td>
<td>Fox Island Bridge Rd NW to 32nd St NW</td>
<td>Improve intersections, widen shoulders</td>
<td>$1,730,000</td>
</tr>
<tr>
<td>P59</td>
<td>Lombard Dr NW</td>
<td>Rosedale St NW to Hunt St NW</td>
<td>Improve shoulders</td>
<td>$600,000</td>
</tr>
<tr>
<td>P66</td>
<td>36th St NW/92nd Av NW</td>
<td>Intersection</td>
<td>Realign intersection to a standard “T”</td>
<td>$70,000</td>
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<tr>
<td>P70</td>
<td>Wollochet Dr/28th St/50th Av /Cromwell Dr/62nd Av NW</td>
<td>40th St NW to 32nd St NW</td>
<td>Improve intersections, alignment, and shoulders</td>
<td>$7,340,000</td>
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<tr>
<td>P72</td>
<td>Island Bv Fl/Kamus Dr Fl</td>
<td>Intersection</td>
<td>Realign/reconstruct intersection</td>
<td>$120,000</td>
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<tr>
<td>P74</td>
<td>Kamus Dr Fl</td>
<td>Island Bv Fl to 11th Av Fl</td>
<td>Add paved shoulders</td>
<td>$130,000</td>
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<td><strong>Low Priority Projects – County</strong></td>
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<td></td>
</tr>
<tr>
<td>P10A</td>
<td>36th St NW</td>
<td>SR 16 to Pt Fosdick Dr NW</td>
<td>New arterial, improve existing road between SR 16 and Pt Fosdick Dr</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>P10B</td>
<td>36th St NW Corridor</td>
<td>Pt Fosdick Dr NW to 38th Av NW</td>
<td>New arterial</td>
<td>$3,100,000</td>
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<tr>
<td>P10C</td>
<td>36th St NW Corridor</td>
<td>38th Av NW to East Bay Dr NW</td>
<td>New arterial</td>
<td>$3,900,000</td>
</tr>
<tr>
<td>Proj. ID</td>
<td>Road/Project Name</td>
<td>Project Limits</td>
<td>Proposed Improvement</td>
<td>Estimated Cost</td>
</tr>
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<tr>
<td>P23</td>
<td>128&lt;sup&gt;th&lt;/sup&gt; St NW Corridor</td>
<td>Hallstrom Dr NW to Borgen Blvd</td>
<td>New arterial</td>
<td>$9,630,000</td>
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<tr>
<td>P40</td>
<td>92&lt;sup&gt;nd&lt;/sup&gt; St NW</td>
<td>82&lt;sup&gt;nd&lt;/sup&gt; Av NW to easterly terminus</td>
<td>Improve alignment and shoulders, minor widening</td>
<td>$1,180,000</td>
</tr>
<tr>
<td>P41</td>
<td>36&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>Horsehead Bay Dr NW to Ray Nash Dr NW</td>
<td>Improve vertical alignment and shoulders</td>
<td>$1,340,000</td>
</tr>
<tr>
<td>P43</td>
<td>Crescent Valley Dr NW</td>
<td>Drummond Dr NW to 160&lt;sup&gt;th&lt;/sup&gt; St NW</td>
<td>Improve intersections, shoulders and drainage, rehabilitate</td>
<td>$8,400,000</td>
</tr>
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</table>

**Total** $29,550,000

<table>
<thead>
<tr>
<th>Premier Priority Projects – State Projects</th>
<th>County Projects Total $80,510,000</th>
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<tbody>
<tr>
<td>P21 Narrows interchange</td>
<td>SR 16 at 24&lt;sup&gt;th&lt;/sup&gt; St NW and 36&lt;sup&gt;th&lt;/sup&gt; St NW</td>
</tr>
<tr>
<td>P77 Haven of the Rest Vicinity Access Relocation</td>
<td>To Rosedale St NW or Burnham Dr NW</td>
</tr>
<tr>
<td>P78 SR 16/Wollochet Dr Interchange</td>
<td>At Pioneer/Wollochet Interchange</td>
</tr>
<tr>
<td>P80 SR 302 Purdy Spit Bridge</td>
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<tr>
<td>P81 SR 302/SR 302 Spur Intersection</td>
<td>Intersection</td>
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**Total** $14,140,000

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<th>High Priority Projects – State Projects</th>
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<tbody>
<tr>
<td>C6(P62) SR 302 (Kitsap County Line Connector)</td>
<td>SR 302 to SR 16</td>
</tr>
<tr>
<td>C18(P37) SR 16</td>
<td>I-5 to Kitsap County Line</td>
</tr>
<tr>
<td>P19 SR 16/Rosedale St NW Northern Ramps</td>
<td>Rosedale St NW/ Bujacich Rd NW Vicinity</td>
</tr>
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Pierce County Comprehensive Plan | Transportation Element 12-133
<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Road/Project Name</th>
<th>Project Limits</th>
<th>Proposed Improvement</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>P79</td>
<td>SR 16/Rosedale St NW Southern Ramps</td>
<td>Rosedale St NW Vicinity</td>
<td>Construct ramps to/from east (westbound off, eastbound on)</td>
<td>$7,000,000</td>
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<tr>
<td></td>
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<td></td>
<td>$170,990,000</td>
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<td><strong>Medium Priority Projects – State Projects</strong></td>
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</tr>
<tr>
<td>P82</td>
<td>Kimball Dr Park and Ride lot direct access ramp</td>
<td>SR 16 to North Gig Harbor Park and Ride lot</td>
<td>Westbound direct access ramp from SR 16 to lot</td>
<td>$300,000</td>
</tr>
<tr>
<td></td>
<td><strong>State Projects Total</strong></td>
<td></td>
<td></td>
<td>$185,430,000</td>
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Map 12-29: Graham Community Plan Project Recommendations
### Table 12-HH: Graham Community Plan Project Recommendations

<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Road Name</th>
<th>Project Limits</th>
<th>Facility Improvement</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>22 Ave E</td>
<td>SR 7 to 208 St E</td>
<td>Add paved shoulders or path</td>
<td>$270,000</td>
</tr>
<tr>
<td>G2</td>
<td>38 Ave E</td>
<td>200 St E to Wright Rd E</td>
<td>New 3-lane road with sidewalks &amp; paved shoulders</td>
<td>$4,030,000</td>
</tr>
<tr>
<td>G3</td>
<td>70 Av E</td>
<td>204 St E to 224 St E</td>
<td>New 2-lane roadway</td>
<td>$5,540,000</td>
</tr>
<tr>
<td>G4</td>
<td>70 Av E</td>
<td>260 St E to 224 St E</td>
<td>Add paved shoulders</td>
<td>$710,000</td>
</tr>
<tr>
<td>G5</td>
<td>122 Ave E/Orting-Kapowsin Hwy Extension</td>
<td>185 St E to Orting-Kapowsin Hwy E</td>
<td>New arterial with curb, gutter, paved shoulders, sidewalks, bicycle facilities, &amp; intersection improvements.</td>
<td>$9,030,000</td>
</tr>
<tr>
<td>G6</td>
<td>224 St E</td>
<td>SR 161 to Orting-Kapowsin Hwy E</td>
<td>Add paved shoulders, turn lanes, and sidewalks and/or trail. Widen to 5 lanes from SR 161 to 104 Av E.</td>
<td>$620,000</td>
</tr>
<tr>
<td>G7</td>
<td>224 St E</td>
<td>SR 7 to SR 161</td>
<td>Widen to 4 or 5 lanes; geometric &amp; intersection improvements, add pathway or sidewalks.</td>
<td>$13,270,000</td>
</tr>
<tr>
<td>G8</td>
<td>260 St E</td>
<td>54 Ave E to 70 Ave E</td>
<td>Construct paved pathway</td>
<td>$280,000</td>
</tr>
<tr>
<td>G9</td>
<td>304 St E/Kapowsin Hwy E</td>
<td>SR 7 to Orting-Kapowsin Hwy E</td>
<td>Add paved shoulders or trail and widen lanes</td>
<td>$2,820,000</td>
</tr>
<tr>
<td>G10</td>
<td>Canyon Rd E South Extension</td>
<td>192 St E to 224 St E</td>
<td>New 5-lane arterial with paved shoulders &amp; sidewalks or trail</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>G11</td>
<td>Canyon Rd E South Extension</td>
<td>224 St E to SR 7/260 St E</td>
<td>New 3-lane arterial with paved shoulders &amp; sidewalks or trail</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>G12</td>
<td>Eatonville Cutoff Rd E</td>
<td>SR 7 to 352 St E</td>
<td>Realign intersection with 352 St E, add turn lanes and paved shoulders or wide lanes</td>
<td>$200,000</td>
</tr>
<tr>
<td>G13</td>
<td>Orting-Kapowsin Hwy E</td>
<td>Tacoma RR Trail (246 St E) to 150 Ave E</td>
<td>Add paved shoulders</td>
<td>$1,520,000</td>
</tr>
<tr>
<td>G14</td>
<td>Tacoma Rail Trail</td>
<td>North plan boundary to south plan boundary</td>
<td>Construct new trail alongside rail line</td>
<td>$4,900,000</td>
</tr>
<tr>
<td>G15</td>
<td>Webster Rd E/70 Av E</td>
<td>260 St E to SR 161</td>
<td>Widen road, improve alignment, add paved shoulders or wide lanes</td>
<td>$10,860,000</td>
</tr>
</tbody>
</table>

**Premier Priority Projects - Total Estimated Cost**  $70,050,000
<table>
<thead>
<tr>
<th>Proj. ID</th>
<th>Road Name</th>
<th>Project Limits</th>
<th>Facility Improvement</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>G16</td>
<td>38 Ave E/Wright Rd E</td>
<td>214 St E to 208 St E</td>
<td>Extend paved pathway</td>
<td>$20,000</td>
</tr>
<tr>
<td>G17</td>
<td>86 Ave E</td>
<td>224 St E to 242 St E</td>
<td>Widen lanes and construct pathway</td>
<td>$820,000</td>
</tr>
<tr>
<td>G18</td>
<td>92 Ave E/192 St E</td>
<td>86 Ave E to 204 St E</td>
<td>New 3-lane connection, partially on existing roadways, convert entire route to a public road</td>
<td>$4,510,000</td>
</tr>
<tr>
<td>G19</td>
<td>92 Ave E/204 St E</td>
<td>208 St E to SR 161</td>
<td>Add sidewalks and turn lanes. Install traffic control device at intersection of 92 Av E and 204 St E</td>
<td>$540,000</td>
</tr>
<tr>
<td>G20</td>
<td>98 Ave E/100 Av E</td>
<td>224 St E to 232 St E</td>
<td>Construct new 3-lane roadways, shared commercial access facilities, and road parallel to rail line</td>
<td>$2,870,000</td>
</tr>
<tr>
<td>G21</td>
<td>104 Ave E</td>
<td>Eustis Hunt Rd E to 234 St E</td>
<td>Construct new 3-lane roadway in commercial area with shared commercial access facilities</td>
<td>$4,640,000</td>
</tr>
<tr>
<td>G22</td>
<td>108 Ave E</td>
<td>224 St E to 234 St E</td>
<td>Construct trail or wide gravel shoulders. Install traffic signal at intersection with 224 St E.</td>
<td>$480,000</td>
</tr>
<tr>
<td>G23</td>
<td>192 St E/194 St E</td>
<td>92 Ave E to 95 Ave E</td>
<td>New/Reconstructed 3-lane roadway</td>
<td>$900,000</td>
</tr>
<tr>
<td>G24</td>
<td>200 St E</td>
<td>SR 161 to Orting-Kapowsin Hwy E</td>
<td>Add paved shoulders and turn lanes, widen lanes.</td>
<td>$750,000</td>
</tr>
<tr>
<td>G25</td>
<td>208 St E</td>
<td>22 Ave E to 66 Ave E</td>
<td>Add turn lanes and paved shoulders</td>
<td>$5,230,000</td>
</tr>
<tr>
<td>G34</td>
<td>218 St E/98 Ave E/100 Ave E</td>
<td>SR 161 at 218 St E to 224 St E at 98 Ave E and 100 Ave E</td>
<td>Construct new 3-lane roadways in commercial area with shared commercial access facilities</td>
<td>$4,500,000</td>
</tr>
<tr>
<td>G26</td>
<td>232 St E</td>
<td>86 Ave E to SR 161</td>
<td>Construct trail or wide gravel shoulders</td>
<td>$360,000</td>
</tr>
<tr>
<td>G27</td>
<td>232 St E</td>
<td>SR 161 to 108 Ave E</td>
<td>Construct new 3-lane roadway in commercial area with shared commercial access facilities</td>
<td>$1,480,000</td>
</tr>
<tr>
<td>Proj. ID</td>
<td>Road Name</td>
<td>Project Limits</td>
<td>Facility Improvement</td>
<td>Estimated Cost</td>
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</tr>
<tr>
<td>G28</td>
<td>234 St E</td>
<td>104 Ave E to 108 Ave E</td>
<td>Widen lanes. Eliminate intersection with SR 161 by dead-ending roadway.</td>
<td>$80,000</td>
</tr>
<tr>
<td>G29</td>
<td>264 St E</td>
<td>SR 161 to Orting-Kapowsin Hwy E</td>
<td>Widen lanes, construct paved pathway, resolve parking overflow issue at Kapowsin Elementary.</td>
<td>$720,000</td>
</tr>
<tr>
<td>G30</td>
<td>Powerline Trail</td>
<td>Orville Rd E to SR 7 at 52 Ave E</td>
<td>Construct new trail</td>
<td>$2,790,000</td>
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**High Priority Projects - Total Estimated Cost** $30,690,000

