
Appendix A

City of Lakewood Comprehensive Plan

Background Report

November 1997

This Background Report was prepared as part of the initial groundwork for development of the Lakewood Comprehensive Plan. The contents reflect the condition of Lakewood shortly after incorporation. Some of these conditions will have changed as part of the ongoing development of the City of Lakewood.

Table of Contents

Chapter 1: Introduction to the Background Report	1-1
1.1 A Short History of Lakewood.....	1-2
1.2 Jurisdictional Boundaries	1-8
1.3 A Vision of Lakewood.....	1-11
1.4 Growth Management Act Policies and Guidelines.....	1-15
Chapter 2: Demographic Description.....	2-1
2.1 Background on Data	2-1
2.2 Population Growth and Dynamics	2-3
Chapter 3: Land Use.....	3-1
3.1 Existing Conditions	3-2
3.2 Land Use.....	3-6
3.3 Trends and Projections	3-40
3.4 Summary of Countywide Policies for Land Use	3-42
3.5 Planning Implications	3-45
Chapter 4: Urban Design and Community Character.....	4-1
4.1 Introduction.....	4-1
4.2 Existing Urban Design and Community Character	4-1
4.3 Overall Policies for Urban Centers.....	4-22
4.4 Planning Implications	4-26

Table of Contents

Chapter 5: Economic Development Element	5-1
5.1 Introduction.....	5-3
5.2 Current Economic Role	5-3
5.3 Economic Location	5-5
5.4 Economic Development Policy Background	5-6
5.5 Planning Implications	5-12
 Chapter 6: Housing.....	 6-1
6.1 Existing Conditions	6-1
6.2 Trends and Projections	6-14
6.3 Countywide Planning Policy	6-21
6.4 Planning Implications	6-23
 Chapter 7: Transportation.....	 7-1
7.1 Existing Conditions	7-1
7.2 Trends and Projections	7-29
7.3 Summary of County Planning Policies for Transportation.....	7-36
7.4 Planning Implications	7-40
 Chapter 8: Utilities	 8-1
8.1 Existing Conditions	8-1
8.2 Trends and Projections	8-12
8.3 Summary of Countywide Planning Policies	8-20
8.4 Planning Implications	8-24

List of Figures

Figure 1.1 Vicinity Map	1-9
Figure 1.2 Census Tract Boundary Map.....	1-10
Figure 1.3 Planning Areas	1-12
Figure 2.1 FAZs/Census Tracts for Lakewood.....	2-2
Figure 2.2 Regional Population Growth Trends: 1980-1996	2-4
Figure 2.3 Income Lakewood Subareas.....	2-8
Figure 2.4 Poverty Status: Lakewood Subareas	2-9
Figure 2.5 Comparison of Poverty Status by Age and Subarea.....	2-10
Figure 2.6 Households, Ownerships, Value, and Rents by Subarea.....	2-11
Figure 3.1 Existing Land Cover.....	3-4
Figure 3.2 Existing Land Use	3-7
Figure 3.3 Zoning	3-23
Figure 3.4 Sensitive Hydrologic Features	3-30
Figure 3.5 Sensitive Geologic Features	3-39
Figure 3.6 Development of Natural Areas in Lakewood 1984-1992.....	3-41
Figure 4.1 Urban Design Analysis.....	4-3
Figure 4.2 Lakewood Urban Center	4-9
Figure 7.1 City of Lakewood Arterial Street Classifications	7-3
Figure 7.2 Existing Traffic Control	7-5
Figure 7.3 Existing Traffic Volumes	7-7
Figure 8.1 Water Purveyors	8-2
Figure 8.2 Wastewater Facilities	8-6
Figure 8.3 Electric Utilities Approximate Service Areas	8-9

List of Tables

Table 1-1 General Goal Statements by Category	1-15
Table 2-1 Regional Population Trends: 1990-1996.....	2-4
Table 2-2 Population Projections: 1995-2020, City of Lakewood, Region, County and City's Subareas	2-5
Table 2-3 Demographic Patterns: Lakewood, Pierce Co., and Washington State, 1990	2-7
Table 2-4 Household Income and Poverty Status by Lakewood Subarea	2-9
Table 2-5 Household Size, Tenure, Home Value, and Rent by City and Subarea	2-12
Table 2-6 Composition of Housing Units in Lakewood: 1997.....	2-13
Table 2-7 Comparison of Multifamily Units among Pierce County Cities: 1997	2-13
Table 2-8 Percentage of Multifamily Units in Region: 1997	2-13
Table 2-9 Population Density of Pierce County, South King County, and Cities of Comparable Size to the City of Lakewood: 1996.....	2-14
Table 2-10 Lakewood Renter Households in Need of Assistance by Type Household, Income Level, and Housing Need 1990.....	2-15
Table 2-11 Lakewood Owner Households in Need of Assistance by Type Household, Income Level, and Housing Need 1990.....	2-17
Table 2-12 Distribution of Population and Housing Units within Lakewood: 1990...	2-19
Table 2-13 Distribution of Minority and Hispanic Population in Lakewood.....	2-20
Table 3-1 Land Cover in the City of Lakewood.....	3-5
Table 3-2 Categories of Existing Land Uses in the Lakewood Parcel Database.....	3-9
Table 3-3 Planning Area Acreage Summaries.....	3-10
Table 3-4 Distribution of Existing Land Uses in Planning Area 1	3-11
Table 3-5 Distribution of Existing Land Uses in Planning Area 2	3-12
Table 3-6 Distribution of Existing Land Uses in Planning Area 3.....	3-14
Table 3-7 Distribution of Existing Land Uses in Planning Area 4.....	3-16
Table 3-8 Distribution of Existing Land Uses in Planning Area 5	3-17
Table 3-9 Distribution of Existing Land Uses in Planning Area 6	3-18
Table 3-10 Distribution of Existing Land Uses in Planning Area 7	3-20
Table 3-11. Summary of Existing Land Use in the Highway Overlay Zone.....	3-21

List of Tables (continued)

Table 3-12 Existing Lakewood Zoning by Acres	3-21
Table 6-1 Lakewood's Population by Age Categories	6-2
Table 6-2 Age of residents in Lakewood, University Place, and Pierce County, 1990	6-3
Table 6-3 Year Householder Moved into Unit, Lakewood and Pierce County	6-3
Table 6-4 Various Measures of income in Lakewood and Pierce County, 1979, 1989	6-4
Table 6-5 Housing Units in Structure for Lakewood, 1980, 1990, 1997	6-5
Table 6-6 Age of Housing Stock	6-5
Table 6-7 Year Structure Built by Tenure	6-6
Table 6-8 Tenure by Age of Householder, Lakewood and Pierce County, 1990	6-7
Table 6-9 Tenure by Race of Householder	6-7
Table 6-10 Population, Households, and Employment at Fort Lewis and McChord 1970 to 1990	6-8
Table 6-11 Civilian and Military Employment & Veteran Status	6-9
Table 6-12 % of Planning Area Covered by Housing Conditions Survey	6-9
Table 6-13 Housing Condition by Planning Area, City of Lakewood, 1997	6-10
Table 6-14 Condition of Mobile Home Parks, City of Lakewood	6-12
Table 6-15 PCHA Owned Units	6-13
Table 6-16 Lakewood Population and Household Projections, 1990 to 2020	6-14
Table 6-17 Median Home Sale Price and Number of Sales in Lakewood, 1995-1997	6-15
Table 6-18 Home Sales in Lakewood, 1995-1997 by Sale Categories	6-16
Table 6-19 Home Sales in Lakewood, 1995-1997	6-17
Table 6-20 Monthly Owner Costs as a Percent of Household Income	6-17
Table 6-21 Apartment Units by the Size of the Apartment Project	6-18
Table 6-22 Apartment Units in Lakewood by Year Built	6-18
Table 6-23 Average Monthly Rents in Lakewood, University Place and Pierce County, 1995 to 1997	6-19
Table 6-24 Monthly Rental Costs as a Percent of Household Income for Various Jurisdictions	6-20

List of Tables (continued)

Table 6-25 Multifamily Vacancy Rates by Area (in Percent)	6-20
Table 6-26 Multiple Family Vacancy Rates by Number of Bedrooms (in Percent) April 1997	6-21
Table 6-27 Monthly Rental Costs as a Percent of Household Income	6-21
Table 7-1 Level of service criteria for urban and rural roadways	7-11
Table 7-2 City of Lakewood existing corridor level of service	7-12
Table 7-3 Level of service criteria for signalized intersections	7-16
Table 7-4 Existing signalized intersection LOS summary	7-16
Table 7-5 1992-1996 total annual accidents - signalized intersections	7-18
Table 7-6 1992-1996 average annual accident frequency by severity and rates - signalized intersections	7-20
Table 7-7 1992-1996 total annual accidents - roadway segments	7-22
Table 7-8 Pierce Transit Bus Service Routes	7-26
Table 7-9 Existing Non-Motorized Transportation Facilities	7-26
Table 7-10 Year 1990-1996 (through September) traffic accidents involving pedestrians or bicyclists	7-27
Table 7-11 Regional CTR qualifying companies	7-29
Table 7-12 Pierce County recommended road improvement projects	7-30
Table 7-13 20-year transportation improvement projects (TIP) - 1997-2016	7-31
Table 7-14 Pierce County recommended non-motorized transportation improvement projects in Lakewood.....	7-35
Table 8-1 Lakewood Water District 1998-2001 Proposed Capital Improvements.....	8-12
Table 8-2 Projected Population and Average Dry Weather Wastewater System Flows	8-14
Table 8-3 Pierce County Long Term Transfer Capacity Needs (tons/day)	8-16
Table 8-4 Projected Long-term Disposal Needs.....	8-17

List of Photos

Photo 4-1 Gateway: I-5 at 100 th St./SR-512.....	4-6
Photo 4-2 Old Fort Steilacoom and the Western Washington State Hospital Campus create a distinctive District within the City	4-12
Photo 4-3 Lakewood Colonial Center is the oldest retail center in Lakewood	4-14
Photo 4-4 The lakes divide Lakewood into two halves and created a distinctive residential district	4-17
Photo 4-5 Flett Dairy wetlands creates a green open space edge to the city	4-19
Photo 4-6 South Tacoma Way (Old Highway 99) is a major path through the City	4-20
Photo 4-7 The crossroads at Gravelly Lake Drive and Bridgeport Way creates an unusual street pattern	4-22

CHAPTER 1: INTRODUCTION TO THE BACKGROUND REPORT

The 1990 Washington State Legislature enacted the Growth Management Act (GMA) to guide Washington State as it grows into the future. The GMA requires the state's fastest growing counties (which include Pierce County), and cities within those counties, to prepare comprehensive plans. Because the City of Lakewood is located in Pierce County, it is required to prepare a comprehensive plan. This Background Report, which provides a baseline understanding of the city, is the first step toward completion of the City of Lakewood's Comprehensive Plan. This Background Report was prepared in 1997 at the beginning of Lakewood's comprehensive planning process. The original purpose of the document was to provide a detailed analysis of conditions pertinent to each of the issue areas to be addressed by the Comprehensive Plan and Environmental Impact Statement. Throughout the three-year planning process, the background report has continued to document baseline conditions. With the possible exception of when previously unavailable data became available after 1997, most of this document has deliberately not been updated to preserve this snapshot in time.

All county and city comprehensive plans are required by the GMA to address the following five elements: Land Use, Housing, Capital Facilities, Utilities, and Transportation. In addition to these required elements, Lakewood has elected to include three optional elements: Economic Development, Urban and Community Design, and Parks and Recreation.

In accordance with GMA, the City of Lakewood prepared and adopted the Lakewood Interim Comprehensive Plan (ICP) in 1996 when it incorporated on February 28th of that year. The ICP is essentially that portion of the 1990 Pierce County Comprehensive Plan policies and guidelines that relates to the Lakewood area. Lakewood zoning was modified from the Pierce County Zoning, and preparation of a Future Land Use Plan was delayed awaiting preparation of the Lakewood GMA Comprehensive Plan. The goals and policies contained in the ICP will serve to guide Lakewood development and growth in the interim until the Comprehensive Plan is adopted, sometime in 2000. The Comprehensive Plan will replace the Lakewood ICP.

The city has taken other planning steps since incorporation which provide for special zoning considerations based on unique characteristics of the land, environment, or economy. These include the adoption of two new overlay zones: the Temporary Residential Density Overlay Zone and the Office and Limited Business Overlay Zone, as well as other legislative actions.

This Background Report provides a detailed overview of current conditions and trends in and around the City of Lakewood. The purpose of this report is to establish a common understanding of the character of Lakewood, including the current state of physical and socio-economic development, and to set the tone for establishing the goals, policies, and objectives of the Comprehensive Plan, and with that, the future direction of the City of Lakewood. This Background Report has also been prepared to serve as the basis for the “affected environment” section of the Environmental Impact Statement (EIS) on the Comprehensive Plan.

This introductory chapter includes a brief history of the Lakewood area, defines the boundaries for planning purposes, describes a future vision of the community as developed through public consensus, and concludes with an overview of policies and guidelines of the state GMA. Chapter 2 provides a statistical profile of city demographics. Chapters 3 through 8 describe baseline information for each Comprehensive Plan element in terms of existing conditions, trends, projections, and planning implications.

The maps in this document were produced from a geographic information system (GIS) prepared specifically for the Comprehensive Plan. The data came from a variety of sources including the City of Lakewood, Pierce County, various state agencies, the Puget Sound Regional Council (PSRC), as well as research by EDAW, Inc., consultants to the city for the Comprehensive Plan.

1.1 A Short History of Lakewood

Lakewood was covered for most of the past million years by a mile thick sheet of ice. Between 10,000 and 14,000 years ago, the last remnants of the Ice Age glaciers retreated

leaving the Lakewood plains. The glacial residue remaining, estimated to be as much as 2000 feet thick, had been compacted by the weight of the glacial ice. As the ice retreated the compacted clays, silt, sands, gravel, scattered cobbles and boulders rebounded an estimated 300 feet to the current elevation.

The glaciers left behind a rolling topography of thin soil and gravel extending from the waters of the Pacific Ocean and Puget Sound to the foothills of the Cascade and Olympic mountain ranges. The soil conditions favor only a narrow range of native evergreens and rough grasses, although certain valleys produce broader arrays of vegetation. The climate, forests, prairies, and bodies of water have made western Washington home to large populations of fish, shellfish, and fur-bearing animals. These, with abundant roots, berries, and cedars, provided sustenance for the first people who migrated to the Lakewood area shortly after the retreat of the glaciers. Evidence has been found of a 7,000 year old Native American camp on the banks of Chambers Creek near 75th West. Numerous sites of early human habitation have been documented in and around Lakewood. Southern Puget Sound's Indian population probably numbered in the thousands before it was decimated by exposure to diseases brought by early settlers of European decent (Densley, 1997).

The few artifacts discovered in the Puget Sound area indicate that Indians have lived here for at least 9,000 years. The Indians' semi-nomadic, hunting, and gathering way of life left only slight impressions on the land. Three tribes, the Nisqually, Steilacoom, and Puyallup, shared the area known now as the City of Lakewood in Pierce County, until treaties removed them to reservations. These are Coastal Salish people, related by language to the Salish tribes of northern Idaho and Montana. Early explorers named streams and rivers after the tribes they found living where those waters entered the Sound. Of all the tribes of western Washington, only the Nisqually kept horses. The others relied mainly on canoes or walking for transportation. The Nisqually have always been closely associated with the horse-owning Yakamas of central Washington. The horses made visiting across the Cascade passes relatively easy.

In 1833, the first documented Europeans explored Lakewood. That year they camped, built houses, then erected a fur trading post at the mouth of Sequelichew Creek for the

Hudson Bay Company. On the bluffs above creek, Fort Nisqually was established as a safe haven for the fur traders and the local settlers. The trading post and fort was located just south of the present day Lakewood city boundary. In 1838, Puget Sound Agricultural Company (PSAC), a subsidiary of the Hudson Bay Company began raising livestock and farming, on land between the Puyallup and Nisqually rivers including the present Lakewood area.

In 1841, the first fourth of July celebration west of the Missouri was conducted by Commander Charles Wilkes. The Wilkes Expedition contributed greatly to the geography and cartography of the Pacific Northwest. He was the first known American to cross the Cascades and to estimate the height of Mount Rainier. The tribes of Puget Sound welcomed the first white traders because of the blankets, guns, and ammunition they could obtain in exchange for furs.

By treaty since 1818, the Oregon Country, consisting of the modern states of Idaho, Oregon, and Washington, was administered by both the United States and Great Britain. Via an 1846 treaty, Britain relinquished all claim to the country but retained the right of the Hudson's Bay Company (HBC) to do business in what was to become Washington Territory. Some of the earliest white settlers in the Lakewood area were recruited by the HBC. A small party known as the Red River Settlers set out in 1841, from an HBC community which is now Winnipeg, Canada to settle what is now Lakewood. Prominent among that band was John Flett. His son-in-law, George Chapman, developed the existing Flett Dairy in 1903.

In 1844, just 6 miles north of the Fort Nisqually, Joseph Thomas Heath settled and undertook management of a farm for the PSAC. Heath died of pneumonia in March of 1849. In August of 1849, Captain Bennett Hill and his army artillery company of "23 men and a bugler" arrived in the area to establish a suitable place for a military post to protect settlers. The Heath farm was selected and rented. By October of 1849, Fort Steilacoom was established and had a compliment of 5 officers and 75 men, Company M of the US Army Artillery.

In 1853, Washington became a territory and Andrew F. Byrd built a dam, which created Steilacoom Lake and built a sawmill at the outlet of lake and start of Chambers Creek.

The Oregon Donation Land Claim Act, passed in 1850, permitted Americans to claim up to 640 acres for homesteading, depending on their marital status. This act was in effect until 1855. The tribes were given reservations lands as a result of the Medicine Creek Treaty signed in 1854 by Governor Isaac I. Stevens. The reservations were enlarged by the Fox Island Council of 1856.

Upset with the influx of white settlers, approximately 12,000 Native Americans revolted in 1855, beginning the Indian Wars. Forts and blockhouses were built all over the territory. One of these, the Bradley barn, made of squared timbers, was located near the intersection of Bridgeport and Custer. The same year the first school north of the Columbia was built near the current site of Park Lodge School. The school was built of lumber from the Byrd Mill and provided instruction for the children in the area to as far away as Spanaway. The Byrd school building was moved in 1856 to another site near Lakewood Drive and Steilacoom Blvd. where it remained until it burned in 1885. In 1857, Byrd added a gristmill a hundred yards down stream from the sawmill and dam on Chambers Creek. On February 18, 1858, Chief Leschi of the Nisqually tribe was hanged from a tree east of Fort Steilacoom in a hollow near Lake Steilacoom.

In April of 1868, Fort Steilacoom was abandoned. In 1870, the fort was purchased by Washington Territory and in 1874, Congress approved the transfer to the territory, for use as the territorial insane asylum, now known as Western State Hospital.

A pre-1900 corduroy road a road built from split cedar logs is located near the end of 59th Ave between 79th and 86th Streets spanning a Flett Creek delta.

In 1903, a National Guard Training Camp was established on the banks of American Lake, the Camp was named Camp Murray after Maj. Gen. Authur Murray in 1915. Joint Federal and Guard exercises were held at Camp Murray and in 1917, Camp Lewis named after Captain Meriwether B. Lewis, was established in preparation for training for W.W.I. On September 30, 1927, Camp Lewis was officially designated Fort Lewis.

The early settlers of the Lakewood area were primarily farmers, but some built dams, saw mills, and grist mills. It was not, however, until the Northern Pacific Rail Road selected Tacoma as a terminus in 1888 that the affluence of that city's population began to change the basic rural character of the Lakewood area. In 1900 an eastern businessman, Frederick Weyerhaeuser, began an empire by purchasing 900,000 acres of forest land, at \$6 per acre, from the Northern Pacific Rail Road. Mr. Weyerhaeuser's heirs still live in Lakewood and the corporate headquarters of the Weyerhaeuser Company still exists in Tacoma.

Lakewood, originally known as the Lakes District, grew as a residential and resort area. In 1909 the Tallman-Thompson Land Company held a contest to name the town they were attempting to develop. Howard Nicholson of Fern Hill, submitted the winning suggestion of Lakewood out of 400 entries. The name of Lakewood was approved at a Tacoma election in 1910. An electric trolley system that served much of the county brought full-time residents to the community.

On the 4th of July 1912, the first Indianapolis 500 style automobile race was held near the corner of Lakeview and Steilacoom Blvd. The Tacoma Speedway held 500 mile races through 1922 with many top racing names participating, Rickenbacker, Chevrolet, Oldfield, DePalma and Tetzlaff to name a few. The grandstands burned in 1922 and were rebuilt for the race that year but the Speedway Association went bankrupt and the property was sold. The property was bought in 1923 and the Mueller-Harkins Airport was established. The first Air Mail Service flight came into Mueller-Harkins Airport in 1926. The airport was the main airport for Tacoma, becoming the Tacoma Municipal Airport in the late thirties.

World War I brought a military boom to the state, county, and Lakewood. The military presence grew in the late 1930s with the addition of McChord Air Force Base and the Naval Supply Depot. In 1938, McChord Field was established from the old Pierce County -Tacoma Field which was about 3 miles east of Mueller-Harkins Airport.

In 1937, a far-seeing entrepreneur, Norton Clapp, built the first planned shopping center west of the Mississippi River in the heart of the Lakewood now known as Lakewood Colonial Center.

On July 21, 1944, Mueller-Harkins Airport was condemned and taken to support the war effort. The property then became a Naval Advance Base, (Naval supply depot). In 1949, some of the old Navy base was declared surplus and signed over to the Clover Park School District. By 1954 Clover Park Vocational Technical Institute had received the northern section of the Navy base.

In 1957, a second shopping center, the Villa Plaza, was constructed, followed in 1960 by the Thunderbird Shopping center. Lakewood General Hospital opened in 1961, and in 1963, the Flora B. Tenzler Memorial Library was opened. In 1965, an industrial park was developed on the southern portion of the old Navy Base and the State Legislature authorized Fort Steilacoom Community College in 1967, now known as Pierce College.

Lakewood General Hospital was replaced in 1988 by St. Clare Hospital. The area experienced additional growth and commerce by the completion of Interstate-5 in 1963. The Oakbrook Addition, a residential subdivision, was begun in 1964.

The military presence in the area resulted in growth spurts during major military conflicts, including the Korean Conflict of the early 1950s, the prolonged engagement in South East Asia lasting until the mid-1970s, and the Cold War that lasted until the early 1990s.

As the economy of the Puget Sound area became more global, Lakewood's role in that economy changed, but it is still primarily a residential community with a predominantly blue-collar workforce. Aside from government work, many Lakewood residents are employed by the larger timber, aircraft manufacturing, and electronic firms well known in the region. Local industry is mostly light manufacturing and freight forwarding.

Since cityhood in 1996, Lakewood has steered more vigorously in the direction its residents wanted. Crime, taxes, and the economy have become focal points of the city's

administration. Currently, Lakewood encompasses 24 square miles, 4 of which are water, and a population of just over 63,000.

1.2 Jurisdictional Boundaries

The City of Lakewood is in southwestern Pierce County (see Figure 1-1).

Commencement Bay is approximately 8 miles to the northeast of the city and Mt. Rainier National Park is approximately 35 miles to the southeast. The City of Tacoma lies just north of Lakewood, with Fort Lewis, Army Reserve, and McChord Air Force Bases at the southern boundaries. Unincorporated Pierce County lies to the east and the City of Steilacoom lies to the west. For the purposes of the Comprehensive Plan, the jurisdictional boundaries and the urban growth area (UGA) boundaries are contiguous, as shown in Figure 1-1. The city boundaries are:

- On the north bounded by Chambers Creek, Leach Creek, and the City of Tacoma's corporate limits;
- On the east bounded by Interstate 5 (I-5), south to 95th Street S, east to Sales Road S to its southerly terminus, finally bounded by Steele Street, south of 104th Street S;
- On the south bounded by the north and west boundaries of McChord Air Force Base and the north boundary of the Fort Lewis Military Reservation, west to a line established by 107th Avenue SW; and
- On the west bounded by 107th Avenue SW, between Fort Lewis and a line south of 100th Street SW, east to Far West Drive SW and then north along this line to the top of the Chambers Creek Canyon and then north to Chambers Creek.

The City of Lakewood encompasses approximately 24 square miles (12,800 acres).

Elevations within the city begin at sea level and rise to approximately 300 feet. Census tract boundaries for the city, as determined by the U.S. Census Bureau, are shown in Figure 1-2.

Figure 1.1
Vicinity Map

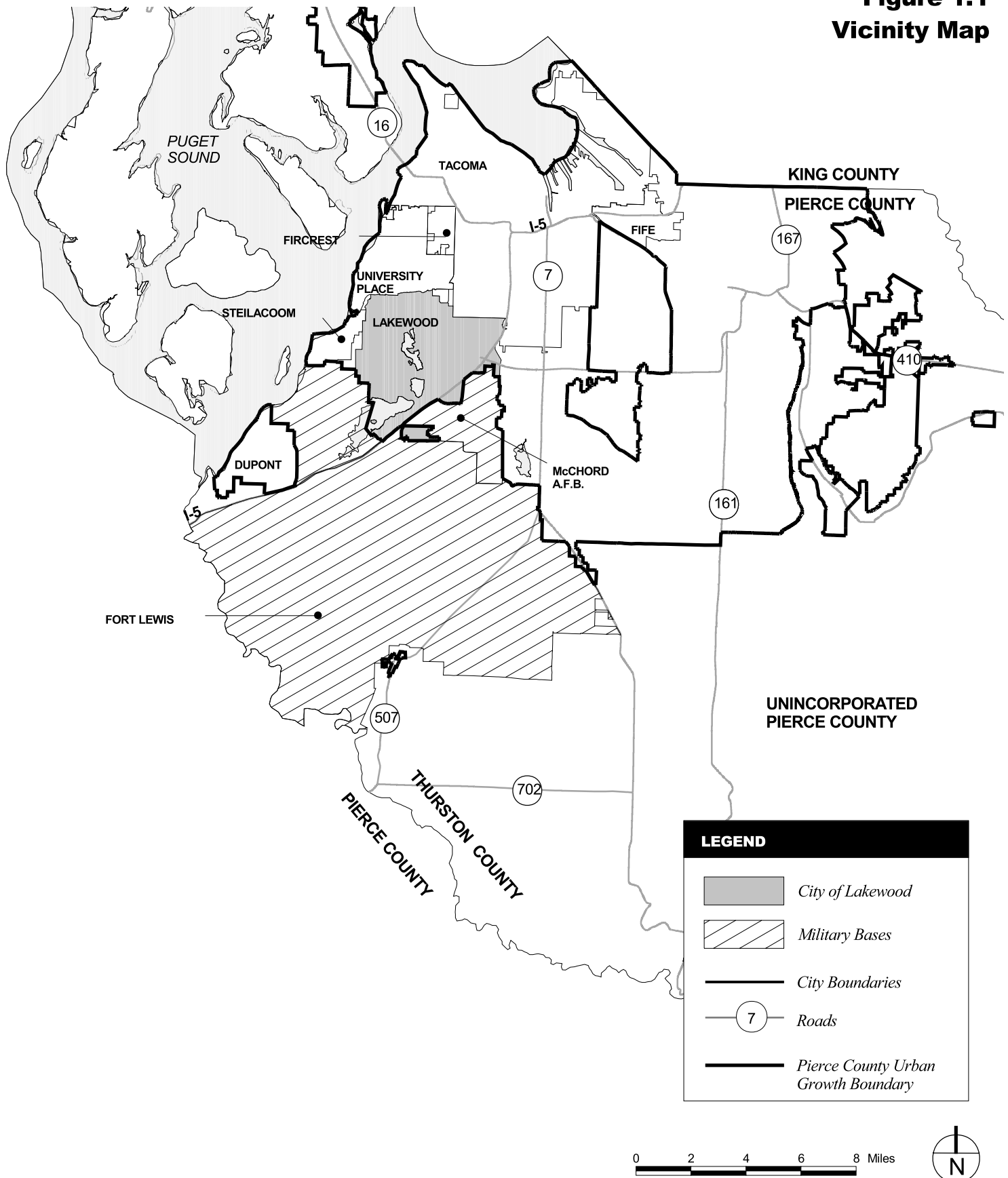
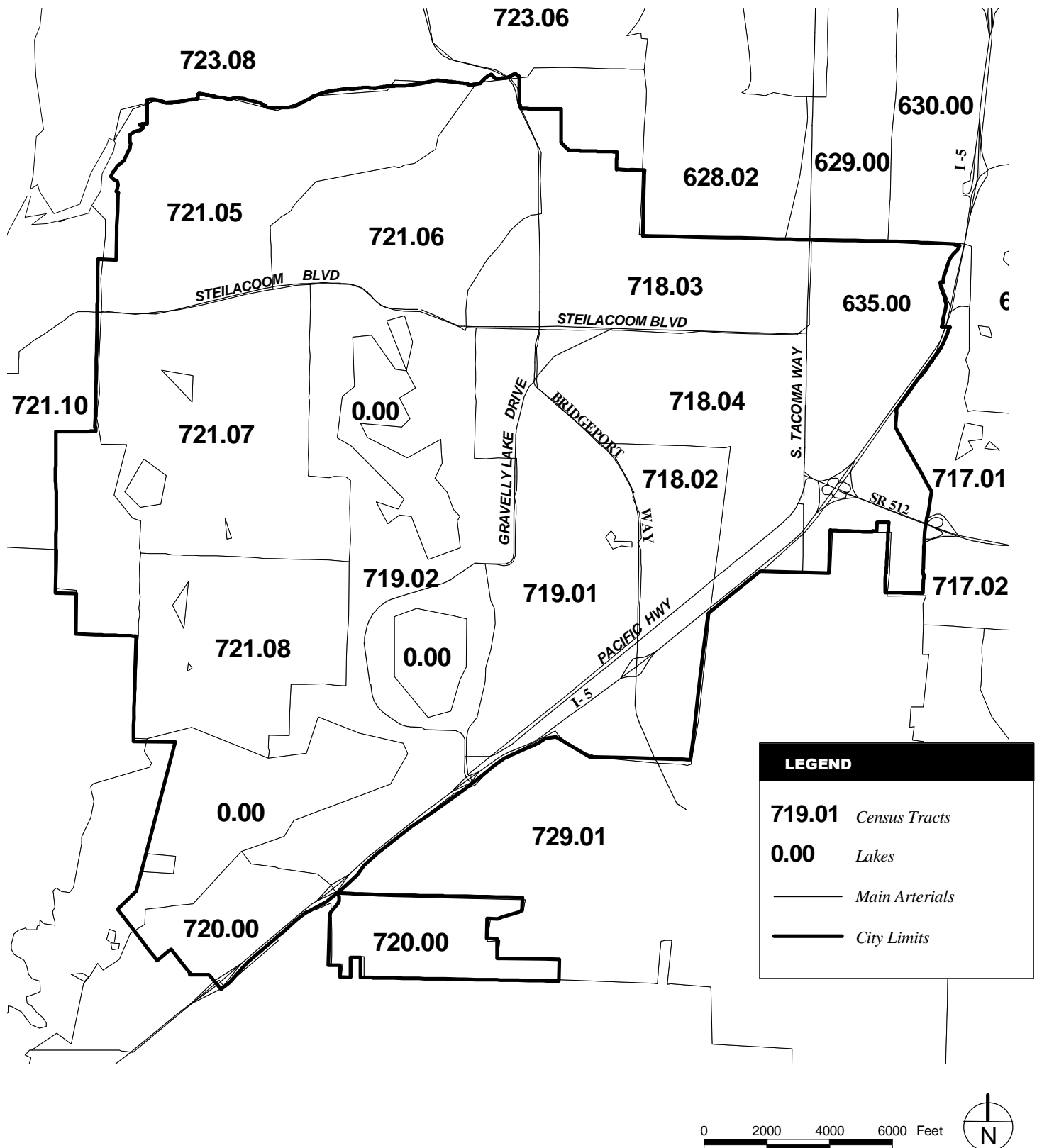


Figure 1.2
Census Tract Boundary Map



1.2.1 Planning Areas

The City of Lakewood is characterized by a variety of residential, commercial, and industrial lands. To facilitate the planning process and the analysis needed in preparing the Comprehensive Plan, a set of seven discrete planning areas was defined (see Figure 1-3). By identifying these smaller planning areas, the process of data gathering and summarizing is simplified and becomes more understandable, and easier to communicate. These planning areas were identified to aid in preparing the Background Report. The boundaries of the planning areas were based on current zoning, current land use, census information, and jurisdictional boundaries. A detailed discussion of the boundary limits and character of each of the seven planning areas is provided in Chapter 3.0-Land Use. The seven planning areas and their corresponding census tracts are:

- **1. Urban Core** - census tracts 718.02*, 718.04*, 719.02*, 719.01*
- **2. Northeast Area** - census tracts 718.04*, 717.02, 717.01, 719.023
- **3. North Central Area** - census tracts 718.03, 718.037, 723.06
- **4. Northwest Area** - census tracts 721.05, 721.06, 723.08
- **5. West Area** - census tracts 721.07, 721.08, 719.02*, 721.074, 721.10
- **6. South Central Area** - census tract 719.01*, 718.02*
- **7. Southwest Area** - census tract 720

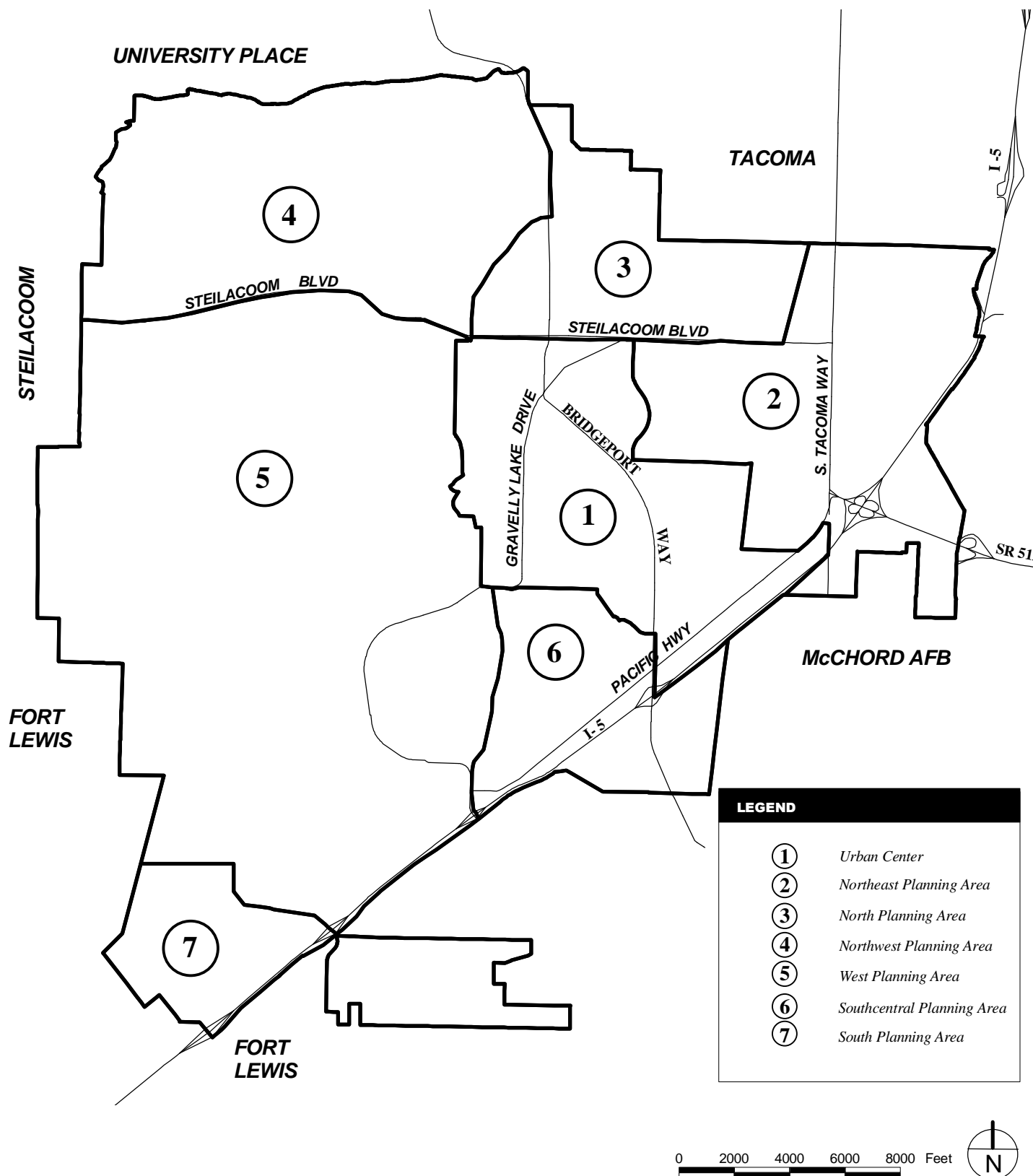
* denotes census tract split between multiple Planning Areas

1.3 A Vision of Lakewood

The city is conducting an extensive Public Participation program as part of the comprehensive planning process called *Lakewood 2020-Visioning*. This section describes the city's public participation process, provides a summary of community goals and values for the city in the year 2020.

1.3.1 Public Participation Process

As part of the *Lakewood 2020 - Visioning* process, the City of Lakewood held two community meetings to determine the public's vision of the city's future. The first

Figure 1.3
Planning Areas

visioning session, held on May 31, 1997, focused on the desires of the community and the basic strengths and weaknesses of Lakewood. In addition, citizens made over 280 vision statements describing the City of Lakewood in 2020.

The objective of the second visioning session, held on June 12, 1997, was to create recommended actions to implement the goals and general vision statements from the first session. Attendance for both sessions totaled nearly 250 people and included citizens, City Council, appointed boards, city staff, and consultants. It was important to the Lakewood City Council and appointed board members to hear the values, concerns, and future visions of the larger Lakewood community to gain a solid knowledge of the citizens' expectations for their city. These expectations will ultimately be reflected in the goals and policies of the Comprehensive Plan, which will provide the "road map" to Lakewood's future.

1.3.2 Summary of Community Values

The citizens who commented during the visioning process had a wide range of opinions about the Lakewood community, including its past, present, and future. Each of the visioning meetings was facilitated and attended by City Council and the Lakewood Planning Advisory Board (PAB) members, in addition to city staff. The first visioning session identified the following top five strengths and weaknesses of Lakewood:

Strengths

- Natural beauty
- City government and staff
- Economic potential and business climate
- Civic involvement
- Schools, libraries, and higher educational opportunities

Weaknesses

- Crime
- Existing commercial/retail development problems (including a lack of an anchor at Lakewood Mall, unattractive hotels and motels, strip mall development hindering development of Lakewood Mall)
- Conditions and appearance of the gateways to the city
- History of poor planning and land use history
- Condition and/or lack of streets, sidewalks, and bikepaths

Over 280 vision statements that were presented in the first session were summarized into general goal statements distributed into 11 functional categories. These goal statements, sorted by functional category, embody the citizen's desires for Lakewood in the year 2020, and are summarized in Table 1-1. Each goal statement is stated as a description of the reigning conditions in Lakewood in the year 2020.

Table 1-1 General Goal Statements by Category

Category	Goal Statement
1. Capital Facilities	Lakewood has attractive, well designed civic facilities which are a source of pride to the community
2. Economic Base	Lakewood supports a strong, diverse employment base.
3. Environment	Lakewood continues to cherish and protect the natural environment including its lakes, woods, and natural amenities.
4. Government	City government in Lakewood functions to preserve and protect the values of its diverse population.
5. Human Services	Lakewood has paid close attention to the needs of all its citizens and provided excellent human services.
6. Land Use - Residential	Lakewood has preserved its lovely existing single-family neighborhoods while creating an urban center that supports multi-family residential in planned areas with high levels of public services.
7. Land Use - Commercial	Lakewood has both thriving community centers and a downtown. The unique downtown has become the "heart" of the city, but a regional urban center where commerce, culture, and government flourish.
8. Land Use - Amenities	Lakewood is a beautiful city marked by an abundance of parks, open spaces, and attractive, landscaped corridors.
9. Transportation	Lakewood has an excellent, integrated transportation system that supports all modes of transportation - private vehicles, public transportation, bicycles, and walking.
10. Urban Design	Lakewood is now a city with a "heart." Friendly, diverse neighborhoods with distinctive character are now linked to a dynamic unique city center that is truly a blending of lakes and woods.
11. Utilities	Utilities have been extended throughout the majority of the city to provide citizens with efficient and reliable services.

During the second session, the citizens formed discussion groups on the 11 basic topic areas. The objective of each group was to develop a list of possible actions that would implement the specific goal. Each of the members in each group then voted on these action items to create a priority list of recommended actions. Of all the action items, urban design received the most votes. Some of the categories and recommended actions that people felt strongly about are listed below:

- **Urban Design** – Define a sense of place through a quality built environment.
- **Land Use - Residential** - Maintain the character of single-family homes, especially large suburban lots or estates in the Lakewood urban area.

- **Land Use - Amenities** - Develop zoning/re-zoning that emphasizes the preservation of open space and additional wildlife habitat.
- **Capital Facilities** - Acquire a land base for a city/civic center, and parks and open space.
- **Human Services** - Provide opportunities for job training and community service for teens and older youth.

The *Lakewood 2020 - Vision* process is the measuring stick by which staff planners, consultants, and the Planning Advisory Board members will continue to evaluate the direction desired by the citizens of Lakewood during the development of the Comprehensive Plan. At certain times during the comprehensive planning process, citizens will be asked again to confirm specific statements in the *Lakewood 2020 - Vision* and provide more details to their visions. The planning process is designed to allow for change and the introduction of more facts and ideas into the future vision of the City of Lakewood.

1.4 Growth Management Act Policies and Guidelines

1.4.1 An Overview of State Growth Management Requirements

The 1990 Washington State Legislature enacted the landmark Growth Management Act (GMA) to guide Washington State as it grows into the future. The GMA was a significant first step in setting basic guidelines for growth management. Along with it, the Legislature approved several other measures that provide important new resources to assist with growth management, including increases in state transportation funding, new tax sources for local government open space acquisition, appropriations for habitat and recreation land acquisition, and new funding sources for local facilities financing.

The GMA requires the state's fastest growing counties (which includes Pierce County), and cities within those counties, to prepare comprehensive plans.¹ Because the City of

¹ The Growth Management Act requires that comprehensive plans be prepared in counties that: (1) have a population

Lakewood is located in Pierce County, it is required to prepare a comprehensive plan. The GMA also requires all counties to inventory agricultural, forest lands, and critical areas, and all cities and counties to make their zoning consistent with their comprehensive plans.

Those cities and counties required to prepare comprehensive plans must designate urban growth areas, coordinate their plans with adjacent cities and counties, and include public participation in plan development.

The GMA has established 13 broad goals that cities and counties are required to follow (Revised Code of Washington {RCW} 37.70A.020). The goals are described below.

1. Urban Growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
2. Reduce Sprawl. Reduce the inappropriate conversion of undeveloped land into sprawling, low density development.
3. Transportation. Encourage efficient multi-modal transportation systems based on regional priorities and coordinated with city and county comprehensive plans.
4. Housing. Encourage the availability of affordable housing to all economic segments of the population of the state, promote a variety of residential densities and housing types, and encourage preservation of existing housing.
5. Economic Development. Encourage economic development throughout the state that is consistent with adopted comprehensive plans; promote economic opportunity for all citizens of the state, especially for unemployed and disadvantaged persons; and encourage growth, all within the capacities of the state's natural resources, public services, and public facilities.

over 50,000 and have a population growth of more than 10% in the past ten years until 5/16/1995 or more than 17% after 5/16/1995 (RCW 36.70A-040); or (2) have a growth rate of more than 20% in the previous ten years regardless of population size.

6. Property Rights. Private property shall not be taken for public use without just compensation. The property rights of landowners shall be protected from arbitrary and discriminatory actions.
7. Permits. Applications for both state and local government permits shall be processed in a timely and fair manner to ensure predictability.
8. Natural Resource Industries. Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries.
9. Open Space and Recreation. Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
10. Environment. Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
11. Citizen Participation and Coordination. Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.
12. Public Facilities and Services. Ensure that those public facilities and services necessary to support development shall be adequate at the time the development is available, without decreasing current service levels below locally established minimum standards.
13. Historic Preservation. Identify and encourage the preservation of lands, sites, and structures with historical or archaeological significance.

The GMA requires counties, in collaboration with their cities, to designate urban growth areas (UGAs), within which urban growth is to be encouraged and outside of which growth may occur only if it is not urban in nature. UGAs are to be sized to accommodate the growth projected for the next 20 years, as forecasted by the State Office of Financial Management. For the City of Lakewood, the 20-year allocation is approximately 30,000

new people by 2017, for a total population of approximately 93,200 (pers. com., Dan Cardwell, Pierce County Planning and Land Services, 8/8/97). UGAs may contain more than one city and may contain unincorporated territory if the territory is already characterized by urban growth or is adjacent to other territory characterized by urban growth.

The GMA requires that all county and city comprehensive plans address the following elements:

1. Land Use. The Land Use Element shall designate land for housing, commerce, industry, recreation, open space, public facilities, and other uses, and include densities, building intensities, and estimates of future population growth.
2. Housing. The Housing Element shall include an inventory and analysis of existing and projected needs; describe goals, policies, and objectives to preserve, improve, and develop housing; identify sufficient land for housing; and provide for existing and projected needs of all economic segments of the community.
3. Capital Facilities. The Capital Facilities Element shall include an inventory of existing capital facilities owned by public entities; a forecast of the future needs for such capital facilities; proposed locations and capacities of expanded or new facilities; at least a six-year plan to finance facilities; and a requirement to reassess the Land Use Element if probable funding falls short of meeting needs. Under the law, development is not allowed unless and until capital facilities are adequate to serve the development at an adopted level of service standard.
4. Utilities. The Utilities Element shall consist of the general location, proposed location, and capacity of existing and proposed utilities, including but not limited to electrical lines, telecommunication lines, and natural gas lines.
5. Transportation. The Transportation Element shall include land use assumptions; inventory of existing facilities; facility needs based on adopted level of services standards; traffic forecasts for at least 10 years; system expansion and management needs; a financing plan; and intergovernmental coordination. As was the case with

the Capital Facilities Element, the law states that development is not to be allowed unless and until transportation systems are adequate to serve the development at an adopted level of service standard.

In addition to the above required elements, Lakewood has elected to include three optional elements:

1. Economic Development. The Economic Development Element shall profile the city's business community and provide goals, policies, and actions to promote vibrant and sustainable economic activity.
2. Urban and Community Design. The Community Design Element shall include goals, policies, and actions to enhance the aesthetic character of the city through the application of building, landscaping, and site and neighborhood design techniques.
3. Parks and Recreation. The Parks and Recreation Element shall include goals, policies, and actions to enhance the quality and quantity of Lakewood's active and passive recreation opportunities, as well as to preserve open space.

The GMA requires cities and counties to adopt interim critical areas regulations to protect wetlands, frequently flooded areas, geologically hazardous areas, fish and wildlife habitat conservation areas, and aquifer recharge areas prior to adoption of comprehensive plans. When plans are adopted, jurisdictions are required to revisit the interim critical areas regulations, make modifications if warranted, and adopt permanent regulations.

The GMA requires newly incorporated cities to adopt their comprehensive plans and the development regulations necessary to implement those plans within four years after incorporation. Since the City of Lakewood was incorporated on February 28, 1996, the deadline to complete the Lakewood Comprehensive Plan is February 28, 2000.

Finally, the GMA authorizes cities and counties to establish impact fees to pay for a proportionate share of certain public improvements necessary to mitigate the impacts from new development. Impact fees may not be collected to correct existing

deficiencies, and financing for new system improvements may not rely solely on impact fees. Any capital facilities proposed to be financed with impact fees must be included in the jurisdiction's capital facilities or transportation elements.

1.4.2 A Summary of Multi-County and Countywide Planning Policies

To ensure consistency among the comprehensive plans of neighboring cities and counties, the GMA mandates the adoption of multi-county and countywide planning policies. These policies, according to state law, are written statements used solely for establishing a countywide (or multi-county) framework from which county and city plans are developed and adopted. By law, multi-county policies and countywide planning policies are required to address the following:

- Policies to implement urban growth areas;
- Policies to promote contiguous and orderly development and provide urban services to such development;
- Policies for siting public capital facilities of a countywide or statewide nature;
- Policies for countywide transportation facilities and strategies;
- Policies for joint city and county planning within urban growth areas;
- Policies for countywide economic development and employment; and
- An analysis of the fiscal impact.

Vision 2020, produced by the PSRC, contains multi-county policies affecting King, Snohomish, Pierce, and Kitsap counties. In addition, Pierce County adopted countywide planning policies that provide a framework for Lakewood's comprehensive plan. Further information regarding Vision 2020 is provided below.

1.4.2.1 Vision 2020

Vision 2020 is the regional long-range growth and transportation strategy for central Puget Sound. Adopted in 1991 by the regional council of governments, Vision 2020 provides the framework for countywide planning policies and local comprehensive

planning efforts, as mandated by the GMA. In May 1995, Vision 2020 was updated to reflect current countywide planning efforts and to establish an integrated regional vision (PSRC, 1995). These policies “promote diverse, economically healthy and environmentally sensitive communities that offer affordable housing for all economic segments of the population and are connected and served by a high-quality, efficient transportation system” (PSRC, 1995). The framework policies that guide regional development are listed below and their reference number within Vision 2020 1995 Update is shown in parentheses (i.e., RF-#).

1. Urban Growth Areas. Locate development in urban growth areas to conserve natural resources and enable efficient provision of services and facilities. Within urban growth areas, focus growth in compact communities and centers in a manner that uses land efficiently, provide parks and recreation areas, is pedestrian-oriented, and helps strengthen communities with an efficient, transit-oriented, multi-modal transportation system (RG-1).
2. Contiguous and Orderly Development. Coordinate provision of necessary public facilities and services to support development and to implement local and regional growth planning objectives. Provide public facilities and services in a manner that is efficient, cost-effective, and conserves resources. Emphasize interjurisdictional planning to coordinate plans and implementation activities and to achieve consistency. Protect critical areas, conserve resource lands, and preserve lands and resources of regional significance (RC-2).
3. Regional Capital Facilities. Strategically locate public facilities and amenities in a manner that adequately considers alternatives to new facilities (including demand management), implements regional growth planning objectives, maximizes public benefit, and minimizes and mitigates adverse impacts (RF-3).
4. Housing. Provide a variety of choices in housing types to meet the needs of all segments of the population. Achieve and sustain an adequate supply of low-income, moderate-income, and special needs housing located throughout the region (RH-4).

5. Rural Areas. Preserve the character of identified rural areas by protecting and enhancing the natural environment, open space, recreational opportunities, and scenic and historic areas; supporting small-scale farming and forestry uses; and permitting low-density residential living and cluster development maintained by rural levels of service. Support cities and town in rural areas as locations for a mix of housing types, urban services, cultural activities, and employment that serve the needs of rural areas (RR-5).
6. Open Space, Resource Protection, and Critical Areas. Use rural land and open space to separate and delineate urban areas and to create a permanent regional greenspace network. Protect critical areas, conserve natural resources, and preserve lands and resources of regional significance (RO-6).
7. Economics. Foster economic opportunity and stability, promote economic well-being, and encourage economic vitality and family wage jobs while managing growth. Support effective and efficient mobility for people, freight, and goods that is consistent with the region's growth and transportation strategy. Maintain region-wide information about past and present economic performance. Assess future economic conditions that could affect the central Puget Sound region (RE-7).
8. Transportation. Develop a transportation system that emphasizes accessibility, includes a variety of mobility options, and enables the efficient movement of people, goods and freight, and information (RT-8).

Urban Centers. Vision 2020 also identifies three types of centers: (1) Urban Centers, (2) Town Centers, and (3) Manufacturing/Industrial centers. The Vision 2020 strategy is to reinforce and diversify existing Urban Centers by targeting a significant portion of the region's growth, services, and facilities into areas that are already urban focal points. Urban Centers are targeted for employment, residential growth, efficient and frequent transportation service, and for investment in major public facilities

Urban Centers are intended to be areas of concentrated employment and/or housing within urban growth areas which serve as the hubs of transit and transportation systems.

They are integral to creating compact urban development that conserves resources and creates additional transportation, housing, and shopping choices. Centers are an important part of the regional strategy (Vision 2020) for urban growth as they will become focal points for growth within the county and will be areas where public investment is directed.

Urban Centers are intended to:

- Be priority locations for accommodating growth;
- Strengthen existing development patterns;
- Promote housing opportunities close to employment;
- Support development of an extensive transportation system which reduces dependency on automobiles; and
- Maximize the benefit of public investment in infrastructure and services.

In addition, Vision 2020 has established future density and transit characteristics for a typical Urban Center, which include the following:

- a minimum gross density of 25 employees per acre;
- at least 10 households per acre;
- a minimum of 15,000 employees; and
- fast and frequent high capacity transit.

City of Lakewood Urban Center Study Area. The PSRC has designated a 1,350-acre area within the City of Lakewood as an urban center study area (PSRC Urban Centers Baseline Report, 1996). The study area boundaries have not been locally adopted and are likely to change with the comprehensive planning process to become a more defined urban center. This study area is bordered to the north by Steilacoom Boulevard, to the south by I-5, to the west by moderate density single-family neighborhoods, and to the east by the City of Lakewood Manufacturing Center which includes the 170-acre Lakewood Industrial Park. Commercial retail and services, as well as single-family residential development, have historically dominated much of the development within

the urban center study area. The urban center study area contains the Colonial Center, Lakewood's oldest commercial development. The urban center study area also surrounds the 99-acre Lakewood Mall west of Gravelly Lake Drive SW. This complex was originally constructed in 1957 as a community shopping center and was later redeveloped in 1989 to become the Lakewood Mall. The urban center study area also contains the Post Office, City Hall, the Lakewood Library, the Clover Park School District Headquarters, Clover Park High School, and St. Claire Hospital.

1.4.2.2 Pierce County

Pierce County's Countywide Planning Policies were adopted by the Pierce County Regional Council in November 1994 and amended in November 1995. These policies provide a framework for coordinating development between Pierce County and the 20 incorporated cities within it (pers. com., Carolyn Pendle, Pierce County Council, 10/14/97). The Pierce County Countywide Planning Policies were developed by the Growth Management Planning Council (the Planning Council), which is responsible for identifying Urban Centers, adopting 20-year target numbers for projected population and employment, and identifying the Urban Growth Area within the county.

The countywide policies are divided into ten topic areas. A brief summary of the overall intent of the policies provided below. Specific policies for each of these ten areas are summarized in this report at the end of each respective planning element.

1. Affordable Housing. The goals and policies in this section encourage the availability of affordable housing to all economic segments of the population, promote a variety of residential densities and housing types, and encourage preservation of the existing housing stock.
2. Agricultural Lands. The goals and policies in this section are intended to maintain and enhance natural resource-base industries, including productive agricultural industries, and the conservation of productive agricultural lands.
3. Economic Development and Employment. The policies found in this section encourage economic development, promote economic opportunity for all citizens,

especially for unemployed and disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth.

4. Education. The goals and policies in this section ensure the provision of high quality educational facilities, encourage excellence in education, and offer diverse educational opportunities for all residents.
5. Fiscal Impact. The goals and policies in this section mandate fiscal impact analysis used to determine the relative costs of governmental decisions, such as the provision and siting of public facilities and services, which may affect jurisdictional responsibilities.
6. Historic, Archaeological, and Cultural Preservation. The goals and policies in this section identify and encourage the identification and preservation of lands, sites, and structures that have historical significance.
7. Natural Resources, Open Space, and Protection of Environmentally Sensitive Lands. The goals and policies in this section maintain and enhance natural resource-based industries; encourage the conservation of productive timber lands, agricultural lands, and fisheries; encourage the retention of open space; and protect environmentally sensitive lands.
8. Siting of Public Capital Facilities of a County-wide or State-wide Nature. The goals and policies in this section relate to the identification and siting of essential public facilities, such as airports, state educational facilities, state or regional transportation facilities, solid waste facilities, and other difficult to site facilities.
9. Transportation Facilities and Strategies. The goals and policies in this section are related to land use assumptions used in estimating travel characteristics, facilities and service needs, finance, intergovernmental coordination efforts to assess the impacts of transportation plans, and demand management strategies.
10. Urban Growth Areas. The goals and policies in this section encourage development in urban areas where adequate public facilities and services exist, seek to reduce

sprawl, and provide adequate public facilities services necessary to support urban development at the time the development is available for occupancy.

CHAPTER 2: DEMOGRAPHIC DESCRIPTION

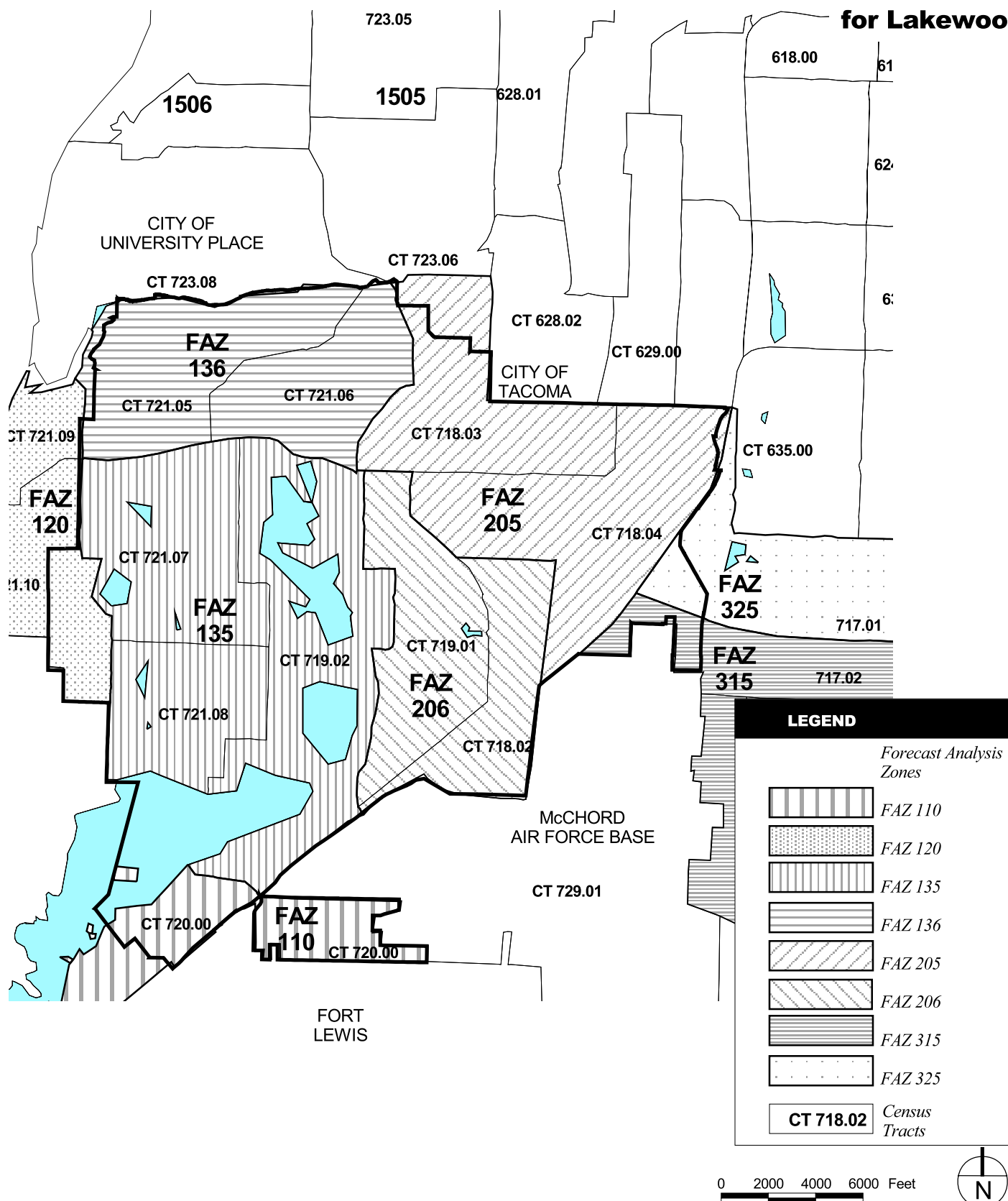
The Lakewood area has long been a development center in Pierce County. That role has historically related to providing residences for the area as well as for personnel from the military installations. Businesses have primarily provided goods and services for local residents and businesses, the military and to a lesser extent the regional economy. Demographic data are a good way of understanding who the residents of Lakewood are, and projecting demand for goods and services.

2.1 Background on Data

The City of Lakewood is newly incorporated. Not only does that provide a special character, it also presents some challenges for gathering, presenting, and analyzing data. For some planning purposes the exact and specific number of dwelling units, acres, etc. are important. For economic and demographic purposes, overall patterns, trends, and general relationships are more important. Data used to describe economic, demographic, and real estate conditions, character, and trends are often generated for purposes for which they are not intended; arranged by areas that do not coincide with economic purposes or comparable areas; are often collected periodically and published with some lags; therefore, exact comparisons over time and between and among areas are often difficult.

Economic and demographic data are routinely collected by census tract, postal zip code, or municipal jurisdiction. When a new municipal jurisdiction is formed it is not typically consistent with past census or existing postal areas. This has been true for the new City of Lakewood. Figure 2-1 compares census tracts and postal zip codes to the city's incorporated boundaries. In addition, the PSRC combines data on population, households, and employment into forecast analysis zones (FAZs). These FAZs are composed of several census tracts (see also Figure 2-1). In the tables and graphs that follow, every attempt has been made to gather data for areas that are coincident with city boundaries. This was not always possible or necessary. In many instances it was not possible because the patterns, conditions, character, and trends are not necessarily restricted by these data gathering conveniences.

Figure 2.1
FAZ's/Census Tracts
for Lakewood



Where appropriate in the tables and graphs that follow, comparisons were made to larger areas such as the county (Pierce) or the state. These larger areas represent typical patterns that can be used to gain perspective on Lakewood's particular and specific character.

For planning purposes, the current city has been divided into seven planning areas, as discussed in Chapter 1. When appropriate and comparable data were available, comparisons are presented for areas within the City of Lakewood.

Finally, the text material in this chapter was condensed from many tables and data sources to provide a succinct description and analysis of the demographic situation of this city for purposes of the Comprehensive Plan and its Economic Development Element. The City of Lakewood, through its Economic Development Advisory Board, has provided a separate document that not only analyzed the local economy, but contains the city's economic development strategy. In addition, a community profile is available that not only provides a large amount of information, it also contains data sources and methodologies for updating later by the city and/or Chamber of Commerce. The purpose of this chapter and the community profile was to help individuals and businesses both within the city and outside to develop a better understanding of this city. In addition, both internal and external government and community leaders and decision-makers will have a solid basis to understand the city's various policy issues.

2.2 Population Growth and Dynamics

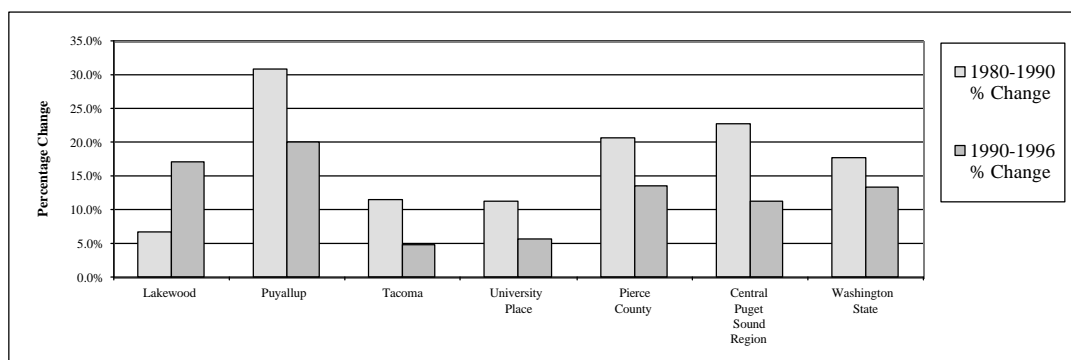
2.2.1 Population Growth: Past & Future

Population growth and size are often taken as an index of the relative strength of a city. This is half of the basis for evaluating the significance of a city's role (i.e., population). The other half of the basis for viability is economic activity. In 1997 the State of Washington estimated that the population base in the City of Lakewood is 62,240 people. This represents 9.2% of Pierce County's population compared to Tacoma (27.5%), Puyallup (4.4%), University Place (4.3%), Edgewood (1.6%), Bonney Lake (1.4%), and Sumner (1.2%). The City of Lakewood is 1.1% of

the state and 2% of the four-county¹ Central Puget Sound Region population. Pierce County is 12% of the state's population and 21.7% of the region's.

Figure 2-2 compares the recent population growth in the City of Lakewood, Pierce County, region, state and three similar cities in Pierce County. Table 2-1 compares the rates of growth among City of Lakewood, similar Pierce County cities, the county, the region, and state.

Figure 2-2 Regional Population Growth Trends: 1980–1996



Source: US Census and State Office of Financial Management

Table 2-1 Regional Population Trends: 1990–1996

Jurisdiction	1996	% Average Annual Change 1980–1990	% Average Annual Change 1990–1996	% Average Annual Change 1980–1996
Lakewood	62,786	0.6	2.7	1.4
Puyallup	28,660	2.7	3.1	2.9
Tacoma	185,000	1.1	0.8	1.0
University Place	38,751	1.1	0.9	1.0
Pierce County	665,200	1.9%	2.1%	2.0%
Region ²	3,056,800	2.1	1.8	2.0
Washington State	5,516,800	1.6	2.1	1.8

Source: Office of Financial Management, State of Washington

Over the past 16 years the City of Lakewood has grown slower (on an annual basis) than Puyallup, Pierce County, the region, and state. However, during the period 1980–1996 the City of Lakewood grew faster than Tacoma and University Place. Estimates indicate that the area

¹ King, Kitsap, Pierce and Snohomish Counties.

² King, Kitsap, Pierce and Snohomish Counties.

that is now Lakewood added over 12,000 persons since 1980 or roughly 7% of the county's population gain; Tacoma added 15% of the growth in Pierce County and Puyallup 6%.

Table 2-1 does not include those persons who lived on the military installations (McChord or Fort Lewis). The census tract that is McChord Air Force Base (729.01) had 4,538 persons; the Fort Lewis census tract (729.02) had 22,224 persons in 1990. These together would add roughly 45% more population to Lakewood. In 1996, the total was reported to be 25,152 enlisted personnel.³

The City of Lakewood is projected⁴ to continue its growth, but at a pace roughly two-thirds of that of the past two decades. Table 2-2 compares the projected growth from 1995–2020 in the region, county, city, and subareas. Lakewood is projected to add 18,000 persons in the next 25 years or 7% of the county's population gain. Alternatively, the Pierce County Comprehensive Planning process allocated the Lakewood area a total of 96,000 persons by the year 2020. This is a significantly faster pace of local population growth, 1.7% per year and 13% of Pierce County's expected population growth.

Table 2-2 Population Projections: 1995–2020, City of Lakewood, Region, County and City's Subareas

	Average Annual % Change	Persons Added	% of Region, County or City's Growth
Central Puget Sound	1.37%	1,102,000	--
Pierce County	1.44	257,000	23.3%
Thurston County	2.19	136,000	--
City of Lakewood	1.1 – 1.7	18,000 – 33,000	7.0 – 13%
•Southeast	0.4 – 0.6	490 – 900	2.7
•West	0.9 – 1.3	3,980 – 7,300	22.1
•Northwest	1.5 – 2.3	5,260 – 9,600	29.2
•North Central & Northeast	0.8 – 1.3	1,850 – 3,400	10.3
•Core & South Central	1.5 – 2.3	6,430 – 11,800	35.7

Source: Puget Sound Regional Council, 1995. Pierce County Comprehensive Plan, 1994.

2.2.2 Demographic Character

The number and expected growth of persons is important to Lakewood's economic future, as well as for other comprehensive planning issues. The type of persons and households are also

³ State of Washington, Office of Financial Management

an important variable in Lakewood's economic future, the type of potential economic activity, and need for public services and facilities. Demographic comparisons are noted between the City of Lakewood, Pierce County, and the state. These comparisons are made to indicate how different Lakewood is from the typical patterns found in this area of the Pacific Northwest. Over larger areas these patterns tend to ameliorate extremes. Table 2-3 compares the pattern for the whole City of Lakewood to these broader patterns, whereas Tables 2-4 and 2-5 and Figures 2-3, 2-4, 2-5, and 2-6 below compare the patterns within the City of Lakewood. To some extent these patterns are dated because they are derived from US census data collected in 1989 or 1990. However, this data source is the only comprehensive means to have valid comparisons across jurisdictions.

The demographic patterns summarized in Table 2-3 indicate that typically there tend to be fewer school-aged children and pre-schoolers in the Lakewood area than the county and state; about the same percentage of residents older than 65 years as the county but slightly less than the state. The median age of persons in 1990 in Lakewood was slightly less than the county, but markedly less than the state's median population age.

In summary, the characteristics of the population base are very similar to that of Pierce County and the State of Washington. There are some notable exceptions. The ethnic, cultural, and racial diversity present in the Lakewood community is more typical of the nation and older metropolitan areas than new suburbs. While Lakewood has, and to some extent is known for, its concentration of wealthy households, these are outweighed by more modest income households. The measures of income and wealth that represent Lakewood as a whole are indicated by levels less than county and state, with larger proportions of people in poverty status. In addition to the ethnic, cultural, and racial diversity, the various sub-areas of Lakewood have very different levels of household and personal per capita income and home values. In many ways using any one number to represent Lakewood's demographic character masks the range and diversity among its population and sub-areas.

⁴ by the Puget Sound Regional Council, 1995.

Table 2-3 Demographic Patterns: Lakewood, Pierce Co., and Washington State, 1990

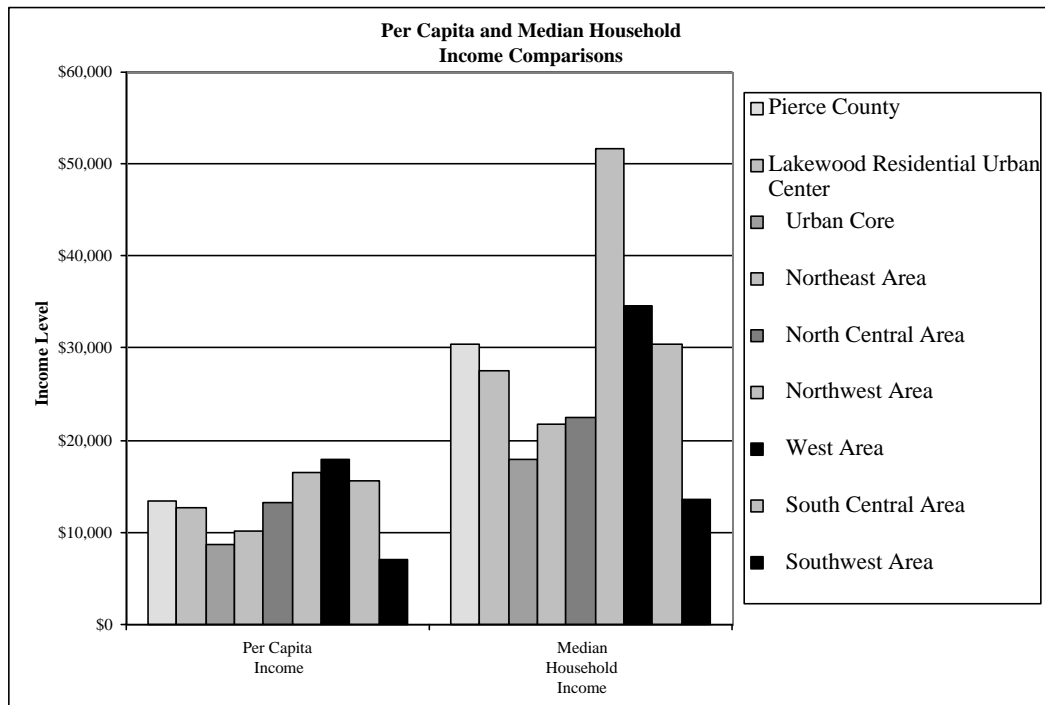
Characteristic	Lakewood*	Pierce County	Washington State
Age			
•median age	30.7 years	31.3 years	33.1 years
•% under 18	24.9%	27.2%	25.9%
•% over 65	10.7%	10.5%	11.8%
Household Income			
•median household income	\$27,522	\$30,412	\$31,183
•% of County	90.5%	--	--
•% of State	88.3	97.5%	--
Per Capita Income	\$12,758	\$13,439	\$14,923
•% of County	94.9%	--	--
•% of State	85.5	90.1%	--
Persons Living in Poverty Status	8,819	64,068	--
•% of City	16.9%	--	--
•% of County	13.8%	10.9%	--
•% of State	--	--	10.6%
•% Children <18	7.4	4.0	3.5%
•% Seniors >65	0.6	0.9	1.0
Households	22,754	214,652	1,872,431
•Avg Persons/HH	2.48	2.62	2.53
•% in Group Qtrs	3.4%	4.0%	2.5%
•% Single Person	24.1	23.4	25.4
•% Family HH	69.9	70.7	67.6
-couple w/child	23.9	28.4	26.2
-couple w/o child	30.3	28.0	28.8
-male/female single parent	15.7	14.3	12.6
-non-family HH	6.0	5.9	7.0
Race/Ethnicity			
•White	74.5%	85.1%	88.5%
•Black	12.7	7.2	3.1
•American Indian	1.4	1.4	1.7
•Asian	9.5	5.0	4.3
•Other	2.0	1.4	2.4
•Hispanic	5.5	3.5	4.4
Housing Units	24,230	228,842	2,032,378
•Vacant	6.1%	6.2%	7.9%
•Owner Occupied	47.5	60.3	62.6
•Renter Occupied	52.5	39.7	37.4
•Units in Structure			
-single family	53.5	64.6	65.0
-duplex, triplex, multifamily	40.1	25.7	24.8
-mobile home or trailer	5.7	8.9	9.2
-other	0.7	0.8	1.0
Median Value Owner-Occupied	\$88,300	\$82,500	\$93,400
•% of County	107.0%	--	--
•% of State	94.5	88.3%	--
Median Rent (Per Month)	\$355	\$374	\$383
•% of County	94.9%	--	--
•% of State	92.6	97.7%	--

Source: US Census of Population and Housing, 1990

*Note: for purposes of this table the Lakewood Census Designated Place was used—this does *not* include Fort Lewis (Census Tract 729.02) or McChord (Census Tract 729.01) nor a small portion of Census Tract 717.01 east of I-5 or the Steilacoom portion of Census Tract 721.10.

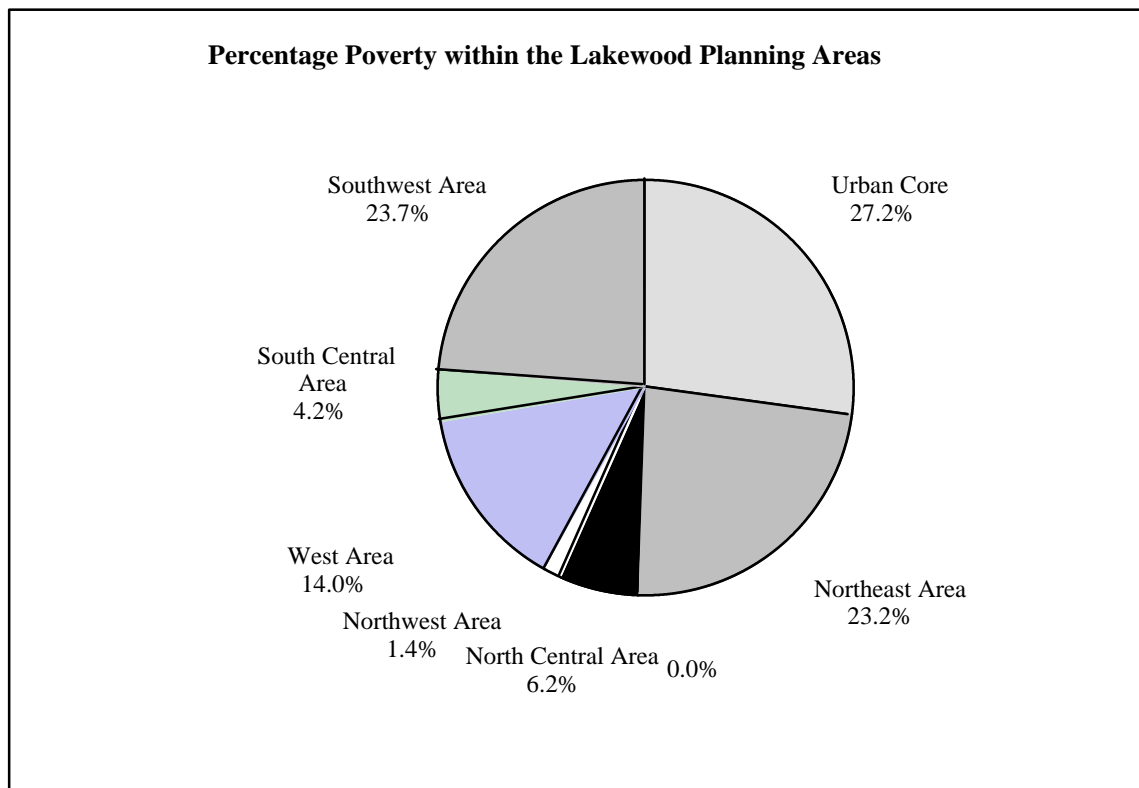
Residents of Lakewood have median income for households nearly 10% less than typical for the county and nearly 12% less than the state in 1990. Per capita average income, which is more influenced by extremes (high or low), was 95% of the county's per capita personal income and 85.5% of the state's level. Even though there are concentrations of higher income households in Lakewood (as discussed below), overall this index of community well-being shows that the typical household and/or individual does not do as well as in the whole county or state.

Figure 2-3 Income Lakewood Subareas



Source: US Census of Population, 1990

Approximately one of every six persons (16.9%) of all ages living in Lakewood in 1990 was considered living in poverty status, compared to one of every seven persons in the county (10.9%) or 10.6% of persons in the state. Lakewood has more than twice the percentage of children, defined as persons less than 19 years of age, living in poverty (7.4%) than did the state (3.5%) and the county (4.0%). Lakewood area had roughly 9% of the county's population in 1990, but 13.8% of the county's persons living in poverty status.