**Medium Priority Projects**

<table>
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<th>Proj. ID</th>
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<th>Estimated Cost</th>
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<tbody>
<tr>
<td>G31</td>
<td>82 Av E</td>
<td>224 St E to Eustis Hunt Rd E</td>
<td>Add paved shoulders or wide lanes</td>
<td>$190,000</td>
</tr>
<tr>
<td>G33</td>
<td>194 St E</td>
<td>95 Ave E to SR 161</td>
<td>Construct trail or wide gravel shoulders, convert from private to public road</td>
<td>$160,000</td>
</tr>
<tr>
<td>G35</td>
<td>288 St E</td>
<td>Webster Rd E to SR 161</td>
<td>Widen lanes or construct trail</td>
<td>$400,000</td>
</tr>
<tr>
<td>G36</td>
<td>352 St E</td>
<td>SR 161 to Eatonville Cutoff Rd E</td>
<td>Improve vertical alignment, add paved shoulders or widen lanes.</td>
<td>$9,340,000</td>
</tr>
<tr>
<td>G37</td>
<td>Eustis Hunt Rd E</td>
<td>208 St E to 82 Ave E</td>
<td>Add paved shoulders or path</td>
<td>$130,000</td>
</tr>
<tr>
<td>G38</td>
<td>Orting to Kapowsin Rail Trail</td>
<td>Foothills Trail to Electron</td>
<td>Construct new trail</td>
<td>$2,970,000</td>
</tr>
<tr>
<td>G39</td>
<td>Orville Rd E</td>
<td>Orting-Kapowsin Hwy E to Electron Rd E</td>
<td>Add paved shoulders or trail (on north side of road at Lake Kapowsin)</td>
<td>$710,000</td>
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**Medium Priority Projects - Total Estimated Cost** $15,430,000

**Low Priority Projects**

<table>
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<th>Proj. ID</th>
<th>Road Name</th>
<th>Project Limits</th>
<th>Facility Improvement</th>
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<tbody>
<tr>
<td>G40</td>
<td>30 Ave E</td>
<td>208 St E to 224 St E</td>
<td>New 2-lane roadway</td>
<td>$4,310,000</td>
</tr>
<tr>
<td>G41</td>
<td>117 Ave E/118 Ave E</td>
<td>208 St E to 224 St E</td>
<td>New/Reconstructed 3-lane roadway with paved shoulders</td>
<td>$3,990,000</td>
</tr>
<tr>
<td>G42</td>
<td>132 Ave E</td>
<td>288 St E to Kapowsin Hwy E</td>
<td>Widen lanes and extend south to Kapowsin Hwy E, convert from private to public road</td>
<td>$1,180,000</td>
</tr>
<tr>
<td>G43</td>
<td>144 Ave E/Benbow Dr E/312 St E</td>
<td>Orville Rd E &amp; Kapowsin Hwy E to Whitman Lake</td>
<td>Add paved shoulders or widen lanes</td>
<td>$620,000</td>
</tr>
<tr>
<td>Proj. ID</td>
<td>Road Name</td>
<td>Project Limits</td>
<td>Facility Improvement</td>
<td>Estimated Cost</td>
</tr>
<tr>
<td>---------</td>
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<tr>
<td>G44</td>
<td>200 St E/146 Ave E Extension</td>
<td>Orting-Kapowsin Hwy E to 204 St E/146 Ave E</td>
<td>New 2-lane roadway with paved shoulders</td>
<td>$2,970,000</td>
</tr>
<tr>
<td>G45</td>
<td>210 St E</td>
<td>118 Ave E to Orting-Kapowsin Hwy E</td>
<td>Widen lanes and extend from 124 Av E to 127 Av E, convert entire route to a public road</td>
<td>$1,030,000</td>
</tr>
<tr>
<td>G46</td>
<td>232 St E</td>
<td>70 Ave E to 86 Ave E</td>
<td>New 2-lane roadway</td>
<td>$4,520,000</td>
</tr>
<tr>
<td>G47</td>
<td>232 St/126 Ave/122 Ave/256 St/118 Ave E</td>
<td>224 Ave E to 264 St E</td>
<td>Construct gravel pathway</td>
<td>$190,000</td>
</tr>
<tr>
<td>G48</td>
<td>240 St E</td>
<td>SR 7 to Mathias Rd E</td>
<td>Widen lanes and extend from 42 Av E to 46 Av E, convert entire route to a public road</td>
<td>$1,290,000</td>
</tr>
<tr>
<td>G49</td>
<td>251 St E/252 St E</td>
<td>SR 7 to 54 Ave E</td>
<td>Widen lanes and connect at 4600 block, convert entire route to a public road</td>
<td>$650,000</td>
</tr>
<tr>
<td>G50</td>
<td>Orting-Kapowsin Hwy E</td>
<td>RR Crossing (284 St E) to 288 St E</td>
<td>Add paved shoulders</td>
<td>$80,000</td>
</tr>
<tr>
<td>G51</td>
<td>Orville Rd E</td>
<td>Electron Rd E to SR 162</td>
<td>Add paved shoulders or wide lanes</td>
<td>$2,210,000</td>
</tr>
<tr>
<td>G52</td>
<td>Orville Rd E/Orting-Kapowsin Hwy</td>
<td>288 St E to SR 161</td>
<td>Improve road alignment &amp; pavement structure, add paved shoulders or wide lanes</td>
<td>$20,150,000</td>
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**Low Priority Projects - Total Estimated Cost**: $43,190,000

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<th>State Projects (No Priority Assigned)</th>
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<td>G54</td>
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Map 12-30: Key Peninsula Community Plan Project Recommendations
<table>
<thead>
<tr>
<th>ID#*</th>
<th>Roadway**</th>
<th>Limits</th>
<th>Description***</th>
<th>Estimated Cost****</th>
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<tbody>
<tr>
<td><strong>Premier Priority Projects (4)</strong></td>
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<tr>
<td>KP1</td>
<td>134th Ave KPN/Key Peninsula Hwy KPN</td>
<td>Intersection</td>
<td>Realign intersection and add turn lanes</td>
<td>$640,000</td>
</tr>
<tr>
<td>KP2</td>
<td>186th Ave/Jackson Lake Rd KPN</td>
<td>Herron Rd KPN to Key Peninsula Hwy KPN</td>
<td>Construct missing roadway segment on 186th Ave KPN, widen existing lanes, and add roadside path</td>
<td>$6,650,000</td>
</tr>
<tr>
<td>KP3</td>
<td>Key Peninsula Hwy KPN</td>
<td>Olson Dr/Cramer Rd KPN to SR 302 (Elgin-Clifton Rd KPN)</td>
<td>Widen existing paved shoulders, add pedestrian facilities in commercial center</td>
<td>$6,360,000</td>
</tr>
<tr>
<td>KP4</td>
<td>Olson Dr/Cramer Rd/Key Peninsula Hwy KPN</td>
<td>Intersection</td>
<td>Realign intersection and add turn lanes</td>
<td>$1,115,000</td>
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<td><strong>High Priority Projects (7)</strong></td>
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<tr>
<td>KP5</td>
<td>Cramer Rd/134th Ave KPN</td>
<td>Key Peninsula Hwy KPN to SR 302</td>
<td>Add paved shoulders</td>
<td>$4,390,000</td>
</tr>
<tr>
<td>KP6</td>
<td>Jackson Lake Rd/Key Peninsula Hwy/Lackey Rd KPN</td>
<td>Intersection</td>
<td>Reconfigure into 3-way intersection and add turn lanes</td>
<td>$1,340,000</td>
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<tr>
<td>KP7</td>
<td>Key Peninsula Hwy KPS</td>
<td>76th St KPS to Erickson Rd KPS</td>
<td>Add paved shoulders or roadside path, add pedestrian facilities in commercial center</td>
<td>$3,240,000</td>
</tr>
<tr>
<td>KP8</td>
<td>Key Peninsula Hwy KPN</td>
<td>Herron Rd/A St KPN to 89th St KPN</td>
<td>Widen existing paved shoulders or add roadside path, add pedestrian facilities in commercial center</td>
<td>$9,750,000</td>
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<tr>
<td>KP9</td>
<td>Key Peninsula Hwy KPN</td>
<td>89th St KPN to Olson Dr/Cramer Rd KPN</td>
<td>Add center turn lane and pedestrian facilities in commercial center</td>
<td>$930,000</td>
</tr>
<tr>
<td>KP10</td>
<td>Olson Dr KPN</td>
<td>S Vaughn Rd/Wright-Bliss Rd KPN to Key Peninsula Hwy KPN</td>
<td>Improve alignment and add paved shoulders or roadside path</td>
<td>$3,400,000</td>
</tr>
<tr>
<td>KP11</td>
<td>Whiteman Rd KPS/Key Peninsula Hwy KPS</td>
<td>Intersection</td>
<td>Realign intersection</td>
<td>$460,000</td>
</tr>
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<td>ID#*</td>
<td>Roadway**</td>
<td>Limits</td>
<td>Description***</td>
<td>Estimated Cost****</td>
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<td><strong>Medium Priority Projects (14)</strong></td>
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<tr>
<td>KP12</td>
<td>92nd St KPN</td>
<td>S Vaughn Rd KPN to Olson Dr KPN</td>
<td>Add paved shoulders</td>
<td>$1,570,000</td>
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<tr>
<td>KP13</td>
<td>94th Ave NW (Developer)</td>
<td>0.25 miles south of SR 302 to SR 302</td>
<td>Construct new roadway with paved shoulders</td>
<td>$500,000</td>
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<tr>
<td>KP14</td>
<td>94th Ave NW</td>
<td>SR 302 to Kitsap County Line</td>
<td>Widen existing lanes and add paved shoulders</td>
<td>$3,460,000</td>
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<tr>
<td>KP15</td>
<td>118th Ave NW</td>
<td>Creviston Dr NW to SR 302</td>
<td>Add paved shoulders or roadside path</td>
<td>$1,293,000</td>
</tr>
<tr>
<td>KP16</td>
<td>Cornwall Rd KPS/Delano Rd KPS</td>
<td>Herron Rd KPN to 158th Ave KPS</td>
<td>Add paved shoulders or roadside path</td>
<td>$4,690,000</td>
</tr>
<tr>
<td>KP17</td>
<td>Creviston Dr NW</td>
<td>134th Ave KPN to SR 302</td>
<td>Improve alignment and add paved shoulders</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>KP18</td>
<td>Hall Rd KPN</td>
<td>West terminus to S Vaughn Rd/Wright-Bliss Rd KPN</td>
<td>Add paved shoulders or roadside path</td>
<td>$1,230,000</td>
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<tr>
<td>KP19</td>
<td>Herron Rd KPN/ Key Peninsula Hwy KPN</td>
<td>Intersection</td>
<td>Add turn lanes</td>
<td>$330,000</td>
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<tr>
<td>KP20</td>
<td>Key Peninsula Hwy KPS</td>
<td>Erickson Rd KPS to Herron Rd/A St KPN</td>
<td>Widen existing paved shoulders or add roadside path</td>
<td>$7,770,000</td>
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<tr>
<td>KP21</td>
<td>Lackey Rd KPN</td>
<td>Jackson Lake Rd KPN to S Vaughn Rd KPN</td>
<td>Add paved shoulders or roadside path</td>
<td>$1,980,000</td>
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<tr>
<td>KP22</td>
<td>Rouse Rd KPS/ Key Peninsula Hwy KPS</td>
<td>Intersection</td>
<td>Realign intersection</td>
<td>$450,000</td>
</tr>
<tr>
<td>KP23</td>
<td>S Vaughn Rd KPN</td>
<td>Lackey Rd KPN to Hall Rd/Olson Dr KPN</td>
<td>Add paved shoulders</td>
<td>$612,000</td>
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<tr>
<td>KP24</td>
<td>Wright-Bliss Rd KPN</td>
<td>Hall Rd/Olson Dr KPN to SR 302 (Elgin-Clifton Rd KPN)</td>
<td>Widen existing paved shoulders or add roadside path</td>
<td>$3,234,000</td>
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<tr>
<td>KP25</td>
<td>Wright-Bliss Rd KPN</td>
<td>SR 302 (Elgin-Clifton Rd KPN) to Kitsap County Line</td>
<td>Improve alignment and add paved shoulders or roadside path</td>
<td>$5,720,000</td>
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<td><strong>Low Priority Projects (8)</strong></td>
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<tr>
<td>KP26</td>
<td>76th St/Whiteman Rd KPS</td>
<td>Key Peninsula Hwy KPS s/72nd St KPS to Key Peninsula Hwy KPS n/174th Av KPS</td>
<td>Add paved shoulders</td>
<td>$16,670,000</td>
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<tr>
<td>ID#*</td>
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<td>Description***</td>
<td>Estimated Cost****</td>
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<tr>
<td>KP27</td>
<td>118th Av NW</td>
<td>SR 302 to Kitsap County Line</td>
<td>Widen existing lanes and add paved shoulders</td>
<td>$3,870,000</td>
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<tr>
<td>KP28</td>
<td>128th St/94th Ave/ Danforth St NW</td>
<td>Wind-N-Tide Dr NW to SR 302</td>
<td>Add paved shoulders or roadside path</td>
<td>$3,314,000</td>
</tr>
<tr>
<td>KP29</td>
<td>144th St KPN/NW Powerline Rd</td>
<td>Wright-Bliss Rd KPN to SR 302</td>
<td>Construct new roadway with roadside trail</td>
<td>$25,190,000</td>
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<tr>
<td>KP30</td>
<td>Erickson Rd KPS</td>
<td>Whiteman Rd KPS to Key Peninsula Hwy KPS</td>
<td>Add roadside path</td>
<td>$1,350,000</td>
</tr>
<tr>
<td>KP31</td>
<td>Goodrich Dr NW</td>
<td>SR 302 to Kitsap County Line</td>
<td>Widen existing lanes and add paved shoulders</td>
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<tr>
<td>KP32</td>
<td>Rouse Rd KPS</td>
<td>Whiteman Rd KPS to Key Peninsula Hwy KPS</td>
<td>Add paved shoulders</td>
<td>$3,970,000</td>
</tr>
<tr>
<td>KP33</td>
<td>Van Slyke Rd/ Bayview Rd/ Bliss Cochrane Rd KPN</td>
<td>Hall Rd KPN to SR 302</td>
<td>Add paved shoulders or roadside path</td>
<td>$4,200,000</td>
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</table>