Figure 2-4 Poverty Status: Lakewood Subareas**Table 2-4 Household Income and Poverty Status by Lakewood Subarea**

Region/Jurisdiction	Income		Poverty Status
	Median Household	% of County Median	% of Area Population
Washington State	\$31,183	102.5%	10.6%
Pierce County	\$30,412	100.0	10.9
Lakewood Planning Areas	\$27,522	90.5%	16.9
•Urban Core	\$17,978	59.1	25.8
•Northeast Area	\$21,734	71.5	21.6
•N Central Area	\$22,400	73.7	16.6
•Northwest Area	\$51,713	170.0	2.2
•West Area	\$34,674	114.0	8.6
•S Central Area	\$39,472	129.8	8.1
•Southwest Area	\$13,680	45.0	39.1

Source: 1990 Census of Population and Housing.

The median value of housing units seven years ago was higher by 7% than the county, \$88,300 versus \$82,500, although lower (by 5.5%) than the state. More recent information is provided in the real estate section below. Rent levels in the census year for housing units in Lakewood were 94.9% of the county's median monthly rent of \$374 or \$355 and 92.6% of the state's (\$383). Comparing these to the county and city's income levels indicates that an average

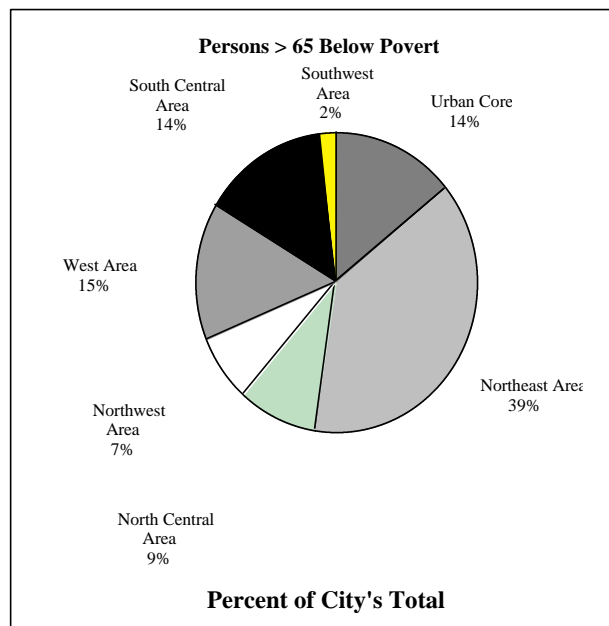
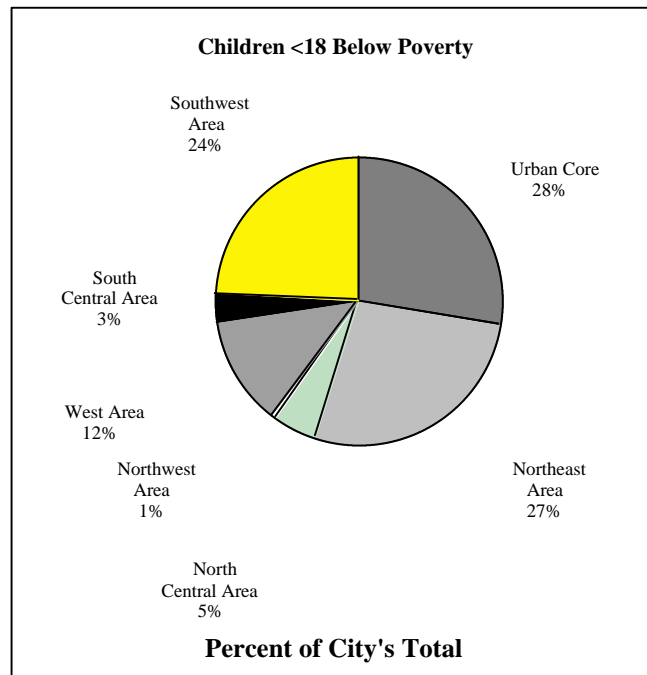
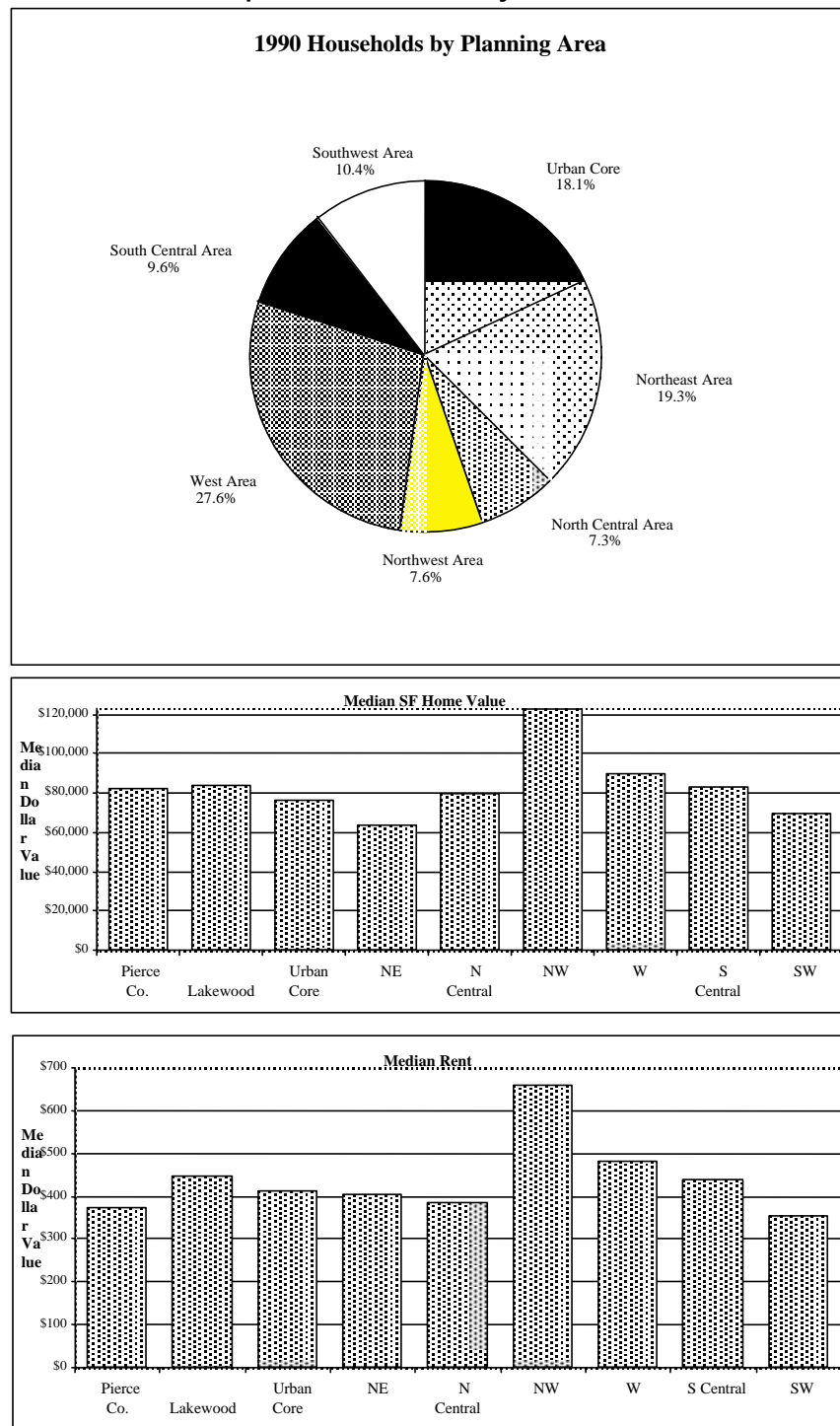
Figure 2-5 Comparison of Poverty Status by Age and Subarea

Figure 2-6 Households, Ownerships, Value, and Rents by Subarea



household in Lakewood then paid a higher portion of their incomes in rent and housing than in the county and state. The section on housing discusses housing issues more fully.

The typical size of households (2.48 persons per household) in Lakewood was slightly less than the county (2.62) and state (2.53). The percentage of single person households (24.1%) was similar to the county (23.4%) and state (25.4%). Single parent households were higher as a percentage of all households in Lakewood (15.7%) than the county (14.3%) or state (12.6%).

There is relatively more cultural, ethnic, or racial diversity in Lakewood than the county or state's pattern. Non-white persons made up 25.5% of the 1990 residents in the Lakewood area, versus 14.9% of the county's and 11.5% of the state's residents. Hispanic persons also made up a higher proportion of the Lakewood area's population (5.5%) versus the county (5.5%) and state (4.4%).

Table 2-5 Household Size, Tenure, Home Value, and Rent by City and Subarea

Region/Jurisdiction	Households		Housing Value and Rent	
	Household Size	Renters % of Total Households	Median SF Home Value	Median Rent
Washington State	2.53	37.4%	\$92,800	\$382
Pierce County	2.62	39.7	\$82,500	\$374
Lakewood	2.45	51.8	\$83,879	\$450
Planning Areas				
•Urban Core	2.46	78.6	\$76,267	\$415
•Northeast Area	2.47	49.9	\$64,150	\$405
•N Central Area	2.15	79.6	\$80,200	\$386
•Northwest Area	2.56	20.0	\$122,900	\$663
•West Area	2.61	29.0	\$90,033	\$485
•S Central Area	2.31	43.2	\$83,700	\$441
•Southwest Area	2.57	80.9	\$69,900	\$354

Source: 1990 Census of Population and Housing.

Proportionally, there were more renters in Lakewood (52.5% of households in housing units in 1990) which is dramatically different than the 39.7% and 37.4% of renters households in the county and state, respectively. This parallels the composition of housing types in Lakewood (i.e., 45% multifamily, 55% single family), compared to the county (25.7% multifamily, 64.6% single family) and the state 24.8% multifamily (65.0% single family residences). The Lakewood area at the census year (1990) had 16.5% of the county's multifamily units though retaining 10.6% of all county housing units. Lakewood has a significantly lower percentage of mobile home/trailer housing units (5.7%) than the county (8.9%) or state (9.2%).

After incorporation in 1997, the State's Office of Financial Management estimated that the pattern holds within the City of Lakewood's boundaries as indicated in Tables 2-6 and 2.7.

Table 2-6 Composition of Housing Units in Lakewood: 1997

	# of Units	% of Units	% of County's Units
Single Family	13,119	49.4%	7.7%
Multifamily	11,889	44.8	17.1
Mobile Homes, Trailers & Other	1,526	5.8	5.0
	26,534	100.0%	9.8%

Source: Office of Financial Management, State of Washington, 1997.

This pattern of predominance of multifamily units compares to the patterns in the following cities in Pierce County (Table 2-7):

Table 2-7 Comparison of Multifamily Units among Pierce County Cities: 1997

	% Multifamily Units
Lakewood	44.8%
University Place	42.3
Sumner	38.3
Gig Harbor	37.3
Steilacoom	34.0
Puyallup	33.8
Tacoma	33.7
Edgewood	10.8
Incorporated Pierce County	35.0
Unincorporated Pierce County	12.7
Total Pierce County	25.6

Source: Office of Financial Management, State of Washington, 1997.

The pattern of multifamily residences in areas of South King County and Thurston County are shown in Table 2-8.

Table 2-8 Percentage of Multifamily Units in Region: 1997.

	% Multifamily Units
Incorporated King County	43.2%
All of King County	36.3
•Auburn	42.5
•Burien	38.6
•Des Moines	41.9
•Federal Way	41.8
•Kent	46.7
•Normandy Park	16.8
•Renton	48.0
•Sea-Tac	36.3
•Seattle	47.3
•Tukwila	54.1
Thurston County	
•Olympia,	37.8
•Lacey	31.7
•Tumwater	40.9

Source: Office of Financial Management, State of Washington, 1997.

This characteristic (i.e., large percentage of multifamily units) results from several factors: Lakewood is as much a central place as it is a suburb; there is a large concentration of employment (both public [military] and private) nearby; and, as is the case with several of the jurisdictions cited above, county government regulations and permitting tended to allow multifamily development. The City of Lakewood is a fairly densely developed area. Table 2-9 compares the development density for cities near to Lakewood and of similar size.

Table 2-9 Population Density of Pierce County, South King County and Cities of Comparable Size to the City of Lakewood: 1996 (persons per square mile)

City	County	Persons per Square Mile
Lakewood	Pierce	2,616
Tacoma	Pierce	3,772
Fircrest	Pierce	3,687
University Place	Pierce	3,658
Lakewood	Pierce	3,139
Puyallup	Pierce	2,577
Milton	Pierce	2,345
Gig Harbor	Pierce	2,165
Sumner	Pierce	1,453
Bonney Lake	Pierce	1,404
Fife	Pierce	1,384
Edgewood	Pierce	1,148
Des Moines	King (South)	4,942
Burien	King (South)	4,057
Federal Way	King (South)	3,584
Renton	King (South)	2,659
Bellevue	King	3,375
Kent	King (South)	2,237
Sea-Tac	King (South)	1,839
Tukwila	King (South)	1,696
Auburn	King (South)	1,756
Bellingham	Whatcom	2,380
Everett	Snohomish	2,645
Spokane	Spokane	3,199

Source: 1997 Washington State Almanac: An Economic and Demographic Overview of Counties and Cities.

2.2.3 Lakewood Households in Need of Assistance

2.2.3.1 Renter Households

There were 11,941 renter-occupied units in Lakewood in 1990. Forty-five percent (or 5,373 households) had housing problems, and need assistance. These are households lacking a complete kitchen, lacking complete plumbing, having more than 1.01 persons per room, or paying more than 30 percent of their income for rent. In all, 2,175 renter households were paying more than 50 percent of their income for rent, which represents an extreme cost burden. The level of need varies, predictably, by income.

Very Low Income - 0 to 30 Percent of Median. Over 80 percent of households in this income group had housing problems. Seventy-eight percent were over 30 percent cost-burdened and almost two-thirds (64 percent, or 1,675 households) were paying over half of their income for rent. Almost all (93 percent) of large family households (more than 5 people in the household) in this income range had housing problems.

Low Income – 31 to 50 Percent of Median. As above, over 80 percent of households in this income range had housing problems. A higher percentage of large family households had problems (92 percent). About three-quarters of households were paying more than 30 percent of their income for rent and 21 percent (452 households) were 50 percent or more cost-burdened. A higher percentage of elderly households were burdened at this level.

Moderate Income – 51 to 80 Percent of Median. Forty-five percent (1,195 households) in this income range had housing problems. A greater percentage (64 percent) of large family households had problems. However, a higher percentage of elderly households were burdened with housing costs in excess of 30 percent and 50 percent of their income.

Middle Income – 81 to 95 Percent of Median. Far fewer households (237) in this income range had housing problems. More elderly households faced cost burdens than other types of renters.

Table 2-10 Lakewood Renter Households in Need of Assistance by Type Household, Income Level, and Housing Need 1990

Income Level and Housing Need	Type of Household				Total
	Elderly	Small Family	Large Family	Other	
0-30% Median Income	239	1,075	478	835	2,627
With housing problems	62%	84%	93%	80%	82%
Cost burdened (>30%)	60%	81%	80%	79%	78%
Cost burdened (>50%)	43%	67%	63%	66%	64%
31-50% Median Income	176	1,015	430	528	2,149
With housing problems	70%	82%	92%	77%	82%
Cost burdened (>30%)	69%	78%	69%	73%	74%
Cost burdened (>50%)	29%	20%	19%	22%	21%
51-80% Median Income	126	1,433	621	447	2,627
With housing problems	55%	39%	64%	38%	45%
Cost burdened (>30%)	54%	33%	30%	36%	34%
Cost burdened (>50%)	10%	0%	1%	4%	1%
81-95% Median Income	35	597	287	156	1,075
With housing problems	38%	17%	37%	11%	22%
Cost burdened (>30%)	38%	7%	10%	10%	9%
Cost burdened (>50%)	15%	1%	0%	0%	1%
Total Households	702	5,970	2,388	2,881	11,941
With housing problems	50%	40%	56%	44%	45%

2.2.3.2 Owner Households

A similar analysis of owner households indicates that about 16 percent of owner households need assistance because of housing problems. That represents 1,726 households in all, about 30 percent of which are elderly.

There were 10,813 owner-occupied units in Lakewood in 1990. Fifteen percent, or 1,632 households, are paying in excess of 30 percent of their income for housing. A smaller portion (533 households, 5 percent of the total) are paying 50 percent or more of their income for housing.

Very Low Income – 0 to 30 Percent of Median. About two thirds of elderly households at this income range have problems, as do almost 90 percent of other households. Over 30 percent (118) elderly households pay half or more of their monthly income for housing. Sixty-six percent (176) non-elderly households pay 50 percent or more of their income for housing.

Low Income – 31 to 50 Percent of Median. There were estimated 865 owner households in this income range. Just over 60 percent were elderly households, 25 percent of who had housing problems and potentially needed assistance.

A much larger share of other owner households in this income range were estimated to have housing problems. Almost 70 percent were cost-burdened and 34 percent were extremely cost-burdened.

Moderate Income – 51 to 80 Percent of Median. In this income category, 38 percent of owner households are estimated to have housing problems. Just over one-third are paying 30 percent or more of their income for housing and 6 percent (84 households) are paying 50 percent or more of their income for housing.

Middle Income – 81 to 95 Percent of Median. While fewer owners need assistance at this income range, 260 households (27 percent) had housing problems. Twenty-four percent were 30 percent or more cost-burdened. Just 1 percent was paying 50 percent or more of their income for housing.

Table 2-11 Lakewood Owner Households in Need of Assistance by Type Household, Income Level, and Housing Need 1990

Income Level and Housing Need	Type of Household		Total
	Elderly	Other Owners	
0-30% Median Income	382	267	649
With housing problems	67%	88%	76%
Cost burdened (>30%)	67%	87%	75%
Cost burdened (>50%)	31%	66%	45%
31-50% Median Income	541	324	865
With housing problems	25%	72%	43%
Cost burdened (>30%)	25%	68%	41%
Cost burdened (>50%)	7%	34%	17%
51-80% Median Income	732	891	1,623
With housing problems	16%	55%	37%
Cost burdened (>30%)	15%	50%	34%
Cost burdened (>50%)	3%	7%	5%
81-95% Median Income	286	687	973
With housing problems	7%	35%	27%
Cost burdened (>30%)	7%	31%	24%
Cost burdened (>50%)	0%	1%	1%
Total Households	3,182	7,631	10,813
With housing problems	17%	16%	16%

2.2.4 Update of Demographic Character

The US census provides a periodic standard and uniform method and procedure to ensure that demographic, population, and housing patterns can be compared. Unfortunately, the census data are published every ten years. Currently those data are 7–8 years old. In addition, the relatively new status of Lakewood precluded publication of recent detailed state population and housing estimates until very recently.

Updating the information on the City of Lakewood's demographic character is somewhat problematic. The last comprehensive US Census of Population and Housing in 1990 provided a whole range of data by specific local jurisdictions and small areas within jurisdictions, census tracts. State and local data sources update population estimates and housing unit estimates, but demographic detail are not available. What is available is collected for counties, not smaller areas. Several local agencies and the school district contracted to obtain data since the census. In addition, there are national data services that provide intracensal estimates based on formulas derived from national patterns. These non-census data sources are not necessarily comparable.

Several trends were considered in attempting to update local demographic descriptions of Lakewood:

- Population growth—the general population growth in the areas of Lakewood covered by state agencies appears to have increased at a pace faster than historically for the area. The national data source did not match this, but estimated recent population growth at historic rates.
- Household incomes—the only intracensal estimates are for Pierce County for per capita personal and median household income. While the per capita income in Pierce County increased at the same pace as the state and nation (1990 to 1995-20.8%, 21.0% and 21.2% respectively), the median household income estimates for Pierce County were slower, 31.5% versus 37.6% for the state from 1989 to 1997. The national data source information provided by the T.A.T. indicated comparable household income increases for the county, but the rate of increase for the Lakewood area was slightly less than 50% faster than the county's and the national data source had the Lakewood area's per capita income increase at more than twice the county's estimated pace. These results do not seem comparable. School district data indicated that students eligible for free and reduced price lunches have increased, while enrollment has tended to be stable.
- Ethnicity—the school district monitors the racial/ethnic composition for enrollment. During the past 15 years the Asian, American Indian, Black, and Hispanic students have increased as a percentage of school enrollment. The racial/ethnic composition of the school enrollment is much more diverse than the community's population at large.
- Home ownership—there are no data comparable to the census data; however, the national data system estimated that whereas 1990 census data showed a 47.5% ownership rate, their 1996 estimate was 50.2%; this is a fairly significant change to have occurred in six years if in fact the information is comparable.

Just as with any enterprise, periodic updating and monitoring of data, information, and performance are important; this is also true for local communities. Typically monitoring economic, land use/real estate, and public finance trends are possible, albeit with a lag of from one to three years. Demographic trends are harder to monitor but typically also do not change as rapidly.

As the city continues to grow, it will be able to take advantage of state, local, and regional data sources to monitor its trends and conditions within its own specific boundaries. The city's GIS system; and housing and building permits will allow it to make periodic estimates of the amount of population if not its composition.

2.2.5 Diversity Among Planning Areas of Lakewood

There is wide variation among the seven planning subareas. The demographic patterns within the city around the overall or typical patterns are described above. The share of population of each sub-area also ranges from 6.3% of the city's population (North Central Planning Area) to 27.4% (West Planning Area). The distribution of population and housing units in 1990 is shown in Table 2-12. Detailed land use inventory provides a refinement of this pattern (see Chapter 3).

Table 2-12 Distribution of Population and Housing Units within Lakewood: 1990

Lakewood Planning Area	% of Population	% of Housing Units
Urban Core	17.9	18.2
Northeast	18.2	19.5
North Central	6.3	7.5
Northwest	11.1	7.6
West	27.4%	26.8%
South Central	8.7	9.6
Southwest	10.3	10.8

Source: US Census of Population: 1990.

The only place in the city where the percentage of population exceeds the percentage of housing units is the Northwest Planning Area. This area includes the area known as Oakbrook. The Northwest Planning Area had the highest (170% of county) median household income; the second highest number of persons per household and per capita personal income; lowest percentage of total persons (2.2%) and children (0.4%) living in poverty status; highest percentage of home ownership (69.1%); highest median home value (49% above county median); and rental rate per month 77.3% above the county average.

The subareas less well-off based on the decennial census data were:

- lowest percent of owner-occupied housing—North Central and Southwest
- lowest median house value—Northeast and Southwest
- lowest median monthly rent—North Central and Southwest

- smallest household size—North Central and South Central
- lowest average per capita income—Urban Core and Southwest
- lowest median household income—Northeast and Southwest
- lowest percentage of persons in poverty status—Urban Core and Southwest

The minority population groups are distributed throughout the Lakewood planning areas as shown in Table 2-13.

Table 2-13 Distribution of Minority and Hispanic Population in Lakewood

Subarea	% of City's Minority Population	% of Hispanic Population
Urban Core	40.1%	7.0%
Southwest	33.0	7.3
Northeast	25.8	3.8
North Central	25.0	5.6
South Central	22.6	4.6
West	15.9	4.0
Northwest	14.8	2.2
Citywide	24.8%	4.8%

Source: US Census of Population: 1990.

2.2.6 Summary

The dimensions of demographic diversity in Lakewood are very important to understand for the planning process. They are also not necessarily relevant since these are all areas of one city that will increasingly be called upon to function as one place, now that it is incorporated.

An important reason to examine the statistics for planning areas is to appreciate that the residents of Lakewood are complex and not easily described by reference to a few generalizations. These patterns exist for complex historic economic, social, and lifestyle reasons. The main vehicle by which different areas of a community exhibit a diverse pattern is a combination of real estate market and lifestyle choices. Size, price, age, condition, and type of housing and neighborhood attract demographic groups who find old or new housing to fit their budgets and housing preferences. The local housing stock does not change rapidly. Typically, the demographic character of neighborhoods does not change rapidly, although they can. Rapid change usually occurs by two means:

- a large amount of new construction of housing units on vacant ground that are different than the existing stock of housing units; or

- substantial numbers of new households are attracted because of some “natural” economic or demographic change; for example, a frequent pattern is new younger families with children moving into a neighborhood of older less expensive homes that are being sold by smaller older households with grown children.

Demographically, the City of Lakewood has more in common with older urban centers than with newer rapidly growing suburbs. These areas emerging at the edge of the metropolitan area tend to be more homogeneous and better off with high home values. Lakewood can be expected to grow at more moderate rates compared to outlying areas. The current diversity patterns for Lakewood are more consistent with urban centers than edge suburbs.

CHAPTER 3: LAND USE

Although Lakewood has been an independent city for only 18 months, land use patterns are clearly defined and mature. Most of the easily developed land within the city boundary has been improved in some manner. Current land use patterns in the City of Lakewood are largely the result of two different forces, the first being single family neighborhood development. The western part of the city is almost entirely residential in character, due in part to the attractiveness of its many lakes. By contrast, land uses in the eastern part of the city are dominated by long established commercial development. This development pattern has in part been dictated by the many transportation arterials, especially State Highway 99, Bridgeport Way, Steilacoom Boulevard, the Burlington-Northern Railroad, and more recently Interstate 5.

The presence of the two adjacent military installations—McChord Air Force Base and the Fort Lewis Army installation—is another major regional force influencing land use patterns. Lakewood is surrounded on the east and south by these two installations and considers itself the host community for both. Most major entrances into these two large bases are through Lakewood, and many of the military personnel who serve there live and/or shop in Lakewood, along with their families. The presence of these bases has a noticeable impact on Lakewood's demographics and, consequently, land use patterns.

The purpose of this chapter is to describe existing land use patterns within Lakewood. In general, the discussion is restricted almost entirely to conditions within the city limits, although occasionally mention will be made of adjacent conditions. It begins with a discussion of existing conditions, including: (1) identification of the county Urban Growth Boundary; (2) land cover and development patterns; (3) existing land use; and (4) existing city zoning, including a discussion of several zoning changes implemented since the adoption of the Interim Comprehensive Plan at the time of incorporation. This is followed by a discussion of land use trends and projections, including identification of development patterns based on recent satellite imagery and projections for population, housing demand, and employment growth for the 20-year timeframe encompassed by the Comprehensive Plan. This chapter also includes a summary of countywide land use policies as established by the Pierce County Comprehensive Plan. As mandated under

the GMA, city land use policies must support the broader county-wide land use policy. The chapter concludes with a discussion of the implication for planning of the data presented.

A number of different data sources were relied upon in developing this chapter. First, spatial data for map images, as well as data on natural resources, came from the Geographic Information System (GIS) departments of various government agencies, including the Department of Natural Resources, the Department of Ecology, the Department of Fish and Wildlife, and most importantly, Pierce County. Data on existing land use and housing conditions came from an extensive database developed by the City of Lakewood Planning Department, based on a parcel-by-parcel survey undertaken in 1996 and 1997. Additional data on land cover patterns and development trends came from the Puget Sound Regional Council, including imagery based on satellite images and aerial photography.

3.1 Existing Conditions

3.1.1 Planning Areas

As described in Chapter 1, Lakewood was divided into 7 distinct planning areas:

1. Urban Center Planning Area
2. Northeast Lakewood Planning Area
3. North Central Lakewood Planning Area
4. Northwest Lakewood Planning Area
5. West Lakewood Planning Area
6. South Central Lakewood Planning Area
7. Southwest Lakewood Planning Area

Identification of these 7 planning areas is intended to simplify discussion of the land use and census data throughout this Background Report. To a large degree, the boundaries of these areas are based on 1990 census tracts, allowing for relationships to be drawn

between land use and socioeconomic data with relative ease. In some cases, a census tract may be split between several planning areas. For example, the boundaries of the Urban Center Planning Area follow those identified by the Puget Sound Regional Council in their study of Urban Centers throughout the Puget Sound region (PSRC 1997). PSRC used physical boundaries such as streets and significant development rather than census tracts to define the Urban Center.

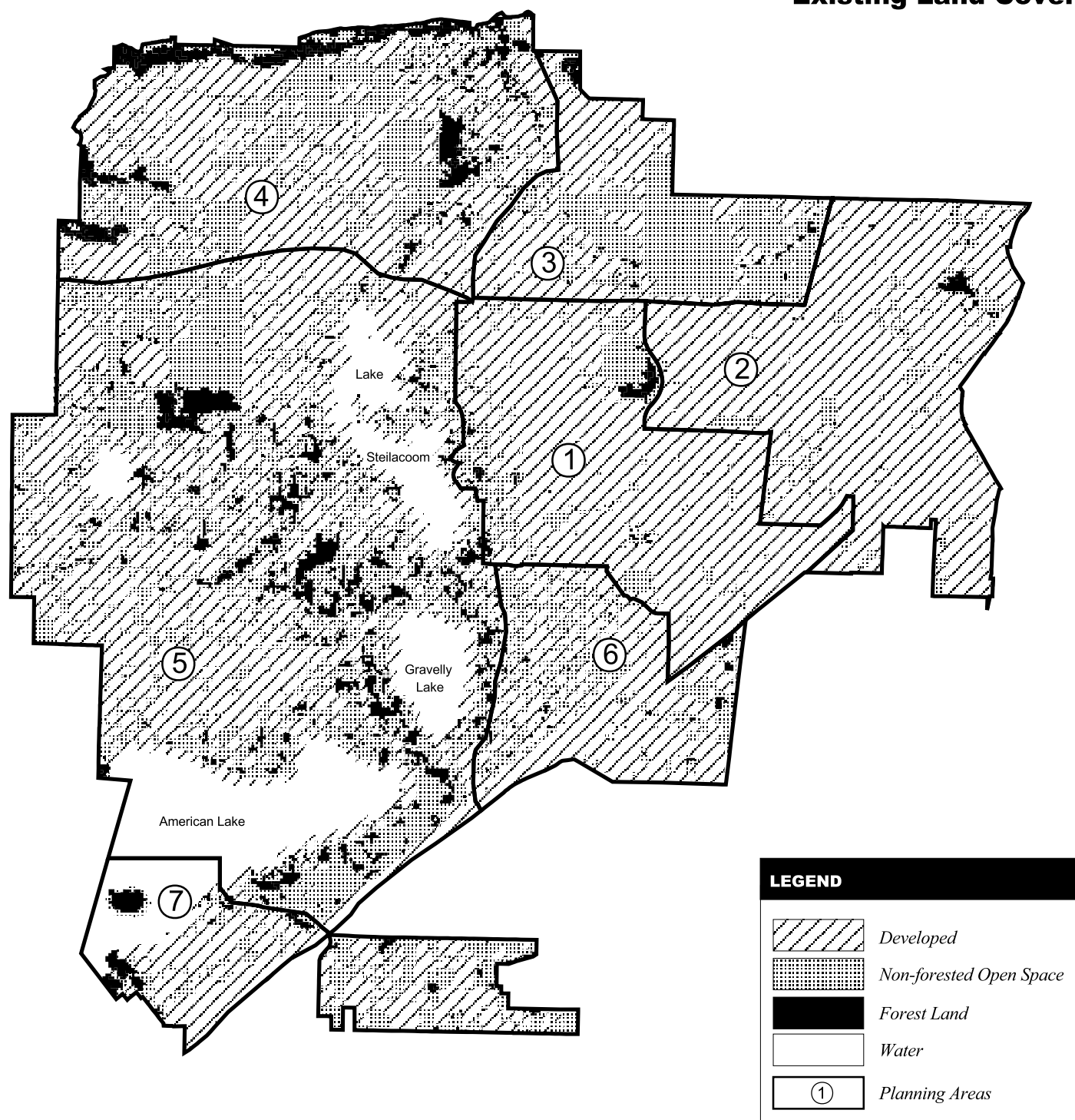
3.1.2 Land Cover & Development Patterns

Land cover information provides a way to understand general development and environmental patterns present in Lakewood. Unlike other land use statistics presented in this section, land cover information is not related to specific parcels but rather identifies what is actually present on the ground. An individual parcel may contain multiple types of land covers.

Land cover data for the City of Lakewood are shown in Figure 3-1. This information was obtained from 1992 satellite imagery obtained from the Puget Sound Regional Council. Six land cover classifications are shown that were generated from an August 1992 LANDSAT Thematic Mapper image. These classifications are Developed, Agricultural, Natural Open Land, Forest Land, Water, and Barren Land (see Table 3-1). A description of each of these land cover classifications follows:

- Developed - modified for human use (e.g., roads, buildings, houses).
- Agriculture - Pasture and farm land (e.g., livestock grazing, turf farms, crops).
- Natural Open Land - land that has not been significantly modified by human activity and contains low vegetation (e.g., grasslands and scrubs).
- Forest Land – trees.
- Water - lakes, ponds, streams, etc.
- Barren Land - land devoid of vegetation and developed structures (e.g., gravel pit, bare lots).

Figure 3.1
Existing Land Cover



NOTES

Based on LANDSAT satellite imagery acquired and manipulated by Puget Sound Regional Council.

Table 3-1 Land Cover in the City of Lakewood

Land Cover	Area (acres)¹	Percentage of Total
Developed	7,245	59%
Agriculture	50	<1%
Natural Open Land	3,297	27%
Forest Land	624	5%
Water	955	8%
Barren Land	15	<1%
Total²	12,186	100%

Note:

¹ Acreages were calculated from a GIS coverage and rounded to the nearest whole number.

² Area totals may vary from totals in other tables due to discrepancies in GIS data sources.

Source: Puget Sound Regional Council and EDAW, Inc., 1997.

As apparent in Figure 3-1, developed land is the predominant land cover type in the City of Lakewood and is relatively abundant in all parts of the city. While it is particularly dominant in the Urban Center and Northeast Planning Areas, Developed land represents close to or above 50% of the total land area in each of the 7 planning areas.

There are some large areas of open land found in many areas of the city. However, little of this represents public open space. The largest areas of public open space are found in Planning Area 1, with the Flett wetlands, and in Planning Area 5, represented by Steilacoom County Park. Other large areas of open land include golf courses in Planning Areas 4 and 5, and open space associated with Western Washington Hospital in Planning Area 4.

Two significant concentrations of forested land are apparent in Figure 3-1. One of these, the largest contiguous parcel of forest lands in the city, stretches along the northern border of Lakewood on the steep slopes adjacent to Chambers Creek. The second significant concentration of forest cover is found scattered throughout the large lot residential areas west of Gravelly and Steilacoom Lakes, and east of Lake Louise. These forest lands are potentially vulnerable to future residential development.

Open water is a major land cover type present in Lakewood due to the many lakes. These are found predominantly in Planning Areas 5 and 7. Agricultural or barren lands are present in small pockets throughout Lakewood but amount to minimal land area.

3.2 Land Use

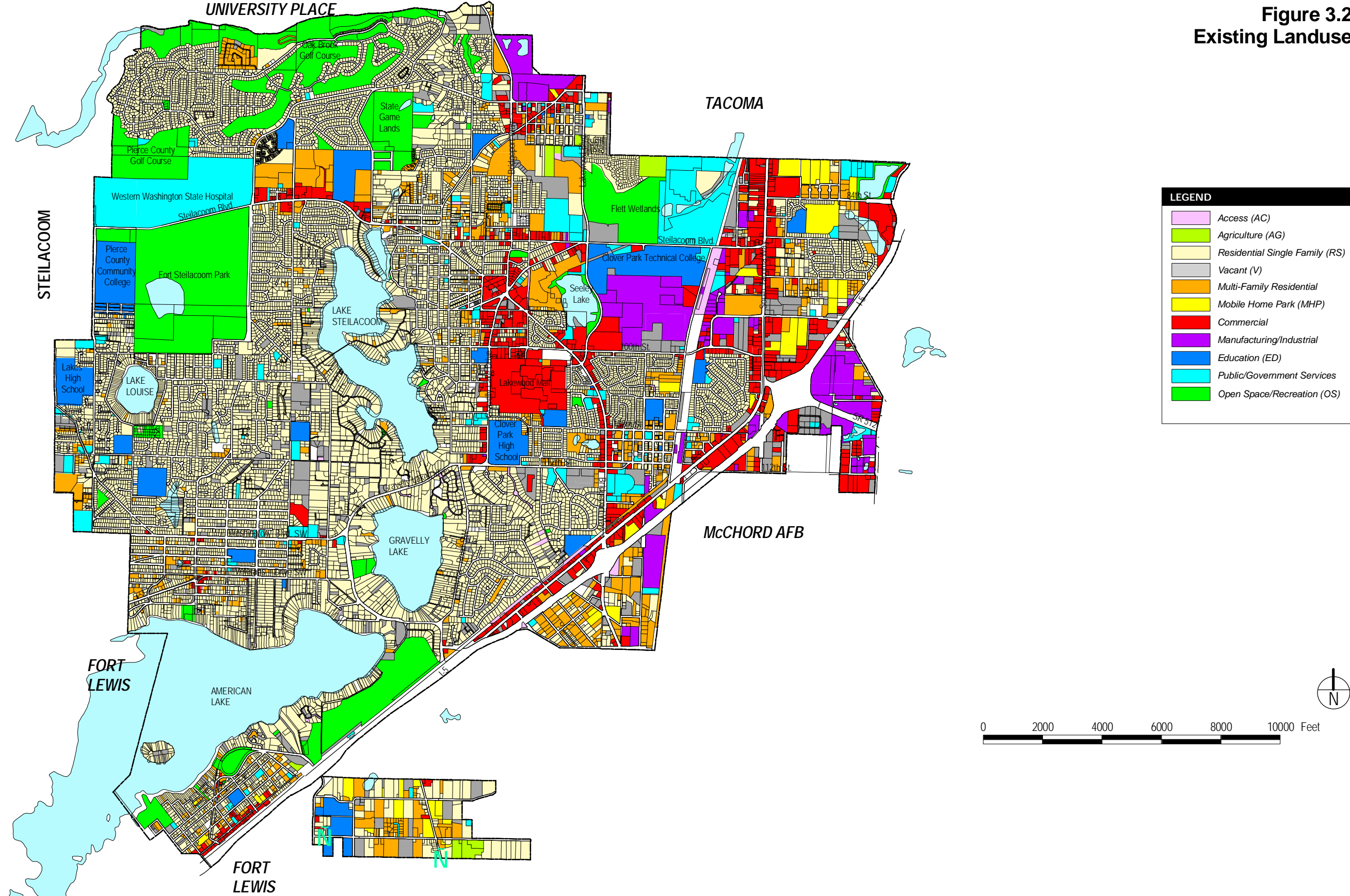
Two major sources of data were used to assemble statistical information about land use within Lakewood. The first and most important of these is a comprehensive parcel-by-parcel existing land use survey conducted by the City of Lakewood during 1996 and 1997. City planning interns conducted a physical survey of all land within the city boundaries and created a database of the results. Organized by tax assessor parcel number, the database consists of these survey data as well as additional information from the county assessor's office. For the purposes of this report, all data identifying parcel areas within this survey are assumed to be identical with the county assessor's records. Land use statistics presented in this report are based on this parcel survey database, unless otherwise noted.

The other important source of information is the city's GIS. This GIS was assembled from existing GIS data sources, including Pierce County information services, the Puget Sound Regional Council, and various state agencies such as the Department of Natural Resources, the Department of Ecology, and the Department of Fish and Wildlife. The Lakewood GIS has been used to create most of the map-based figures in the Background Report and serves as a valuable cross-reference regarding area tabulations.

It should be noted that for various unavoidable historical and cartographic reasons, physical descriptions of individual parcels (e.g., square footage) vary between these two sources. When this is the case, the city's parcel survey database was used rather than the GIS system. As mentioned above, the parcel database is assumed to be equal to the assessor's data.

The city's land use survey assigns all parcels to 1 of 27 categories of land use, as identified in Table 3-2. Although very useful for the City of Lakewood's planning purposes, these categories are too finely divided for purposes of this report, which is intended to summarize general land use patterns throughout the city. Therefore, these land uses were reclassified into a total of 13 summary categories. The basis of this reclassification is also shown in Table 3-2. Existing land use, classified by these summary categories, is also shown in Figure 3-2.

Figure 3.2
Existing Landuse



Source: Pierce County GIS / Lakewood Parcel Survey Database / EDAW Inc., 1997.

Table 3-2 Categories of Existing Land Uses in the Lakewood Parcel Database

Summary Categories	Land Use Survey Categories	Symbol	Definition
Access	Access	AC	parcel is used entirely as a driveway
Agriculture	Agriculture	AG	land used for growing crops
Residential Single Family	Residential Single Family	RS	one house per parcel, including mobile homes
Mobile Home Park	Mobile Home Park	MHP	four or more mobile homes
Multi-Family Residential	Residential-Duplex	DUP	two residences per building
	Residential-Triplex	TRI	three residences per building
	Residential-Fourplex	4P	four residences per building
	Retirement/Group Homes	GH	five or more people per room
Commercial	Transitional Housing	TH	residential hotels
	Adult Entertainment	AD	classified by city ordinance
	Communication	CMU	land used for telephone, radio, television operations
	Commercial Retail	CR	retail sales such as gas, groceries, restaurants, bars, etc.
	Commercial Services	CS	professional offices, hair salons, auto repair, etc.
	Commercial Vacant	CV	empty building/storefront
Manufacturing/Industrial	Heavy Manufacturing	HI	wood products, cements, chemicals, metals
	Light Manufacturing	LI	food, clothing, newspapers, scientific instruments
	Mineral	MIN	sand & gravel operations
	Commercial Warehouse	CW	automotive, hardware, construction material
Education	Education	ED	schools, technical institutes, colleges
Public/Government Services	Government Services	GOV	military, police, fire, postal, administration
	Public Assembly	PA	theaters, stadiums, arenas, auditoriums
	Quasi-Public	QP	churches, libraries, museums, historic sites, cemeteries
	Utilities	UT	substations, water towers, drainfields, catch basins
Open Space/Recreation	Open Space/Recreation	OS	parks, playing fields, greenbelts
Street Right-of-way	Street Right-of-way	ROW	public street ROW
Vacant	Vacant	V	no buildings on lot
Water (Lakes)	Water	Water	lake surface
No Parcel Data Available	No Parcel Data Available	No Data	No parcel data available

Source: City of Lakewood Planning Department, 1998.

Of Lakewood's total area of 12,118 acres, 11,927 acres are accounted for in the city's parcel survey database. The remaining 191 acres consist of unclassified parcels and land outside all planning areas. Table 3-3 shows how the 12,106 acres are distributed by land use and by planning area. Several facts are immediately apparent from a quick review of this table. First, Lakewood is a mature developed community, with a scarcity of large undeveloped tracts of land. Land used for Agriculture accounts for only 42 acres of the city total, while Open Space/Recreation land accounts for only 1,427 acres, or less than 12% of the land base, excluding lakes and rights-of-way. This represents 1 acre of Open Space land for every 3.5 acres currently occupied by residential uses. There is no land identified as 'Resource' land. In the future, growth will occur through infill or redevelopment. Secondly, Lakewood is a predominantly residential community, with 41% of the total area occupied by homes, apartments, mobile homes, and other residential uses. Combined residential uses occupy 5,019 acres, with the majority of that being devoted to single family residences. Each of the seven planning areas is described further below.

Table 3-3 Planning Area Acreage Summaries

Land Use	Area 1 (acres)	Area 2 (acres)	Area 3 (acres)	Area 4 (acres)	Area 5 (acres)	Area 6 (acres)	Area 7 (acres)	Summary by Land Use	% of Total Area
Access	4	21	3	0	6	14	0	48	0.4%
Agriculture	0	0	26	0	0	0	16	42	0.3%
Residential Single Family	408	193	190	720	2021	340	229	4101	33.8%
Mobile Home Park	12	99	1	0	0	10	33	154	1.3%
Multi-Family Residential	143	104	102	107	106	104	97	764	6.3%
Commercial	297	323	39	37	19	44	20	777	6.4%
Manufacturing/ Industrial	17	253	65	0	0	14	0	348	2.9%
Public/ Government Services	53	39	188	19	60	11	9	378	3.1%
Education	68	110	1	57	160	10	39	445	3.7%
Open Space/ Recreation	44	35	105	650	560	0	32	1427	11.8%
Street ROW	309	248	83	222	545	188	119	1712	41.1%
Vacant	67	146	63	51	176	74	57	635	5.2%
Water	0	0	0	0	928	0	170	1098	9.1%
No Data	39	33	7	59	27	11	2	179	1.5%
Acre Totals	1460	1603	872	1922	4607	820	822	12106	100%
Percentage Totals	12%	13.2%	7.2%	15.9%	38%	6.8%	6.8	100%	

Source: City of Lakewood Parcel Survey Database, 1998.

3.2.1 Planning Area 1: Lakewood Urban Center

The Urban Center Planning Area (Planning Area 1) consists of 1,460 acres located in the heart of Lakewood (Table 3-4). It is bounded by Steilacoom Boulevard and 100th Street on the north, 112th Street on the south, I-5 on the southeast, and Halcyon Road on the east. To the west the boundary follows a series of residential streets, placing most of the residential area on the east side of Steilacoom Lake within Planning Area 5. Planning Area 1 contains all of Census Tract 718.02, splits Census Tract 718.04 with Planning Area 2, and Census Tract 719.02 with Planning Area 5.

Table 3-4 Distribution of Existing Land Uses in Planning Area 1

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	3.7	0.2%	0.0%
Agriculture	0.0	0.0%	0.0%
Residential Single Family	408.3	28.0%	3.4%
Mobile Home Park	11.7	0.8%	0.1%
Multi-Family Residential	143.0	9.8%	1.2%
Commercial	296.5	20.3%	2.4%
Manufacturing/Industrial	16.7	1.1%	0.1%
Public/Government Services	53.3	3.7%	0.4%
Education	68.0	4.7%	0.6%
Open Space/Recreation	43.9	3.0%	0.4%
Street Rights-of-Way	308.7	21.1%	2.5%
Vacant	67.4	4.6%	0.6%
Water (Lakes)	0.0	0.0%	0.0%
No Parcel Data Available	39.0	2.7%	0.3%
TOTALS	1460.2	100%	12%

Source: City of Lakewood Parcel Survey Database, 1998.

Although Planning Area 1 contains almost all of the commercial areas on either side of Bridgeport Way and Gravelly Lake Drive and includes the Lakewood Mall, existing commercial land uses comprise up only 20% of the planning area. With 297 acres of combined commercial lands, Planning Area 1 has the second largest amount of commercial lands of any planning area. Public/Government Services and Education make up another 8.4%, including the Clover Park High School, while Manufacturing/Industrial lands comprises only 1.1%. All in all, these categories of land use, often thought of as defining land uses in terms of urban centers, include only a total of 30% of the planning area.

In contrast, a total of 39% of existing land use in the Urban Center consists of residential land uses, most of which (408 acres) serves single-family residences and comprises the planning area's dominant land use. Much of this single-family housing is found in

unified, well-maintained, owner-occupied neighborhoods. Some areas are beginning to experience higher rates of renter-occupied units and infill of multiple-family units. Only about 3% of land area in the Urban Center is categorized as Open Space/Recreation. A total of 4.6% of the land in the planning area consists of vacant parcels. These are mostly vacant developed lands in this older developed neighborhood.

3.2.2 PLANNING AREA 2: NORTHEAST LAKEWOOD

The Northeast Planning Area (Planning Area 2) consists of 1,603 acres in the northeast corner of Lakewood, including all of the area east of I-5 north of McChord AFB, making it the third largest planning area (Table 3-5). This planning area includes a designated industrial and manufacturing center centered on the Lakewood Industrial Park on 100th Street SW, the Clover Park Technical School, four of five potential sites for the terminus of the RTA Commuter rail station, and Lakewood's International District, a substantial Korean community centered on South Tacoma Way. The boundaries of the Northeast Planning Area consist of the city boundaries to the north and the east, the Burlington Northern tracks and Steilacoom Boulevard on the northwest, and the Urban Center Planning Area on the south and west. Planning Area 2 contains Census Tract 717.02, and that part of Census Tract 717.02 found within the Lakewood boundaries. It splits Census Tract 718.04 with Planning Area 1.

Table 3-5 Distribution of Existing Land Uses in Planning Area 2

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	20.5	1.3%	0.2%
Agriculture	0.0	0.0%	0.0%
Residential Single Family	193.1	12.0%	1.6%
Mobile Home Park	98.6	6.1%	0.8%
Multi-Family Residential	103.8	6.5%	0.9%
Commercial	323.4	20.2%	2.7%
Manufacturing/Industrial	252.9	15.8%	2.1%
Public/Government Services	39.5	2.5%	0.3%
Education	109.9	6.9%	0.9%
Open Space/Recreation	34.7	2.2%	0.3%
Street Rights-of-Way	247.7	15.4%	2.0%
Vacant	146.1	9.1%	1.2%
Water (Lakes)	0.0	0.0%	0.0%
No Parcel Data Available	33.2	2.1%	0.3%
TOTALS	1603.4	100.10%	13.30%

Source: City of Lakewood Parcel Survey Database, 1998.

The largest single land use component in Planning Area 2 consists of Commercial properties, which account for 20% of the land base in the area. With 323 acres identified

as Commercial, the Northeast Planning Area has the most commercial land of any planning area. The second largest land use component in Planning Area 2 is Manufacturing/Industrial, with 253 acres, or 16%. This largely reflects the presence of the Lakewood Industrial Park, and also manufacturing facilities in the former gravel quarry north and east of the I-5/SR 512 intersection. It also contains 146 acres of land classified as Vacant, which accounts for 9% of the planning area. Vacant lands are scattered throughout the planning area, including in the Lakewood Business Park. Most of the Commercial parcels consist of property located on either side of Highway 99, and in the Lakewood Industrial Park on 100th Street. Other significant clusters of Commercial lands are found along the east side of the Burlington Northern line and at the intersections of I-5 with 84th Street and with SR 512.

Multi-Family residences account for another 6.5% of the planning area, with 104 acres; Residential Single Family land accounts for another 193 acres. Much of this single-family housing is found in two relatively isolated residential neighborhoods - Sylvan Park and South Gate, which are surrounded by Commercial and other land uses. A significant portion of the residential property consists of mobile home parks, with at least 14 found in Planning Area 2, most of them located between Highway 99 and I-5, north of SR 512. Mobile home parks (MHP) account for 99 acres of Planning Area 2, or 64% of the total MHP land found in Lakewood. A number of residential areas in Planning Area 2 are affected by flight noise from McChord AFB, which helps account for the prevalence of MHPs, sometimes considered a transient land use.

A large parcel classified as open space is found in the northeast corner. This is a former gravel quarry which now serves as stormwater overflow for the City of Tacoma. No other parcels classified as Open Space/Recreation are found in Planning Area 2, which could serve the 396 acres of residential land uses. Some recreation opportunities are found in school playgrounds. The remainder of the planning area consists mostly of small areas of Education, Public and Government Service uses, including the Pierce Transit headquarters at 96th Street and S. Tacoma Way.

3.2.3 PLANNING AREA 3: NORTH CENTRAL LAKEWOOD

The North Central Planning Area (Planning Area 3) consists of 872 acres in the northern part of Lakewood, including a significant portion of the Flett wetlands, possibly the most significant natural open space area within the city boundaries. Planning Area 3 is defined by the boundaries of Census Tract 718.03, except that portion east of the Burlington Northern tracks. The physical boundaries are the city boundary to the north, Bridgeport Way (in part) on the west, Steilacoom Boulevard on the south, and the Burlington Northern tracks on the east. It also contains any assessor's parcels included in Census Tracts 718.036 and 723.06 that are within the boundaries of Lakewood.

Planning Area 3 has the most balanced distribution of land uses of any planning area in Lakewood (Table 3-6). No single category of land use dominates. Seven categories have at least 7% of the total planning area, yet no land use category has more than 22% of the total area. Planning Area 3 has the greatest amount of land classified as Agricultural of any planning area, but it also has a significant component of Manufacturing/Industrial lands.

Table 3-6 Distribution of Existing Land Uses in Planning Area 3

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	2.66	0.3%	0.0%
Agriculture	26.04	0.0%	0.0%
Residential Single Family	189.65	21.8%	1.6%
Mobil Home Park	1.19	0.1%	0.0%
Multi-Family Residential	102.25	11.7%	0.8%
Commercial	38.57	4.4%	0.3%
Manufacturing/Industrial	64.62	7.4%	0.5%
Public/Government Services	187.63	21.5%	1.5%
Education	1.24	0.1%	0.0%
Open Space/Recreation	104.99	12.0%	0.9%
Street Right-of-Way	82.8	9.5%	0.7%
Vacant	63.28	7.3%	0.5%
Water (Lakes)	0.0	0.0%	0.0%
No Parcel Data Available	7.0	0.8%	0.1%
TOTALS	871.92	96.90%	6.90%%

Source: City of Lakewood Parcel Survey Database, 1998.

The most common land uses in Parcel Area 3 are Public/Government Services and Residential Single Family each with 22% of the planning area. It is the only planning area where Public/Government Services comprises a significant portion of a planning area's land use (see Table 3-6). The statistics regarding land defined as Public/Government Services include a number of important cemeteries, which are

classified as quasi-public (QP) in the city database, and identified as Public/Government Services in this report. Other parcels identified as vacant may be difficult to develop due to the difficulties associated with wetland development. The Flett wetlands stretch through this area and potentially constrain many of those parcels.

Approximately 34% of the area consists of residential uses, with 22%, or 190 acres, consisting of single family residences, and 12%, or 102 acres, consisting of multi-family residences, much of the latter built in recent years. Although there is limited designated park land in this planning area, there is a sizable percentage of open space in the form of public and private conservation land available for passive recreation.

3.2.4 PLANNING AREA 4: NORTHWEST LAKEWOOD

The Northwest Lakewood Planning Area (Planning Area 4) is the second largest planning area in Lakewood, with 1,922 acres. It contains significant open space areas (south side of Chambers Creek, several golf courses) and major institutions and historical resources (Western Washington State, Fort Steilacoom). The boundaries of Planning Area 4 are the city boundaries on the north and west sides, Steilacoom Boulevard on the south, and Bridgeport Way on the east. It includes Census Tract 721.05, and those parts of 721.06 and 723.08 in the city.

Northwest Lakewood is perceived as having a residential character, with Residential Single Family as the largest component, accounting for 37% of Planning Area 2. Most of this land is in a large golf-course oriented planned unit development in the far northwest corner of Lakewood. There are 107 acres of multi-family housing as well, mostly along Hipkins Road north of Steilacoom Boulevard. Public/Government Services lands account for 19 acres, much of that being Western Washington State Hospital, while another 51 acres are classified as Vacant. This planning area has the largest share of land classified as Open Space/Recreation, (650) or approximately 0.8 acre for every acre of residential property. This open space consists primarily of Chambers Creek Park, the Fort Steilacoom Golf Course (public), and the Oakbrook Golf Course (private).

Table 3-7 Distribution of Existing Land Uses in Planning Area 4

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	0.37	0.0%	0.0%
Agriculture	0.0	0.0%	0.0%
Residential Single Family	719.63	37.5%	5.9%
Mobile Home Park	0.0	0.0%	0.0%
Multi-Family Residential	107.27	5.6%	0.9%
Commercial	36.5	1.9%	0.3%
Manufacturing/Industrial	0.0	0.0%	0.0%
Public/Government Services	18.54	1.0%	0.2%
Education	57.15	3.0%	0.5%
Open Space/Recreation	650.41	33.8%	5.4%
Street Right-of-Way	221.65	11.5%	1.8%
Vacant	50.96	2.7%	0.4%
Water (Lakes)	0.0	0.0%	0.0%
No Parcel Data Available	59.0	3.1%	0.5%
TOTALS	1921.48	100.10%	15.9%

Source: City of Lakewood Parcel Survey Database, 1998.

3.2.5 PLANNING AREA 5: WEST LAKEWOOD

The West Lakewood Planning Area is by far the largest planning area, at 4,607 acres. It has a predominantly residential character and is marked by neighborhoods that surround its many lakes. Over 20% of the planning area is covered by lake water; most of Lakewood's lake area is in Planning Area 5, including Lake Steilacoom, Gravelly Lake, Lake Louise, and American Lake. Other prominent non-residential land uses include Fort Steilacoom County Park and Pierce County Community College. Planning Area 5 is bounded by the city boundary on the west, Steilacoom Boulevard on the north, American Lake and I-5 on the south, and Nyanza Road on the east. It contains Census Tracts 721.07 and 721.08, and splits 729.02 with Planning Area 1. It also contains that part of Census Tract 721.10 in the city.

As noted, the West Lakewood Planning Area is predominantly residential, with 46% of its land area classified residential (Table 3-8). Of this, 2,021 acres are zoned Residential Single Family, and 106 acres are zoned multi-family. The West Lakewood single family residential component accounts for 17% of the entire land area of the city. No other planning area is so completely dominated by a single land use. Open Space/Recreation is the third largest category of land use, with 560 acres. The greater part of this is found in a single parcel - Fort Steilacoom Regional Park.

Table 3-8 Distribution of Existing Land Uses in Planning Area 5

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	5.8	0.1%	0.0%
Agriculture	0.0	0.0%	0.0%
Residential Single Family	2021.27	43.9%	16.7%
Mobil Home Park	0.0	0.0%	0.0%
Multi-Family Residential	106.33	2.3%	0.9%
Commercial	18.62	0.4%	0.2%
Manufacturing/Industrial	0.0	0.0%	0.0%
Public/Government Services	59.63	1.3%	0.5%
Education	160.04	3.5%	1.3%
Open Space/Recreation	559.87	12.2%	4.6%
Street Right-of-Way	544.54	11.8%	4.5%
Vacant	175.98	3.8%	1.5%
Water (Lakes)	928.02	20.1%	7.7%
No Parcel Data Available	27.0	0.6%	0.2%
TOTALS	4607.1	100.00%	38.10%

Source: City of Lakewood Parcel Survey Database, 1998.

Education uses, which are compatible with the residential nature of the area, total 160 acres. A number of public school facilities are found here, including elementary and middle schools and Lakes High School. Pierce County Community College also contributes to this number. This planning area also holds the greatest share of street rights-of-way, not surprising considering the high percentage of residential streets and cul-de-sacs.

Vacant lots are the fifth largest category of existing land use in Planning Area 5, at 4% or 176 acres. This would appear to indicate a capacity to absorb a fair amount of new residential construction in the area. It may also account for much of the forested character of the area. Figure 3-1, Existing Land Cover, shows that Planning Area 5 has the greatest amount of remaining forest cover in the city outside of the Chambers Creek valley.

There is only a small amount of land use in the Commercial and Public/Government Services land use categories, consisting mostly of small neighborhood retail areas and utility service providers facilities. This would indicate that residents seek services in other parts of the city. There is no agricultural, manufacturing, or industrial land in this planning area.

3.2.6 PLANNING AREA 6: SOUTH CENTRAL LAKEWOOD

The South Central Planning Area consists of the mixed residential/commercial neighborhoods south of the main urban core on either side of I-5, including the McChord Gate area. The smallest of the planning areas, it contains 820 acres and includes the main entrance into McChord Air Force Base, on Bridgeport east of I-5. It is bounded by McChord AFB on the east; 112th Street, Bridgeport Way, and I-5 on the north; Fort Lewis and I-5 on the south; and Nyanza Road on the west. It contains Census Tracts 719.01, and splits Census Tract 718.02 with the Urban Center Planning Area.

Planning Area 6 has roughly the same proportion of its land area in residential use as Planning Area 5, at 41.5%, yet it has a very different character (Table 3-9). While Planning Area 5 residential uses were almost entirely single family, 13% of the residential land in Planning Area 6 is multi-family, and half of that is in duplex units. Furthermore, the South Central Planning Area has 5% of its land area designated Commercial, compared with less than 1% for the West Lakewood Planning Area, most

Table 3-9 Distribution of Existing Land Uses in Planning Area 6

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	14.11	1.7%	0.1%
Agriculture	0.0	0.0%	0.0%
Residential Single Family	340.39	41.5%	2.8%
Mobil Home Park	9.59	1.2%	0.1%
Multi-Family Residential	104.42	12.7%	0.9%
Commercial	43.61	5.3%	0.4%
Manufacturing/Industrial	13.77	1.7%	0.1%
Public/Government Services	10.59	1.3%	0.1%
Education	9.55	1.2%	0.1%
Open Space/Recreation	0.39	0.0%	0.0%
Street Right-of-Way	187.55	22.9%	1.5%
Vacant	74.33	9.1%	0.6%
Water (Lakes)	0.0	0.0%	0.0%
No Parcel Data Available	11.0	1.3%	0.1%
TOTALS	820	99.90%	6.80%

Source: City of Lakewood Parcel Survey Database, 1998.

of it in large areas of strip commercial along Highway 99, Bridgeport Way, or other arterials. Together, residential and commercial uses account for 61% of the land area in Planning Area 6.

Vacant land accounts for 9% of Planning Area 6. Other than Right-of-Way, no other category of land use accounts for more than 2% of the land area on Planning Area 6. Education uses total only 10 acres of land, despite the very significant residential land use component, which would appear to indicate that many children must leave their neighborhood to attend school. Less than a single acre of land is categorized as Open Space/Recreation, indicating almost no recreation opportunities are available to serve the extensive residential development in Planning Area 6.

3.2.7 PLANNING AREA 7: SOUTHWEST LAKEWOOD

Southwest Lakewood is relatively isolated from the rest of Lakewood due to the convergence of American Lake, Fort Lewis, and I-5 at Ponders Corner. It consists of the two neighborhoods of Tillicum and American Lake Gardens, each separated by I-5. At 822 acres, it is the second smallest planning area. The boundaries of the planning area are coincident with the city boundaries, except where it meets Planning Area 6 at Ponders Corner, just north of the Tillicum Country Club. Its boundaries are coincident with the boundaries of Census Tract 720.

Residential uses account for 44% of the land area, with Residential Single Family accounting for 28%, Mobile Home Parks 4%, and Multi-Family Residential another 12% (Table 3-10). There is a wide disparity in housing quality, with residences ranging from the Castle, a turn-of-the-century timber baron mansion on the shores of American Lake, to a number of older substandard rental housing developments scattered throughout the area. There is a considerable amount of Vacant land in Planning Area 7 – 57 acres, or 7%. This would seem to indicate a capability to accommodate additional development pressure in the Southwest Lakewood Planning Area for the near future using existing undeveloped land. Indeed, a new housing development of 54 units on 20 acres was just approved on a desirable American Lake shoreline property. However, housing development in Planning Area 7 is constrained by a lack of any available sewer connection. The development of these neighborhoods is already unusually dense for areas served only by individual drain fields and septic tanks.

All other land use categories are present only in small amounts, or absent altogether. With 32 acres, Open Space/Recreation accounts for 4% of the land area, mostly in Harry

Todd Park, a city park on the shores of American Lake in Tillicum. There is a small component of Commercial land, mostly along Highway 99 in Tillicum. There are 39 acres of Education lands, in Tillicum Elementary School and Woodbrook Middle School in American Lake Gardens. Southwest Lakewood is one of only two planning areas with any designated agricultural land use, the 16-acre Brookwood Stables in American Lake Gardens.

Table 3-10 Distribution of Existing Land Uses in Planning Area 7

LAND USE	ACRES	% of PLANNING AREA	% of LAKEWOOD TOTAL
Access	0.41	0.0%	0.0%
Agriculture	16.1	0.0%	0.0%
Residential Single Family	228.56	27.8%	1.9%
Mobil Home Park	33.08	4.0%	0.3%
Multi-Family Residential	96.86	11.8%	0.8%
Commercial	19.92	2.4%	0.2%
Manufacturing/Industrial	0.0	0.0%	0.0%
Public/Government Services	8.55	1.0%	0.1%
Education	38.82	4.7%	0.3%
Open Space/Recreation	32.39	3.9%	0.3%
Street Right-of-Way	118.94	14.5%	1.0%
Vacant	56.74	6.9%	0.5%
Water (Lakes)	169.52	0.0%	0.0%
No Parcel Data Available	2.0	0.2%	0.0%
TOTALS	821.89	77.20%	5.40%

Source: City of Lakewood Parcel Survey Database, 1998.

3.2.8 Highway Overlay Zone

In addition to the seven planning areas, an additional functional area was analyzed. This was identified as the Highway Overlay Zone, as the purpose was to identify the land use breakdown for the area along the 2 major north-south regional road systems, I-5 and old Highway 99. The Overlay District was defined as that area bounded by I-5 on the east, the Burlington-Northern line on the west, the city limits on the north, and Ponders Corner on the south. The results are shown in Table 3-11.

Interestingly enough, the predominant land use is residential, with a combined 42% in residential land use. Perhaps even more surprising is that Residential Single Family formed almost half of that amount, while Multi-family units formed less than a third. Commercial and Manufacturing/Industrial lands form a bit more than a third, at 35%. A glance back at Figure 3-2 will show much of this in a narrow corridor one lot deep on either side of Highway 99. The next most prominent land use is Vacant.

Table 3-11 Summary of Existing Land Use in the Highway Overlay Zone

Land Use Category	Acres	Total Parcels	Area as % of Overlay Zone
Residential Single Family	187	664	19%
Mobile Home Park	105	15	10%
Multi-family	130	108	13%
Commercial	304	314	30%
Manufacturing/Industrial	51	31	5%
Public/Government Service	31	17	3%
Education	17	3	2%
Vacant	125	83	12%
Other	61	76	6%
Totals	1,011	1,131	100%

Source: City of Lakewood Parcel Survey Database, 1997.

3.2.9 Zoning

There are eight general zoning classifications in the City of Lakewood, as shown in Figure 3-3, most of which were inherited from Pierce County after incorporation. The acreages for each of these zones is shown in Table 3-12. The eight general zoning classifications are described below:

Table 3-12 Existing Lakewood Zoning By Acres

Zone	Acreage	Percent of Total¹
Employment Center	894	8.1%
Major Urban Center	757	6.9%
Community Center	281	2.6%
Neighborhood Center	15	0.1%
Mixed Use District	1,041	9.5%
High Density Residential District	436	4.0%
Moderate Density Single Family	6,673	6.1%
Open Space/Recreation	876	8%

source: EDAW, GIS coverage

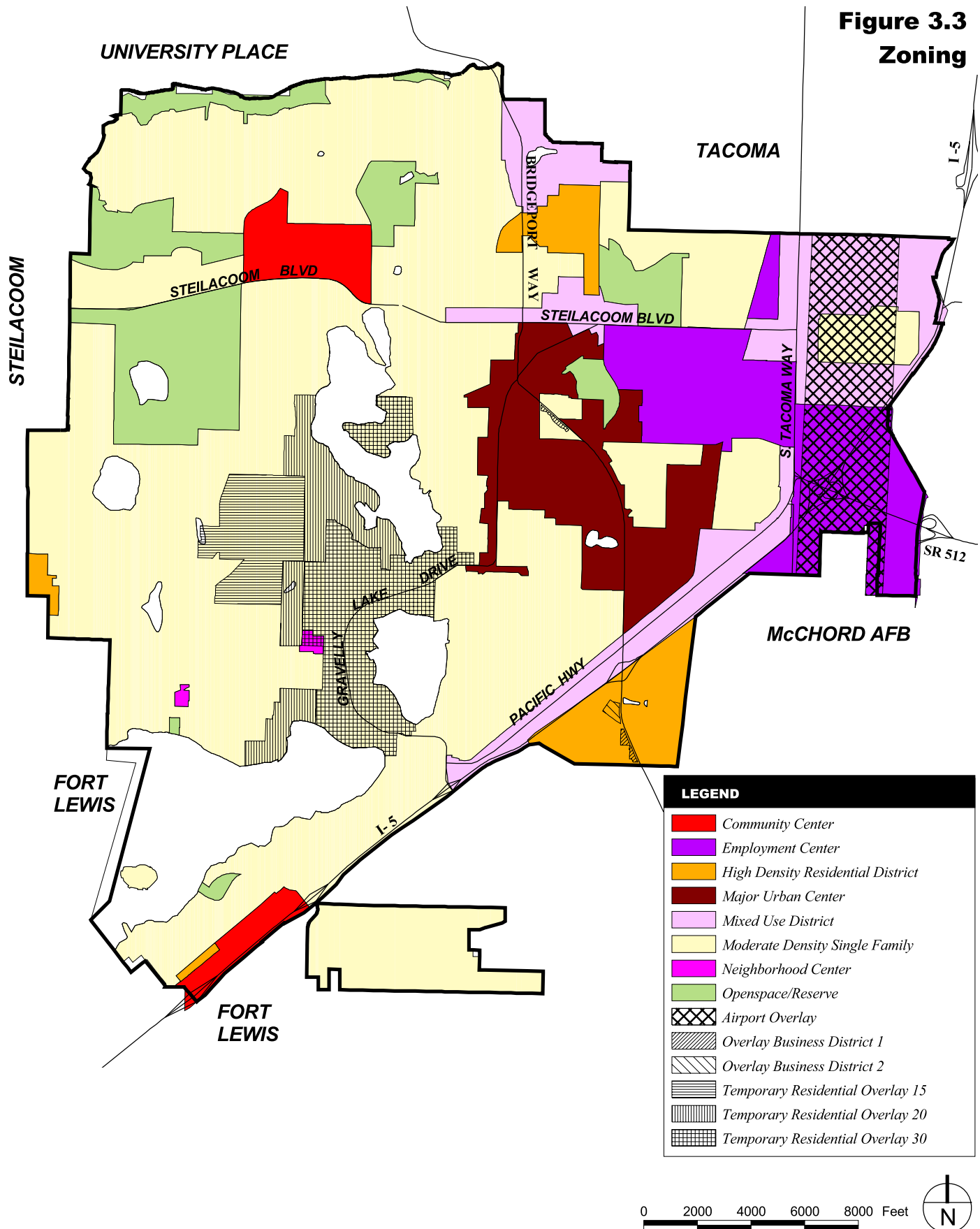
(1) Does not include area in open water. Does include public ROW's.

- Employment Center** - The Employment Center zone classification provides for a concentration of office parks, manufacturing, other industrial development, or a combination thereof to meet the needs of a growing, job-based economy. This zone also allows for commercial development as a part of the center, so long as the commercial development is incidental to the employment activities of the center and supports and serves the needs of the workforce. The Employment Center zone classification accommodates light industrial type uses, warehousing, and corporate offices which have a low impact on the surrounding land uses. Areas in Lakewood that are currently within the Employment Center zone include the Clover Park

Technical College, the Lakewood Industrial Park, and areas near the intersection of I-5 and SR 512.

- Major Urban Center - The Major Urban Center zone classification allows for a highly dense concentration of urban development with a commercial focus. The purpose of this zone is to provide for major concentrations of employment, shopping, services, and multi-unit housing. A significant high density multi-unit residential presence in the area is encouraged. Areas in Lakewood that are currently within the Major Urban Center zone include the Lakewood Mall, the Colonial Center, certain portions of Gravelly Lake Drive, and areas surrounding the Lakeview neighborhood.
- Community Center - The Community Center zone classification has as its focus a significant commercial traffic generator, around which develops a concentration of other commercial office services, and some high density multi-unit developments and high density single-unit housing. The commercial activity within the center is directed to a customer base drawn from more than one neighborhood, but should be at a scale which is compatible with surrounding residential areas. Areas in Lakewood that are currently within the Community Center zone include areas surrounding the intersection of Steilacoom Blvd. and 83rd Avenue to the west of Western Washington State Hospital, and areas surrounding Union Avenue in Tillicum.
- Neighborhood Center - The Neighborhood Center zone allows for a concentrated mix of small scale retail and service commercial and office development that serves the daily needs of residents in the immediate neighborhood. Areas in Lakewood that are currently within the Neighborhood Center zone include areas surrounding the intersection of Washington Street and Interlaken Drive to the west of Gravelly Lake, and areas surrounding the intersection of 92nd Avenue and Veterans Drive SW north of American Lake.
- Mixed Use District - The Mixed Use District zone classification provides for a concentrations of commercial, office, and multi-unit developments located along major arterial streets. Commercial activity in the Mixed Use District caters to a

**Figure 3.3
Zoning**



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 is the primary use within the Mixed Use District. Areas in Lakewood that are currently within the Mixed Use District zone include nearly all of the areas to either side of Pacific Highway SW, the areas to either side of Steilacoom Blvd. near the intersection of Bridgeport Way, and the areas surrounding 75th Street and Bridgeport Way near the northern border of Lakewood.

- High Density Residential District - The High Density Residential District zone classification allows for multi-unit and high density single-unit housing located along major arterial streets, state highways, and major transit routes connecting to Community, Employment, or Urban Centers. The purpose of this zone classification and the Mixed Use District are to allow multi-unit, office, and other commercial uses that provide economic diversity and housing opportunities near transit routes and business activities. Areas in Lakewood that are currently within the High Density Residential District zone include the entire triangular portion of land along Bridgeport Way southeast of I-5, and the areas between Lakewood Drive and Bridgeport Way near the northern border of Lakewood.
- Moderate Density Single Family - The Moderate Density Single-family zone classification covers geographic areas that fall outside the other zoning classification areas discussed in this section. The purpose is to provide for single and two-unit residential living in a residential environment. Areas in Lakewood that are currently within the Moderate Density Single Family zone include the majority of the acreage in the city.
- Open Space/Recreation - The Open Space/Recreation zone classification includes designated natural areas, neighborhood, community, and regional parks, as well as linear trails and public golf courses. The purpose of this zone is to protect open space areas and provide recreational properties and facilities located on public property. This zone classification was adopted after incorporation, on February 3, 1997 (Ordinance # 114). The previous Lakewood Municipal Code and its zoning did

not provide for this zoning classification. Areas in Lakewood that are currently within the Open Space/Recreation zone include Fort Steilacoom Park, the Fort Steilacoom golf course, Harry Todd Park, North American Lake Park, areas along Chambers Creek, the Flett Dairy, Seeley Lake Park, and the Washington State Game Farm.

- Overlay Zones Adopted Since Incorporation - Two new overlay zones were adopted since incorporation in order to provide for special zoning considerations based on unique characteristics of the land, environment, or economy. The overlay zones are further described below:
- Temporary Residential Density Overlay Three temporary residential density overlay zones were adopted on July 21, 1997 to control residential density pending completion of the Comprehensive Plan (Ordinance # 134). This overlay zone was intended to return these neighborhoods to the previously existing historical development patterns of large lot, single-family home development. The overlay zone upheld the uses allowed within the underlying Moderate Density Single-family zone, but established that no lot shall be occupied by more than one dwelling unit (no new duplexes). The overlay zone also established development, density, and dimension standards. Areas in Lakewood that are currently within the Temporary Residential Density Overlay zone include the areas in and around Gravelly Lake and the southern portion of Lake Steilacoom.
- Office and Limited Business Overlay Two overlay zones; Office and Limited Business District - Level 1 (OLB-1) and Limited Business and Office Districts - Level 2 (OLB-2), were adopted on (Ordinance # 128). These overlay zones allow certain residential properties in proximity to commercial property to be eligible for limited office and business uses where the proximity affects the residential use. The OLB-1 zoning district is a transitional land use buffer between residential and more intensively developed properties, and allows the location of low-intensity business, financial, and professional service offices. This zone buffers established single family residential areas from adjacent traffic impacts.

The OLB-2 overlay zone is also a transitional land use buffer but is large enough to provide a community focus. The primary function is to provide for the location of integrated complexes of offices, hotels and motels, eating establishments, and retail sales. Such districts are located in areas that abut, or have convenient access to, freeways, major highways, and major arterial streets. Both overlay zones also establish development, density, and dimension standards. Areas in Lakewood that are currently within the OLB-1 zone are a linear strip along Bridgeport Way adjacent to the Oak Park residential neighborhood, and three parcels along Bridgeport Way to the southeast of I-5. Areas in Lakewood that are currently within the OLB-2 zone include an area adjacent to Clover Creek and Bridgeport Way to the southeast of I-5.

- Airport Overlay Zone Classification - The purpose of the Airport Overlay Zone classification is to minimize land use incompatibilities in the Noise Zones and Accident Potential Zones (APZ) I and II from McChord Air Force Base, which lies southeast of Lakewood. The City of Lakewood adopted Pierce County's existing overlay zone when it incorporated in 1996. The provisions of the zone classification address reduction of incompatibilities with McChord Air Force Base through performance standards, building coverage, limitation on the number of persons on site at any one time, and/or construction of buildings with noise attenuation features. Areas in Lakewood that are currently within the Airport Overlay zone include the Sylvan Park and Monte Vista neighborhoods (see Figure 3-3).

Under the Airport Overlay zone, no additional residential units shall be permitted on a lot within the McChord Clear Zone and APZ I, and all non-residential uses shall be subject to a conditional use permit and Administrative Review for compliance with performance standards. New residential units within McChord APZ II shall be limited to a density of six dwelling units per acre.

3.2.9 Environmental Constraints to Development

This section describes the key natural environment components found within the Lakewood area as a basis for land use planning and for regulation of critical areas. This section discusses the natural environment in terms of sensitive hydrologic (water) and

geologic (soil) areas. Hydrologic resources encompass five of the critical areas defined by the GMA: fish and wildlife habitat, water quality, frequently flooded areas, wetlands, and aquifers. Geologic resources encompass two types of critical areas: geologic hazard areas and aquifer recharge areas.

The GMA requires that local jurisdictions designate critical areas and adopt development regulations to protect these areas. The Lakewood City Council adopted Critical Areas Ordinance in February 1996 for protection of geologically hazardous areas, aquifer recharge areas, and frequently flooded areas and wetlands. It is anticipated that these regulations will be revised based on the findings and conclusion of the Comprehensive Plan. Changes and/or clarifications to these regulations may require additional analyses on the sensitive environmental areas discussed in this section as well as other sensitive areas not included herein.

Lakewood's natural environment includes sensitive hydrologic areas and sensitive geologic areas, as discussed below. Much of the following descriptions of Lakewood's hydrologic and geologic areas were derived from the Lakewood Interim Comprehensive Plan.

3.2.9.1 Sensitive Hydrologic Areas

Hydrologic areas include rivers, streams, lakes, ponds, wetlands, and floodplains (see Figure 3-4). Hydrologic areas are often defined geographically according to the watershed basin of which they are a part. A watershed may be defined as a landscape catchment basin, including terrestrial slopes, streams, and lakes, drained by a common stream outlet. For study and management, a watershed is a conveniently sized ecosystem with definable boundaries that operates as a unified, co-dependant ecosystem.

Of the four regional watershed basins in Pierce County, Lakewood is located within the Tacoma Watershed. The regional watershed was further divided into 25 subwatershed basins and ranked for the purposes of prioritizing planning and stormwater management, with "1" ranking having the highest protection priority. Rankings were based on the extent of impairment, likelihood of increased development, and potential for water quality problems. Lakewood encompasses portions of Chambers Bay, Steilacoom

Lake/Clover Creek, and American Lake/Sequalitchew Creek subwatersheds. Chambers Bay has been ranked “2,” Clover Creek “5,” and American Lake “9.” These rankings were done as part of the effort by Pierce County in response to the mandate of the Puget Sound Water Quality Authority (PSWQA), as described in the 1987 Puget Sound Water Quality Management Plan (PSWQMP). Each of the three subwatersheds within Lakewood is further described below.