**State Highway Priority Projects (3)**

<table>
<thead>
<tr>
<th>ID#</th>
<th>Roadway (WSDOT)</th>
<th>Limits</th>
<th>Description</th>
<th>Estimated Cost</th>
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<tbody>
<tr>
<td>KP34</td>
<td>SR 302</td>
<td>Mason County Line to Peninsula Hwy KPN</td>
<td>Improve existing alignment, intersections, and paved shoulders and/or construct new northern route with a regional multi-use trail, add pedestrian facilities in commercial center</td>
<td>TBD</td>
</tr>
<tr>
<td>KP35</td>
<td>SR 302</td>
<td>Key Peninsula Hwy KPN to 94th Ave NW</td>
<td>Improve existing alignment, intersections, and paved shoulders and/or construct new northern route with a regional multi-use trail, add pedestrian facilities in commercial center</td>
<td>TBD</td>
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<tr>
<td>KP36</td>
<td>SR 302</td>
<td>94th Ave NW to Purdy Dr NW (SR 302 Spur)</td>
<td>Improve existing alignment, intersections, and paved shoulders and/or construct new northern route with a regional multi-use trail, add pedestrian facilities in commercial center</td>
<td>TBD</td>
</tr>
</tbody>
</table>

NOTE: ALL PROJECTS ARE SUBJECT TO MORE DETAILED REVIEW AND ANALYSIS PRIOR TO IMPLEMENTATION
*Projects are not listed in a specific priority order. ID numbers are intended for reference purposes only and to identify projects in the Transportation Project Recommendations map.

**Roadways are listed in numerical order and then alphabetical order by priority groups. For intersections, the name of the east-west road is listed first.

***The following assumptions should be noted for project descriptions:

a. The widening of existing lanes assumes the construction of 12-foot-wide travel lanes in both directions of the roadway (if feasible).
b. The construction of a new roadway assumes the construction of a paved roadway competed to Pierce County’s current standards (if feasible).
c. The addition of paved shoulders assumes the construction of 6-foot-wide striped shoulders on both sides of the roadway (if feasible).
d. The addition of a roadside path assumes the construction of a 6-foot-wide paved walkway on one side of the roadway only (if feasible).
e. The addition of a roadside trail assumes the construction of a 10-foot-wide paved trail on one side of the roadway only (if feasible).

****Cost estimates are rough order of magnitude estimates for planning purposes only. These estimates are based on Year 2006 dollars and rounded to the nearest $10,000. In cases where more than one nonmotorized option is recommended for a particular roadway, the higher cost estimate was used.

(Developer): This project is dependent upon a future development proposal and would likely be implemented by a developer.

(WSDOT): The Washington State Department of Transportation (WSDOT) would be the lead agency for this project.

TBD: To be determined.
Map 12-31: Mid-County Community Plan Project Recommendations
<table>
<thead>
<tr>
<th>Map ID#*</th>
<th>Roadway**</th>
<th>Limits***</th>
<th>Description</th>
<th>Estimated Cost****</th>
<th>Proposed Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC1</td>
<td>24th Avenue E</td>
<td>96th Street E to 90th Street E</td>
<td>Develop path</td>
<td>$220,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC2</td>
<td>24th Avenue E</td>
<td>104th Street E to 99th Street E</td>
<td>Develop path</td>
<td>$180,000</td>
<td>Low</td>
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<tr>
<td>MC3</td>
<td>34th Avenue E</td>
<td>128th Street E to 112th Street E</td>
<td>Develop path</td>
<td>$530,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC4</td>
<td>36th Avenue E</td>
<td>64th Street E to 48th Street E</td>
<td>Add paved shoulders</td>
<td>$2,569,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC5</td>
<td>40th Avenue E</td>
<td>128th Street E to 120th Street E</td>
<td>Develop path</td>
<td>$270,000</td>
<td>Low</td>
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<tr>
<td>MC6</td>
<td>42nd Avenue E</td>
<td>Brookdale Road E to 128th Street E</td>
<td>Add paved shoulders</td>
<td>$2,283,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC7</td>
<td>44th Avenue E</td>
<td>72nd Street E to Pioneer Way E</td>
<td>Add paved shoulders or wide curb lanes</td>
<td>$2,558,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC8</td>
<td>50th Avenue E</td>
<td>152nd Street E to 128th Street E</td>
<td>Add paved shoulders or develop path</td>
<td>$2,054,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC9</td>
<td>62nd Avenue E</td>
<td>128th Street E to 112th Street E</td>
<td>Add paved shoulders</td>
<td>$1,397,000</td>
<td>Low</td>
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<tr>
<td>MC10</td>
<td>64th Street E</td>
<td>Waller Road Elementary School to Waller Road E</td>
<td>Add paved shoulders or sidewalks</td>
<td>$359,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC11</td>
<td>66th Avenue E</td>
<td>West Stewart Avenue to SR 167 (River Road)</td>
<td>Add paved shoulders</td>
<td>$1,253,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC12</td>
<td>66th Avenue E (BR #19204-B)</td>
<td>66th Avenue E over Clarks Creek</td>
<td>Replace southerly bridge</td>
<td>$400,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC13</td>
<td>66th Avenue E (BR #19204-C)</td>
<td>66th Avenue E over Clarks Creek</td>
<td>Replace northerly bridge</td>
<td>$400,000</td>
<td>Low</td>
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<tr>
<td>MC14</td>
<td>72nd Street E</td>
<td>Tacoma City Limits to Woodland Avenue E</td>
<td>Upgrade design to current standards, add turn lanes at intersections, add center lanes where appropriate, and add paved shoulders</td>
<td>$14,412,000</td>
<td>High</td>
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<td>Map ID#*</td>
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</tr>
<tr>
<td>MC15</td>
<td>72nd Street E/Canyon Road E <em>(New)</em></td>
<td>Intersection</td>
<td>Reconstruct intersection for capacity improvements</td>
<td>TBD</td>
<td>Premier</td>
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<tr>
<td>MC16</td>
<td>80th Street E</td>
<td>20th Avenue E to Waller Road E</td>
<td>Add paved shoulders, wide curb lanes, or path</td>
<td>$1,677,000</td>
<td>Medium</td>
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<tr>
<td>MC17</td>
<td>80th Street E</td>
<td>Waller Road E to Canyon Road E</td>
<td>Add wide curb lanes or path</td>
<td>$81,000</td>
<td>Medium</td>
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<td>MC18</td>
<td>84th Street E</td>
<td>20th Avenue E to Waller Road E</td>
<td>Add paved shoulders</td>
<td>$845,000</td>
<td>Premier</td>
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<td>MC19</td>
<td>90th Street E</td>
<td>20th Avenue E to 24th Avenue E</td>
<td>Develop path</td>
<td>$210,000</td>
<td>Medium</td>
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<tr>
<td>MC20</td>
<td>90th Street E</td>
<td>Canyon Road E to Woodland Avenue E</td>
<td>Develop path</td>
<td>$510,000</td>
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<tr>
<td>MC21</td>
<td>93rd Street E</td>
<td>20th Avenue E to 24th Avenue E</td>
<td>Develop path</td>
<td>$350,000</td>
<td>Low</td>
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<td>MC22</td>
<td>97th Street E</td>
<td>20th Avenue E to 24th Avenue E</td>
<td>Develop path</td>
<td>$460,000</td>
<td>Medium</td>
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<tr>
<td>MC23</td>
<td>104th Street E</td>
<td>22nd Avenue E to Waller Road E</td>
<td>Add paved shoulders</td>
<td>$715,000</td>
<td>Medium</td>
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<tr>
<td>MC24</td>
<td>104th Street E</td>
<td>Waller Road E to Vickery Avenue E</td>
<td>Add paved shoulders</td>
<td>$686,000</td>
<td>High</td>
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<td>MC25</td>
<td>104th Street E</td>
<td>Canyon Road E to Woodland Avenue E</td>
<td>Add paved shoulders, wide curb lanes or path</td>
<td>$3,322,000</td>
<td>High</td>
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<tr>
<td>MC26</td>
<td>112th Street E</td>
<td>Golden Given Road E to 18th Avenue E</td>
<td>Add sidewalks</td>
<td>$1,610,000</td>
<td>Premier</td>
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<tr>
<td>MC27</td>
<td>116th Street E</td>
<td>Bingham Avenue E to Canyon Road E</td>
<td>Develop path</td>
<td>$260,000</td>
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<tr>
<td>MC28</td>
<td>121st Street E/120th Street E</td>
<td>Golden Given Road E to Waller Road E</td>
<td>Develop path</td>
<td>$680,000</td>
<td>Low</td>
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<tr>
<td>MC29</td>
<td>128th Street E</td>
<td>Golden Given Road E to Canyon Road E</td>
<td>Add paved shoulders</td>
<td>$3,830,000</td>
<td>High</td>
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<tr>
<td>Map ID#*</td>
<td>Roadway**</td>
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<tr>
<td>MC30</td>
<td>128th Street E</td>
<td>Canyon Road E to Woodland Avenue E</td>
<td>Upgrade design to current standards, add turn lanes at intersections if signalized, and add paved shoulders or sidewalks</td>
<td>$6,378,000</td>
<td>High</td>
</tr>
<tr>
<td>MC31</td>
<td>128th Street E/Woodland Ave. E</td>
<td>Intersection</td>
<td>Add turn lanes at intersection if signalized</td>
<td>$1,065,000</td>
<td>Medium</td>
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<tr>
<td>MC32</td>
<td>132nd Street E</td>
<td>Waller Road E to 42nd Avenue E</td>
<td>Add paved shoulders</td>
<td>$1,971,000</td>
<td>Low</td>
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<tr>
<td>MC33</td>
<td>136th Street E/62nd Avenue E</td>
<td>Canyon Road E to 128th Street E</td>
<td>Develop path</td>
<td>$540,000</td>
<td>Low</td>
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<tr>
<td>MC34</td>
<td>138th Street E/Vickery Avenue E</td>
<td>Waller Road E to 112th Street E</td>
<td>Add paved shoulders</td>
<td>$2,938,000</td>
<td>Medium</td>
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<tr>
<td>MC35</td>
<td>144th Street E</td>
<td>Bingham Avenue E to Canyon Road E</td>
<td>Add paved shoulders or wide curb lanes</td>
<td>$702,000</td>
<td>Medium</td>
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<tr>
<td>MC36</td>
<td>152nd Street E</td>
<td>Bingham Avenue E to 50th Avenue E</td>
<td>Develop path</td>
<td>$925,000</td>
<td>Medium</td>
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<tr>
<td>MC37</td>
<td>160th Street E</td>
<td>Canyon Road E to Woodland Avenue E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$10,599,000</td>
<td>High</td>
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<tr>
<td>MC38</td>
<td>160th Street E/Woodland Avenue E</td>
<td>Intersection</td>
<td>Add turn lanes at intersection if signalized</td>
<td>$1,964,000</td>
<td>Medium</td>
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<td>MC39</td>
<td>Bingham Avenue E</td>
<td>144th Street E to 112th Street E</td>
<td>Add paved shoulders</td>
<td>$2,813,000</td>
<td>Medium</td>
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<tr>
<td>MC40</td>
<td>Bingham Avenue E</td>
<td>152nd Street E to 144th Street E</td>
<td>Develop path</td>
<td>$260,000</td>
<td>Low</td>
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<tr>
<td>MC42</td>
<td>Brookdale Road E</td>
<td>Golden Given Road E to Waller Road E</td>
<td>Add paved shoulders</td>
<td>$1,826,000</td>
<td>Low</td>
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<tr>
<td>Map ID#*</td>
<td>Roadway**</td>
<td>Limits***</td>
<td>Description</td>
<td>Estimated Cost****</td>
<td>Proposed Priority</td>
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</tr>
<tr>
<td>MC43</td>
<td>Brookdale Road E</td>
<td>38th Avenue E to Canyon Road E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$7,682,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC44</td>
<td>Brookdale Road E/Waller Road E</td>
<td>Intersection</td>
<td>Add turn lanes if signalized</td>
<td>$1,800,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC45</td>
<td>Canyon Road E</td>
<td>144th Street E to 131st Street E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$10,037,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC46</td>
<td>Canyon Road E</td>
<td>131st Street E to 116th Street E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$8,567,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC47</td>
<td>Canyon Road E</td>
<td>106th Street E to 96th Street E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$5,200,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC48</td>
<td>Canyon Road E</td>
<td>96th Street E to 72nd Street E</td>
<td>Add through lanes, add turn lanes at intersections, add center turn lanes where appropriate, and add paved shoulders or sidewalks</td>
<td>$10,850,000</td>
<td>Premier</td>
</tr>
<tr>
<td>Map ID#*</td>
<td>Roadway**</td>
<td>Limits***</td>
<td>Description</td>
<td>Estimated Cost****</td>
<td>Proposed Priority</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>MC49</td>
<td>Canyon Road E</td>
<td>72nd Street E to Pioneer Way E</td>
<td>Add climbing lane and add paved shoulders or sidewalks</td>
<td>$11,010,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC50</td>
<td>Canyon Road E - North Extension</td>
<td>Pioneer Way E to 70th Avenue E</td>
<td>Construct new roadway and bridges and add paved shoulders or sidewalks</td>
<td>$45,000,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC51</td>
<td>Golden Given Road E</td>
<td>Brookdale Road E to 112th Street E</td>
<td>Add paved shoulders</td>
<td>$1,579,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC52</td>
<td>Pioneer Way E</td>
<td>Tacoma City Limits to Woodland Avenue E</td>
<td>Add through lanes, add center turn lanes where appropriate, and add paved shoulders where needed</td>
<td>$16,320,000</td>
<td>High</td>
</tr>
<tr>
<td>MC53</td>
<td>Pioneer Way E (BR #11203-E)</td>
<td>Pioneer Way E over Swan Creek</td>
<td>Replace bridge</td>
<td>$592,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC54</td>
<td>Pioneer Way E/Canyon Road E (New)</td>
<td>Intersection</td>
<td>Reconstruct intersection for capacity improvements</td>
<td>TBD</td>
<td>Premier</td>
</tr>
<tr>
<td>MC55</td>
<td>Pioneer Way E/Waller Road E</td>
<td>Intersection</td>
<td>Add turn lanes at intersection if signalized</td>
<td>$1,964,000</td>
<td>High</td>
</tr>
<tr>
<td>MC56</td>
<td>Portland Avenue E (New)</td>
<td>112th Street E to SR 512</td>
<td>Add through lanes and add turn lanes at intersections</td>
<td>$1,855,000</td>
<td>Premier</td>
</tr>
<tr>
<td>MC57</td>
<td>SR 167 (River Road) (WSDOT)</td>
<td>Tacoma City Limits to Puyallup City Limits</td>
<td>Safety improvements for head-on collisions</td>
<td>TBD</td>
<td>High</td>
</tr>
<tr>
<td>MC58</td>
<td>SR 512/Canyon Road E (WSDOT) (New)</td>
<td>Interchange</td>
<td>Widen overpass and modify ramps (cloverleaf)</td>
<td>TBD</td>
<td>Premier</td>
</tr>
<tr>
<td>MC59</td>
<td>SR 512/Portland Avenue E (WSDOT) (New)</td>
<td>Interchange</td>
<td>Widen overpass and modify ramps</td>
<td>TBD</td>
<td>Premier</td>
</tr>
<tr>
<td>Map ID#*</td>
<td>Roadway**</td>
<td>Limits***</td>
<td>Description</td>
<td>Estimated Cost****</td>
<td>Proposed Priority</td>
</tr>
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</tr>
<tr>
<td>MC61</td>
<td>Tacoma Pipeline Trail (City)</td>
<td>Tacoma City Limits to Woodland Avenue E</td>
<td>Develop trail</td>
<td>TBD</td>
<td>Premier</td>
</tr>
<tr>
<td>MC62</td>
<td>Tacoma Rail Trail (City)</td>
<td>Tacoma City Limits to Brookdale Road E</td>
<td>Develop trail</td>
<td>TBD</td>
<td>Medium</td>
</tr>
<tr>
<td>MC63</td>
<td>Vickery Avenue E</td>
<td>104th Street E to 92nd Street E</td>
<td>Add paved shoulders</td>
<td>$1,076,000</td>
<td>Low</td>
</tr>
<tr>
<td>MC64</td>
<td>Waller Road E</td>
<td>57th Street E to Pioneer Way E</td>
<td>Add paved shoulders</td>
<td>$2,220,000</td>
<td>Medium</td>
</tr>
<tr>
<td>MC65</td>
<td>Waller Road E</td>
<td>72nd Street E to 57th Street E</td>
<td>Add paved shoulders</td>
<td>$1,339,000</td>
<td>High</td>
</tr>
<tr>
<td>MC66</td>
<td>Woodland Avenue E</td>
<td>128th Street E to 72nd Street E</td>
<td>Add paved shoulders or wide curb lanes</td>
<td>$4,878,000</td>
<td>Medium</td>
</tr>
</tbody>
</table>