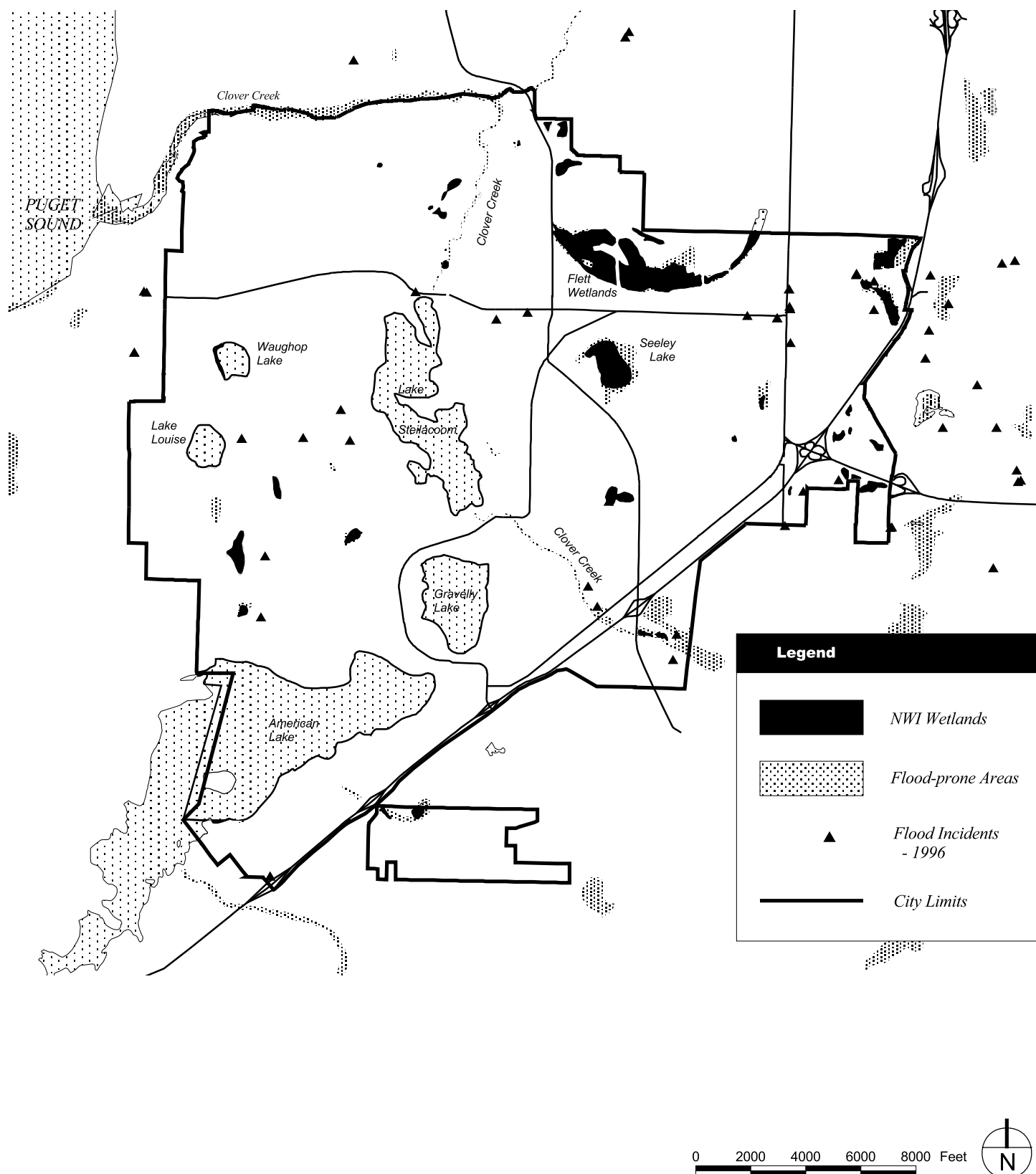
Chambers Bay Subwatershed The Chambers Bay Subwatershed is the principal drainage outlet for the entire Clover/Chambers Creek drainage basin. The flow from Clover Creek entering Steilacoom Lake to the south is carried out by Chambers Creek to the north, and eventually out into Puget Sound. The topography of this subwatershed is composed of level flatlands for the eastern portion with deeply incised ravines in the Leach Creek basin, most of Chambers Creek, and the downstream portion of Flett Creek.

The area is composed almost entirely of typically level, somewhat excessively drained, gravely soils that were formed in glacial outwash. Chambers Creek carries flow from Leach Creek, Flett Creek, and outflow from Steilacoom Lake to Chambers Bay. Waughop Lake, Seeley Lake, and other lakes do not have surface outlets connecting them to Puget Sound, but are formed as groundwater intercept lakes.

Steilacoom Lake/Clover Creek Subwatershed - Most of the Steilacoom Lake/Clover Creek Subwatershed consists of level flatlands which drain into Steilacoom Lake and is covered with a gravel subsoil which maximizes infiltration and minimizes runoff. Steilacoom Lake, in addition to Spanaway Lake, is large enough to lessen flood impacts from intense storm events.

American Lake/Sequalitchew Creek Subwatershed - The prominent drainage channel emptying into American Lake is Murray Creek. A weir located at the southern tip of American Lake diverts the water into a channel to Sequalitchew Lake which empties into Sequalitchew Creek and finally into Puget Sound. Runoff is generally low in the subwatershed, which is covered almost exclusively by a gravel subsoil with small isolated patches of peat and fine grained materials.

Figure 3.4
Sensitive Hydrologic Features



Fish and Wildlife Habitat

Lakewood contains a rich variety of fish and wildlife habitats, and wildlife in the area is typical of those found in coniferous forest habitats found throughout Pierce County.

Black-tailed deer is the only big game species found in Lakewood. Other game may include pheasant, blue grouse, ruffed grouse, quail, band-tailed pigeon, turkey, marmot, and cottontail rabbit. Lakewood is also home to a variety of waterfowl, and other birds and mammals.

Federally listed endangered species in the Lakewood area include bald eagles (*Haliaeetus Leucocephalus*). This species may winter in the area from about October 31 through March 31, and a total of eight bald eagle nesting territories are located in the Lakewood area (U.S. Fish and Wildlife Service, letter dated 9/9/97). Most of these territories are in and around American Lake and Steilacoom Lake. In addition, peregrine falcon (*Falco peregrinus*) and water howelia (*Howelia aquatilis*) may also occur in the Lakewood area. Species which are candidates for listing and may occur in the Lakewood area include the Oregon spotted frog (*Rana pretiosa*). In addition, the following species of concern which may occur in the Lakewood area include: long-eared myotis (*Myotis evotis*), long-legged myotis (*Myotis volans*), Northwestern pond turtle (*Clemmys marmorata marmorata*), olive-sided flycatcher (*Contopus borealis*), and the Pacific western big-eared bat (*Corynorhinus townsendii townsendii*) (U.S. Fish and Wildlife Service, letter dated 9/9/97).

Three anadromous fish species that are currently candidates for listing under the ESA are known to be present in the Lakewood area, including Chambers Creek, Flett Creek, Steilacoom Lake, and Clover Creek. The species present are the chum salmon (*Oncorhynchus keta*), chinook salmon (*O. tshawytscha*), and the Puget Sound/Strait of Georgia coast coho salmon (*O. kisutch*). It is important to note that candidate species have no status under the ESA (National Marine Fisheries Service, letter dated 8/14/97).

Rare plant species of concern in the Lakewood area include isolated stands of white-top aster (*Aster curtus*) (Washington Natural Heritage Program, Natural Heritage Data Map, Steilacoom and Tacoma Quadrangles, printed 8/25/97). The status of these plants are

considered “sensitive” by the state, just below the thresholds of threatened and endangered. In addition, water howelia (*Howelia aquatilis*) may occur in Lakewood.

The following areas in Lakewood are considered priority wildlife habitats by the Washington Department of Fish and Wildlife (WDFW). All information was provided by the WDFW Important Wildlife Information Public Release Map, Steilacoom and Tacoma South Quadrangles, printed 8/7/97, as well as the WDFW Priority Habitats and Species Database and the Wildlife Heritage GIS Data Report, printed 8/7/97.

American Lake and Gravelly Lake. The wooded areas surrounding these lakes are home to bald eagles (a federal and state threatened species). This species nests primarily in the cottonwood trees on the shorelines of American Lake. The open water habitat provided by these lakes also support large concentrations of waterfowl.

Steilacoom Lake. Bald eagles can also be found at this lake, in addition to large concentrations of waterfowl. Anadromous fish and other Washington state priority fish species can be found at this lake. These fish species can also be found in Clover Creek which runs through a portion of Lakewood and into McChord Air Force Base to the southeast of the city.

Fort Steilacoom Park, Waughop Lake, and Lake Louise. Naturally vegetated open space at Fort Steilacoom Park provides general wildlife habitat for a variety of birds and mammals. At Waughop Lake, naturally vegetated open space at the western edge of the lake and wetland areas on the lakeshore provide habitat for large concentrations of waterfowl and other birds and mammals.

Seeley Lake. Essentially a wetland, Seeley Lake provides general habitat for a variety of waterfowl. Naturally vegetated open space areas south of the lake also provide general habitat for a variety of birds and mammals.

South Puget Sound Wildlife Area. This area, north of Steilacoom Lake and west of Chambers Creek in the northern section of Lakewood includes naturally vegetated open space, riparian, and wetland areas that provide general habitat for a variety of birds and mammals.

Chambers Creek. Naturally vegetated open space and riparian corridors provide bald eagle habitat as well as habitat for large concentrations of waterfowl, especially along the steeper canyon walls. Some lagoons and wetland areas where Chambers Creek empties into Chambers Bay also provide important habitat areas.

Flett Creek. Anadromous and priority fish runs occur through Fleet Creek and into Chambers Creek. Wetland areas and other naturally vegetated open space provide habitat for large concentrations of waterfowl along Flett Creek.

The approximately 12,500 acres of land in Lakewood include Douglas-fir, cedar, red alder, big-leaf maple, and western hemlock. Cottonwood, dogwood, pussywillow, and cascara trees also occur in the area. Brush species include Oregon grape, red-flowering currant, salal, serviceberry, elderberry, wild blackberry, salmonberry, kinnikinnick and various types of ferns, mosses, and lichens. Lakewood also contains several groves of Oregon white oak which are becoming rarer in western Washington and Oregon. Major groves are located at Bridgeport Way and Custer Road southwest, the crest of Flett Creek at the end of Tyler Street between Steilacoom Boulevard and South 74th Street, and at South 80th Street and Pine Street. Ponderosa pine, another species rare west of the Cascades, exists on Fort Lewis property and may exist in the Lakewood area.

Frequently Flooded Areas

Flooding is the most common natural disaster to occur in Lakewood, placing lives, properties, and resources at risk. In January 1990, site-specific areas in Lakewood experienced floods. These floods occurred primarily because of heavy rains coupled with inadequate stormwater facilities in the flooded areas. The risk of flooding increases with increasing development density. The South Tacoma Way corridor is an example of densely developed commercial/industrial areas extensively utilizing both subsurface recharge and stormwater disposal systems. During an unusually heavy storm event, the

designed capacity of these systems can be overloaded, which can cause extensive flooding over roadways and parking lots¹.

Floodplains are identified on the Flood Insurance Rate Maps (FIRMs) for Pierce County, which are prepared by the Federal Emergency Management Agency (FEMA). These maps illustrate the predicted flood area in a 100-year storm event. FEMA has defined ten insurance flood hazard zones or risk rate zones; however, only three exist in Lakewood—Zone A, Zone B, and Zone C. Flood Zone A are flood hazard areas inundated by the 100-year flood, determined by approximate methods. Areas within Lakewood designated Flood Zone A include a narrow strip of shoreline surrounding Seeley Lake, Steilacoom Lake, Gravelly Lake, Lake Louise, American Lake, Flett Creek, and Chambers Creek. Areas designated Flood Zone B include areas between the limits of the 100-year flood areas and the limits of the 500-year flood; areas protected from the 100- or 500-year floods by dike, levee, or other local water-control structure; areas subject to certain types of 100-year shallow flooding where depths are less than one foot; and areas subject to 100-year flooding from sources with drainage areas less than one square mile. Waughop Lake, Barlow Pond, Carp Lake, Lost Lake, Boyles Lake, and a few areas west of Steilacoom Lake are considered to be Zone B. Flood Zone C areas represent minimal flood hazard. The remainder of Lakewood falls into this category.

Wetlands

Wetlands are areas which have saturated soils or standing water for at least part of the year, contain hydric soils (soils which have changed over time due to frequent or prolonged saturation with water), and which contain hydrophylic (water-loving) vegetation. Lakewood has an estimated 155.3 acres of wetlands within its boundaries (see Figure 3-4). Of the total area, approximately 105 acres are within the Flett Creek 100-year floodplain region. Together with the 37-acre Crawford Marsh (Seeley Lake) these two wetland areas comprise 143 acres of the total wetland area in Lakewood. Both are areas where peatbogs are present, and open space areas which provide habitat to a

¹ Lakewood Interim Comprehensive Plan.

variety of waterfowl, other birds, and other local wildlife. The remaining wetland areas are composed of relatively small sites dispersed throughout Lakewood. Some are man-made either through mining operations or as mitigation for wetlands lost to property development. Others are surrounded by residential housing.

Aquifers

Lakewood is underlain by soils that are highly permeable and allow for the infiltration of surface water into groundwater. At a depth below the surface, the infiltration water enters the aquifer, which is a saturated geologic layer that can yield sufficient quantities of water to be used as a source of public or private water supply. Where these conditions exist, the areas are known as aquifer recharge areas.

Aquifers provide the primary source of domestic and industrial water for most of Lakewood and large portions of urban Pierce County. Land uses which contaminate surface stormwater can eventually contaminate groundwater in aquifer recharge areas. Any activity which degrades the water quality of an aquifer can detrimentally impact the health of local citizens.

Groundwater flow systems can be divided into three major patterns: regional, intermediate, and local. Generally, regional flow systems exhibit the greatest chemical quality changes and the longest flow paths and residence times. Local systems, however, show little water quality change and have the shortest flow paths and flow times. Within the Lakewood area, recharge is predominantly through local and intermediate flow systems. Regional recharge occurs mainly east of the Clover/Chambers Creek basin in the Cascade Mountains, while regional discharge is primarily to Puget Sound, the Puyallup, and Nisqually rivers².

The Lakewood Water District (District) is completely dependent on groundwater sources for meeting the drinking water requirements of its customers. In compliance with Washington State Department of Health (DOH) guidelines and mandates, the District has

² Lakewood Interim Comprehensive Plan

developed a comprehensive wellhead protection plan (WHPP) for these sources. The study delineated 23 wellhead protection areas (WHPAs), or capture zones, for each of the groundwater sources that supply water to the District³.

The WHPP found that Lakewood has three primary aquifer zones used for water production by the District, labeled Aquifers Zones A, C, and E, are overlain by Lakewood. Aquifer Zone A is in the shallowest of the aquifer systems in the area. Water in Zone A is often in direct or nearly direct hydraulic connection with the local surface water bodies and as a result is the most sensitive to potential contaminants entering the aquifer. Areas in Zone A include the surface drainage areas surrounding Lake Louise, Waughop Lake, and American Lake. Other areas in Zone A are in the eastern boundary of the District and extend south and east into Fort Lewis, McChord Air Force Base, and Parkland.

Aquifer Zone C is usually encountered between 100 feet above and 100 feet below sea level. This zone has a good level of protection from transfer of surface contaminants. Zone E is typically encountered about 200 feet below sea level and has a high level of protection throughout the majority of the District's study area.

The WHPP outlines a number of proper protocols and recommendations to deal with the potential hazards of aquifer contamination in the Lakewood Water District⁴. In general, the plan recommends that the District establish a surface water quality monitoring program to address the following primary and secondary hydrogeologic features of the Lakewood area:

- Primary: (1) American Lake, (2) Waughop Lake, and (3) Lake Louise.
- Secondary: (1) Gravelly Lake, (2) Lake Steilacoom, and (3) Clover Creek.

³ Lakewood Water District Wellhead Protection Plan

⁴ Lakewood Water District Wellhead Protection Plan

In addition, the plan recommends that both the city and county notify the District on any construction or land use project within the District's WHPAs that requires a hydrogeologic assessment or a State Environmental Policy Act (SEPA) response. In this way, the District can serve as a partner to the city and county in assessing the impact of land use on drinking water quality in the Lakewood area.

3.2.9.2 Sensitive Geologic Areas

Sensitive geologic areas include landslide and erosion problem areas, landslide hazard areas, and seismic hazard areas. Each of these sensitive areas, including a description of Lakewood soils, are described below.

Landslide and Erosion Problem Areas

Landslide and erosion hazards are common in hillside areas with steep and unstable slopes. The topography of Lakewood is generally characterized by flat plains and gently rolling hills with slopes measuring between 0-8%. The central western section of the city around Carp Lake, Lake Louise, and Waughop Lake is characterized by potholes and hills measuring between 8 and 30%. The steepest slopes within the city are located along the northeast boundary in the Chambers Creek Canyon with slopes measuring over 30% (see Figure 3-5). The risk for landslide and erosion problems is highest in this area.

Soils

The City of Lakewood is comprised of two general soil classifications. These soil classifications, also called "associations," have distinct patterns of soils, relief, and drainage. They also have their own unique natural landscape and are suitable for certain types of land uses. The two soil classifications in Lakewood are the Spanaway Association and the Alderwood-Everett Association. In general, these soils are suitable for urban uses, although use is somewhat limited in the Alderwood soil association. In

both soil associations, septic waste from drain fields endangers the groundwater supplies because the soil is moderately to highly permeable⁵.

The Spanaway Association, which consists of the largest portion of the city, is a nearly level to undulating (0-6% slope), somewhat excessively drained soil. It is formed in glacial outwash, mixed in the upper part with volcanic ash. This soil has no limitations for urban development; however, septic waste from drain fields endangers the groundwater supplies because the soil is moderately permeable.

The Alderwood-Everett Association, mostly surrounding Lake Louise and Waughop Lake, contain slopes ranging from 0 to 30%, with moderately to excessively drained soils that formed in glacial till and glacial outwash. The majority of this area contains Alderwood gravelly sandy loam with slopes ranging from 0 to 30%. Homesite excavation is limited by the weakly cemented and compact substratum and areas of moderately steep slopes. In areas with moderate to high populations, on-site sewage disposal systems may fail during heavy rainfall due to the restrictive substratum layer.

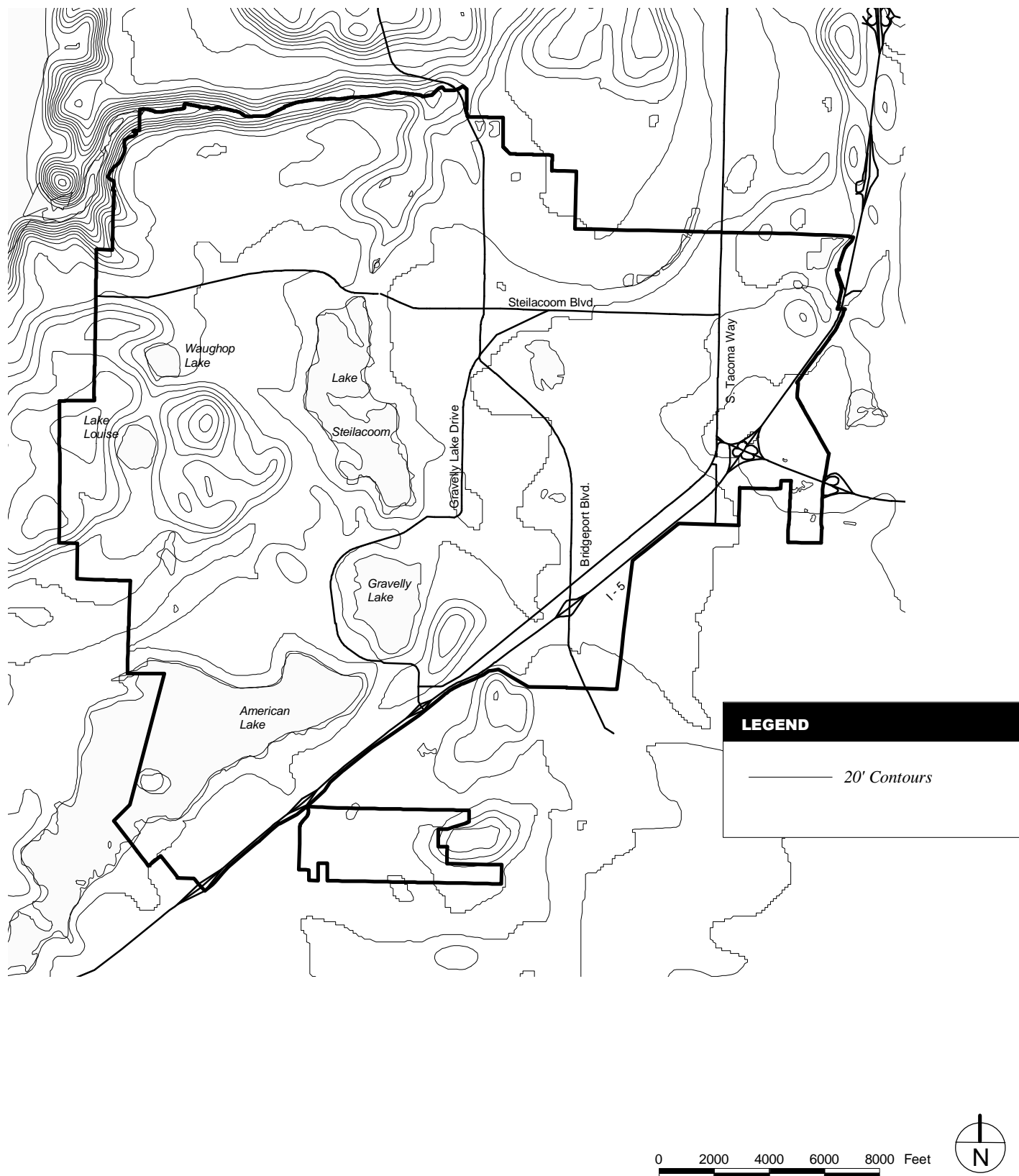
Small portions of this area also contain Everett gravelly sandy loam with slopes ranging from 0 to 15%. One of the most desirable for homesites and as a source for gravel for construction. Septic tank drainage fields function properly throughout the year; however, there is a potential of contaminating the groundwater due to the highly permeable soils.

Seismic Areas

Three criteria are generally used to establish the seismic risk potential for a specific site: (1) the local geological conditions, (2) the rate of earthquake activity, and (3) the maximum historical intensity experienced at a site. As a result of these criteria, a majority of the Lakewood area is classified as having a slight to moderate risk of structural damage due to an earthquake within the Puget Sound region. However, the entire Puget Sound region is located in seismic zone three according to the Uniform

⁵ Soil Survey of Pierce County, 1979.

Figure 3.5
Sensitive Geologic Features



Building Code (UBC). The UBC assigns a seismic zone to different regions of the country, with zone four being the highest risk. Compared to the rest of the United States, Lakewood is a high risk area for damage due to seismic activity.

3.3 Trends and Projections

3.3.1 Historic Development Patterns

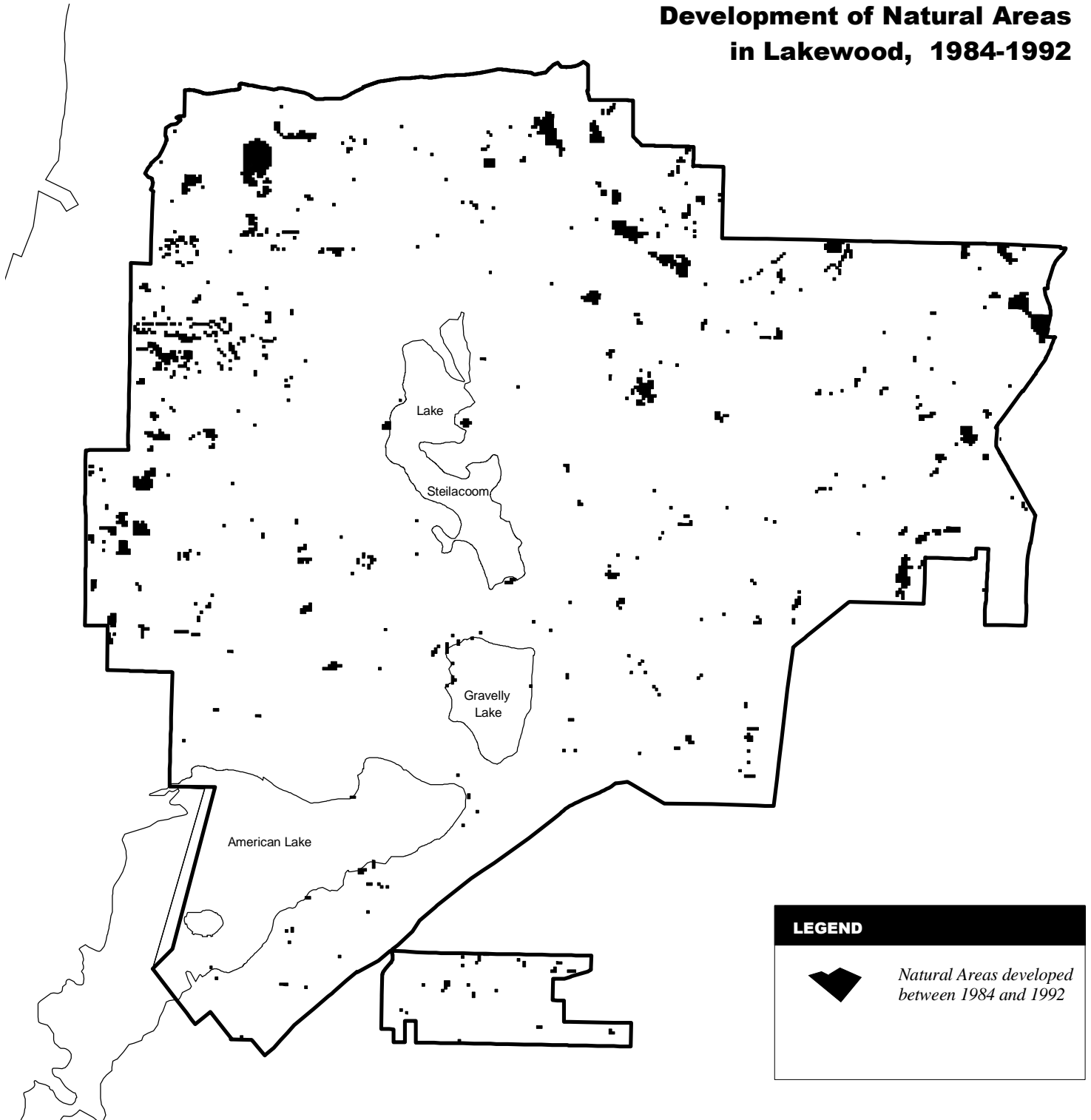
As a complement to the land classification coverage, the Puget Sound Regional Council also conducted a change detection analysis of the Puget Sound region. This analysis compared satellite images from 1984 to 1992 to determine those lands that have been converted from natural lands (i.e., Forest, Natural Open Land, Agriculture) to developed. The goal of this change detection analysis was to identify past development trends and project potential future land development.

It is important to note that the GIS-produced change detection coverage describes land now categorized as developed that was previously natural (i.e., Natural Open Land, Forest, Agriculture). The change detection coverage did not identify lands that have been redeveloped. The change detection was conducted by analyzing the spectral (color) change between the two satellite images on a pixel-by-pixel basis. An assessment of the data found a classification accuracy of 84.5%, based on a limited field verification analysis and is considered to be adequate for regional planning purposes (Puget Sound Regional Council, 1994).

An illustration of the development of natural areas between 1984 and 1992 is shown in Figure 3-6.

Within the City of Lakewood, approximately 291 acres of natural land were developed during the change detection period (i.e., between 1984 and 1992). This represents development of 3% of the land acreage in Lakewood in that 8-year period. Although this development was widely scattered throughout the city, it can be seen on Figure 3-6 as generally located within a band along the northern and western boundaries. Again, it must be noted that Figure 3-6 does not portray all lands developed in that period, but

Figure 3.6
Development of Natural Areas
in Lakewood, 1984-1992

**NOTES**

Based on LANDSAT satellite imagery acquired and manipulated by Puget Sound Regional Council.

only those lands which made the transition from natural to built. Other development in Lakewood in that timeframe consisted of redevelopment of existing built land.

3.3.2 Growth Forecast

According to the GMA, all cities and counties required to prepare a comprehensive plan must accommodate additional population and employment according to projections provided to each county by the Washington State Office of Financial Management. Counties are required to allocate growth to cities within their jurisdiction.

The Pierce County Growth Management Planning Council is responsible for establishing net new population (counted as new households) and employment in cities within King County. To provide for some flexibility, they have established target ranges for cities as a planning guide. As discussed in Chapter 2, the target population for planning purposes in the year 2020 is 96,000 total residents.

3.4 Summary of Countywide Policies for Land Use

Pierce County has no specific countywide policies specifically addressed as land use per se. These countywide policies are addressed to ten policy areas. These were reviewed for policies relating to land use. A number of policies were identified that have implications for land use in the City of Lakewood. These are identified and summarized below.

Housing: County-Wide Policy #2 on Housing identifies a number of alternative strategies for meeting projected housing demand. Among those strategies is the need to identify vacant parcels with appropriate zoning which can be used for infill. This has been consistently done by the city with their parcel survey database.

Economic Development: County-Wide Policy #1 on Economic Development calls for measures to be taken to ensure consistency between economic development policies and adopted comprehensive plans. Among other measures, this policy identifies a need for the Land Use Element to designate areas for Commerce and Industry, and to provide, with appropriate zoning, sufficient land to accommodate projected development within a

market-based system. Policy #2 identifies a need for economic diversity and a “Jobs/Housing” balance. Policy #5 identifies a need for land planning to produce fiscally sound results by produce and Land Use Element which allows for an appropriate mix of uses, which reduce sprawl and transportation demand, thus maximizing the efficiencies of providing public facilities and services. Lastly, County-Wide Policy #6 identifies a need and strategies to strengthen existing businesses, through, among other things, promoting infill development and redevelopment, strategies highly appropriate for Lakewood’s situation.

Education: County-Wide Policy #3 on Education calls for coordination between municipalities and school systems using the Land Use Element, among others, to make adequate provision of lands for schools. In general, Lakewood school sites exist city-wide; the challenge will be to make sure facilities are adequate as the population grows.

Historic, Archeological, and Cultural Preservation: County-Wide Policy #1 on Historic Preservation requires that municipalities identify the presence of significant historic, archeological, and cultural sites within their boundaries, and that any special designations of significance must be reflected in the land use element of the comprehensive plan. Protective measures are encouraged but not mandated.

Natural Resources, Open Space, and Environmentally Sensitive Lands: Although the GMA does not require county-wide policies for these areas, Pierce County willingly provided them in its Countywide Policies. While they do not specifically address land use, achievement of the goals expressed would be impossible without adequate land use linkages and controls. Countywide Policy #1 on Open Space identifies the various governmental entities that must coordinate to provide these protective measures, and includes municipalities such as Lakewood. Subsequent policies refine the ways in which the coordination and protective measures should work, and define the resources for which protection is to be provided. These include environmentally sensitive resources present in Lakewood such as wetlands, aquifer recharge areas, fish spawning areas, and others. The use of designating open space networks to provide this protection is encouraged.

Facility Siting: Countywide Policy #5 on Facility Siting requires that all public facility siting be consistent with adopted municipal comprehensive plans, including the future land use map.

Urban Growth Areas: The GMA requires the designation of urban growth areas within the county. This urban growth area shall be of sufficient size that it will accommodate projected urban growth over a 20-year period. The county and municipalities must work together to manage this growth within the designated UGA to produce a fiscally sound growth pattern for all government bodies.

As a mechanism for managing this growth, the “principles of understanding between Pierce County and the municipalities in Pierce County,” as outlined in the Countywide Policies, identify a number of categories of centers, within which specific policies are adopted directing the type and nature of growth. These include metropolitan centers, urban centers, town centers, and manufacturing centers. These centers are priority locations for accommodating growth, each of a different type and size. Lakewood has two centers, an urban center, with the Lakewood Mall at its heart, and a manufacturing center, focused on the Lakewood Industrial Park.

Policy numbers 12 through 35 in the Principles of Understanding identify a series of criteria and treatments for urban centers. Among others, they are to be characterized by clearly defined geographic boundaries, high capacity transit and sufficient land intensity to support it, pedestrian-oriented land uses and amenities, and sufficient public open spaces and recreational opportunities. Specific design treatments are encouraged, including streetscape amenities, defined setbacks and building massing, and a rich mixture of land uses, including higher residential densities. Urban centers must plan for and meet the following criteria:

- a minimum of 25 employees per gross acre of non-residential lands;
- a minimum of 10 households per gross acre;
- a minimum of 15,000 employees; and
- shall not exceed a maximum of 1½square miles in size.

Policy numbers 35 through 42 in the Principles of Understanding identify a series of criteria and treatment for manufacturing centers. Among other characteristics, planning for manufacturing centers is to encourage clearly defined geographic boundaries, direct access to regional transportation systems, and provision to prohibit housing.

Development of offices and retail uses is to be discouraged beyond that needed to serve employees, while land assemblage to provide efficient-sized parcels for manufacturing is to be encouraged. Design and provision of efficient modern transportation system is a high priority.

3.5 Planning Implications

Based on the above findings, a number of implications for future planning can be articulated. These are as follows:

- Although Lakewood is a new city, it is extensively developed. There is little greenfield lands available for future development, with only 43 acres of designated agricultural lands and no forest resource lands in the city. According to the Lakewood parcel survey, there are 1,200 acres of vacant land in the city. However, a substantial portion of that is restricted due to public ownership or natural constraints such as wetlands and steep slopes, and the remaining vacant land is widely scattered. Future development will occur as infill development of vacant parcels, or redevelopment of existing parcels to greater intensity. Land assembly to amass critical parcel size or configuration may need to occur for redevelopment to happen, particularly for commercial uses.
- The amount of land designated as Open Space/Recreation appears to be well below accepted standards to support the amount of residential development currently found in Lakewood, even without projecting future needs. This disparity in recreation resources appears to be of particular concern in areas with substantial multi-family residential development. There is no network of open space to connect neighborhoods and recreation resources, or provide refuge for wildlife and plants. A major thrust of city planning efforts for Lakewood should be to identify and

implement strategies to protect and link existing open space, as well as increase the amount land protected as open space through acquisition or other strategies.

- While Lakewood has abundant natural assets, such as the many lakes, Chambers Creek, the Flett wetlands, and other open space, most of these assets are inaccessible to most citizens. Either there is no access or access is limited and not known to be available. Future planning efforts should increase available access to public lands and waters and to ensure proper functioning of existing assets.
- A number of older residential neighborhoods in some parts of the city have become isolated by surrounding commercial development and traffic arterials. Many of them have high rates of rental occupancy. The viability of these neighborhoods to remain in their current state should be tested, on a case-by-case basis, in light of known future development such as the RTA station development and anticipated land use changes. In particular, development of the Lakewood Urban Center, as foreseen by the PSRC, will bring changes that may make some of these older low density neighborhoods unviable.

The image of graceful lakes set in the forest is central to the identity of Lakewood. In reality, this image is most applicable to the West Lakewood Planning Area, where the majority of remaining forest cover is found. This area is also critical for protection of the aquifer upon which much of the community's water supply rests. Development of adequate land use controls to minimize rates of change in this area will protect both forest and aquifer resources.

CHAPTER 4: URBAN DESIGN AND COMMUNITY CHARACTER

4.1 Introduction

During the course of the visioning process, the citizens of Lakewood indicated a strong concern for the urban design quality of the city and a desire to create a city with a “heart” — a dynamic and unique city center. They expressed the need for an urban center that is linked to its diverse neighborhoods through pedestrian-friendly connections, well-designed public spaces, improved streetscapes, and an overall improved image. They envisioned a compact, thriving urban core that did not lose its small town charm and is reached along “corridors of beauty” and defined as blending of lakes and woods.

This portion of the Background Report identifies and documents urban design elements that can contribute to realizing Lakewood’s vision of urban design. A review of the existing urban design and community character of the urban center and the surrounding neighborhoods will provide the basis for recommendations to the comprehensive planning process for an improved urban design quality for the city. The discussion of urban design elements supporting Lakewood’s Urban Center begins with a review of the countywide planning policies adopted by Pierce County for urban centers.

4.2 Existing Urban Design and Community Character

The analysis of the existing urban design and community character conditions of the City of Lakewood focuses on the following key areas:

- **Urban Morphology:** The physical pattern of streets, parcels of land, and natural features that give form to a city.
- **Gateways:** The entryways and major access points to a city.
- **Districts/Neighborhoods:** Distinct and recognizable areas or subdivisions of a city that the community identify themselves and give it order.
- **Nodes of Activity:** Key points or locations of human activity.
- **Edges:** The physical elements that define the boundaries of a city.

- **Landmarks/Views:** Reference points that assist in orientation and identity.
- **Paths:** The preferred routes or channels along which people move.
- **Linkages:** Physical connections between districts or nodes of activity.

By understanding the condition of these urban design elements, as shown in Figure 4-1, recommendations can be incorporated into the Comprehensive Plan to strengthen or enhance the urban design quality of the city.

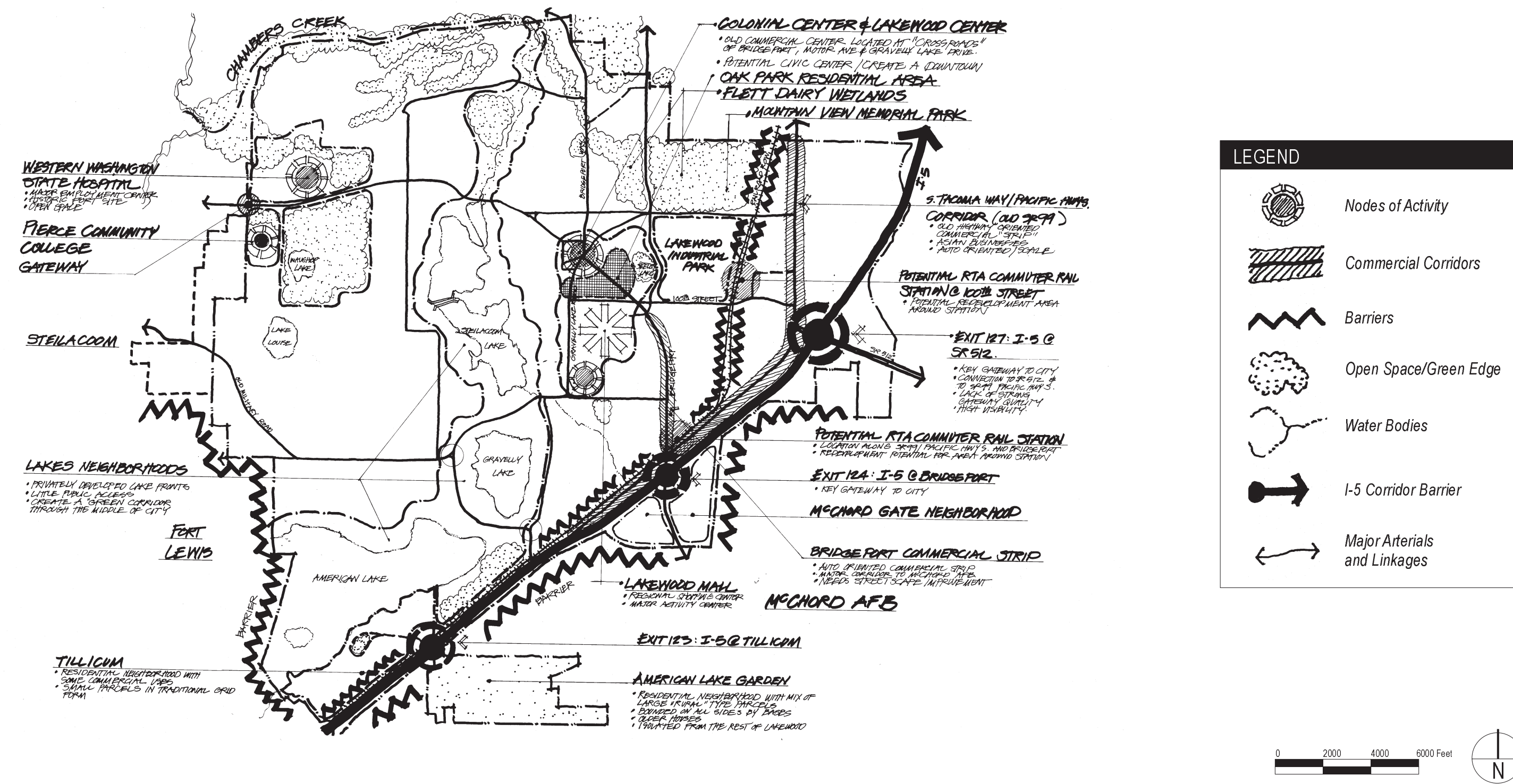
4.2.1 Urban Morphology

This is the pattern of streets and blocks that create the physical patterns of the city. The size and configuration of streets and parcels in Lakewood reflects the different periods of development and the legacy of past land use patterns and uses. The physical patterns of development are also influenced by topography, natural features such as streams, and property ownership.

Currently, Lakewood exhibits many of the land use patterns typical of cities that developed very rapidly after the Second World War through the 1950s and 1960s with the increased dependence on the automobile. The urban morphology consists of a mixed pattern of older grid street networks and land parcels developed earlier in the area's history as it developed from a rural agricultural area and crossroads for the movement between military bases such as old Fort Steilacoom. Major roads that define much of the urban morphology of Lakewood today are the result of the necessity for access between key areas north and south of present-day Lakewood. Steilacoom Boulevard, Military Road, and Bridgeport Way are major arterials that define the city and its urban form.

The street and block patterns of Lakewood also reflect the parcelization or division of land for agricultural uses. Many blocks are very large with few streets between them. These large parcels were often single ownership farms that did not have streets running through them. Examples of this pattern can be seen around the Lakewood Center, Lakewood Mall, Clover Park, and Lakewood Industrial Park.

Figure 4.1
Urban Design Analysis



The physical pattern of development is also the result of natural features such as topography, streams, and the lakes that divide the city into two distinct areas east and west of the lakes. Chambers Creek defines the northern boundary of the city and street patterns reflect the meandering path and topographic changes along the creek. Wetlands such as those around the old Flett Dairy also limited the development of roads and housing, as well as commercial and industrial sites.

Older areas of commercial and residential development are located around or near Lakewood Center, the Mall, and Clover Park. Topography is reasonably flat making it easy to develop. The streets reflect an era of traditional pre-war pattern of regular gridded streets and uniform blocks. The Oak Park, Lake City, Tillicum, and Lakeview residential neighborhoods are examples of these older traditional development patterns. However, in the case of Lakewood many of the older residential neighborhoods developed before the war were not developed with the infrastructure typical of older incorporated cities such as Tacoma and Seattle. The development requirements of the county did not require the development of sidewalks, curbs, or gutters.

Newer development patterns that reflect the “modern” theory of town planning encouraged a break with the traditional grid and the use of curvilinear street patterns, cul-de-sac street ends to provide more privacy, and developing a “garden community” that related to the natural topography and features. Examples of this urban form can be seen in the Oakbrook, Clover Park, Interlaken, and Lakes neighborhoods

4.2.2 Gateways

Gateways are the major access and entrances to a city and can contribute to the public’s mental image of the city. They usually occur along major “Preferred Paths” at key intersections of major roads such as I-5 and 100th Street. Gateways provide people with clues to wayfinding and orientation within a city. Gateways can be strengthened to make them more memorable and identifiable.

There are six major gateways to Lakewood. These are:

- **I-5 at 100th Street and the intersection with SR 512:** This is a significant gateway due to the intersection of Interstate 5, the most important north/south corridor, with SR 512, the major eastward connection and to 100th Street, a major westward connection through Lakewood.
- **I-5 at Bridgeport Way:** Bridgeport Way is a major north/south connection through Lakewood and the main gateway to McChord Air Force Base to the east.
- **I-5 at Gravelly Lake Drive (Exit 124):** This is another gateway from I-5 and provides access to neighborhoods west of the lakes district.
- **I-5 at Tillicum (Exit 123):** This interchange provides the only access to the neighborhood of Tillicum and the south shore of American Lake. Although Tillicum is somewhat isolated from the rest of the City of Lakewood, this I-5 interchange provides the connection.
- **Bridgeport at Steilacoom Boulevard:** This is a gateway from the north from Tacoma and University Place.



Photo 4-1 Gateway: I-5 at 100th St./SR-512-This is a major freeway access point to Lakewood.

- **Steilacoom Boulevard at Far West Drive:** This gateway includes the campuses of Western State Hospital (Old Fort Steilacoom) and Pierce Community College and Fort Steilacoom Park. This gateway runs along Steilacoom Boulevard, a State Historical Road, and links Lakewood with the Town of Steilacoom, the oldest incorporated city in the state.

Other important places in terms of City image along transportation routes are as follows:

- **South Tacoma Way/Pacific Highway South (Old Highway 99):** This corridor was the major north/south connection for Lakewood prior to I-5. This corridor provides access to the eastern portion of Lakewood and is dominated by auto-oriented commercial uses.
- **The Crossroads of Bridgeport Way, Gravelly Lake Drive, and Motor Avenue:** This is the gateway to the commercial heart of the city. The intersection of these streets at unusual angles makes this intersection more memorable.

4.2.3 Districts and Neighborhoods

Districts are the medium to large sections of a city that people physically and mentally enter into and that are recognizable as having some common identifying character, such as the “Lakes District.” Often they are identified as neighborhoods and can exhibit similar development patterns, types of land uses, and building types and eras. People tend to structure their ideas and knowledge of a city by districts. These districts can be strengthened through land use planning to reinforce uniqueness and image.

Neighborhoods are smaller units within districts that people identify strongly with. Neighborhood boundaries can be defined by natural features such as lakes, streams, hills, and man-made elements such as major streets, arterials, freeways, bridges, or railroad tracks. These districts and neighborhoods are all contained within the Planning Areas for Lakewood and often across census tracts. The neighborhoods and districts are most often defined by major arterials or natural features.

Some of the identifiable districts in Lakewood are described below. These districts do not always relate to the planning areas using census tracts as in other chapters of this report.

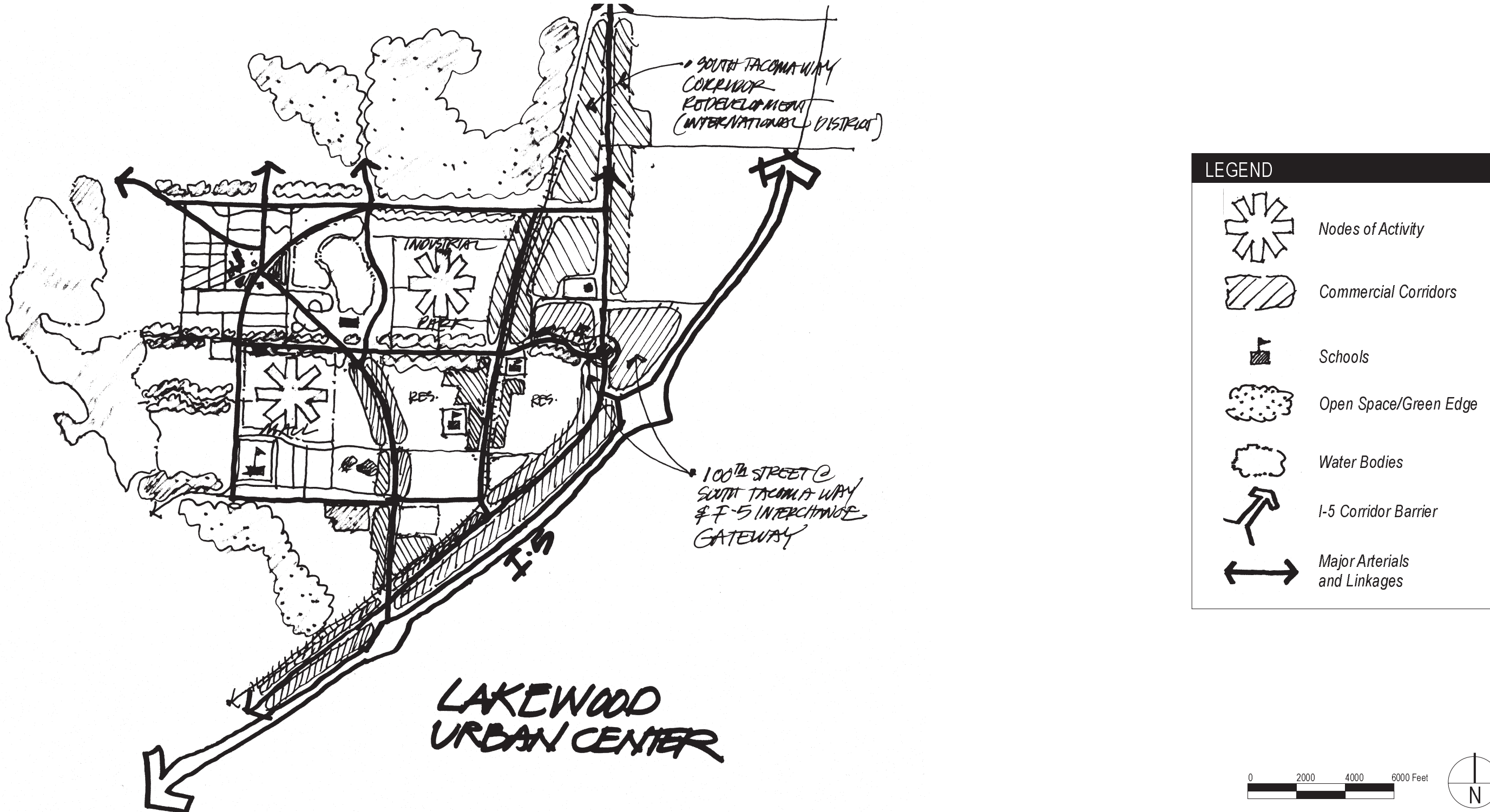
4.2.3.1 The Urban Center

This is the area centered around the Lakewood Shopping Mall, the Lakewood Center, and the Clover Park, Oak Park, and Lakeview neighborhoods (see Figure 4-2). It is bounded by Steilacoom Boulevard and 100th Street on the north, the railroad tracks to the east, I-5, the Pacific Highway corridors and 112th Street to the south and Lake Steilacoom to the west. Bridgeport Way and Gravelly Lake Drive run through the center of this district and it is the principal commercial and employment center for the city. This district is predominately auto-oriented with the Lakewood Mall regional shopping center at its core. The Urban Center is identified as the urban core in the planning areas and includes census tracts 718.02, 718.04 and 719.02. As an Urban Center it is expected to meet the basic standards set forth in the Pierce County Countywide Planning Policies for Urban Centers.

4.2.3.2 Industrial and Manufacturing District

This district is bounded by Steilacoom Boulevard on the north, the railroad tracks on the east, 100th Street along the south, and the Seeley Lake and the Crawford Marsh wetlands to the west. This district is approximately 375 acres in area and contains a mix of light manufacturing, warehousing, distribution, and shipping and office functions. The district also contains the Clover Park Technical College, fire station, and a former airstrip runway. The old Tacoma Raceway once occupied portions of this area and auto racing was done on a banked wooden track. The Lakewood Industrial Park is the largest of the current users in this district. The campus of the industrial park has been landscaped along its perimeter and has well designed signage and access streets. The area is highly visible as approached along 100th Street or Steilacoom Boulevard or along Lakeview Avenue due to the scale of the tall warehouses and industrial sheds. This district is included in the Northeast Planning Area and includes Census Tracts 718.04 and 717.02.

Figure 4.2
Lakewood Urban Center



4.2.3.3 South Tacoma Way/Pacific Highway South Corridor

This is a linear district that runs along the old Highway 99. This district is not very wide, perhaps one to two blocks deep, but runs along the entire eastern and southeastern edges of the city limits. Highway 99 is the remnant of the early highways along the west coast that linked California to Washington State. The railroad right-of-way parallels portions of the old highway along the western side as does I-5 along the eastern edge. Consequently, there are few cross streets that intersect South Tacoma Way and Pacific Highway South. This often results in long narrow parcels of land along its length and affects access. The old highway developed with auto-oriented uses such as motels and diners in its early days to service the traveling public. Access to attractions along the highway was unlimited, with multiple driveways and parking areas fronting onto the highway. Today this results in a lack of sidewalks and pedestrian amenities. The character of this linear district is that of a mix of small auto-oriented retail and customer services businesses occupying older single story structures and newer businesses office and retail functions in newer buildings. This area crosses through a number of planning areas including the Urban Center, Industrial and Manufacturing District, Planning Area 2, the Northwest Area, and Area 6, the South Central Area.

4.2.3.4 The Lakes District

The Lakes District is oriented around the three major lakes in Lakewood (the American Lake, Gravelly Lake and Steilacoom Lake), which are located within the central portion of the city and run north/south. Together with Chambers Creek, these lakes form a “ribbon of green” that divides the city into two parts. They are the single most important natural feature within the city and a major amenity for homes located along their shores. The residential neighborhoods that line the shorelines of these lakes are generally large stately homes with large narrow lots and some lake frontage that retain much of the mature trees. There are only a few locations on the lakes where general public access is permitted or where views of the lakes can be seen. One location on Steilacoom Lake is at Clinton Park and along Interlaken Drive and the bridge crossing the lake which affords views up and down the lake. The overall impression of the area around the lakes is one of lower density development with significant green space and quiet neighborhoods. According to long-time residents of Lakewood, the lakes were visible from higher

elevations of the city prior to more recent development. The Lakes neighborhood includes all or portions of five planning areas: Planning Area 1, the Urban Core; Area 4, the Northwest Area; Area 5, the West Area; Area 6, the South Central Area; and Area 7, the South West Area.

4.2.3.5 Old Fort Steilacoom

This district is comprised of the campuses of Western Washington State Hospital, Pierce Community College, and the Fort Steilacoom Park. This district is divided in half by Steilacoom Boulevard, a State Historical Road, and is bounded by residential neighborhoods. Waughop Lake is located within the Fort Steilacoom Park and is an open space amenity. The character of this district is defined by the historic fort structures such as the officers' homes, the larger brick and stone structures of the State Hospital, and the campus structures of the college. The institutions are major employers of the city and their campuses define the western border of the city. The Old Fort Steilacoom district corresponds to Planning Areas 4 and 5, the Northwest and West Areas of Lakewood.



Photo 4-2 Old Fort Steilacoom and the Western Washington State Hospital Campus create a distinctive District within the City.

4.2.3.6 Tillicum and American Lake Gardens

These two neighborhoods combine to form a somewhat isolated district in the southern portion of the city. Due to its location along American Lake and between I-5 and the Tacoma Country Club and the lack of roads, Tillicum is separated from the rest of the city and has historically developed as a separate community. American Lake Gardens is located east of I-5 and is surrounded by McChord Air Force Base. Access is from I-5 at the Tillicum Exit 123. Tillicum has a small commercial district within the neighborhood located along Union Avenue, a library, and elementary school. Tillicum developed early on as a small community with a grid street pattern and small lots, some for summer cabins along the lake which have become year-round residences. The small lots and homes on them give this area a distinct character not found in other parts of the city. American Lake Gardens still has a rural quality with small farms and larger lots and home sites. The Tillicum and American Lake Gardens neighborhoods are situated in Planning Area 7, the South West Area.

4.2.4 Nodes of Activity

Nodes are key points or locations within the city that attract human activity such as employment, shopping, civic functions, and public open spaces such as parks. They are the focus of intense activity to which people will travel to and from. They are another element which assists people in organizing themselves in the city; due to human activity, they are usually memorable places in the minds of residents. Lakewood has a number of these “nodes of activity,” as summarized below.

4.2.4.1 Lakewood Mall

Lakewood Mall is the major commercial and shopping node of the city. The mall is typical of many regional shopping centers of the era. Originally called Villa Plaza Shopping Center, the mall has expanded with a centralized indoor shopping mall organized along a central pedestrian spine with shops along its length and anchor stores at its major entrances. Older shops are located along the north, west, and south sides of the mall separated from the mall by surface parking lots. Recent site and building improvements have provided some pedestrian amenities and architectural design elements; however, the area is still

predominantly auto-oriented. Also its location is somewhat “buried” by the lack of street frontages and surrounding order buildings which block views of the mall.

4.2.4.2 Lakewood Colonial Center

The oldest commercial center in Lakewood, the original shopping center was developed in 1937 at the crossroads of Gravelly Lake Drive and Bridgeport Way. It was designed in a colonial architectural style which established a trend for some future commercial buildings in the city. Its shops and movie theater provided a community center and focal point during the early years of Lakewood’s development and are remembered fondly by long-time residents. It occupies a very visible location due to the crossroads, and newer commercial development has located around the Colonial Center to form another significant commercial core.

4.2.4.3 Lakewood Industrial Park

This major employment node has light manufacturing, warehousing, and distribution centers. This node of activity is located in the eastern portion of the city along 100th Street and is part of the gateway area to the city. Opportunities for increased employment and access to future commuter rail and transit could help to shape this activity node.



Photo 4-3 Lakewood Colonial Center is the oldest retail center in Lakewood

4.2.4.3 Lakewood Industrial Park

This major employment node has light manufacturing, warehousing, and distribution centers. This node of activity is located in the eastern portion of the city along 100th Street and is part of the gateway area to the city. Opportunities for increased employment and access to future commuter rail and transit could help to shape this activity node.

4.2.4.4 Western Washington State Hospital

The State Hospital is a major employment and institutional node, combined with the historic setting of Fort Steilacoom and open space. This node provides an employment “anchor” and gateway element to the western portion of the city with highly visible architectural and historical qualities that lend to a memorable image.

4.2.4.5 Pierce Community College

This major employment and educational institution node provides cultural facilities to the city at large. The campus provides architectural scale, with an open space setting that blends with surrounding residential neighborhoods. The college and Western Washington State Hospital combine to form institutional nodes that anchor the western portion of the city. The college has a master plan for future expansion and opportunities for additional facilities that can benefit the Lakewood community.

4.2.4.6 Clover Park High School and Park

The high school and nearby park provide a node of activity near the center city and urban core. The high school provides facilities to the community beyond educational functions. It is a source of community pride and a landmark. The park is an important open space and recreational amenity for the central city and urban core areas with some higher density residential areas adjacent to it. Their locations near the crossroads of Gravelly Lake Drive and 112th Street also function as a gateway to the urban core.

4.2.4.7 St. Clare Hospital and South Bridgeport Way

The hospital is another major employment node and medical facility for the city. Its location near the I-5 interchange at Bridgeport Way and possible commuter rail and transit station could provide opportunities for redevelopment of this gateway area to the city. This area is also a major gateway to McChord Air Force Base, a major employer of civilian workers who travel through this area on the way to work. The commercial corridor along Bridgeport Way around the hospital and interchange would benefit from improved pedestrian and transit connections and streetscaping elements such as street trees, lighting, sidewalks, and signage. Opportunities exist for redevelopment of the area along Pacific Highway South at the Bridgeport Way and I-5 interchange near the hospital.

4.2.5 Edges

Edges are generally linear physical elements that create boundaries, borders, barriers, or limits to the city. They are boundaries between two areas or districts. Edges include things like shorelines, railroad tracks, freeways, major open spaces, or natural features that define an area and contribute to its image. Edges may be barriers or “seams” that separate or join together two areas or districts. Strengthening the edge conditions, that is improving the image or lessening the adverse effects of barriers, can improve the imageability of a city. Lakewood has some distinct edges that contribute to its image, as described below.

4.2.5.1 The I-5 Freeway Corridor

This defines the southeasterly boundary of the city. The freeway creates a barrier and limits east-west vehicular movement where it interrupts the street grid. This edge includes portions of the Pacific Highway South and South Tacoma Way corridors and the railroad right-of-way. The freeway and highway corridors have influenced the character of commercial development along the length and contribute to the poor visual and environmental quality of the area along its length. Noise and vehicular traffic and the auto-oriented commercial uses and surface parking areas, along with a lack of reinvestment and maintenance of properties, result in visual blight and poor image. Efforts such as new landscaping standards, improved vehicular access, sidewalks, and streetscaping will improve these corridors and the edge quality as redevelopment occurs.

4.2.5.2 The Railroad Right-of-Way

The Burlington Northern-Santa Fe Railroad tracks and right-of-way which run along the eastern and southeastern edges of Lakewood also interrupts the street grid and movement through the city. It has influenced land use development patterns along its length, and is a barrier to travel and limits crossing points which require signals. With the introduction of commuter rail service along the right-of-way, there is an opportunity to improve the visual and functional quality and safety of this edge. The commuter rail station, along with improved transit service, will enhance the edge condition at key locations such as gateways to the city.

4.2.5.3 The Lakes

The lakes create an edge that divides the city into two halves. The lakes also interrupt the street grid and limit east-west movement. While the lakes do provide a natural barrier, they also provide a natural open space corridor which contributes to the high quality of the surrounding residential neighborhoods. The lakes edge will tend to contain commercial and higher density residential development to the eastern portion of the city and continue to provide a natural edge and quality visual image to the city.



Photo 4-4 The lakes divide Lakewood into two halves and create a distinctive residential district.

4.2.5.4 Chambers Creek and Flett Dairy Wetlands

This is a natural green edge that defines the northern boundary of Lakewood. Chambers Creek and its surrounding wooded slopes limit development and the street grid and create a natural ribbon of open space, habitat, and buffer to the community of University Place to the north. Residential neighborhoods along the creek are laid out to respond to topographic conditions and the creek basin. Flett Creek, which converges with Chambers Creek near Bridgeport Way and 75th Street, connects to the old Flett Dairy property and the wetlands on it to continue this ribbon of green open space along the northern edge of the city, defining the boundary to the southern city limits of Tacoma.

4.2.5.5 American Lake and Fort Lewis

American Lake and the Fort Lewis Army Base reservation define a southern edge to the city and limit expansion in that direction. Generally the area is perceived as a natural setting with lower density residential neighborhoods surrounding the lake and the boundaries of the base clearly defined. The American Lake Medical Center and Veteran's Hospital are located in the area which is a node of activity just outside the city. The boundaries of Fort Lewis are wooded, and army facilities are generally contained farther south, contributing to the natural open space edge condition.

4.2.5.6 Landmarks/Views

Landmarks are reference points within or external to the city, and are usually a physical object, a building, topographic feature such as Mt. Rainier, a store or group of stores, domes, towers etc. They assist in orientation and travel and in creating an identity of a city. Key landmarks in Lakewood include:

- **Mt. Rainier:** Views of the mountain exist from the eastern portion of the city and from places within the city such as buildings and vistas along major streets.
- **Colonial Towers:** The steeples on the theater at the Colonial Lakewood Center and on the nearby church are well-known landmarks to long-time residents.
- **Lakewood Mall:** This is a major shopping center and destination point.

- **Western Washington State Hospital and Fort Steilacoom:** The buildings and campus grounds are landmarks and reference points.
- **Fort Steilacoom Park:** This park is both a major open space amenity and a landmark.
- **Old Flett Dairy Wetlands:** This major open space area is highly visible from historic Steilacoom Boulevard.
- **Chief Leishi Hanging Tree:** This historic landmark is located just off Steilacoom Boulevard near Chambers Creek and the Fish Rearing Pond.
- **Harry Todd Park and Old Mansion:** In Tillicum Park this old mansion on American Lake is a long-time favorite recreational area. The mansion is privately owned and has rustic Tudor architectural elements.



Photo 4-5 Flett Dairy wetlands creates a green open space edge to the city.

4.2.7 Paths

Paths are the “channels” along which people move. They may be streets, walkways, transit lines, railroad lines, and freeways. Strong paths are usually those that are recognized by the public as the preferred routes to places. Major arterials or transportation lines can define key paths and usually help define districts. They can also be strengthened through good land use and transportation planning and through

improved streetscaping elements such as landscaping, street trees, sidewalks, street furniture, and signage to be more identifiable. Key paths in Lakewood include:

- **100th Street** between South Tacoma Way and Gravelly Lake Drive;
- **Bridgeport Way** between I-5, Pacific Highway South, and Steilacoom Boulevard;
- **Gravelly Lake Drive** between I-5 and Steilacoom Boulevard;
- **Steilacoom Boulevard** between South Tacoma Way and Far West Drive;
- **Far West Drive** between Steilacoom Boulevard and Old Military Road;
- **Pacific Highway South/South Tacoma Way** between Ponders Corner and the Tacoma city limits;



Photo 4-6 South Tacoma Way (Old Highway 99) is a major path through the City.

- **Old Military Road/Washington Street** between Gravelly Lake Drive and Town of Steilacoom; and
- **Interlaken Drive** between Washington Street/Mt. Tacoma Drive and Motor Avenue.

4.2.8 Linkages

Linkages are physical connections between two or more areas, districts, or nodes of activity. Usually along major paths, they can be improved pedestrian linkages such as

sidewalks, streets, trails, or transit connections. Linkages can also relate to land use connections between different areas in terms of developing appropriate land uses that are compatible. Land use patterns can create linkages between older and newer areas of the city. Key physical linkages in Lakewood are described below.

4.2.8.1 100th Street Corridor

The 100th Street corridor offers opportunities for improved gateway image, pedestrian and transit access, and redevelopment near potential commuter rail station and around South Tacoma Way and I-5 areas. This area could build on existing streetscape improvements along the north side of 100th Street adjacent to Lakewood Industrial Park. The key intersections are located at South Tacoma Way, Bridgeport Way, and Gravelly Lake Drive.

4.2.8.2 Bridgeport Way Corridor

Redevelopment opportunities exist along the Bridgeport Way Corridor between I-5 and Lakewood Center. There is a need for improved pedestrian access, sidewalks, streetscaping, and mixed land uses. If the proposed commuter rail station is located on Bridgeport Way at I-5, this development could assist in redevelopment opportunities of the Bridgeport Way Corridor. Key intersections along this corridor include Gravelly Lake Drive at Lakewood Center, 100th Street, 108th Street, 112th Street, and Pacific Highway South.

4.2.8.3 Gravelly Lake Drive

This street links together several distinct districts including the industrial park, the Lakewood Colonial Center, the Lakewood Mall, the Clover Park High School, the Lakes District, and Pacific High South. The portion of Gravelly Lake Drive that runs through the Lakewood Urban Center between 112th Street and Bridgeport Way is an important north/south linkage due to the interruption of the street grid by the Mall, the lakes, and the railroad right-of-way. Recent commercial development and the new Park Lodge School at 100th Street have improved the pedestrian quality of the street with sidewalks, landscaping, and crosswalks. This is the closest thing to a “Main Street” that Lakewood

has. Currently portions of Gravelly Lake Drive are still without continuous sidewalks, and commercial buildings are set back from the street which discourages pedestrian shopping. The street is also wide, with four lanes of traffic.

4.3 Overall Policies for Urban Centers

The Pierce County Comprehensive Plan adopted countywide planning policies for all urban centers within the county to provide direction for future growth and to provide consistent standards that all urban centers must follow to meet the requirements of the



Photo 4-7 The crossroads at Gravelly Lake Drive and Bridgeport Way creates an unusual street pattern.

GMA. Lakewood is designated an Urban Center in the County Comprehensive Plan and must meet the basic standards for development and future growth. As part of the countywide planning policies, policies for urban centers were established that have urban design and community character implications for the City of Lakewood. The Overall Policies for Urban Centers are organized by the following areas:

- Vision
- Design Features of Urban Centers

- Transportation, Parking, and Circulation
- Urban Centers

The following Overall Policies for Urban Centers will influence the urban design and community character of Lakewood.

4.3.1 Vision

Policy 12. Centers shall be locally determined and designated by the county and each municipality based upon the following:

- 12.1 Consistency with specific criteria for centers adopted in the countywide planning policies;
- 12.2 The center's location in the county and its potential for fostering a logical and desirable countywide system of centers;
- 12.5 If the county or any municipality in the county designates a center, they must also adopt the center's designation and provisions in their comprehensive plans and development regulations to ensure that growth targeted to centers is achieved and urban services will be provided;
- 12.6 Centers shall be characterized by all of the following:
 - 12.6.1 clearly defined geographic boundaries;
 - 12.6.2 intensity/density of land uses sufficient to support high capacity transit;
 - 12.6.3 pedestrian-oriented land uses and amenities; and
 - 12.6.4 urban design standards which reflect the local community.

These overall urban design policies for urban centers should be supported by future land uses and urban design standards for Lakewood. An understanding of Lakewood's clearly defined boundaries, its opportunities for transit and pedestrian oriented land uses, and the identification of specific local and community-based urban design standards that support these vision policies are discussed in the following sections on urban morphology, gateways, districts, nodes of activity, edges, landmarks, paths, and linkages. From an understanding of the existing conditions that define the urban form of

Lakewood, the Comprehensive Plan can adopt policies that support the countywide policies and provide a basis for defining community-based urban design standards that reflect the values of Lakewood.

4.3.2 Design Features of Urban Centers

Urban design elements are further defined by the following countywide policies on Urban Centers:

Policy 14. The county and each jurisdiction that designates a center within its comprehensive plan shall encourage density and development to achieve targeted growth.

14.1 Any of the following may be used:

- 14.1.1 encourage higher residential density within centers;
- 14.1.2 avoiding creation of large blocks of single-use zones;
- 14.1.3 allowing for greater intensity of use within centers;
- 14.1.4 increase building heights, greater floor/area ratios within centers;
- 14.1.5 minimize setbacks within centers;
- 14.1.6 allow buildings to locate close to streets to enhance pedestrian accessibility; and
- 14.1.7 encourage placement of parking to rear of structures.

Within the Urban Center Planning Area of Lakewood there are opportunities to achieve these types of design features required by the countywide policies. Potential strategies could include strategic infill development of higher density development or the redevelopment of key areas around existing commercial and employment nodes or the use of catalyst capital facilities projects such as a City Hall, community center, commuter rail station, or major public park to encourage higher density residential development or the redevelopment of areas as high intensity employment centers. These types of strategies and amenities are suggested in the following policies:

Policy 15. To provide balance between higher intensity of use within centers, public and private open space shall be provided.

Policy 16. Streetscapes amenities (landscaping, furniture, etc.) shall be provided within centers to create a pedestrian friendly environment.

Policy 17. Any of the following regulatory mechanisms shall be used within Centers:

17.1 Either use zoning mechanisms which allow residential and commercial uses to intermix or limit the size and extent of single use districts.

17.2 Adopt development standards to encourage pedestrian-scaled development such as:

17.2.1 buildings close to street and sidewalks;

17.2.2 interconnections between buildings and sidewalks;

17.2.3 pedestrian links between residential and non-residential areas; and

17.2.4 street trees/furniture; minimize separations between uses.

4.3.3 Transportation, Parking, and Circulation

The following transportation, parking, and circulation policies also have urban design implications for Lakewood Urban Center:

Policy 18. To encourage transit use within centers, jurisdictions shall establish mechanisms to limit the use of single occupancy vehicles.

Policy 19. Centers should receive a high priority for the location of high capacity stations and transit/or transit centers.

Policy 20. Locate higher densities/intensities of use close to transit stops within centers.

20.1 Create a core area to support transit use.

20.2 Allow/encourage all types of transit facilities (transit centers, bus pullouts, etc.) within centers.

20.3 Establish incentives for developers to provide transit supportive amenities.

Lakewood currently has a transit center located at Lakewood mall and an express bus service park and ride lot located at intersection of I-5 and SR 512. Lakewood is also designated to get an RTA commuter rail station within its urban center boundaries.

These types of transit systems can help to support the development of transit supportive urban centers and amenities that encourage pedestrian friendly urban design.

4.3.4 Urban Centers

The Countywide Planning Policies also include more specific urban design related policies for urban centers. These include the following:

Policy 28. Urban centers are locations that include a dense mix of business, commercial, residential, and cultural activity within a compact area. Urban centers are targeted for employment and residential growth, excellent transportation service, including fast, convenient high capacity transit service, as well as investment in major public amenities.

Policy 29. Urban centers will plan for and meet the following criteria:

- 29.1 A minimum of 25 employees per gross acre of non-residential lands;
- 29.2 A minimum of 10 households per gross acre;
- 29.3 A minimum of 15,000 employees; and
- 29.4 Not to exceed a maximum of 1-1/2 square miles in size.

4.4 Planning Implications

The analysis of the existing urban design and community character conditions within Lakewood and a review of the Pierce County countywide planning policies for urban centers indicate a number of key planning implications for the Comprehensive Plan. These urban design planning implications will focus on creating opportunities for meeting the requirements of urban centers as defined by these policies and on areas within the city that best meet the standards of urban centers. The following are the key planning implications that will be addressed in the development of alternative land use plans:

- Reinforcing clear, well-defined boundaries and edges of the Lakewood Urban Center through open space and sensitive area set asides, landscaping standards, densities of development, and redevelopment of well-designed business and residential districts;

- Identifying opportunities for areas of increased intensity of use and density of development within the urban center and the urban core. These intensified areas should be supported by transit, transportation, and pedestrian improvements;
- Strengthening the character and identity of existing residential neighborhoods through streetscaping, residential design guidelines, linkages to open space networks and parks, and location of capital facilities such as community centers;
- Improving the pedestrian qualities along key paths and linkages through the city. These paths help people orient themselves within the city and increase the recognizable identity of a city;
- Defining the character of a core “downtown” area of Lakewood to create a “heart” to the city. Currently, Lakewood lacks a center that is a rich mix of activities and functions. Should Lakewood have a major “downtown” center or a mix of smaller neighborhood-based village centers? Should the focus of the urban core move toward I-5 and the future commuter rail station and transit center and should Lakewood provide the necessary intensity of permitted development to create a more diverse center that retail can provide?
- Developing strategies for using major capital facilities such as a new City Hall/civic center and planned transportation facilities such as RTA commuter rail station as a catalyst for redevelopment and improved gateways to the city. Will future ridership be enough to make an urban center or will it need additional incentives to create it?
- How can ethnic neighborhoods such as the International District along South Tacoma Way be integrated into the community and retain its uniqueness and diversity?

The areas of the city that will provide the most opportunities for significant change and growth of residential and commercial development will be the urban center or core of Lakewood between I-5 and the lakes and corresponding to Planning Areas 1 and 2. A community needs to have a center where it celebrates civic life. These are people places with commonly shared and recognizable qualities important to a community. Citizens are seeking places in which they gather around fundamental needs such as shopping, recreation, and housing, but have quality life experiences above the essentials as well. Well-planned and designed urban environments can contribute to a community's

collective memory and strengthen the bounds of a community. The urban design quality of a community will be the reflection of creative as well as practical planning. Policies developed in the Comprehensive Plan should support zoning and design guidelines that follow and contribute to the overall quality of an urban center.

CHAPTER 5: ECONOMIC DEVELOPMENT ELEMENT

This chapter covers several topics:

- An analysis of the existing economic conditions within the community.
- The implications of this analysis for the Comprehensive Plan and economic development strategy for Lakewood.
- An examination of the development potential from which land use planning and other alternatives were derived.
- Existing and approved county and regional plans and policies that focus on economic development.
- The existing role and mission statement of the City of Lakewood's Economic Development Advisory Board.

The text of the existing conditions analysis contains tables and graphs of data and information that were derived from much more detailed tables and graphs. These more detailed tables and graphs are contained in Appendix 5.A.1. This appendix also contains a detailed report on the strategic role local jurisdictions such as Lakewood have in influencing economic development in their communities. That report covers the following topics:

- Community Economic Development Concepts:
 - * the local economic development process
 - * public and private roles
 - * locational decisions of businesses
 - * economic development potential
- Relationships between Comprehensive Planning and Economic Development
- Strategies for Economic Development of Washington Communities
 - * roles available
 - * specific activities

- * guidelines for effective programs
- * alternative economic development strategies

These materials were used in the deliberations of the Economic Development Advisory Board for formulating the Economic Development Strategy and Economic Development Element of the Comprehensive Plan.

The economic character of Lakewood has been shaped by many factors. This area was close to one of the first white settlements in Western Washington less than two centuries ago. Three sets of complex decisions over a long period have brought this area to the current economic position:

- The residential choice decisions of thousands and thousands of households;
- The business location decisions of thousands of businesses; and
- Political decisions made on behalf of the nation's defense by the federal government, state government decisions about mental health care and prisons, and the land use planning and public facilities decisions of Pierce County.

The number, kinds, and character of households that have chosen to live in this area have resulted in the demographic composition of the current and to a great extent the future residents. The number, kinds of business, their activities and employees are the basis of the area's economic character and potential.

Besides the personal welfare of the residents and businesses, the economic viability of the community, its facilities and services are significantly influenced by these economic, demographic, and real estate characteristics, conditions, and trends. The demand for public facilities and services and the strength of a community's tax base to provide these community facilities and services is a function of the economic, demographic, and real estate activity in the city. The following sections describe and analyze these factors.

5.1 Introduction

The City of Lakewood is a component of a metroplex of five counties, the four counties of the Central Puget Sound Region and Thurston County. This area is the primary population and economic component of a concentration of population and economic activity that stretches from Vancouver, BC to mid-Oregon. Lakewood is the fifth largest city, based on 1997 state population estimates, in this metroplex. Only Seattle, Tacoma, Bellevue, Everett, and Federal Way are currently larger.

What is different from these other large cities is that Lakewood has not been perceived or functioned as an employment center. The military installations (Fort Lewis, Madigan, and McChord) provide a significantly large employment base, albeit not driven by market factors.

This section views the City of Lakewood as an economic center of business and employment, not just a place of residences. This task examines the data that reflect the non-residential aspects of Lakewood driven or responding to regional, national, and international market pressures. Businesses locate in a community because that location is beneficial to the business by reducing costs, raising revenues, or reducing risk (improving certainty). Other parts of the Economic Development Element discuss factors that affect business location decisions and how communities may interact or influence these factors. The data in this section reflect the results of the business decisions and market factors that determine the current role, conditions, and trends of Lakewood's economy. While this section (and the Economic Development Strategy) considers and recognizes the very important economic role and impact of the military installations, they are viewed as factors that are separate from the market economy and not something the local community has control over.

5.2 Current Economic Role

Lakewood's self image as a suburban bedroom community is only partially supported by the demographic, economic, and real estate analysis reported in the Economic Development Element. The reliance of the local economic base on employment in local/state government (29%), retail (26%), and services (21%) is consistent with communities at the edge of urban areas, although suburban areas typically do not have large amounts of state government

employment. Demographically, the Lakewood community has more in common with older urban neighborhoods of metropolitan areas in the Pacific Northwest. With a population of 63,000 persons (estimated in April 1997), Lakewood is among the ten largest cities in Washington State. Being a new city with its growth spread over a long period, much of the residential, commercial, and industrial real estate base is more mature than typical of suburban areas in Western Washington that have been the product of rapid growth in this past quarter century. Lakewood's growth has been uneven and has occurred over some time.