NOTE: ALL PROJECTS ARE SUBJECT TO MORE DETAILED REVIEW AND ANALYSIS PRIOR TO IMPLEMENTATION.

*Projects MC41 and MC60 do not appear in this table since they were removed from consideration.

**Projects are listed in numerical order and then alphabetical order by roadway name. For intersections, the name of the east-west road is listed first followed by the north-south road.

***Project limits are listed from west to east or from south to north.

****Cost estimates are "order of magnitude" estimates for planning purposes only and are rounded to the nearest $1,000. Please note the following assumptions:

- The cost estimates for sidewalks assume the construction of a 6-foot wide sidewalk with curb and gutter on both sides of the roadway.
- The cost estimates for paved shoulders assume the construction of a 6-foot wide striped shoulder on both sides of the roadway.
- The cost estimates for paths assume the construction of a 6-foot wide paved path on one side of the roadway only.
- The cost estimates for trails assume the construction of a 12-foot wide paved trail.
- For major arterials where paved shoulders or sidewalks are recommended, the higher cost estimate for sidewalks was used.
- The cost estimates for turn lanes at intersections also include the installation of a traffic signal if the intersection is unsignalized.
- TBD - To Be Determined
- (City) - The City of Tacoma may serve as the lead agency for this project.
- (New) - This project is not currently included in either the Transportation Improvement Program (TIP) or the Transportation Element of the Comprehensive Plan.
- (WSDOT) - The Washington State Department of Transportation (WSDOT) would be the lead agency for this project.
<table>
<thead>
<tr>
<th>Map ID #</th>
<th>Project Location</th>
<th>Proposed Facility</th>
<th>Estimated Cost</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5 Av Ct E – 172 St E to 168 St E</td>
<td>Path.</td>
<td>$13,000</td>
<td>LOW</td>
</tr>
<tr>
<td>2.</td>
<td>6 Av and 8 Av – 128 St to 121 St</td>
<td>Path.</td>
<td>$49,000</td>
<td>LOW</td>
</tr>
<tr>
<td>3.</td>
<td>8 Av E – 208 St E to SR 7</td>
<td>Paved shoulders or trail.</td>
<td>$104,000</td>
<td>LOW</td>
</tr>
<tr>
<td>4.</td>
<td>12 Av E -- 80 St E to 72 St E</td>
<td>Path.</td>
<td>$26,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>5.</td>
<td>13 Av Ct E/188 St E – 192 St E to 14 Av E</td>
<td>Paved shoulders.</td>
<td>$97,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>6.</td>
<td>14 Av E/15 Av E – 188 St E to 168 St E</td>
<td>Path.</td>
<td>$53,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>7.</td>
<td>18 Av E -- 93 St E to 85 St E</td>
<td>Path.</td>
<td>$28,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>8.</td>
<td>21 Av Ct E -- 172 St E to 168 St E</td>
<td>Path.</td>
<td>$14,000</td>
<td>LOW</td>
</tr>
<tr>
<td>9.</td>
<td>22 Av E -- 176 St E to 152 St E</td>
<td>Paved shoulders.</td>
<td>$395,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>10.</td>
<td>22 Av E – SR 7 to 176 St E</td>
<td>Paved shoulders or path.</td>
<td>$755,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>11.</td>
<td>24 Av E -- 96 St E to 90 St E</td>
<td>Path.</td>
<td>$22,000</td>
<td>LOW</td>
</tr>
<tr>
<td>12.</td>
<td>26 Av/Sales Rd/102 St -- 96 St to Ainsworth</td>
<td>Paved shoulders.</td>
<td>$274,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>13.</td>
<td>72 St E – McKinley Av E to Portland Av E (Tacoma Lead)</td>
<td>Add center turn lane; improve intersections, add sidewalks. @Golden Given - Traffic signal, illumination and turn lanes.</td>
<td>$1,600,000</td>
<td>Year 2000</td>
</tr>
<tr>
<td>14.</td>
<td>72 St E – Portland Av E to 25 Av E</td>
<td>Improve road, add paved shoulders or wide curb lanes &amp; sidewalks</td>
<td>$1,300,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>15.</td>
<td>80 St E – Golden Given Rd E to 24 Av E</td>
<td>Paved shoulders, wide lanes, or trail.</td>
<td>$230,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>16.</td>
<td>85 St E/84 St E – McKinley Av E to 24 Av E</td>
<td>Paved shoulders.</td>
<td>$109,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>17.</td>
<td>90 St E -- McKinley Av E to 24 Av E</td>
<td>Path.</td>
<td>$59,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>18.</td>
<td>93 St E -- Tacoma/Rainier Rail Trail (NTAC24A) to 24 Av E</td>
<td>Path.</td>
<td>$35,000</td>
<td>LOW</td>
</tr>
<tr>
<td>19.</td>
<td>95 St E -- Golden Given Rd E to 20 Av E</td>
<td>Path.</td>
<td>$32,000</td>
<td>LOW</td>
</tr>
<tr>
<td>20.</td>
<td>96 St S -- Yakima Av S to Steele St S (Tacoma Lead).</td>
<td>3 lane road with 5' bike shoulders and 5'-7' sidewalks.</td>
<td>$2,300,000</td>
<td>Year 1999</td>
</tr>
<tr>
<td>21.</td>
<td>96 St E/97 ST E -- McKinley to 24 Av E</td>
<td>Realign and improve intersections, path.</td>
<td>$2,736,000</td>
<td>LOW</td>
</tr>
<tr>
<td>22.</td>
<td>96 St E -- Pacific Av to McKinley Av (Tacoma Lead).</td>
<td>3 lane road with 5' bike shoulders and 5'-7' sidewalks.</td>
<td>$1,500,000</td>
<td>Year 2000</td>
</tr>
<tr>
<td>Map ID</td>
<td>Project Location</td>
<td>Proposed Facility</td>
<td>Estimated Cost</td>
<td>Priority</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td>23.</td>
<td>99 St/24 Av – Golden Given Rd to 96 St E</td>
<td>Paved shoulders.</td>
<td>$277,000</td>
<td>LOW</td>
</tr>
<tr>
<td>24.</td>
<td>104 St E – McKinley Av E to 24 Av E</td>
<td>Improve alignment, add turn pockets, channelize, paved shoulders.</td>
<td>$2,993,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>25.</td>
<td>104 St E -- 18 Av to Ainsworth Av</td>
<td>Path.</td>
<td>$13,000</td>
<td>LOW</td>
</tr>
<tr>
<td>26.</td>
<td>104 St E -- A St E to D St E</td>
<td>Paved shoulders.</td>
<td>$57,000</td>
<td>LOW</td>
</tr>
<tr>
<td>27.</td>
<td>106 St S -- Park Av S to SR 7</td>
<td>Paved shoulders.</td>
<td>$76,000</td>
<td>LOW</td>
</tr>
<tr>
<td>28.</td>
<td>106 St S -- Sales Rd to Ainsworth Av</td>
<td>Path.</td>
<td>$26,000</td>
<td>LOW</td>
</tr>
<tr>
<td>29.</td>
<td>112 St -- Steele St S to Golden Given Rd E</td>
<td>Widen road, construct sidewalks, wide curb lanes, traffic signals, drainage, channelization and turn lanes.</td>
<td>$2,586,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>30.</td>
<td>116 St S -- Park Av to SR 7</td>
<td>Paved shoulders.</td>
<td>$66,000</td>
<td>LOW</td>
</tr>
<tr>
<td>31.</td>
<td>116 St S/Steele St S – Spanaway Loop Rd S to Sales Rd S</td>
<td>Sidewalks, &amp; paved shoulders or wide curb lanes.</td>
<td>$895,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>32.</td>
<td>117 St and 118 St – Spanaway Loop Rd S to SR 7</td>
<td>Path.</td>
<td>$129,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>33.</td>
<td>120 St S -- Ainsworth Av S to C St S</td>
<td>Sidewalks and wide lanes.</td>
<td>$689,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>34.</td>
<td>121 St E – SR 7 to A St E</td>
<td>Sidewalks on south side only.</td>
<td>$101,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>35.</td>
<td>121 St E -- A St E to Golden Given Rd E</td>
<td>Paved or gravel shoulders or path.</td>
<td>$205,000</td>
<td>LOW</td>
</tr>
<tr>
<td>36.</td>
<td>121 St S/8 Av Ct S/ Wheeler St S – Ainsworth Av to SR 7</td>
<td>Sidewalks.</td>
<td>$549,000</td>
<td>PREMIER</td>
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<tr>
<td>37.</td>
<td>123 St E -- A St E to 6 Av E</td>
<td>Path.</td>
<td>$21,000</td>
<td>LOW</td>
</tr>
<tr>
<td>38.</td>
<td>127 St/6 Av/128 St – SR 7 to Golden Given Rd</td>
<td>Reconstruct to design standards; add turn lanes, improve drainage, pave shoulders and add sidewalks.</td>
<td>$2,184,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>39.</td>
<td>138 St – SR 7 to Golden Given Rd E</td>
<td>Paved shoulders.</td>
<td>$243,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>40.</td>
<td>143 St E/D St E – SR 7 to 138 St E</td>
<td>Path and intersection improvements at SR 7.</td>
<td>$171,000</td>
<td>LOW</td>
</tr>
<tr>
<td>41.</td>
<td>152 St E -- B St E to Waller Rd E</td>
<td>Paved shoulders.</td>
<td>$504,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>42.</td>
<td>159 St/160 St/Old Military Rd – SR 7 to 27 Av E</td>
<td>Paved shoulders or wide lanes, sidewalks SR 7 to 5 Av</td>
<td>$826,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>43.</td>
<td>166 St S – Park Av to SR 7</td>
<td>Path on north side.</td>
<td>$13,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>44.</td>
<td>168 St E – SR 7 to 22 Av E</td>
<td>Paved shoulders and sidewalks.</td>
<td>$1,307,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>Map ID #</td>
<td>Project Location</td>
<td>Proposed Facility</td>
<td>Estimated Cost</td>
<td>Priority</td>
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<tr>
<td>45.</td>
<td>172 St/5 Av -- 176 St E to 22 Av E</td>
<td>Paved shoulders and path.</td>
<td>$464,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>46.</td>
<td>176 St E -- SR 7 to 27 Av E</td>
<td>Widen roadway, add turn lanes and sidewalks, preserve paved shoulders.</td>
<td>$3,223,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>47.</td>
<td>192 St E -- B St E to 22 Av E</td>
<td>Paved shoulders.</td>
<td>$343,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>48.</td>
<td>196 St E/6 Av E -- SR 7 to 192 St E</td>
<td>Path.</td>
<td>$23,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>49.</td>
<td>204 St E/208 St E -- SR 7 to 22 Av E</td>
<td>New arterial with paved shoulders.</td>
<td>$2,875,000</td>
<td>LOW</td>
</tr>
<tr>
<td>50.</td>
<td>A Street -- 138 St S to 131 St S</td>
<td>Paved shoulders.</td>
<td>$124,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>51.</td>
<td>A Street -- 104 St E to 96 St E</td>
<td>Paved shoulders or wide lanes.</td>
<td>$135,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>52.</td>
<td>Ainsworth Rd -- Spanaway Loop Rd to Wheeler St</td>
<td>Sidewalks: Paved shoulders exist.</td>
<td>$153,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>53.</td>
<td>Ainsworth @ 112 St S</td>
<td>Reconstruct existing traffic signal. Widen to provide turn lanes.</td>
<td>$500,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>54.</td>
<td>Alaska St -- 106 St to 102 St</td>
<td>Path.</td>
<td>$14,000</td>
<td>LOW</td>
</tr>
<tr>
<td>55.</td>
<td>B St E -- SR 7 to 152 St E</td>
<td>Paved shoulders and sidewalks.</td>
<td>$2,239,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>56.</td>
<td>Brookdale Rd E - 14 Av E to Waller Rd E (Tacoma Rail Trail)</td>
<td>Paved shoulders.</td>
<td>$297,000</td>
<td>LOW</td>
</tr>
<tr>
<td>57.</td>
<td>C St S -- 122 St S to 112 St S</td>
<td>(Bike route) Keep existing wide lanes and sidewalks.</td>