Economically, Lakewood has many of the characteristics of a "bedroom" community, in that it has roughly 2.5 persons per job, not counting military and civilian employees at the adjacent military installations. The range of quality and price of housing in Lakewood has been attractive for households employed in the employment centers of King, Pierce, and Thurston counties. Only 12% of Lakewood's employment base is of the type associated with business and industrial parks and areas that typically contain businesses that are attracted to a community for reasons other than its own population and resident-serving businesses.

The military installations are very important because of the number and kind of persons they bring to Lakewood (as well as Pierce and Thurston counties), giving the community some of the feeling of a company town. The military and state institutions (Western State and McNeil Island) are driven by political not market factors and decisions made in the state and nation's capitols, therefore less influenced by typical market factors. These facilities have significant influence over the demographic and economic character of local households. The area where this influence is felt but has not translated into a strength is retail trade. As a community and relative to its size, Lakewood has been able to capture, retain, and attract a fairly small proportion of retail spending. This comes even though Lakewood has significant amounts of retail space, including the recently renovated Lakewood Mall. Lakewood has also not participated in regional real estate markets to a great extent, with the exception of the Lakewood Industrial Park and the Lakewood/512 Business Park. There are few office buildings or parks of the size or quality that would attract regional tenants. Most offices are located in retail space or in scattered two-story buildings.

Lakewood has many locational advantages and is well-positioned to participate in the economic growth anticipated in the region.

5.3 Economic Location

The economic location of the Lakewood community has attributes that have influenced its development and will continue to affect the path of future development. There are several locational factors that have to be considered when contemplating the community's future, including:

- distance to the center of the Central Puget Sound Metroplex—40 miles to the intersection of I-90 and I-5 in downtown Seattle.
- 5 to 10 miles from the traditional main economic and employment center of Pierce County (i.e., CBD and Port of Tacoma).
- location at the mid-point of the concentration of population and economic activity that dominates the northwest quadrant of the US—Lakewood is situated roughly equidistant between Vancouver, BC and Eugene, OR.
- location within 4 to 5 exits on the primary West Coast freeway that connects Canada, California, and Mexico.
- location at the intersection of I-5 and SR-512, which affords a more or less direct route to I-90 (the northern instate freeway that connects east-west traffic between the northern tier of the nation's states).
- proximity, but not adjacency, to the Port of Tacoma, transcontinental railroads, and the Pacific Northwest's national and international airline hub at Sea-Tac.
- proximity to areas of Southeastern Pierce County, Thurston County, and DuPont (WA) at Northwest Landing; these areas contain significant areas with vacant land targeted for substantial residential (population growth), commercial, and industrial development (employment growth).

- location close to employment concentrations that are not typically influenced by short-term business cycles (state government in Olympia, state's National Guard, Western State Hospital, McNeil Island, McChord AFB, Fort Lewis, and Madigan Hospital).

These locational advantages are set against the general locational attribute that the Pacific Northwest, and in particular the Central Puget Sound Metroplex, is forecast to add 1,700,000 more people and 630,000 more jobs by 2020. While it would be naive to assume that the Lakewood community will automatically capture a significant share of regional growth, that is possible.

5.4 Economic Development Policy Background

5.4.1 Introduction

The City of Lakewood's Economic Development Policies will not operate in a vacuum. Besides the dimensions of local, regional, national, and international market forces, there are state as well as county economic development policies. In addition, the Tacoma-Pierce County Economic Development Board and Port of Tacoma have policies and plans. To some extent, the City of Lakewood is bound by such policies, except they are typically so general that each specific community has to interpret and shape their own to deal with their own issues.

State and regional economic development policies that have been (or will be) adopted that provide a basis for Lakewood's Economic Development Element are summarized below.

5.4.2 Washington State Growth Management Act (1990-1991)

There are two ways to consider the GMA legislation and a local community's economic development. A narrow view would only search the text of the state laws for statements, intent, and programs that show a direct relationship to economic development. The second way is to interpret the planning, infrastructure, and capital financing sections of the GMA as a major restructuring of property rights in Washington State. As usual, the reality is somewhere in between.

Recent economic development activities in Washington State have been driven by several concerns:

- Boeing layoffs in the early 1990s
- economic slow-down in the US and Washington State during 1990-1995
- the need to moderate perceived impacts of increased regulation on private development actions
- concern by communities with how they will attain and finance their visions of future growth

Economic development in the case of growth management planning provides a balance to land use and environmental regulation. It realistically considers the need to stimulate economic activity to provide the community's strength to achieve their vision. In addition, the GMA requires consistency and concurrency so that plans and policies have a better change of being implemented. The public sector can shape and influence the direction of economic development, but ultimately the decisions of private firms are what generate community growth.

Economic development is listed prominently among the goals of the 1990 Act that set its intent:

(5.) Economic Development. Encourage economic development through-out the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services and public facilities.

Cities and counties in Washington are allowed to adopt Economic Development Elements, but are not mandated to do so. There is a direct intent in several sections of the GMA that

economic or employment activities be balanced with other goals and objectives. The GMA also states that state resources be used to ensure that growth is spread around the state.

Implicitly, economic development and economic concepts are themes that run through the GMA legislation. For example, impact fees and concurrency requirements are essentially applications of well-established pricing principles for financing public infrastructure--the main principle being that those who benefit should pay according to use. Where the GMA legislation has generated the most concern is when it reinforces planning principles over market-driven actions. The legal basis for planning is well established in U.S. and state law. What the GMA does is provide a more consistent and explicit basis for local jurisdictions to enforce what they probably could--and should--have done voluntarily. Now they are required to plan and zone in ways that are consistent and that explicitly recognize capital facility capacities plus protection of sensitive environments.

5.4.3 VISION 2020 and Economic Development

The PSRC has adopted region-wide goals and objectives to guide multi-jurisdictional transportation and land use policies. Economic development is implicit in many of their goals and objectives. One of their five-part strategies for encouraging growth directly relates to economic development.

“Maintaining a Strong Regional Economy and Accommodate Growth”

- Accept responsibility to plan for the moderate growth forecast for the region by 2020.
- Promote a distribution of new employment growth centers, such as Tacoma, Everett, and Bremerton, to relieve growth pressures on King County.
- Provide enough urban land to allow private enterprise to effectively create the urban structures in which residents will live and work.
- Recognize the mobility needs of business and industry and provide for these needs within the intent of VISION 2020.

The PSRC is currently reviewing VISION 2020 as well as preparing a regional economic development strategy with its constituent bodies in four counties.

5.4.4 Pierce County Comprehensive Plan Economic Development Objectives (November 1994)

Economic development figures prominently in Pierce County's Comprehensive Planning.

The following are the stated objectives:

- Strengthen existing business and industry and assist new business to locate in the county adding to the diversity of economic opportunity and employment.
- Pursue an active and aggressive recruitment program to induce a variety of commercial and industrial enterprises to settle in the county.
- Encourage the growth of readily available large planned employment center development sites, properly zoned and serviced with infrastructure.
- Develop programs that create healthy central business districts (CBD) and neighborhood commercial districts throughout the county.
- Through tiering and the Capital Facilities Plan, ensure that adequate infrastructure is provided to accommodate economic growth.
- Actively participate in the development of a properly educated and trained work force.
- Encourage programs that develop and promote our cultural resources.
- Achieve and maintain a high environmental quality of life to maintain and develop a robust, thriving economy and keep Pierce County a preferred place to live, work, and play.
- Pierce County should develop regulations which are consistent, enforceable, fair, predictable, and timely.

- Coordinate economic development efforts so that a clear and consistent economic policy is followed.

5.4.5 Pierce County Strategic Economic Development Action Plan (May 1997)

Pierce County has a goal of creating a “jobs-based economy.” To achieve this goal, the County Executive and County Council convened a Citizens’ Advisory Committee on Economic Development. That committee, which was composed of 50 members from throughout the county, developed recommendations in the areas of infrastructure provision, regulatory processes, workforce training, and business attraction, retention, and growth.

The Citizens’ Advisory Committee recognizes that partnerships are key as Pierce County moves into the 21st century. The county must create strategic alliances with the cities and towns within its borders; with neighboring counties; with its schools, colleges, and universities; with the military; and with local businesses if it is to succeed in its mission of creating a jobs-based economy.

5.4.5.1 Infrastructure

Goal: Pierce County and its cities and towns must provide adequate highways, roads, sewers, and other public infrastructure to provide for growth, particularly in planned employment centers. The processes for identifying infrastructure needs, planning for new public investments, and building it must be predictable and must be accomplished in partnership with jurisdictions around the county and throughout the region.

5.4.5.2 Regulatory Processes

Goal: Pierce County must provide regulatory and permitting processes that are fair, easy to understand, and simple to follow. Its regulations must provide adequate protection for Pierce County’s environment but must balance environmental stewardship with an understanding of the needs of business.

5.4.5.3 Workforce Training

Goal: A trained and competent workforce is essential for success as Pierce County moves toward a jobs-based economy. Pierce County must work collaboratively with its schools, colleges, and universities and with private employers and other jurisdictions to ensure that its residents are being prepared for good jobs through high-quality, targeted training.

5.4.5.4 Attracting, Retaining, and Growing Businesses

Goal: To create a jobs-based economy, Pierce County must be seen as a desirable place to do business. It must support and nurture new enterprises, help existing businesses expand, modernize, or market, and attract new businesses to the county. The county must be a place where streamlined permitting and a flexible business climate are balanced against quality of life and a strong ethic of care for the environment. Pierce County welcomes and encourages opportunities that will create good jobs for its residents.

5.4.6 City of Lakewood's Economic Development Advisory Board

The City of Lakewood is unique in this state since it has established an Economic Development Advisory Board. This group is a standing committee of the city government. In July 1996, this Board adopted the following Draft Mission Statement and Goals.

“The Economic Development Advisory Board Mission Statement is to develop jobs, increase the revenue base, and diversity and expand Lakewood’s economy in a manner consistent with the community’s long-range vision.”

- Coordinate managed economic growth that is diversified and enhances the quality of life by balancing the concern for the environment with the need for infrastructure.
- Implement programs that provide businesses with financial, technical assistance, and training to ensure their success.
- Identify, develop, and maintain existing and planned employment centers and business districts with adequate infrastructure and business services to concentrate resources, and target growth.

- Communicate a positive business climate through a pro-active community partnership that supports expansion of existing businesses and seeks appropriate new economic development opportunities.
- Develop public policies that promote both economic growth and the well-being of the community.
- Maintain an educational consortium to assist with economic development.
- Develop and maintain flexible vocational education programs that respond to employer needs.
- Support the continued growth and development of K–12 and Pierce County higher education.
- Encourage community diversity training in the workforce.

5.5 Planning Implications

5.5.1 Opportunities and Challenges for Economic Development

Lakewood's past patterns of development; its economic location; and county, regional, state, and national/international trends in economic activity and real estate development converge to provide a complex of opportunities and challenges that, on balance, are positive with respect to economic development.

5.5.1.1 Opportunities

- Reputation for areas of high quality residential areas.
- Small amount, but viable, concentration of high income households.
- Location within a part of the five-county metroplex that is surrounded by recent economic successes that may be leveraged by the community including:

- ♦ Intel/Northwest Landing
 - ♦ Port of Tacoma
 - ♦ rapid suburban residential development in areas near Puyallup
 - ♦ industrial development in Fife/Port of Tacoma area
 - ♦ proximity to natural recreation and tourism areas
 - ♦ viability of military installations in an era of base closures
 - ♦ state policy of growth management which favors existing urban areas where possible.
- Diverse cultural and ethnic population base.
 - Local control over the pace, amount and character of local real estate development.
 - Designation as RTA commuter-rail station.
 - Significant assembled holdings of land with development or redevelopment potential.
 - Attraction of experienced military personnel to the community.

5.5.1.2 Challenges

The challenges facing the City of Lakewood are not atypical for older established mature communities.

- The diversity of the residences and significant numbers of households with lower to moderate incomes and older homes.
- A stock of older commercial buildings that were developed to respond to previous retail, industrial, transportation, and commercial technologies.
- Major retail areas that are not located at exits to the freeway system are a reflection of the age of these areas (Lakewood Mall and Colonial Center area). This is typical of older retail centers around the nation where the trends are more renovations and

restructuring of malls and shopping centers than new malls and shopping centers being built.

- Demographic character of households driven by presence of older, affordable housing as well as need for dependent population groups to be near military, penal, and medical institutions as well as out-patients and retirees.
- New cities have to face the challenge of governing themselves and establishing traditions and process for the whole community to work together rather than in loosely connected groups as was the pattern prior to incorporation.
- New cities assume the responsibilities for programs, facilities, and services that were heretofore financed through county-wide tax base rather than often narrower local tax base.
- The legacy of past planning in unincorporated Pierce County was to allow sprawl and scatter; the new city will have to make some difficult decisions if it seeks to concentrate development rather than continue the diffuse patterns of the past.
- Position closer to the edge of the metroplex than the center, distances to the Ports of Tacoma and Seattle and airports, not being located on main line of transcontinental railroads.
- Large segments of local economic activity not susceptible to influence by local government processes (state and federal facilities and activities).
- Little to no regional participation in office, industrial, and business park development, so there are few areas within Lakewood that would currently be attractive to headquarters or branches of major corporations and industries that are growing in other parts of the Western Washington region.
- Pattern of retail development that is not consistent with other suburban communities that contain regional malls.

Challenges as well as opportunities are just that; they are not immutable or insurmountable, but rest on concerted, planned community-wide actions involving public-private partnerships.

Considering the foregoing palette of challenges, opportunities, locational, demographic, economic and real estate trends, conditions and attributes, a number of implications emerge for the comprehensive planning process and economic development strategy. These include:

- The current significant and diverse residential base of the community will predominate unless significant and concerted action is taken to increase and diversify economic activity (i.e., increases in land devoted to commercial, office and industrial space).
- Future population growth is projected to exceed employment growth; to become an economic, employment and/or urban center, the employment base (and non-residential tax base) would have to gain relative to residential/population.
- Areas within Lakewood will have to be changed to the levels of service, infrastructure, and amenities that are consistent with the office, business park, industrial, and commercial areas of Lakewood's competitors in the region to attract more employment and tax base.
- Lakewood has a limited land base that is precluded from major expansion via annexation by military installations, natural barriers, and other municipal jurisdictions. Lakewood also has 10 to 15% of its land base in vacant categories. Without significant changes in patterns of development, the forecast increases in residents (29% to 52%) and 40% to 50% for employment are unlikely.
- redeveloping portions of mature urban areas such as Lakewood are difficult due to the following:
 - ♦ process of assembling small parcels to attain large enough sites to accommodate modern real estate technologies and patterns;
 - ♦ current owners of zoned property often have inflated ideas about land values compared to vacant previously undeveloped land; and

- ♦ redevelopment can increase development costs by adding demolition, environmental clean-up, land assembly costs, and development time.
- Lakewood has some latitude to pursue planning and development strategies that focus on different features:
 - ♦ serving local population and businesses with retail and services businesses;
 - ♦ pursuing dispersal development patterns within the city versus concentrating and combining economic assets and community facilities;
 - ♦ emphasis on pursuing an urban high-density employment mixed-use center, with either horizontal or vertical combinations of uses; and
 - ♦ emphasis on participation in regional, national and international real estate markets or only response to local population and business objectives.
- Given the ambiguous economic well-being of local households can adequate tax base, public services and facilities be developed to serve the community at acceptable service levels.
- Economic development strong enough to assist community transformation requires concentrating relatively scarce community resources for capital improvements into commercial and industrial areas rather than spreading them throughout residential areas.
- Can the short-term needs of existing community businesses be addressed while at the same time pursuing a vision that requires attracting regional, national and international businesses?
- Can acceptable forms of more dense real estate development for residential and commercial/industrial purposes be pursued consistent with current and affordable infrastructure investment?

The Comprehensive Plan and the city's economic development strategy can be used to focus community activities, energy, and resources to pursue whatever the vision and preferred alternative future that will be determined in the next phases of the planning process.

CHAPTER 6: HOUSING

6.1 Existing Conditions

This report represents the first opportunity to look at the history of housing development in Lakewood. Three factors—the military installations, the lakefront property, and the proximity to Tacoma—have played dominant roles in establishing the character and conditions currently found in Lakewood.

The market demand for affordable housing for soldiers stationed at McChord Air Force Base and Fort Lewis has had a major impact on Lakewood, and is a major factor in understanding the presence of a large number of apartments in the city. Many of the retired homeowners now living in the community were once stationed at one of the two installations. The opportunity to build higher valued homes in a desirable setting on the shores of the city's lakes has provided Lakewood with its share of higher income families, and some of its oldest, most established neighborhoods. The city's proximity to Tacoma has positioned it as a primary location for post World War II tract housing.

Lakewood is characterized by wide variations in income and housing values. The first section of this chapter deals primarily with averages, which tend to mask these differences. The contrasts within the city are more evident in the later sections of this chapter, which describe housing conditions in the city by planning area.

6.1.1 Population, Household, and Income Changes since 1980

Population Changes by Age Groups. The city's population underwent a significant aging in the decade of the 1980s. While the total population increased by about 4,000, the number under age 24 decreased by about 1,000. As shown in Table 6-1, the population below age 19 went from 31% to 28% of the total population. A more dramatic shift occurred in the 20 to 24 year old age group, which fell from 16% to 11%. The decrease in employment on the two military installations during this period may account for the reduction of population of this age group.

The population over age 25 increased from 53% to 61% of the population. The largest percentage increase occurred in the over 65 population which rose from 6% to 11% of the population. It appears that the population is aging in place, and that Lakewood is serving increasingly as a retirement community.

Table 6-1 Lakewood's Population by Age Categories

	1980 (1)	Percent of Total	1990 (2)	Percent of Total
0-19	16,680	31%	16,453	28%
20-24	8,529	16%	6,204	11%
25-34	8,775	16%	10,655	18%
35-54	11,660	21%	13,248	23%
55-64	5,301	10%	5,610	10%
65+	3,488	6%	6,242	11%
Total	54,433	100%	58,412	100%

(1) US, Census for the Lakes Census Designated Place1 1980

(2) US Census for the Lakewood Census Designated Place, 1990

6.1.1.1 Lakewood household Age

Table 6-2 illustrates several unique characteristics found in the city's population mix. This table compares the age of the head of the households in Lakewood, University Place, and for all of Pierce County. As expected, because of the influence of the military installations, the percent of households in the 15 to 24 year old category in Lakewood is considerably higher, 13% vs. 8% and 7%, respectively. What appears to be unique about Lakewood is the lower percentage of middle-age households. Of Lakewood's heads of households, 55% are between 25 and 54 years old. This proportion is significantly lower than is found in University Place and Pierce County, where the figures are 63% and 62%. The most atypical age cohort is 35 to 44, which has 18% of the city's households compared to 24% and 23% in the two other jurisdictions. The proximity to the military installations helps explain this unique feature. The largest population group living in military housing on each of the two installations is between 25 and 34 years old.¹

The fact that fewer middle aged households live in Lakewood is significant, as this population cohort provides an important foundation to a community. Households between 25 and 54 provide the economic spending base for a community, as these are years of family

¹ 31% of the population living at Ft. Lewis is between 25 and 34 and 26% of this same age group were living at McChord Air Force base in 1990. Source: US Census

formation and high personal income. This age group provides the underpinnings for civic leadership in schools and service organizations.

Table 6-2 Age of residents in Lakewood, University Place, and Pierce County, 1990

	Lakewood		University Place		Pierce County	
	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent
Age of Head of Household						
15 to 24	2,972	13%	907	8%	15,462	7%
25 to 34	5,341	23%	2,476	22%	51,421	24%
35 to 44	4,099	18%	2,682	24%	49,603	23%
45 to 54	3,157	14%	1,932	17%	32,857	15%
55 to 64	3,268	14%	1,423	13%	26,112	12%
65+	3,917	17%	1,674	15%	39,179	18%
Total	22,754	100%	11,094	100%	214,634	100%

Source: US Census, 1990

6.1.1.2 Household Turnover Rates

Sixty-three percent of the city's households moved into their housing unit in the four-year period from 1986 to 1990. This percent, as shown below in Table 6-3, is higher than the county's total of 57%. This high turnover rate occurs primarily in rental units which made up over 52% of the occupied housing units in 1990. The opposite trend is found among homeowners, who tend to be older. Twenty-five percent of households moved into their homes between 1960 to 1979. A similar statistic for Pierce County is considerably lower, which is 17%. Ten percent of city households moved into their homes between 1960 and 1969, compared to only 5% for the same period in the county. These figures represent the homeowners who provide stability to the community.

Table 6-3 Year Householder Moved into Unit, Lakewood and Pierce County¹

	Lakewood		Pierce County	
	Number	Percent	Number	Percent
1986 to March 1990	14400	63%	122834	57%
1980 to 1984	1883	8%	26218	9%
1970 to 1979	3364	15%	35920	12%
1960 to 1969	2226	10%	16396	5%
1959 or earlier	881	4%	13284	4%
Total	22754	100%	214652	100%

¹ US, Census for the Lakes Census Designated Place

6.1.1.3 Household Income Levels

Per capita income and median household income increased in Lakewood during the 1980s by 66% and 69%, respectively. As shown in Table 6-4, these increases fell short of the changes for the same measures in Pierce County as a whole. For the county, the per capita income increased by 81% and the median income went up 77%.

While average incomes increased, incomes for those at the bottom did not keep pace with the rest of the population. Persons with incomes below the poverty level increased by 30%. Table 6-4 shows that the percent of persons living below poverty increased from 12.3% to 16%. This increase is much greater than that occurred countywide, where the percent of persons living in poverty increased by 8%.

Table 6-4 Various Measures of income in Lakewood and Pierce County 1979, 1989

	1979	1989	Change 1979 to 1989
	(1)	(2)	
Lakewood			
Per capita income	\$ 8,137	\$ 13,538	66%
Median Household Income	\$ 15,505	\$ 26,228	69%
Percent of Persons Below Poverty Level	12.3%	16.0%	30%
Pierce County			
Per capita income	\$ 7,409	\$ 13,439	81%
Median Household Income	\$ 17,221	\$ 30,412	77%
Percent of Persons Below Poverty Level	10.6%	11.4%	8%

(1) US, Census for the Lakes Census Designated Place, 1980

(2) US Census for the Lakewood Census Designated Place, 1990

6.1.2 Lakewood's Changing Housing Stock

6.1.2.1 Increase of Multi-family Units

From 1980 to 1997 the number of multifamily units in Lakewood increased from 8,874 units to 11,889 units, or a 34% increase. In the same time period, single-family units increased by 556 units or 4%. There is now a total of 26,534 housing units of all types in the city. Current estimates indicate that rental housing provides the majority of housing units in the city.

Table 6-5 Housing Units in Structure for Lakewood, 1980,1990, 1997

	1980		1990		1997	
	Number	Percent	Number	Percent	Number	Percent
	(1)		(2)		(3)	
Single family (4)	12,563	56%	12,964	54%	13,119	49%
2 to 4 units	1,777	8%	2,363	10%	2,641	10%
5 or greater units	7,075	31%	7,361	30%	9,248	35%
Mobile home or other	1,169	5%	1,542	6%	1,526	6%
Total Housing units	22,584		24,230		26,534	

(1) US, Census for the Lakes Census Designated Place, 1980

(2) US Census for the Lakewood Census Designated Place, 1990

(3) Washington State Office of Financial Management, 1997

(4) Includes single-family attached

6.1.2.2 Housing Age

Only 5% of the city's existing housing stock was built before 1939. As shown in Table 6-6, the city has grown steadily², with more than 4,300 units built in every decade since 1950. The fastest growing decades were the 1960s and 1970s when 5,668 and 6,339 units respectively were built. The building pace of the 1990s has apparently slowed, and probably will not match the pace of any post-WWII decade.

Table 6-6 Age of Housing Stock

Decade Built	Number Built	Percent
1990 to 1997	2,304	9%
1980 to March 1990	4,382	17%
1970 to 1980	6,339	24%
1960 to 1970	5,668	21%
1950 to 1959	4,522	17%
1940 to 1949	2,056	8%
Before 1939	1,263	5%

US Census for the Lakewood Census Designated 1990

Washington State Office of Financial Management 1997

6.1.2.3 Rental Housing in Lakewood

The majority of occupied housing units in Lakewood (52%) are now rentals. By way of comparison, rentals make up 40% of all occupied housing units³ in Pierce County. Two trends are at work that combine to put rental housing into the majority of the city's occupied

² Table 6-5 and Table 6-6 differ on the number of units built in the 1980s due to the boundary difference between the 1980 Lake CDP and the 1999 Lakewood CDP.

³ Source: US Census 1990

housing. First, apartment construction has accelerated. While Lakewood has never been an exclusively single-family home ownership community, as there were some multi-family units built in the 1960s, multi-family construction picked up momentum in the 1980s, as illustrated by Table 6-7. Seventy-five percent of all housing units built in the 1980s are renter-occupied.

The other trend affecting rental housing is the conversion of single-family units from owner-occupied to rentals. In 1990, Lakewood had 9,653 owner-occupied single-family housing units, although the city had a total of 13,119 single-family units. Therefore, an estimated 3,466 of the single-family units, or 25%, were renter-occupied.⁴

Table 6-7 Year Structure Built by Tenure

Year Built	Percent Owner-Occupied	Percent Renter- Occupied
1980 to 1990	25%	75%
1970 to 1980	39%	61%
1960 to 1970	56%	44%
1950 to 1959	67%	33%
1940 to 1949	50%	50%
Before 1939	51%	49%
Total	48%	52%

Source: US Census for the Lakewood Census Designated Place 1990

6.1.2.4 Household Age and Home Ownership

Table 6-8 below relates the age of household and tenure in Lakewood. It shows that in nearly every age category there are fewer homeowners than found countywide. For example, in the 25 to 34 age group, only 18% of the city's population are homeowners. This is less than half the 41% county-wide. The gap in the 35 to 44 age cohort is also considerable at 46% to 64%. It is not until the prime earning years and retirement ages of 55 to 74 that Lakewood's homeownership exceeds or meets the countywide percentages. One explanation for the high rate of renters vs. owners may be that military families choose to rent houses for several years rather than purchase, due to their high mobility.

⁴ Source: US Census 1990

Table 6-8 Tenure by Age of Householder, Lakewood and Pierce County, 1990

Age of Head of Household	Lakewood Homeowners	Renters	Pierce County Homeowners	Renters
15 to 24	4%	96%	11%	89%
25 to 34	18%	82%	41%	59%
35 to 44	46%	54%	64%	36%
45 to 54	66%	34%	75%	25%
55 to 64	80%	20%	81%	19%
65 to 74	82%	18%	80%	20%
75 +	77%	23%	68%	32%

Source: U. S. Census 1990

6.1.3 Other Housing Issues, Changes and Conditions

6.1.3.1 Race and Rental Rates

A review of the tenure by race as displayed in Table 6-9, shows that the percent of white householders who are owners (53%) is higher than the city average (47.5%). Conversely, the majority of renters are minorities. Among the city's Asian population, only 44% are homeowners. The percent of homeowners drops even more among Blacks and American Indians, where only 22% are homeowners.

Table 6-9 Tenure by Race of Householder

	Total Households	Percent Homeowners	Percent Renters
White	17,823	53%	47%
Black	2,704	22%	78%
American Indian, Eskimo or Aleut	264	22%	78%
Asian or Pacific Islander	1,598	44%	56%

Source: US Census

6.1.3.2 Impact of Military Installations on Housing

The impacts of military installations on Lakewood's population, housing and economy are varied and strong. The numbers of active military and their dependents living off base are a significant part of the housing market. Their low incomes, youth, and special housing needs skew the market in Lakewood compared to other communities in Puget Sound.

In 1990, population on the two military installations was nearly half that of the Lakewood Census Designated Place (CDP). At that time Pierce County held nearly 45% of the state's military population (see Table 6-10). Virtually all of the Pierce County military are in Fort Lewis

and McChord. Since 1990, the military population declined in Pierce County, so that by 1996, the county contained only 36% of the state's military.

While the number of individuals living on the two installations has fluctuated over the last 20 years, the number of households has remained relatively constant. As shown in Table 6-10 the total employment level and population on the installations reached its high level of 62,502 and 44,211, respectively, in 1970. Both population and employment have decreased by 40% since 1970. The number of households remained at about the same level because of the shift in household size from 5.62 in 1970 to 3.83 in 1990. This 32% reduction far exceeded the Pierce County downsize of households of 15% for the same period. The 32% drop in military household size can be explained either by changes in military housing programs or changes in military family composition over this time period.

Table 6-10 Population, Households, and Employment at Fort Lewis and McChord 1970 to 1990

	1970	1980	1990
Total Population	44,211	29,507	26,762
Household Size	5.62	3.88	3.83
Total Employment	62,502	40,353	37,041
Total Households	4,408	4,265	4,438
Percent Single-family	46%	46%	73%

Source: Puget Sound Regional Council, August 1995

6.1.3.3 Military Personnel Information by Planning Area

In 1990, 2,926 armed forces personnel lived in the Lakewood CDP (rather than on installation property). Table 6-11 shows their distribution within the city. The Urban Core Planning Area has the largest number, nearly 1,000, with the Southwest and South Planning Areas next with about 500 each. The Northwest Planning Area had the smallest number (152).

Nearly 10,000 of Lakewood's 1990 population were armed forces veterans. Of these, the largest number--twice as many as in any other planning area--lived in the West Planning Area.

6.1.4 Housing Conditions Survey

Interns trained by the housing consultants conducted a visual assessment of housing conditions within the City of Lakewood in the summer of 1997. Table 6-12 below identifies what percentage of each planning area was surveyed.

Table 6-11 Civilian and Military Employment & Veteran Status

Planning Area	Veteran Status Civilian Veterans ≥16 yr. old	Civilian Veterans ≥65 yr. old	% of Area
Urban Core	1,404	186	13.4%
Northwest	1,723	372	17.7%
North Central	607	92	5.9%
Northwest	1,316	313	13.8%
West	2,782	855	30.7%
South Central	1,021	317	11.3%
Southwest	716	128	7.1%
Totals	9,568	2,263	100%

Source: 1990 Census of Population and Housing

Table 6-12: % of Planning Area Covered by Housing Conditions Survey

Planning Area	% Percent Covered by Survey
1	80
2	84
3	83
4	2
5	24
6	86
7	100

The survey was concentrated in areas which are likely candidates for future neighborhood revitalization programs because of lack of sewers, neighborhood and environmental conditions, and likely poor housing quality or maintenance based on an initial assessment of housing throughout the city. Concentration of poor housing conditions is one significant element in determining locations for neighborhood preservation programs. The city will eventually need to complete the condition study for the whole city, since condition information provides a baseline for monitoring changes in neighborhoods.

The methodology used to collect the information involves rating each structure on a simple four scale system, where 1 indicates “needs no repair,” and 4 indicates “severely deteriorated.” The consultants trained the interns in the field, conducted cross checks, and accompanied the interns on portions of the survey. The data collected were input into the city's data system. It will be integrated into the city's geographic information system (GIS) for future analysis comparing conditions with such factors as age of structure, type of structure, and tenure.

6.1.4.1 Single Family

As shown in Table 6-13 below, nearly 90% of the city's single-family housing stock is in good or fair condition. Over half the units received a rating of “good,” meaning the house is in good condition and well maintained, needing at most partial painting. Slightly more than one third of all units are in fair condition. With this rating, painting, maintenance and moderate repairs to a major element of the house (roof, walls, foundation) or a few minor elements are all that would be needed to put it into good condition. Just under 10 % of the single-family housing needs substantial repair and just over 1% is in poor condition and may need replacement.

Table 6-13 Housing Condition by Planning Area, City of Lakewood 1997

Planning Area	Good Number/%	Fair Number/%	Substantial Repair Number/%	Poor Number/%
1-Single Family	444 / 45%	576 / 44%	168 / 10%	12 / 1%
1--Multi Family	15 / 24%	45 / 71%	3 / 5%	0 / 0%
2--Single Family	271 / 38%	265 / 54%	35 / 8%	6 / 0%
2--Multi Family	11 / 34%	21 / 66%	0 / 0%	0 / 0%
3-Single Family	267 / 80%	79 / 18%	108 / 2%	4 / 0%
3-Multi Family	5 / 39%	7 / 54%	1 / 8%	0 / 0%
4-Single Family	55 / 95%	3 / 5%		
4-Multi-Family	12 / 57%	8 / 38%	1 / 5%	0 / 0%
5-Single Family	776 / 63%	395 / 28%	132 / 8%	13 / 1%
5-Multi Family	7 / 50%	5 / 38%	2 / 14%	0 / 0%
6-Single Family	228 / 51%	284 / 29%	166 / 18%	14 / 2%
6-Multi Family	14 / 26%	37 / 67%	4 / 7%	0 / 0%
7-Single Family	128 / 31%	190 / 46%	78 / 19%	16 / 4%
7-Multi Family	11 / 31%	20 / 56%	4 / 11%	1/ 3%
TOTALS				
Single Family	2,114 / 46%	1,789 / 39%	687 / 15%	65 / 1%
Multi Family	75 / 32%	143 / 61%	15 / 6%	1 / <1%

Source: Housing Condition Study, City of Lakewood, 1997

Table 6-11 also shows housing conditions of single-family and multi-family housing in each of the city's planning areas. At this time, multi-family data is presented by developments rather than number of units. The distribution of condition varies between areas, and also between single-family and multi-family developments within an area. For example, Planning Area 3 has the largest proportion (75%) of single-family houses in good condition. However, only 38% of its multi-family housing is in good condition, lower than Planning Area 5. Planning Area 5 has

half of its multi-family and nearly 60% of its single-family housing in good condition. While only 24% of the area was surveyed, the results represent the largest number of units surveyed in any planning area.

Planning Areas 6 and 7 include higher-than-average numbers of single-family units needing substantial repair or in poor condition. Units in these conditions comprise about one quarter of the housing in these areas.

6.1.4.2 Mobile Homes

The housing condition study included all 39 mobile home parks found in the City of Lakewood. They were rated on a park-by-park basis using a four scale rating system:

- Parks which had good maintenance, landscaping, and public areas. The homes appear in overall good condition.
- Parks where landscaping and public areas could use some maintenance and where some homes need repair or replacement.
- Parks where landscaping and public areas are in fair or poor condition, and a large percentage of homes need repair or replacement.
- Parks that do not have any landscaping, and common areas need significant repair and maintenance. Most homes need replacement.

Mobile home parks are concentrated in Planning Areas 2 and 7 (refer to Figure 3-3). Together, these areas account for more than three quarters of the mobile home parks in the city. Planning Areas 4 and 5 do not contain any mobile home parks. As shown in Table 6-14, mobile home parks are in poorer condition overall in Lakewood than single-family or multi-family housing.

Particularly in Planning Area 7, two parks are substandard with respect to the condition of the mobile homes as well as environmental conditions. Planning Area 2 has the highest ratings of mobile home parks, with nearly 80% in good or fair condition.

Table 6-14 Condition of Mobile Home Parks, City of Lakewood

Planning Area	Condition			
	Good	Fair	Substantial Repair	Poor
1	0	1	1	0
2	3	8	2	1
3	0	0	0	1
6	0	3	3	0
7	0	8	6	2
Totals	3	20	12	4

Source: Lakewood Housing Condition Study, 1997

6.1.5 Publicly Assisted Housing

The Pierce County Housing Authority (PCHA) administers certificates and vouchers, and manages a scattered site public housing program and several below market rate multi-family developments within the City of Lakewood.

6.1.5.1 Certificates and Vouchers

Section 8 certificates and vouchers provide federal US Department of Housing and Urban Development (HUD) subsidies to low income families to help pay for rent of apartments in the private market to limit costs to 30% of the family's income for housing. Of the 2,218 vouchers and certificates issued by the PCHA, approximately 10% are located within the City of Lakewood.

6.1.5.2 Scattered Site Low Income Housing

PCHA purchased 167 single-family houses around the county with HUD funds and rents them to very low income families. The tenants' rent is 30% of their income with a minimum monthly rent of \$25. While it is unusual for a housing authority to operate only scattered site housing, PCHA does not operate traditional housing developments. One of these units is within the City of Lakewood.

6.1.5.3 Enterprise Fund Rental Apartments

PCHA has acquired 2,099 units located in 20 apartment complexes in Pierce County. A total of 407 units in seven of these apartments are located in Lakewood. This represents 19.4% of the

units and more than one third of the complexes. Enterprise apartments are funded largely through bond issues; no federal funding is involved. Most of the tenants--85% to 95%--have low to very low incomes. Approximately 10% of the Enterprise tenants receive Section 8 certificates or vouchers. PCHA manages these properties. All the complexes were surveyed in the housing condition study and were found to be in good or fair condition. A brief description of individual Enterprise apartments within the City of Lakewood is summarized in Table 6-15.

Table 6-15 PCHA Owned Units

<u>Brookridge</u> 7320 146th St. SW Built: 1976, Purchased 1991 Condition: Good	69 units Family, 1 and 2 br. units Rents: \$405 - \$435
<u>Eagles' Lair</u> 12710 56th Ave. Ct. SW. Built: 1985 Condition: Good	54 units Family, 1 and 2 br units. Rents: \$345 - \$455 Laundry room
<u>Evergreen Court</u> 12809 Lakewood Dr. SW Built: 1954 Condition: Good	40 units Family complex, 1 and 2 br. units Rents: \$305 - \$340 Laundry Room
<u>Lakewood Village</u> 9100 Lakewood Dr. SW Built: 1995(turnkey) Condition: Fair	136 units Family: 30-1 76- 2 30- 3 br units Rents: \$480 - \$580 - \$700 Fireplaces, washers, dryers, each unit has exterior entry, patio or deck
<u>Lonepine</u> 5218 Chicago Ave. SW. Built: 1970 Condition: Fair	28 units Family, 1 and 2 br units Rents: \$300 - 310; \$350 - 360 Laundry room
<u>Oak Leaf</u> 4111 110th St. SW Built: 1967, purchased 1982 Condition: Good	26 units All 1 br units Rents: \$335 - \$355 Storage and laundry room
<u>Montgrove Manor</u> 4001 109th St. SW Built: 1969 Condition: Fair	16 units Family, all 2 br units Rents: \$330
<u>Village Square</u> 10810 Lakeview Ave. SW Built: 1978, purchased 1992 Condition: Fair	38 units Family, 1 and 2 br. units Rents: \$380 - \$425

PCHA's Enterprise units rent below current market, but they experience the high vacancies found throughout Lakewood. Vacancies vary by development. Lakewood Village is among the more successful and stable developments. On average, the Enterprise properties turn over completely on an annual basis.

Assisted housing makes up approximately 8% of the city's *rental* housing stock. This amount is not out of scale with the proportion of assisted households in other cities of comparable size. While this assisted stock provides assurance of an ongoing supply of affordable housing, it does not supply enough housing to meet the overall need for affordable housing in Lakewood based on household income.

6.1.5.4 Housing units without Sewer Services

The 1990 census identified 22,472 residential units in Lakewood. Of these units 92% are on public sewer, and 8% or 1,721 units rely on on-site septic sewers. Two communities, Tillicum and American Lake Gardens, are not served by public sewer. It is unusual to find communities with the densities found in Tillicum and American Lake Gardens using septic tanks.

6.2 Trends and Projections

6.2.1 Projections to 2020

The PSRC projects a steady growth for Lakewood over the next 13 years. By 2020 this agency, which is responsible for developing growth projections, expects that the city will have over 76,000 residents. They expect population increases of 11% and 10% over the first two decades of the next century.

As shown in Table 6-16 most of the growth is expected to occur in multifamily housing.