<td>$0</td>
<td>SIGNING</td>
</tr>
<tr>
<td>58.</td>
<td>C St S @ 138 St S</td>
<td>Install traffic signal and illumination.</td>
<td>$200,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>59.</td>
<td>C St S -- Military Rd S to 122 St S</td>
<td>Build matching paved shoulder to provide for both sides of road.</td>
<td>$228,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>60.</td>
<td>Clover Creek Trail -- C St/Tule Lk Rd Trail to Waller Rd E</td>
<td></td>
<td>$999,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>61.</td>
<td>Croft St -- 100 St to 96 St</td>
<td>Path.</td>
<td>$13,000</td>
<td>LOW</td>
</tr>
<tr>
<td>62.</td>
<td>Cross Base Corridor Study</td>
<td>Corridor study, environmental impact statement, and major investment study.</td>
<td>$2,005,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>63.</td>
<td>Cross Base Highway -- 176 St S/SR 7 to I-5</td>
<td>New arterial and trail.</td>
<td>$70,000,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>64.</td>
<td>Golden Given Rd E -- 1,500' N/O Brookdale Rd E to 112 St E</td>
<td>Widen, improve drainage, add paved shoulders. Install traffic beacon signal at 128th Street.</td>
<td>$2,810,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>65.</td>
<td>Golden Given Rd E -- 104 St E to 72 St E</td>
<td>Sidewalks: Paved shoulders exist.</td>
<td>$1,082,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>66.</td>
<td>Golden Given Rd E -- Clover Creek Trail to 138 St E</td>
<td>Path.</td>
<td>$25,000</td>
<td>LOW</td>
</tr>
<tr>
<td>Map ID #</td>
<td>Project Location</td>
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<td>Priority</td>
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<td>---------</td>
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<tr>
<td>67.</td>
<td>McKinley Av E -- 72 St E to 96 St E (Tacoma Lead).</td>
<td>Improve roadway with 2 travel lanes, bike lanes and sidewalks.</td>
<td>$3,800,000</td>
<td>Year 2000</td>
</tr>
<tr>
<td>68.</td>
<td>McKinley Av E – 96 St E to 104 St E</td>
<td>Paved shoulders.</td>
<td>$137,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>69.</td>
<td>Military Rd S -- Spanaway Loop Rd S to SR 7</td>
<td>Paved shoulders, path, or wide curb lanes.</td>
<td>$309,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>70.</td>
<td>Military Rd S/152 St – SR 7 to B St</td>
<td>Sidewalks on 1-side that does not exist.</td>
<td>$72,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>71.</td>
<td>Park Av S -- 134 St S to 125 St S; and 121 St S to 116 St S</td>
<td>Sidewalks and paved shoulders.</td>
<td>$456,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>72.</td>
<td>Patterson Av -- 106 St to 96 St</td>
<td>Paved shoulders.</td>
<td>$160,000</td>
<td>LOW</td>
</tr>
<tr>
<td>73.</td>
<td>Portland Av E – SR 512 to 72 St E</td>
<td>Sidewalks: Paved shoulders exist.</td>
<td>$1,202,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>74.</td>
<td>Sheridan St S -- 108 St S to 96 St S</td>
<td>Path.</td>
<td>$41,000</td>
<td>LOW</td>
</tr>
<tr>
<td>75.</td>
<td>Spanaway Lake Trail</td>
<td>Trail</td>
<td>$1,335,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>76.</td>
<td>Spanaway Loop Rd S -- 14 Av S to vicinity of Coffee Creek</td>
<td>Widen and reconstruct roadway; paved shoulders and sidewalks.</td>
<td>$996,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>77.</td>
<td>Spanaway Loop Rd S – Coffee Creek to 176 St S/SR 7</td>
<td>Construct new arterial roadway with paved shoulders &amp; sidewalk.</td>
<td>$5,500,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>78.</td>
<td>Spanaway Loop Rd S -- Tule Lk to 116 St S</td>
<td>Sidewalks and paved shoulders or wide curb lanes.</td>
<td>$436,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>79.</td>
<td>SR 512 HOV lanes – Steele St E to 24 Av E (WSDOT)</td>
<td>Add HOV lanes, trail, and landscaping. Keep paved shoulders.</td>
<td>$23,000,000</td>
<td>PREMIER</td>
</tr>
<tr>
<td>80.</td>
<td>SR 7 – SR 512 to Roy Y (WSDOT Project)</td>
<td>Improve with bike lanes, sidewalks, drainage, raised crosswalks, refuge islands, and bus pullouts.</td>
<td>$8,000,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>81.</td>
<td>SR 7 – SR 512 to 96 St E (WSDOT Project)</td>
<td>Improve intersections &amp; channelize. Minor widening. Add sidewalks.</td>
<td>$3,813,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>82.</td>
<td>SR 7 – 22 Av E to Roy Y (WSDOT Project).</td>
<td>Paved shoulders and sidewalks, or trail.</td>
<td>$2,003,000</td>
<td>STATE</td>
</tr>
<tr>
<td>83.</td>
<td>Tacoma/Rainier Rail Trail -- (72 St/McKinley) to SR 512 (Tacoma ROW)</td>
<td>Trail</td>
<td>$852,000</td>
<td>TACOMA</td>
</tr>
<tr>
<td>84.</td>
<td>Tule Lake Rd -- Spanaway Loop Rd S to SR 7</td>
<td>Path. Curb ramps on west side Tule Lake Rd at Ainsworth.</td>
<td>$21,000</td>
<td>HIGH</td>
</tr>
<tr>
<td>85.</td>
<td>Yakima Av (7 Av S) -- 144 St to 138 St</td>
<td>Sidewalks and wide curb lanes.</td>
<td>$293,000</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>86.</td>
<td>Waller Rd E -- Brookdale Rd Intersection</td>
<td>Intersection improvements.</td>
<td>No Estimate</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Proj. #</td>
<td>Project Name</td>
<td>Limits</td>
<td>Project Description(^1)</td>
<td>Length in Miles(^2)</td>
</tr>
<tr>
<td>---------</td>
<td>--------------</td>
<td>--------</td>
<td>-----------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>M29C</td>
<td>112(^{th}) St E Woodland Ave E to Puyallup City Limits</td>
<td>Add additional lanes; intersection improvements, drainage, pedestrian and bicycle facilities</td>
<td>1.0</td>
<td>5,192,000</td>
</tr>
<tr>
<td>M34B</td>
<td>128(^{th}) Street E Woodland Ave E to SR 161</td>
<td>Reconstruct to road and drainage design standards, add turn lanes, and pedestrian and bicycle facilities</td>
<td>3.0</td>
<td>5,636,000</td>
</tr>
<tr>
<td>C11B/ M6</td>
<td>Shaw Road E/Military Rd E/122nd Avenue E. SR 410 to Orting-Kapowsin Hwy. E.</td>
<td>Roadway widening, curb, gutter, sidewalks, bicycle facilities, intersection improvements- Note: Corridor strategy now in progress</td>
<td>4.2</td>
<td>13,000,000</td>
</tr>
<tr>
<td>C14</td>
<td>94th Avenue E Puyallup City Limits to 152nd Street E.</td>
<td>Turn lanes, shoulders, pedestrian, bicycle facilities and additional lanes</td>
<td>2.5</td>
<td>12,570,000</td>
</tr>
<tr>
<td>M23</td>
<td>176(^{th}) Street E Woodland Ave E to SR 161</td>
<td>Widen from 2 to 4 lanes, curb, gutter, sidewalk, and appropriate bicycle facilities, and lanes,</td>
<td>1.0</td>
<td>5,192,000</td>
</tr>
<tr>
<td>M20</td>
<td>160(^{th}) Street E Extension SR 161 to 110th Avenue E</td>
<td>New Arterial, curb, gutter, sidewalks and bicycle facilities</td>
<td>0.6</td>
<td>3,990,000</td>
</tr>
<tr>
<td>Proj. #</td>
<td>Project Name</td>
<td>Limits</td>
<td>Project Description¹</td>
<td>Length In Miles²</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>----------------------------------</td>
<td>------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>C13(E15, M8)</td>
<td>176th Street E Extension</td>
<td>SR 161/176th Street E to City Orting</td>
<td>New major arterial with nonmotorized facilities</td>
<td>1.9</td>
</tr>
<tr>
<td>C22A1</td>
<td>SR 161</td>
<td>176 St E to 128 St E</td>
<td>Traffic signal interconnection, channelization, curb, gutter, sidewalks, illumination, and landscaping</td>
<td>7.6</td>
</tr>
<tr>
<td>C12A</td>
<td>128th Street E</td>
<td>Meridian Ave E to Military Rd E</td>
<td>Curb, gutter, sidewalks, pedestrian, and bicycle facilities</td>
<td>1.4</td>
</tr>
<tr>
<td>C12B</td>
<td>122 Street E/Military Rd E</td>
<td>130 Av Ct E to SR 162</td>
<td>Widen to four lanes, pedestrian and bicycle facilities</td>
<td>1.4</td>
</tr>
<tr>
<td>M39</td>
<td>136th Street E</td>
<td>94th Avenue E to 122 Ave E</td>
<td>Roadway channelization, curb, gutter, sidewalk, and bicycle facilities</td>
<td>2.0</td>
</tr>
<tr>
<td>M40</td>
<td>144th Street E</td>
<td>86th Avenue E to 122nd Avenue E</td>
<td>Two lane roadway with sidewalks, bicycle facilities, and possible center turn lane</td>
<td>2.5</td>
</tr>
<tr>
<td>M41</td>
<td>152nd Street E</td>
<td>160th Avenue E/74th Avenue E to 156th St E/78th Avenue E to 122nd Avenue E</td>
<td>Widen from 2 to 4 lanes, channelization, curb, gutter, bicycle facilities, and sidewalks</td>
<td>3.5</td>
</tr>
<tr>
<td>Proj. #</td>
<td>Project Name</td>
<td>Limits</td>
<td>Project Description</td>
<td>Length In Miles</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>--------</td>
<td>---------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>M42</td>
<td>160th Street E</td>
<td>Woodland Ave E to Meridian Avenue E</td>
<td>Add additional lanes, pedestrian and bicycle facilities.</td>
<td>2.0</td>
</tr>
<tr>
<td>M43</td>
<td>Woodland Ave E</td>
<td>SR 512 to 160th St E</td>
<td>Provide center turn lane where appropriate, bicycle and pedestrian facilities, access management strategies</td>
<td>3.3</td>
</tr>
<tr>
<td>M46</td>
<td>47th Ave E-City of Puyallup project</td>
<td>Meridian Ave E to 110 Ave E</td>
<td>Construct new roadway, curb, gutter, sidewalks</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>122nd Street E</td>
<td>110 Ave E to Military Rd</td>
<td>Bring roadways and intersections to current standards. Provide appropriate bicycle facilities and sidewalks in areas of highest nonmotorized potential. Work with City of Puyallup in developing a strategy for meeting needs of this network.</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>111th St E</td>
<td>122 St E to 128 St E</td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>43rd Ave SE-City of Puyallup Project</td>
<td>Meridian Ave E to 110 Ave E</td>
<td></td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>110th Ave E</td>
<td>116 St E to 120 St E</td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td>M47</td>
<td>164th St E</td>
<td>110th Ave E to Sunrise Blvd/134th Ave E</td>
<td>Convert to public thoroughfare, widen from 2 to 4 lanes, and provide bicycle and pedestrian facilities</td>
<td>1.5</td>
</tr>
<tr>
<td>Proj. #</td>
<td>Project Name</td>
<td>Limits</td>
<td>Project Description¹</td>
<td>Length in Miles²</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>M58</td>
<td>110 Ave E to Sunrise Blvd E</td>
<td>Roadway widening, from 2 to 4 lanes, and provide bicycle and pedestrian facilities</td>
<td>1.4</td>
<td>3,485,000</td>
</tr>
<tr>
<td>M59</td>
<td>86th Ave E to 176th St E</td>
<td>Construction of &quot;missing&quot; sections, turn lanes, curb, gutter, sidewalks and appropriate bicycle facilities</td>
<td>4.0</td>
<td>33,000,000</td>
</tr>
</tbody>
</table>

Total 217,847,000

Nonmotorized Recommendations

<table>
<thead>
<tr>
<th>Proj. #</th>
<th>Project Name</th>
<th>Limits</th>
<th>Project Description¹</th>
<th>Length in Miles²</th>
<th>Estimated Cost ($)³</th>
<th>SHCPB Recommended Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>M61</td>
<td>Tacoma &quot;Pipeline&quot; Trail</td>
<td>City of Tacoma line to east of Meridian Ave E</td>
<td>Develop nonmotorized trail along utility easement</td>
<td>1.5</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>M62</td>
<td>Chapman Memorial Trial</td>
<td>86 Ave E to 94 Ave E</td>
<td>Develop nonmotorized trail along utility easement</td>
<td>0.8</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>M63</td>
<td>94 Ave E to Gem Heights Drive E</td>
<td>Develop nonmotorized facility</td>
<td>0.6</td>
<td>High</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Assume curb, gutter, and sidewalk for all roadway improvements
²Approximate Distance Only
³These are "order of magnitude" cost estimates only- these are for planning level purposes only- Values will be later rounded to nearest 1 thousand $
Chapter 13: UTILITIES ELEMENT

CONTENTS

Introduction ................................................................................................... 13-2
Energy ............................................................................................................ 13-3
   Electricity ............................................................................................................................... 13-4
   Natural Gas ............................................................................................................................ 13-5
Telecommunications ...................................................................................... 13-7
Sanitary Sewer Service and Wastewater Treatment ........................................... 13-8
Solid Waste and Sustainable Resources Management ........................................ 13-11
Domestic Water Systems ............................................................................. 13-12
Storm Drainage and Surface Water Management .......................................... 13-14
INTRODUCTION

The Utilities Element addresses utility services within Pierce County over the next 20 years to identify lands useful for public purposes, such as utility corridors, landfills, sewage treatment facilities, and other public uses.

Issues:

- Provision of utility services within cities’ urban areas and newly annexed portions of cities and towns
- Ability of utilities to utilize public rights-of-way
- The placement of utility lines underground
- Coordinated construction of new roads, road improvements, and road maintenance with under road infrastructure
- Identification of utility corridors
- Need for utility facilities throughout the region, which may pass through but not be used exclusively by Pierce County residents such as natural gas pipelines

To provide efficient utility and transportation service, it is important to coordinate building and maintenance of new or existing roads with the building and maintenance of utility lines. This coordination is financially beneficial and helps avoid removing parts of newly paved roads to install utilities.

GOAL U-1 Provide for the location of utility facilities.

U-1.1 Include facilities as permitted uses in appropriate land use classifications.
U-1.2 Coordinate with providers during the permitting process for new development.
U-1.3 Design new development to facilitate the provision and installation of systems for the full range of services.
U-1.4 Encourage compatibility between facilities and adjacent land uses.
U-1.5 Prioritize facilities close to areas containing existing or future commercial and industrial development.

GOAL U-2 Provide urban level facilities and services only within the designated Urban Growth Areas prior to or concurrent with development.

U-2.1 Encourage the provision of urban level services from cities or appropriate regional service providers.
U-2.2 Encourage special service districts to consolidate or dissolve with the provision from cities or regional providers.
U-2.3 Preserve the rural way of life by not providing urban level of services within rural areas.
U-2.4 Urban level services associated with tourism may be required in some rural centers to protect public health and safety.
GOAL U-3  Ensure adequate utility capacity for future growth.
   U-3.1  Use a minimum 20-year planning horizon and identify new facilities, expansions, and improvements that will be needed to support growth.

GOAL U-4  Foster predictability in processing permits and applications for utility facilities.

GOAL U-5  Encourage water and energy conservation.
   U-5.1  Encourage the use of alternative energy sources.
   U-5.2  Support technologies that encourage water and energy conservation.

GOAL U-6  Coordinate construction of new roads, improvements, and maintenance with providers.
   U-6.1  Locate utility lines underground wherever practicable, using sound engineering judgment.
   U-6.2  Coordinate with providers of underground utility lines on major commercial arterials.

GOAL U-7  Establish and amend as necessary utility service areas.
   U-7.1  Establish a process to resolve conflicts between providers.

GOAL U-8  Maintain consistency between providers’ and County plans.
   U-8.1  Retain copies of comprehensive system plans of each utility serving the County.
   U-8.2  Refer to the comprehensive system plans of utilities in amendments to the Comprehensive Plan.
   U-8.3  Provide the utility providers with the Pierce County Comprehensive Plan to use in planning future facilities.
   U-8.4  Provide utilities with annual updates of population, employment, and development projections.
   U-8.5  Seek to jointly evaluate patterns and rates of growth, and compare the results to demand forecasts.

GOAL U-9  Foster reliable and cost-effective services.
   U-9.1  Encourage the joint use of utility corridors.
   U-9.2  Site new utility facilities and provide standards to reasonably avoid or mitigate adverse environmental effects.

ENERGY

Issues:

- Use of alternative sources of power such as solar and wind power
- Capacity of electric utility facilities
- Expansion of natural gas service areas
• Inconsistencies between the Washington Utilities and Transportation Commission and the GMA
• The ability of utilities to use public rights-of-way
• Joint-trenching of utility lines
• Use of natural gas for backing up hydroelectric power

**ELECTRICITY**

Unincorporated Pierce County has 10 electric purveyors with different customer bases and diverse service areas which may overlap. There are many electric purveyors, particularly rural electric systems, because the large public and private utilities did not want the expense of extending lines and facilities into less densely populated areas. All 10 electric utilities operating in Pierce County are Bonneville Power Administration (BPA) customers and share access and use of transmission facilities. A one utility concept, fostered by BPA, is used by utility companies in facilities planning.

Puget Sound Energy and Tacoma Public Utilities own generation facilities; Tacoma Public Utilities relies on BPA for the remaining part of its energy needs while Puget Sound Energy relies on BPA for only a small percentage of its resource mix. Parkland Light and Water, Elmhurst Mutual Power and Light Company, Tanner Electric, Ohop Mutual Light Company, Alder Mutual Light Company, Lakeview Power and Light Company, Peninsula Light Company, and Lewis County PUD rely on BPA for all of their energy needs.

Electric utility facilities in Pierce County have adequate capacity to serve existing load. Individual utilities have comprehensive system plans to expand capacity as load growth occurs. Capacity ratings of individual equipment and facilities will not be sufficient to determine overall transmission

Puget Sound Energy Profile
- Largest energy utility in the state
- Provides electric power to more than one million customers, and serves the majority of Pierce County
- Approximately 46% of the electricity PSE customers use comes from PSE’s own power plants
- Has about 3,000 megawatts of power-generating capacity
- Conducts routine inspections and maintenance of 13,000 miles of power lines
- Maintains 354 substations, 10,000 miles of power cable, and more than 330,000 power poles

Tacoma Public Utilities Profile
- Serves 169,112 customers (54.7% within city limits and 45.3% outside) within 180 square miles in the western portion of Pierce County
- Owns 2,333 miles of transmission and distribution lines (1,529 overhead; 804 underground) with a system firm load of 5 billion kWh
- Power supply of 90% hydroelectric power, and of that, 45% is provided by TPU’s own hydroelectric power facilities
- Uses 4 main/transmission substations, 5 switching stations, 48 distribution substations, 12 dedicated distribution substations, 23 Bonneville Power Administration customer substations, and 8 generation switchyards
system capacity. Electric system capacity relates to the ability to maintain service, not the quantitative ratings of equipment or facilities.

Pierce County needs are only one component of the regional electrical system. Therefore, the capacity analysis for the County is part of a regional analysis. The County has influence over the location of and development regulations for distribution lines, substations, and transmission lines. BPA works with its electric company customers to ensure that facilities and load are provided when needed. Detailed analyses have been and will be conducted by the individual service providers on the basis of planned land use.

No changes to the service areas of Pierce County electricity purveyors are anticipated. Planned construction of electric utility facilities serving local load areas is based on load rather than time (years). Utilities determine the need for expanded or new electric utility regional transmission network facilities on the basis of established planning standards which define required system performance under specified conditions, including load and generation levels, equipment outages, fault conditions, and equipment ratings.

**GOAL U-10** Accommodate regional electrical facilities.

U-10.1 Ensure the availability of safe, adequate, and efficient electrical service without negatively affecting other jurisdictions.

U-10.2 Accommodate additions and improvements that enhance the capacity and reliability of regional resources.

U-10.3 Provide for utility corridors to supply appropriate service within and outside the County.

**GOAL U-11** Support the expansion of facilities to meet future load requirements, and conservation measures to accommodate future growth.

U-11.1 Encourage the use of energy-conserving electrical infrastructure in new and retrofitted development.

**NATURAL GAS**

Puget Sound Energy (PSE) provides natural gas service to six counties, including unincorporated Pierce County and several other providers:

- **Parkland Light and Water** serves 4,400 households with electricity (100 million kilowatt hours) in the northern portion of the Parkland area, including Pacific Lutheran University. PLW owns one substation and shares a second with Elmhurst Mutual Light. Parkland Light and Water purchases all power from Bonneville Power Administration.

- **Elmhurst Mutual Light** serves over 14,000 meters in parts of Parkland, Spanaway, Mid-County, and Frederickson.

- **Tanner Electric** serves 1,175 meters on Anderson Island.

- **Ohop Mutual Light** serves around 4,200 meters on 420 miles of line in the southern part of Graham and around Eatonville.

- **Alder Mutual Light** serves some of the western part of the Upper Nisqually Valley, below Eatonville.

- **Lakeview Power and Light** serves more than 9,023 meters in part of unincorporated Pierce County, east of Lakewood.

- **Peninsula Light** serves over 25,000 customers on 31,000 meters with 977 miles of line over 112 square miles in the Gig Harbor and Key Peninsulas, and Fox Island.

- **Lewis County PUD** provides electricity to approx 31,000 consumers through 3,370 miles of distribution line with some in Pierce County in the Upper Nisqually Valley area.
incorporated Pierce County cities and towns. All of the gas PSE acquires is transported into the service areas through large interstate pipelines owned and operated by another company. Once PSE takes possession of the gas, it is distributed to customers through more than 21,000 miles of PSE-owned gas mains and service lines over 2,900 square miles, serving over 750,000 customers. PSE controls its gas-supply costs by acquiring gas, under contract, from a variety of gas producers and suppliers across the western United States and Canada. They purchase 100% of the natural gas supplies needed to serve customers.

Natural gas is supplied through the Northwest Pipeline Corporation (NWP). NWP's natural gas transmission system within the State of Washington consists primarily of two large pipelines, one 26-inch and one 30-inch, running north to south through central Pierce County. The natural gas comes from a wide range of sources in North America—60% from Northern British Columbia and Alberta, and 40% from domestic sources including the San Juan Basin in New Mexico and Texas.

Within Pierce County, PSE owns and operates 2,491 miles of natural gas pipeline, 8 gate stations, and a liquefied natural gas storage facility in Gig Harbor, and it served around 141,666 customers as of 2010. In recent years, major maintenance and reliability projects include the $15 million installation of more than 5 miles of new 16-inch natural gas line to increase system reliability and accommodate current and future growth in south Tacoma and surrounding areas (completed 2008).

PSE operates under franchises with unincorporated Pierce County and the cities of Puyallup, Milton, Sumner, Bonney Lake, Orting, Tacoma, Fircrest, Fife, and DuPont, as well as the towns of Ruston and Steilacoom. Gas availability is limited to predominantly urban areas.

GOAL U-12 Encourage natural gas service within an Urban Growth Area.

U-12.1 Coordinate land use and facility planning to allow siting and construction of natural gas distribution lines within rights-of-way.

TELECOMMUNICATION ISSUES:
- Rapidly changing technology
- Evolving services and providers
- Ability of utilities to site new and expand existing antennas and towers
- Competition between providers

PROVIDERS MAY INCLUDE:
- U.S. Cellular
- Verizon
- AT&T
- Sprint
- T-Mobile
- Cricket Wireless
- Vonage
- CenturyLink
- Comcast
- Click! Cable TV
- Rainier Connect
- DISH Network
- DirecTV
The telecommunication industry has changed substantially in recent decades and continues to change rapidly. Services include voice, data, and video, among others on various mediums such as wire, fiber optic, or radio wave. Expanded telephone and cable availability and technology have increased competition in the industry. Services are supplied in unincorporated Pierce County by a variety of public and privately-owned and operated providers. Providers may offer a variety of services, or be subsidiaries of larger companies providing a large range of services.

Various types and levels of telecommunication facilities are located throughout the County and state to serve Pierce County residents. Due to the nature of telecommunication, facilities are not necessarily located near the served customers. Many facilities, including aerial and underground, are co-located with those of the local electric power providers. With the technology used by telecommunication facilities, capacity is a growing problem for companies providing service locally.

Where feasible, cellular facilities utilize existing tower structures, poles, and buildings where antennas can be mounted on rooftops and electronic equipment located within the building itself. Unlike other utilities, the cellular telephone industry does not plan facilities far into the future and analyzes market demand to determine expansions into new service areas.

**GOAL U-13**

- **Permit antennas, towers, fiber optics, and new technology for service purposes.**
  - **U-13.1** Allow for the placement of antennas and towers required by providers.
  - **U-13.2** Develop performance standards for antennas and towers in various land use classifications.
  - **U-13.3** Utilize existing structures rather than constructing new wireless communication facilities.
  - **U-13.4** New facilities should allow for co-location.
  - **U-13.5** Providers must demonstrate that co-location on an existing site is not feasible before a new site is considered.
  - **U-13.6** Encourage placing facilities in locations where impacts will be minimal.
  - **U-13.7** Encourage locating facilities on sites where impacts to rural character can be mitigated.

**GOAL U-14**

- Encourage the design and construction of wireless communication sites to be compatible with surrounding land uses.
  - **U-14.1** Develop design guidelines for wireless communication facilities.
  - **U-14.2** Develop viewshed guidelines to ensure the appropriate location of wireless communications facilities.
SANITARY SEWER SERVICE AND WASTEWATER TREATMENT

Issues:

- Federal and state regulations may become more restrictive for effluent discharges to surface waters. Advanced (tertiary) treatment standards are likely for all treatment facilities. A number of questions follow:
  - What upgrades will be needed to each agency’s plants to meet standards?
  - How will future standards affect plant capacities to serve growth?
  - Is there sufficient land available for each plant for expansion needs?
  - How much will it cost?
  - What alternatives will exist?

- Provision of permanent sewer services to those areas of the Chambers Creek-Clover Creek Basin still on septic tanks and community drainfields

The Unified Sewer Plan for the Pierce County Wastewater Utility (USP), 2010, is the general sewer plan for major sewerage facilities owned, operated, or maintained by the Pierce County Sewer Utility within the Chambers-Clover Creek, Puyallup, and Kitsap sewerage basins. The goal of the Unified Sewer Plan is to promote a jobs-based economy and growth management decision, in ways that utilize the lowest life cycle costs while continuing to protect water quality. As a component of the Comprehensive Plan, the USP inventories facilities, discusses the relationship of land use decisions to sewer services, and identifies the capital facilities to serve the projected growth within the basins.

The plan ensures that all portions of the Urban Growth Area (UGA), including the Urban Growth Areas of cities without wastewater treatment plants fall within an area of planned sanitary sewer service. The USP continues the centralized treatment system and maximizes the use of treatment.

Pierce County’s basic policy continues to be to provide sanitary sewer service within the urban area in support of the Comprehensive Plan.

Pierce County is served by over 18 wastewater agencies with wastewater treatment plants located throughout the County. The majority of these systems are located within the Puyallup River sewerage basin. No countywide sewerage planning document exists which addresses the coordination of sewer and wastewater treatment services within the unincorporated areas of the County in other sewerage drainage basins. Each sewerage system has an adopted sewerage general plan, which applies to that respective jurisdiction.

A complete listing of sewer service areas and providers, Pierce County facilities, infrastructure, and capacities can be found in the 2010 Unified Sewer Plan.

RESOURCES:

- Unified Sewer Plan, 2010
- 2014-2019 Sewer Improvement Program
- Basin Plans
The remainder of the County relies on on-site septic systems for wastewater treatment. Within the urban area, Countywide Planning Policies require that these systems be interim until such time as sanitary sewer systems become available or the on-site septic system fails. Within unincorporated Pierce County, this represents less than 1% a year of new connections. The Tacoma-Pierce County Health Department regulations cover on-site sewage treatment systems. Connections to sanitary sewer are required by PCC 13.04.030 under certain circumstances.

The Biosolids Management Program’s goal is to handle biosolids without contaminating natural resources. It gives priority to land application of biosolids from the County’s treatment plant. Federal and state land application regulations and the Tacoma Pierce County Health Department’s (TPCHD) Sludge Utilization Policy encourage the use of biosolids as a beneficial resource. The program evaluates a complete range of utilization and disposal alternatives and recommends a program based on the beneficial use through land application.

GOAL U-15 Provide sanitary sewers within the urban area.

U-15.1 Coordinate and prioritize phased expansion of sewer interceptors with municipalities.

U-15.2 Expansion of the sewer system shall not be justified solely by sewer treatment plant capacity.

U-15.3 Development that is inconsistent with the Countywide Planning Policies, the Unified Sewer Plan, urban growth boundaries, the applicable municipal land use plan, or County Comprehensive Plan shall not be justified solely by sewer treatment capacity.

U-15.4 Sewer interceptors inside Urban Growth Areas must follow the planned phasing of capital facilities unless:

U-15.4.1 Sewer service will remedy groundwater contamination and health problems, as determined by the local health department; and

U-15.4.2 Extension/expansion is necessary to protect basic public health and safety, the environment.

U-15.5 Utilize community drainfields as an interim means to achieve urban densities within the Urban Growth Area until such time sanitary sewer service is available.

U-15.6 Recognize on-site septic systems within the Urban Growth Area are considered interim facilities.

U-15.6.1 Incorporate into interim on-site and community septic systems infrastructure that facilitates future sanitary sewer hookup; and

U-15.6.2 Acknowledges the applicant and subsequent owners will not object to participation in future Local Improvement Districts or hook up actions.

U-15.7 Sewer service cannot be provided outside the Urban Growth Areas unless:

U-15.7.1 Sewer service will remedy groundwater contamination and health problems, as determined by the local health department; and
U-15.7.2  Extension/expansion is necessary to protect basic public health and safety, the environment, is financially supportable at rural densities, and cannot be used to permit urban development; or

U-15.7.3  A formal binding agreement to service an approved planned development was made prior to the 1995 establishment of the Urban Growth Areas.

U-15.7.4  The extension of public facilities and utilities is authorized to serve a school sited in a rural area pursuant to Additional Rural Policies - Schools in Rural Areas LU-78.5.

U-15.8  Recognize that a sewer interceptor or trunk line constructed or planned to be constructed through a rural area to convey wastewater from a designated Urban Growth Area to a sewerage facility in another designated Urban Growth Area shall not constitute a change of conditions that can be used as the basis for a change in land use designation or urban/rural designation, either for adjacent or nearby properties.

U-15.9  Encourage alternative sewage disposal methods approved by the Tacoma-Pierce County Health Department in rural areas, provided that any developments served are consistent with residential densities allowed in rural areas as adopted in the Pierce County Comprehensive Plan.

U-15.10  Expand the Chambers Creek Regional Wastewater Treatment Plant to meet needed capacity and to further reduce pollutants discharged to Puget Sound.

U-15.11  Maintain emergency response plans for wastewater treatment plants.

GOAL U-16  Utilize best construction methods and practices and innovative techniques in the design and construction of sewer utilities.

U-16.1  Utilize best management practices for surface water management and erosion control during construction of sewer utilities.

U-16.2  Minimize impacts to traffic and transportation networks during the construction of sewer utilities.

U-16.3  Adjust facility locations and alignments in the event that contaminated soils, groundwater, or buried wastes are identified during construction.

U-16.4  Restore disturbed land areas after construction of sewer utilities and facilities located within the plan area.

U-16.5  Preferred routing for sewer lines is through road rights-of-way, power line rights-of-way, and other existing easements.

U-16.6  Support the pretreatment of industrial wastes.

GOAL U-17  Coordinate with the health department in the review and approval of septic permits to determine if flood-prone areas exist on the subject property.

U-17.1  Limit the installation of septic systems in areas prone to high surface water and flooding.
**U-17.1.1** Require applicants to illustrate any flood-prone areas on septic permit applications.

**U-17.1.2** Identify the limits of the flood-prone area of the property prior to installation of the septic system and/or issuance of building permits.

**U-17.2** Septic systems should be maintained and pumped consistent with the health department's operation and maintenance program.

### SOLID WASTE AND SUSTAINABLE RESOURCES MANAGEMENT

The Tacoma-Pierce County Solid Waste Management Plan (SWMP) provides for and supports efforts to increase recycling and diversion of waste to preserve and ensure disposal capacity, reduce emissions, and prevent pollution. The SWMP is a component of the Comprehensive Plan and more information can be found in the SWMP.

The plan established an aggressive waste reduction and recycling strategy to dramatically decrease per capita waste disposal needs from 4.5 pounds per day (2007) to 1.09 pounds per day (2032). Extending these goals and policies to 2038, with a further reduction to 1 pound per capita per day, means the Pierce County, Tacoma, and the JBLM waste management systems will require 7.7 million tons of disposal capacity over a 25-year period.

By continuing the goals and policies adopted as part of the 2000 plan and 2008 supplement, all of this capacity can be met in-county in the LRI Landfill owned and operated by Waste Connections. The LRI Landfill, a designated Essential Public Facility, located at the intersection of 304th Street and Meridian in south Pierce County, opened on December 13, 1999. The County also owns and operates transfer and composting facilities that are further outlined in the SWMP.

**GOAL U-18** Provide reliable and cost-effective service as detailed in the most recent update of the Tacoma-Pierce County Solid Waste Management Plan.

**U-18.1** Design and locate facilities with proper consideration for health and environmental impacts.

**U-18.2** Ensure that all residents and businesses have access to refuse disposal and recycling collection services.

**U-18.2.1** Consider the need to accommodate disposal waste caused by emergencies in addition to planned, regular disposal capacity needs.

**U-18.2.2** Encourage waste collection companies to maintain cost-effective recycling programs.

**U-18.2.3** Provide information regarding the various authorized locations where the public can dispose of problem solid waste.

### RESOURCES:

- 2000 Solid Waste Management Plan (SWMP)
- 2008 Supplement
- 2010 Waste Audit
- Landfill Capacity Analysis
GOAL U-19  Support efforts to reduce solid waste, and increase recycling and diversion of waste to assure disposal capacity, reduce emissions, and prevent pollution.

U-19.1  Encourage manufacturers and retailers to reduce packaging waste at the retail level.

U-19.2  Provide for the separation of waste prior to landfhilling.

U-19.3  Encourage private industry to provide sufficient capacity for processing of recyclables.

U-19.4  Encourage new technologies for disposal or recycling of solid waste.

U-19.5  Promote home composting of yard and food waste.

U-19.6  Encourage a public outreach program that targets illegal dumping, improper storage of solid waste, and ways residents can report problems.

U-19.7  Encourage education on waste reduction and recycling programs.

DOMESTIC WATER SYSTEMS

The Pierce County Coordinated Water System Plan (CWSP) was established in 1988 and the current version of the plan was adopted in 2001. The CWSP includes a regional supplement which presents an assessment of water supply needs in Pierce County and a program to meet those needs.

The plan is also made up of individual water system plans prepared by the utilities for their designated service area, affecting only Group A water systems. All individual water system plans must be prepared within established guidelines and be consistent with the policies and procedures outlined in the regional supplement.

Water system plans prepared by individual water purveyors are required to contain information regarding the water system's capacity and its ability to provide service to expected growth, both in terms of physical infrastructure and water rights. Please refer to the CWSP for further information.

GOAL U-20  Ensure adequate water supply for all uses that support growth.

U-20.1  Support detailed availability studies to determine supply.

U-20.2  Promote more efficient management of groundwater resources.

U-20.3  Suspend enforcement of exclusive future service areas until that system has an approved water system plan.

U-20.4  Review and if necessary update previously adopted plans to be consistent with the Comprehensive Plan.

GOAL U-21  Coordinate water resource planning.
U-21.1 Implement the policies of the Coordinated Water System Plan (CWSP).
U-21.2 Update the CWSP to address emergent issues.
U-21.3 Engage system providers in any process to amend Comprehensive Plan, Community Plans, and development regulations regarding public water systems and public water facilities.
U-21.4 Form an appropriate study group to review issues.
U-21.5 Require plans prepared by public water utilities to demonstrate that water resource management planning has been coordinated with adjacent Group A purveyors.

GOAL U-22 Preserve the high quality and supply of groundwater resources.
U-22.1 Support the long term monitoring of groundwater quality and quantity, for basins that provide domestic water supplies.

GOAL U-23 Encourage metering or measuring all public water withdrawals or diversions.

GOAL U-24 Protect the quality of groundwater used for domestic water supplies.
U-24.1 Protect the quality of groundwater and minimize damage from flooding by implementing an effective surface water management program.
U-24.2 Monitor and enforce wellhead protection plans.
U-24.3 Improve well construction and abandonment practices.
U-24.4 Support measures that keep water purveyors’ sources from going dry in the summer.

GOAL U-25 Prior to development, take into account the availability of potable water.

GOAL U-26 Promote reliable water service.
U-26.1 Ensure there is a balance between water supply and demand.
U-26.2 Recognize flexibility in bulk regulations for system infrastructure.
U-26.3 Provide options in cases where the designated provider cannot provide timely or reasonable service.
U-26.4 Prohibit new individual wells in designated service areas unless the provider cannot provide service in a timely and reasonable manner.
U-26.5 Limit new wells and development activities that require water withdrawals in any areas that are identified as being at risk for saltwater intrusion.

GOAL U-27 Prohibit new wells on sites that are at high risk for saltwater intrusion, unless it can be demonstrated that additional groundwater withdrawal will not worsen the problem.

GOAL U-28 Support and educate about water conservation measures.
U-28.1 Promote water conservation measures in the summer months when saltwater intrusion tends to peak.
Encourage conservation measures to include the use of reclaimed water.

Purgevors interested in regional supply network development should participate in the planning and construction of transmission, source, storage, and other facilities within their service area which could be jointly used by adjacent purveyors.

Implement the satellite management program for new or failing water systems.

Discourage the proliferation of small water systems except for cluster developments in rural areas.

New water systems should be permitted only when operated under a management system as approved under the Pierce County Coordinated Water System Plan.

**STORM DRAINAGE AND SURFACE WATER MANAGEMENT**

People depend on and enjoy water but it creates real problems when there is too much or its quality is compromised. Pierce County addresses water issues including flood risk reduction, water quality, and preservation of natural drainage systems. The County promotes the use of low impact development principles and best management practices. This helps ensure Pierce County’s rivers and streams are clean, healthy, and safe.

**Issues:**

- Increasing cost of managing stormwater
- Greater emphasis on eliminating future potential runoff and mitigating for past allowance of offsite runoff
- Greater emphasis on infiltration and potential groundwater quality
- Greater emphasis on biological health protection of streams and people
- Greater emphasis of the State to impose nonpoint source pollution controls
- Greater emphasis on salmonid habitat protection, preservation, and restoration
- Drainage systems both natural and constructed do not stop at jurisdictional boundaries
- Aesthetics of storm drainage facilities
- Addressing pollution in stormwater by requiring low impact development principles and best management practices, water quality treatment features in the design and construction of facilities, requiring treatment from new development, and through public education
- The need to update the Federal Emergency Management Agency (FEMA) maps that identify the floodways and other flood hazard areas
- The large public expense to repair, expand, or replace developer constructed stormwater facilities that were improperly designed or sized

Pierce County provides surface water management services to non-federal unincorporated Pierce County—approximately 900 square miles. JBLM, McNeil Island, and Mount Rainier are not within the County's service area.
Services include the planning, permitting, design, construction, operation and maintenance of public regional storm drainage and flood risk reduction facilities, along with associated water quality and fish and wildlife habitat projects which protect and restore water quality and enhance flood risk reduction facilities. Stormwater facilities constructed for residential subdivisions with public roads and constructed to County standards can be deeded to Pierce County Surface Water Management (SWM) utility after construction. Inspection, maintenance, and operation of these stormwater facilities are a growing responsibility for the County.

Basin plans look in greater detail at the character of the geographic basin area and projected storm drainage and surface water management needs. Those are based on growth forecasts, planned land use, and environmental regulations existing at the time of the plan’s development. Pierce County has developed basin plans for nine watershed areas and the Rivers Flood Hazard Management Plan for the rivers and large streams of Pierce County. The need for additional capacity in storm drainage and flood protection facilities is analyzed in both the basin plans and the Rivers Plan. The basin plans and Rivers Plan identify capital facilities improvements and programmatic initiatives that can provide nonstructural solutions to meet demand.

The nine basin plans are:

- Clover Creek Basin Plan
- Gig Harbor Basin Plan
- Muck Creek Basin Plan
- Mid-Puyallup Basin Plan
- Clear/Clarks Creek Basin Plan
- Key Peninsula/Islands Basin Plan
- Browns-Dash Point/Hylebos Basin Plan
- Lower White River Basin Plan
- Nisqually River Basin Plan

**GOAL U-31** Strive to prevent the loss of life, the creation of public health and safety problems, and loss of or damage to public and private property due to flooding.

**U-31.1** Preserve undeveloped lands that provide storage for runoff during storm events.

**U-31.2** Construct flood risk reduction facilities and stormwater facilities that support the protection of infrastructure and development.

**U-31.3** Coordinate with the federal government to ensure accuracy of the FEMA maps.

**U-31.4** Continue to reduce the potential for flood-related damage through participation in the National Flood Insurance Program (NFIP).

**U-31.5** Design projects so stormwater enters stream systems gradually with lower peak flows.

**U-31.6** Maintain historic year-round flow levels.

Federal and state regulations:
- **Clean Water Act**
  - Municipal stormwater NPDES permits
  - TMDLs
  - Section 401 certification
  - Army Corps of Engineers Section 404 permits
- **National Flood Insurance Program**
- **Endangered Species Act** and listings in the Puget Sound area
GOAL U-32  Improve surface water and groundwater quality.

U-32.1  Address water quality in stormwater facility maintenance and capital improvement projects.

U-32.2  Reduce and eventually eliminate harm to water quality from stormwater discharges. Do this through use of on-site infiltration and best management practices and source control of pollutants; control of development density and location; preservation of stream corridors, wetlands and buffers; and development, maintenance of a system of stormwater retention and detention facilities, and retrofit of existing facilities to eliminate or reduce untreated stormwater flows.

GOAL U-33  Establish and adopt ways to solve existing surface water problems and prevent future problems.

U-33.1  Balance engineering, economic, environmental, and social factors.

U-33.2  Include a range of capital and programmatic activities.

U-33.3  Pursue nonstructural measures before pursuing structural measures.

U-33.4  Use basin planning as a strategy for achieving federal and state water quality standards.

U-33.5  Use basin plans to identify modifications to land use designations and development regulations that will protect water quality and riparian habitat, and to alleviate flooding problems.

GOAL U-34  Coordinate the basin planning process with the community planning process to address surface water runoff, flooding issues, and future capital improvement projects.

GOAL U-35  Manage stormwater in consideration of the varied uses associated with natural drainage systems.

U-35.1  Preserve opportunities for other uses.

U-35.2  Structural flood risk reduction measures should not obstruct fish passage.

U-35.2.1  Preserve or enhance existing flow characteristics for fisheries and other uses of the riparian zone.

U-35.2.2  Flood management activities should not result in a net loss of fish and wildlife or damage fish and wildlife resources.

U-35.2.2.1  Protect or improve the diversity of natural habitats.

Nonstructural measures include (U-33.3):

- Public acquisition of property
- Development rights
- Regulations
- Policy guidelines
- Site design standards
- Operational policies
- Technical assistance
- Enforcement
- Public outreach
- Educational programs
U-35.2.3 Design stormwater facilities for compatibility between utility facilities and adjacent land uses.

U-35.2.4 Protect, preserve, and restore natural drainage systems in both the urban and rural areas.

U-35.2.5 Promote infiltration, bioretention, dispersion, and permeable pavement.

GOAL U-36 Coordinate with public and private sectors to ensure cost-effective stormwater management, flood risk reduction measures, and equitable distribution of costs.

U-36.1 Include opportunity for interested citizens, groups, and agencies to be involved in the planning process.

U-36.2 Work with cities and towns toward standardization of regulations.

U-36.3 Coordinate National Pollutant Discharge Elimination System stormwater permit implementation, water quality monitoring, and database management interlocally using common protocols.

U-36.4 Work with cities to restore funding for levee system maintenance that benefits incorporated areas protected by the Puyallup River/White River levee system.

GOAL U-37 Reduce or eliminate the stormwater drainage impacts from roadways onto adjacent properties and into surface waters.

GOAL U-38 Make the use of Low Impact Development (LID) techniques in public and private developments the preferred and most widely used method of land development.

U-38.1 Coordinate monitoring and evaluation of projects that utilize LID standards to determine the effectiveness of the established goals.

GOAL U-39 Ensure that negative downstream impacts will not occur from on-site runoff.

GOAL U-40 Implement programs to reduce impacts associated with stormwater runoff.

GOAL U-41 Integrate public regional stormwater detention and retention facilities into the natural environment.

U-41.1 Recognize that regional facilities can provide aesthetic value, recreation, and fish and wildlife habitats in park or open space settings.

U-41.2 Design facilities with a natural, aesthetically-pleasing appearance.

GOAL U-42 Locate new facilities where they would serve to extend identified fish and wildlife habitat areas and open spaces, parks, and greenbelts.

GOAL U-43 Design detention facilities to mimic natural systems, provide recreational opportunities, provide aquifer recharge, or function like wetlands.

GOAL U-44 Plant trees and native, non-invasive vegetation that is suitable for areas designed to retain water.

GOAL U-45 Coordinate the general flood control strategy with the federal fisheries service approved salmon recovery plan for Puget Sound.
GOAL U-46  Establish pond depth and slope requirements that serve to reduce potential safety hazards.

GOAL U-47  Minimize fencing around ponds to allow for wildlife movement and habitats where feasible.

GOAL U-48  Provide technical assistance to homeowners’ associations and commercial sites for operation and maintenance and source control of pollutants.

U-48.1  Apply fees and liens on properties where the responsible homeowners' association or commercial sites are unresponsive to maintenance of private stormwater facilities.

U-48.2  Monitor existing maintenance agreements.

GOAL U-49  Align SWM Fee Credit Program to incorporate water quality treatment as well as flow reduction as mandatory eligibility criteria.