Table 6-16 Lakewood Population and Household Projections, 1990 to 2020¹

	Percentage Change per decade		
	1990 to 2000	2000 to 2010	2010 to 2020
Population	13%	11%	10%
Total Households	15%	16%	19%
Single-family houses	10%	12%	3%
Multifamily	22%	21%	17%

(1) Estimates based on five FAZ areas

Source: 1995 Forecast, Puget Sound Regional Council

For the decade of the 1990s the PSRC projects a population increase of 13%, with 10% increase in single-family housing and a 22% increase in multi-family units. The actual pace

of growth in housing units was about 10% over the first seven years of the decade. This rate is about the same as the projections. The major difference between the projections and what actually has occurred is in the mix in units built. Multi-family units have increased from 9,724 units to 11,890, a growth rate of 22%. At the same time only 155 single-family units have been built (a 1% increase).

6.2.2 Owner-Occupied Single-family Housing

6.2.2.1 Median house price

Since 1995, Lakewood's median price for a single-family house has increased from \$130,000 to about \$135,000, a 4% increase. As shown in Table 6-17 this is based on sales of 238 units in 1995 and 131 for the period from January through August of 1997. This compares to the countywide increase of \$7,000 or about 6%⁵.

Table 6-17 Median Home Sale Price and Number of Sales in Lakewood, 1995-1997

				Change
	1995	1996	1997	1995 to 1997
Number of Sales	238	221	131	-
Median Sale Price	\$ 130,000	\$139,950	\$134,950	\$4,950

Source: Pierce County Market Real Estate News, 1992 to present

6.2.2.2 House sales price by categories

House values vary in Lakewood by large amounts. For example, in 1996, 11 houses sold for less than \$75,000 and three houses sold for over \$400,000. Because of the large differences, it is necessary to look in more depth at home sales to gain a more complete understanding of the home sales market.

Table 6-18 breaks down the sales in 1995 and 1997 by sales price increments. It shows a significant shift in the value of houses from the lowest categories to the middle categories over this two-year period. In 1995, 25% of the homes were sold for less than \$100,000. Two years later, the sales for this amount accounted for only 17% of the total. In 1995, sales were more evenly spaced between \$75,000 and \$150,000, with sales making up 17%, 20%

⁵ Multiple Listing Service

and 23% of the \$25,000 increments. By 1997, the three increments between \$100,000 and \$175,000 had 23%, 26% and 17% of the sales. Therefore, fewer lower priced houses were being purchased and most of the sales were in the middle brackets.

While houses in the lower price ranges were selling for more, there was very little change in the \$175,000 to \$199,999 category. This category made up 6% of the sales in 1995 and 5% in 1997. This suggests that the prices of more expensive houses are not increasing. To determine if this is occurring, it is necessary to look at sales on a geographic basis.

Table 6-18 Home Sales in Lakewood, 1995-1997 by Sale Categories

	Number of Sales	Percent of Sales	Percent of Sales	% Change
	1995-1997	1995	1997	1995 to 1997
< \$75,000	40	8%	5%	-3%
\$75,000 to \$99,999	86	17%	12%	-5%
\$100,000 to 124,999	123	20%	23%	3%
\$125,000 to 149,999	138	23%	26%	3%
\$150,000 to \$174,999	92	11%	17%	6%
\$175,000 to 199,999	39	6%	5%	0%
\$200,000 to \$299,000	48	8%	9%	1%
>\$300,000	31	7%	3%	-4%

Source: Pierce County Market Real Estate New, 1992 to present

6.2.2.3 Home Sale Prices by Areas

The Pierce County Multiple Listing service provides sales for general areas of Lakewood; five areas had a sufficient number of sales to show patterns. The median sale price for the five areas is shown in Table 6-19. This table shows that house prices are increasing on an uneven basis in the city. In the two most eastern sections of the city, prices in the two-year period increased 35% and 11%, respectively. The prices in these two areas started at lower values (\$92,500 and \$108,975) and even with the increases are still lower or at a par with the three other areas. Thus the major price movements were in the lower priced areas and for the lower-priced houses.

Home prices in the central area, or the residential areas around Gravelly Lake and Steilacoom Lake, increased by a 9% from a median value of \$137,042 to \$149,000.

There were minor price decreases in two of the five areas. In the Northwest Planning Area, prices fell by 2%. This area, with a median price of \$154,000, is still the highest in the city. Competition from newer houses being built in the area and in the nearby communities of Steilacoom, DuPont, and Puyallup has kept the prices of existing homes from increasing. Many of the new houses are selling for \$10,000 to \$15,000 more than comparable existing houses, and buyers are opting for the new houses.⁶

House prices also fell in the most western area of the city. There the median sale price fell about \$4,700 from \$124,710 to \$120,000.

Table 6-19 Home Sales in Lakewood, 1995-1997

Section of Lakewood	1995		1997		Change 1995 to 1997	
	Number	Median	Number	Median	\$	Percent
Northeast	38	\$ 92,500	25	\$ 124,500	\$ 32,000	35%
Central: east	22	\$108,975	16	\$ 120,750	\$ 11,775	11%
Central: "Lakes"	44	\$137,042	19	\$ 149,000	\$ 11,958	9%
Northwest	64	\$156,750	34	\$ 154,000	\$ (2,750)	-2%
West	70	\$124,710	37	\$ 120,000	\$ (4,710)	-4%

Source: Pierce County Market Real Estate News, 1992 to present

6.2.2.4 Owner Costs as a Percent of Income

Nearly all (84%) of homeowners in Lakewood pay less than 30% of income for monthly house payments. Another 6%, as shown in Table 6-20 pay between 30% and 35%. A remaining 971 households pay more than 35% of their income for housing cost. When a household pays over 30% of their income for rent, the payments are above an affordability standard.

Table 6-20 Monthly Owner Costs as a Percent of Household Income

	Number	Percent
Less than 20 Percent	5,642	61%
20 to 24 Percent	1,303	14%
25 to 29 Percent	723	8%
30 to 34 Percent	517	6%
35 Percent or more	971	10%

US Census for the Lakewood Census Designated Place, 1990

⁶ Interview with Century 21 Realtor

6.2.3 Rental-Occupied Housing

6.2.3.1 The Composition of the Rental Housing Market

Over half of the city's apartment units are in large building projects. These larger projects do not have all the units in the same buildings but are under owned by one company and under one management firm. As shown on Table 6-21, below there are eight projects which contain more than 200 units and which make up 26% of the city's apartments. On the other end of the spectrum 19% of the apartment units are in smaller 5 to 24 projects.

Table 6-21 Apartment units by the size of the apartment project

	Number of Projects	Number of Units	Percent of Total Units
5 to 24	141	1931	19%
25 to 49	41	1459	14%
50 to 99	23	1595	16%
100 to 199	18	2561	25%
200 to 299	5	1257	12%
300+	3	1464	14%

Source: City of Lakewood

Apartments have historically been an integral part of the city's housing stock. As shown in Table 6-22 over 2,000 apartment units were built in every decade between 1960 and 1990. Over 38% of the units were built before 1970 and over 65% were built before 1980. The city's rental stock is not only old but it was not well built to begin with. The Pierce County Assessor's Office rates all building in terms of quality of construction. Buildings are rated on a five point scale from "excellent" to "low cost." Three-fourth of the city's apartments were judged to be of average quality, and one third of the apartments built before 1970 were considered as "low cost" building. On a more positive note, five buildings built since 1990 were judged to be of "good" construction quality.

Table 6-22 Apartment units in Lakewood by Year Built

	Number	Percent
1990 to date	1,114	11%
1980 to 1989	2,469	24%
1970 to 1979	2,728	27%
1960 to 1969	3,090	30%
1950 to 1959	342	3%
Before 1950	476	5%

Source: City of Lakewood, 1997

6.2.3.2 Rental Rates

The average apartment rental rates, except for minor adjustments, have remained unchanged in Lakewood since the spring of 1993 at around \$485.⁷ Table 6-23 summarizes rental rates for the two-year period from the spring of 1995 to the spring of 1997. During that period average rents in Lakewood fluctuated around this \$485 level. During the same period, rents in neighboring University Place increased by 2% and rents countywide went up 11%.

The stagnant rental rates make it easier for families to afford to rent an apartment; therefore, this is helpful from an affordability perspective. However, the circumstances which have forced the market to keep rents constant are unhealthy for the city in the long run. These circumstances include the large number of older rental units which were not built well to begin with. Many of these units need upgrades, and they all require continued maintenance. The constant rents and high vacancy rates, described below, provide little or no incentive for owners to upgrade or even maintain their units. On the contrary, these conditions often lead to deferred maintenance and deterioration.

Table 6-23 Average Monthly Rents in Lakewood, University Place and Pierce County, 1995 to 1997

	Spring	Fall	Spring	Fall	Spring	Annual % Change
	1995	1995	1996	1996	1997	96 to '97
Lakewood	474	466	484	500	484	0%
University Place	502	495	497	514	508	2%
Pierce County	462	454	458	472	508	11%

Source: Tacoma Real Estate Trends, Spring 1997

A key measure of housing affordability is the percentage of income that households pay for their rent. The general guideline is that housing expenses should not exceed 30% of a household's income. In Lakewood, as shown in Table 6-24 below, 8% of households pay between 30 and 34% of their income for rent and 33% pay more than 35%. The percent of Lakewood households paying more than 30% of their income for rent is comparable to what is found in Tacoma. Lower percentages of households in University Place and Pierce County pay more than 35% of their income for rent -- 24% and 30% respectively.

⁷ Tacoma Real Estate Trends, Spring 1995

Table 6-24 Monthly Rental Costs as a Percent of Household Income for various jurisdictions

	Lakewood	Tacoma	University Place	Pierce County
Less than 20 Percent	30%	27%	36%	30%
20 to 24 Percent	13%	14%	16%	14%
25 to 29 Percent	13%	13%	13%	12%
30 to 34 Percent	8%	8%	8%	8%
35 Percent or more	33%	35%	24%	30%

Source: US Census, for the Lakewood Census Designated Place, 1990

6.2.3.3 Rental Vacancies Rates

Table 6-25 compares the apartment vacancy rates in Lakewood with adjoining University Place and the entire county. Over the past five years Lakewood's vacancy rate have been consistently high, reaching a maximum of 13.6% in 1996. This high rate can be explained in large part by new units which had just hit the marketplace. However, be discussed, the age and bedroom mix of the city's apartments hold the explanation for the consistent long-term high vacancy rates.

Table 6-25 Multifamily Vacancy Rates by Area (in Percent)¹

	1997	1996	1995	1994	1993
Lakewood	9.1	13.6	8.8	8.6	5.5
University Place/Fircrest	6.2	6.5	6.7	6.9	3.3
Pierce County	7.1	7.7	7	6.3	5.3

(1) For April of each year

Source: Tacoma Real Estate Trends

The city's high vacancy rates are in part a result of the age of the housing units. Over the last thirty years apartments have gotten larger, and the percentage mix of one and two bedroom units in apartments has changed significantly. In the 1970s the average apartment project contained 44% one bedroom units. By the 1990s only 30% of the units were one bedroom and the rest were two and some times three bedroom units.⁸ In changing the bedroom mix, the apartment developers have responded to market changes. Market demand for existing one bedroom units is limited, Lakewood has a large inventory of these units, many of them built in the 1970s. Single people are choosing to live with another person, and insisting on two bedroom units with two baths.

The high vacancy rates are show in Table 6-26, which breaks out vacancy rate by the number of bedrooms in each apartment project over 20 units in the city. The high vacancy rates are found

⁸ Dupre + Scott Apartment Advisors, Inc. June 1996, Vol 19 No. 3

in the one bedroom units (9.1%) and two bedroom with one bath units (10.7%). Vacancy rates for these units are at least 40% higher than for other unit types.

Table 6-26 Multiple Family vacancy Rates by Number of Bedrooms (in Percent) April 1997

	Studio	One bed	Two bed One Bath	Two bed Two Bath	Three bed Two Bath
Lakewood	1.2	9.1	10.7	5.8	5.7
University Place/Fircrest	7.5	5.2	6.7	6.8	6.4
Pierce County	4.9	6.6	7.7	7.9	5.3

Source: Tacoma Real Estate Trends

6.2.3.4 Rent as a Percentage of Income

A key measure of housing affordability is the percentage of income that households pay for their rent. The assumption is that housing expenses should not exceed 30% of a household's rent. In Lakewood, 8% of households pay between 30 and 34% of their income for rent, while 33% pay more than 35% (see Table 6-27). This latter number is considered to be very high by typical planning standards.

Table 6-27 Monthly Rental Costs as a Percent of Household Income

	Number	Percent
Less than 20 Percent	3,526	30%
20 to 24 Percent	1,519	13%
25 to 29 Percent	1,508	13%
30 to 34 Percent	949	8%
35 Percent or more	3,985	33%

(1) US Census for the Lakewood Census

6.3 Countywide Planning Policy

The county, and each municipality in the county, shall determine the extent of the need (i.e., the demand) for housing for all economic segments of the population that are projected for the community over the planning period.

- The projection shall be made in dwelling units, by type, provided, that the projection may be arranged and that the types of dwelling units may be in broad categories, such as single-family detached, single-family attached, duplex, triplex, fourplex, apartments and special housing types;
- The projection shall be reflective of census or other reliable data indicating the economic

segments of the population for whom housing needs to be provided, and shall incorporate the jurisdiction's fair share of the county's housing needs;

- The projections shall be reflective of the countywide fair share housing allocation as shall be established pursuant to federal or state law and supplemented by provisions established in intergovernmental agreements between county jurisdictions.

The county and each municipality in the county shall meet their projected demand for housing by one or more or all of the following:

- Preservation of the existing housing stock through repair and maintenance, rehabilitation, and redevelopment;
- Identification of vacant, infill parcels appropriately zoned for residential development with assurances that neighborhood compatibility and fit will be maintained through appropriate and flexible zoning and related techniques, such as:
 - sliding-scale buffering and screening requirements based on adjacent use considerations
 - performance standards
 - height and bulk limitations
 - provision of open space
 - front, side and rear yard requirements
 - protection of natural resources and environmentally-sensitive lands
- Identification of other vacant lands suitable for residential development and permitting sufficient land through zoning to meet one or more or all of the following types and densities, of housing:
 - multi-family housing
 - mixed use development cluster development
 - planned unit development
 - non-traditional housing
- In determining the suitability of the location and identification of sites for affordable housing, the jurisdictions shall consider the availability and proximity of transit facilities, governmental facilities and services and other commercial services necessary to complement the housing.

The county, and each municipality in the county, shall assess their success in meeting the housing demands and shall monitor the achievement of the housing policies not less than once every five years.

The county, and each municipality in the county, shall maximize available local, state, and federal funding opportunities and private resources in the development of affordable housing.

The county, and each municipality in the county, shall explore and identify opportunities for non-profit developers to build affordable housing.

The county, and each municipality in the county, should explore and identify opportunities to reutilize and redevelop existing parcels where rehabilitation of the building is not cost-effective, provided the same is consistent with the county-wide policy on historic, archaeological and cultural preservation.

New fully contained communities shall comply with the requirements set forth in the Growth Management Act and shall contain a mix in the range of dwelling units to provide their “fair share” of the county-wide housing need for all segments of the population that are projected for the county over the planning period.

6.4 Planning Implications

- Study intact old neighborhoods in Lakewood for vulnerability to change - land use regulations and other neighborhood preservation techniques should be considered for those strong neighborhoods at risk.
- Intervention in the form of a public/private financial incentive program is needed - this can help break a cycle of deterioration in older Lakewood apartment buildings. Apartments built in the 1970s have a number of problems which will contribute to neighborhood degradation. Many of these apartments were not built well initially; they have few amenities and they have too many one bedroom units. With a limited demand for one bedroom units, there is now a very high vacancy rate in these buildings. The high vacancy rate does not allow for rent increases and reduces owners' likelihood of repairing and remodeling buildings.

Turnover is high and owners do not generate sufficient income to maintain the buildings. These factors make many of Lakewood's apartment developments undesirable.

One such rental rehabilitation program provides apartment owners with low interest loans, which owners match with their own capital. This and other programs should be considered to break the cycle of disinvestment occurring in these buildings.

- Intervention could also apply to single-family houses - Lakewood includes several modest single-family developments built shortly after World War II. One is located between the Lakewood Mall and Bridgeport Way, which includes a large number of rental units. There is a federal program titled HOPE VI which helps tenants purchase their homes. Lakewood might evaluate this program and other first-time home buyer programs to determine their applicability to the city.

Hampering efforts to upgrade existing apartments is the fact that low incomes in the city force many tenants to pay excessive proportions of their income for rent. More than 40% of renters pay more than 30% of their income for rent and one-third of renters pay more than 35% for rent, as shown in Table 6-24. Thirty percent is considered the maximum a household can afford for rent without sacrificing other essential services.

- Preserve and upgrade the community of Tillicum - This small community, which is only accessible off I-5, is an "island" separate from the rest of Lakewood. It is composed primarily of single-family houses and a strip of commercial uses along Union Avenue. The conditions survey indicated a mix of housing conditions ranging very good to very poor. Therefore, there are home owners who are committed to maintain their property and make this a viable neighborhood. There is no community sewer service to the entire area.

A carefully crafted program which demonstrates to the community that this is a viable neighborhood could stimulate additional private investment, which will gradually upgrade the entire community. City efforts such as code enforcement and general clean-up could begin immediately to demonstrate the city's involvement. Other programs which separate the

commercial uses from residential and improve the parks, sidewalks, and streets would have a similar effect on encouraging private improvements.

- Two areas, American Lake Gardens and McChord Gate, present unique challenges to the city. These areas have severe housing deterioration and high vacancy rates. They have become the least desirable, last resort, locations to live. Some developments need improvements to the social as well as physical environment. The city needs to carefully monitor conditions in these areas and make sure that publicly owned property such as parks and rights-of-way are well maintained. Good street maintenance and community policing will help deter further deterioration.

Programs such as an apartment manager's network and a city program of certifying apartments have helped to stabilize multi-family neighborhoods in other cities, such as Tukwila. This is a model which Lakewood might analyze to determine whether elements are suitable for American Lake Gardens and McChord Gate.

- Finally, projections for population at Fort Lewis and McChord Air Force Base have implications for the planning for the rest of the city. Information on these forecasts, and coordination with the military to accommodate any changes, is needed to evaluate the planning implications and develop appropriate policies.

CHAPTER 7: TRANSPORTATION

7.1 Existing Conditions

This section describes the existing transportation system conditions in the study area. This includes a description of the roadway characteristics, functional classification, traffic volumes, level of service, accidents, transit service, and pedestrian and bicycle facilities.

7.1.1 Existing Roadway Characteristics

The City of Lakewood's arterial street classifications are shown in Figure 7-1. These roadway classifications identify roads according to their uses and serve as the basis for planning roadway improvements. The following definitions serve as a general guide for classifying streets.

Principal arterials are intercommunity roadways that provide access to principal centers of activity. These roadways serve as corridors between principal suburban centers, larger communities, and between major trip generators inside and outside the plan area. The principal transportation corridors within the City of Lakewood are Principal Arterials. These roadways typically carry between 5,000 and 30,000 vehicles per day.

Minor arterials are intracommunity roadways connecting community centers with principal arterials. They provide service to medium-size trip generators, such as less intensive commercial development, high schools and some junior high/grade schools, warehousing areas, active parks and ballfields, and other land uses with similar trip generation potential. In general, minor arterials serve trips of moderate length, and carry approximately 2,500 to 15,000 vehicles per day.

Collector arterials connect residential neighborhoods with smaller community centers and facilities as well as access to the minor and principal arterial system. They typically carry between 1,000 to 4,000 vehicles per day.

Local access roads include all non-arterial public city roads and private roads used for providing direct access to individual residential or commercial properties.

The transportation plan primarily focuses on the arterial street system within the City of Lakewood since local access streets typically do not have capacity deficiencies. As shown in Figure 7-1, principal arterials in the City of Lakewood include South Tacoma Way, Pacific Highway SW, Steilacoom Boulevard, Bridgeport Way, Gravelly Lake Road, Custer Road, 100th Street SW, Lakewood Drive, Washington Boulevard, Military Road, 108th Street SW, and 112th Street SW.




The characteristics of the arterial roadways in the study area are shown in Figure 7-2. The majority of other roadways within the city limits are two-lane roadways with a speed limit of 25 mph.

Existing intersection traffic control devices are also shown on Figure 7-2. As shown, the major arterial street intersections are signalized.

7.1.2 Existing Traffic Volumes

Year 1995 daily and pm peak hour traffic volumes were obtained from the City of Lakewood and Pierce County Public Works Department for all principal and minor arterials within the City of Lakewood. The daily traffic volumes are shown in Figure 7-3. As shown, the highest daily traffic volumes are generally experienced along principal arterials, which have volumes ranging from approximately 13,000 to 30,000 trips per day. In the City of Lakewood, traffic volumes are the highest in the vicinity of interchanges with SR-5, with the highest daily volume occurring on South Tacoma Way north of the SR-512/SR-5 interchange (about 43,800 vehicles per day). Traffic volumes are generally lower in the southern and western areas of the city, where many residential neighborhoods currently exist.

LEGEND

	<i>Principal Arterials</i>
	<i>Minor Arterials</i>
	<i>Collector Arterials</i>

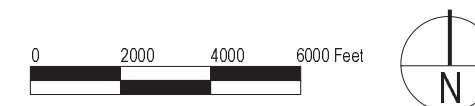


Figure 7.2
Existing Traffic Control

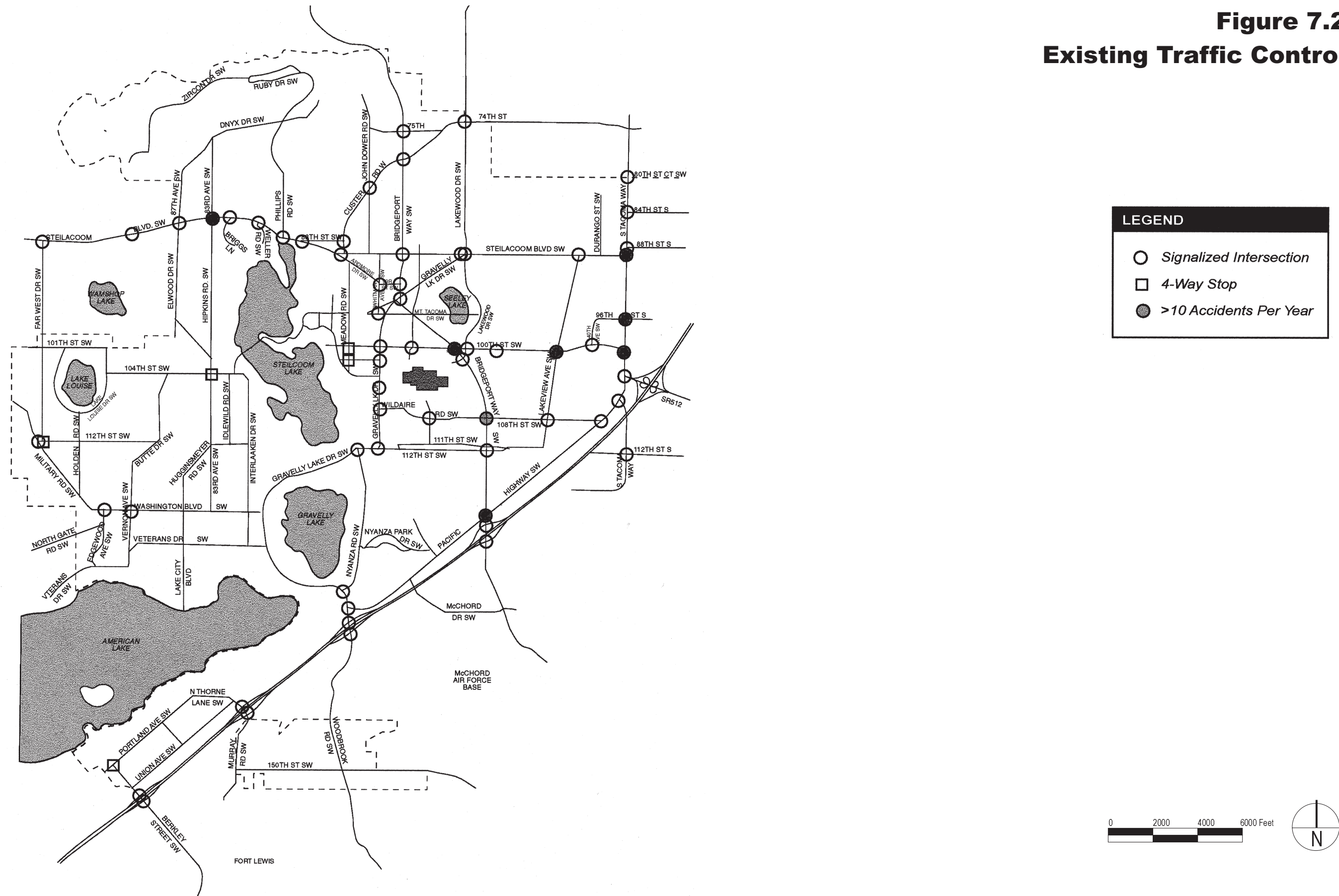
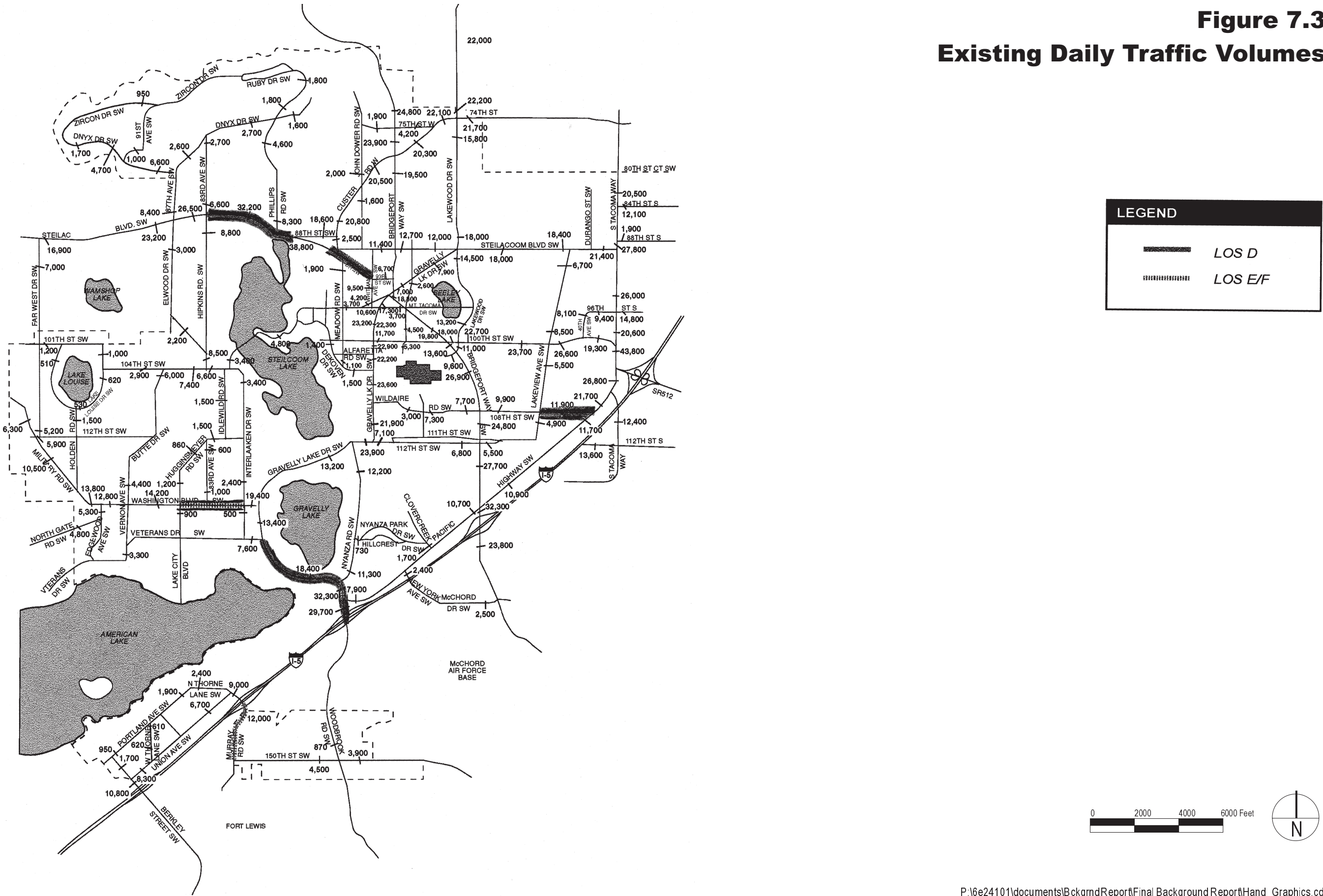


Figure 7.3
Existing Daily Traffic Volumes



Some pm peak hour turning movement volumes were also either obtained from Pierce County or determined from counts performed by Parametrix, Inc. (a contractor to the City of Lakewood). PM peak hour turning movement volumes are available for the following signalized intersections:

- Steilacoom Boulevard SW/83rd Avenue SW
- Steilacoom Boulevard SW/87th Avenue SW
- Steilacoom Boulevard SW/88th Avenue SW
- Bridgeport Way SW/Custer Road
- Bridgeport Way SW/108th Street SW
- Bridgeport Way SW/112th Street SW
- Gravelly Lake Drive SW/100th Street SW
- Lakeview Drive SW/100th Street SW
- Lakeview Drive SW/108th Street SW

7.1.3 Existing Level of Service

Level of service (LOS) is an estimate of the quality and performance of transportation facility operations in a community. The methodology outlined in the *1994 Highway Capacity Manual* (HCM) is commonly used for determining LOS. According to the HCM, the degree of traffic congestion and delay is rated using the letter “A” for the least amount of congestion to the letter “F” for the highest amount of congestion. The GMA requires the establishment of LOS standards by the City of Lakewood. The choice of a particular LOS threshold can vary by planning subarea, roadway classification, or specific corridor or street. LOS D is usually considered the minimum acceptable standard in urban areas. With this level of service, some delays are expected for certain traffic movements.

The following LOS categories provide general descriptions of the different levels of service defined in the HCM.

Level of Service A - represents a free-flow condition. Travel speeds are at or near the speed limit and little to no delay exists. Freedom to select desired speeds and to make turns and maneuver within the traffic stream is extremely high.

Level of Service B - represents a zone of stable flow. Drivers still have reasonable freedom to select their travel speeds. Only minor delays of 5 to 15 seconds per vehicle at signalized intersections are experienced.

Level of Service C - still falls within the zone of stable flow, but travel speeds and vehicle maneuverability are more closely controlled by the higher volumes. The selection of speed is not affected by the presence of others, and maneuvering within the traffic stream requires vigilance on the part of the driver. Longer delays of 15 to 25 seconds per vehicle are experienced at signalized intersections.

Level of Service D - approaches unstable flow. Travel speed and freedom to maneuver are somewhat restricted, with average delays of 25 to 40 seconds per vehicle at signalized intersections. Small increases in traffic flow can cause operational difficulties at this level.

Level of Service E - represents operating conditions at or near the capacity of the roadway. Low speeds (approaching 50% of normal) and average intersection delays of 40 to 60 seconds per vehicle are common. Freedom to maneuver within the traffic stream is extremely difficult. Any incident can be expected to produce a breakdown in traffic flow with extensive queuing.

Level of Service F - describes forced flow operation at very low speeds. Operations are characterized by stop-and-go traffic. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Long delays of over 60 seconds per vehicle occur at signalized intersections.

A more technical method of measuring LOS is described in the HCM, which involves the calculation of the volume to capacity ratio (V/C) of a roadway or intersection. The V/C ratio

ranges shown in Table 7-1 have been developed for determining planning level mid-block LOS on urban and rural roadways.

Table 7-1 Level of service criteria for urban and rural roadways.

LOS		Volume to Capacity (V/C) Ratio
A	less than or equal to	0.3
B	less than or equal to	0.5
C	less than or equal to	0.75
D	less than or equal to	0.90
E	less than or equal to	1.0
F	greater than	1.0

Volume to capacity ratios and levels of service were calculated for mid-block arterial roadway sections throughout the City of Lakewood, based on current am and pm peak hour traffic volumes. The results are shown in Table 7-2. Level of service D was selected as the initial threshold to identify system deficiencies. This is the LOS standard used in many urban areas in the Puget Sound region and serves as a reasonable initial threshold to begin to identify deficiencies in the network. The following existing roadway sections exceed this level of service D threshold during the am and/or pm peak hour:

Gravelly Lake Drive SW north of Pacific Highway SW

Murray Road SW north of 146th Street SW

Washington Blvd. SW west of Gravelly Lake Drive SW

Table 7-2 City of Lakewood existing corridor level of service.

Street Name/Section	Highest One-Way Peak Hour Volume			V/C Ratio		LOS	
	AM	PM	Directional Capacity	AM	PM	AM	PM
Ardmore Dr. SW							
southeast of Steilacoom Blvd. SW	486	641	720	0.68	0.89	C	D
northwest of Whitman Avenue SW	451	579	720	0.63	0.80	C	D
Bridgeport Way W							
north of Gravelly Lake Dr. SW	865	1182	2050	0.42	0.58	B	C
south of Gravelly Lake Dr. SW	642	800	2050	0.31	0.39	B	B
south of Custer Road W	738	953	2050	0.36	0.46	B	B
north of Custer Road W	1068	1021	2050	0.52	0.50	C	B
north of 75 th Street W	1105	1336	2050	0.54	0.65	C	C
north of 100 th Street SW	653	857	2050	0.32	0.42	B	B
north of 111 th Street SW	997	1100	2050	0.49	0.54	B	C
south of 100 th Street SW	510	692	2050	0.25	0.34	A	B
south of Lakewood Drive SW	865	1166	2050	0.42	0.57	B	C
south of Pacific Highway SW	1008	1191	2050	0.49	0.58	B	C
north of Pacific Highway SW	1065	1336	2050	0.52	0.65	C	C
at Clover Creek bridge south of I-5.	947	1298	2050	0.46	0.63	B	C
Butte Dr. SW							
south of 104 th Street SW	233	316	720	0.32	0.44	B	B
northeast of 112 th Street SW	135	216	720	0.19	0.30	A	A
Custer Rd. SW/W.							
north of 88 th Street SW	969	1118	1825	0.53	0.61	C	C
south of 88 th Street SW	97	122	2050	0.05	0.06	A	A
northeast of Bridgeport Way SW	1103	1039	1825	0.60	0.57	C	C
southwest of Bridgeport Way SW	1050	1038	1825	0.58	0.57	C	C
Edgewood Ave. SW							
south of Washington Blvd. SW	223	262	720	0.31	0.36	A	A
Far West Dr. SW							
south of Steilacoom Blvd. SW	346	307	2050	0.17	0.15	A	A
north of 112 th Street SW	202	210	975	0.21	0.22	A	A
Garnet Lane SW							
east of Onyx Drive SW	154	122	720	0.21	0.17	A	A
Gravelly Lake Dr. SW							
southwest of Steilacoom Blvd. SW	299	384	2050	0.15	0.19	A	A
southwest of Bridgeport Way SW	600	838	2050	0.29	0.41	A	B
northeast of Bridgeport Way SW	199	360	1825	0.11	0.20	A	A
south of 100 th Street SW	783	992	2050	0.38	0.48	B	B
south of Alfaretta Street SW	783	1028	2050	0.38	0.50	B	B
south of Mount Tacoma Drive SW	798	1130	2050	0.39	0.55	B	C
north of 112 th Street SW	779	958	2050	0.38	0.47	B	B
north of Wildaire Road SW	840	1030	2050	0.41	0.50	B	B
west of 112 th Street SW	886	1195	2050	0.43	0.58	B	C
south of Pacific Highway SW	1325	1583	2050	0.65	0.77	C	D
north of Pacific Highway SW	1240	2147	2050	0.60	1.05	C	F
west of end Nyanza Rd SW (south)	882	869	975	0.90	0.89	D	D
Hipkins Rd. SW							
south of Steilacoom Blvd. SW	367	411	720	0.51	0.57	C	C
Interlaaken Dr. SW							
east of Bridge #3192A	184	374	720	0.26	0.52	A	C

Table 7-2 City of Lakewood existing corridor level of service. (continued)

Street Name/Section	Highest One-Way Peak Hour Volume			V/C Ratio		LOS	
	AM	PM	Directional Capacity	AM	PM	AM	PM
Lakeview Ave. SW							
south of 100 th Street SW	220	291	1825	0.12	0.16	A	A
north of 100 th Street SW	313	467	1825	0.17	0.26	A	A
south of Steilacoom Blvd. SW	296	345	1825	0.16	0.19	A	A
Lakewood Dr. SW							
north of Steilacoom Blvd. SW	664	937	1825	0.36	0.51	B	C
south of Steilacoom Blvd. SW	528	683	2050	0.26	0.33	A	B
north of 74 th Street W	799	1082	1825	0.44	0.59	B	C
south of 74 th Street W	602	723	1825	0.33	0.40	B	B
north of 100 th Street SW	517	577	2050	0.25	0.28	A	A
Military Rd. SW							
south of 112 th Street SW	372	613	975	0.38	0.63	B	C
northwest of 112 th Street SW	182	355	975	0.19	0.36	A	B
Mount Tacoma Dr. SW							
west of Meadow Road SW	189	242	720	0.26	0.34	A	B
west of Bridgeport Way	161	191	975	0.17	0.20	A	A
west of Motor Avenue SW	121	207	720	0.17	0.29	A	A
west of Gravelly Lake Drive	422	498	975	0.43	0.51	B	C
east of Meadow Road SW	107	205	720	0.15	0.28	A	A
Murray Rd. SW							
north of 146 th Street SW	498	727	720	0.69	1.01	C	F
North Gate Rd. SW							
east of Nottingham Road SW	284	346	720	0.39	0.48	B	B
N. Thorne Lane SW							
southeast of Union Avenue SW	275	523	720	0.38	0.73	B	C
Nyanza Rd. SW							
north of Gravelly Lake Drive SW	434	673	975	0.45	0.69	B	C
south of Gravelly Lake Drive SW	430	741	975				
Pacific Highway SW							
north of 108 th Street SW	649	955	2050	0.32	0.47	B	B
southwest of 108 th Street SW	394	530	2050	0.19	0.26	A	A
northeast of Bridgeport Way SW	395	515	2050	0.19	0.25	A	A
southwest of Bridgeport Way SW	317	468	2050	0.15	0.23	A	A
east of Gravelly Lake Drive SW	231	392	720	0.32	0.54	B	C
Phillips Rd. SW							
north of Steilacoom Blvd. SW	462	448	720	0.64	0.62	C	C
south of Onyx Drive SW	243	265	720	0.34	0.37	B	B
east of Onyx Drive SW	98	106	720	0.14	0.15	A	A
Short Lane SW							
north of 104 th Street SW	133	240	720	0.18	0.33	A	B
South Tacoma Way							
north of 84 th Street SW	740	991	2050	0.36	0.48	B	B
south of Steilacoom Blvd. SW	965	1209	2050	0.47	0.59	B	C
north of Steilacoom Blvd. SW	1050	1356	2050	0.51	0.66	C	C
north of 96 th Street S	976	1182	2050	0.48	0.58	B	C
southeast of Pacific Highway SW	504	568	2050	0.25	0.28	A	A
north of 100 th Street SW	755	1034	2050	0.37	0.50	B	B
south of SR-512	834	1147	2050	0.41	0.56	B	C

Table 7-2 City of Lakewood existing corridor level of service. (continued)

Street Name/Section	Highest One-Way Peak Hour Volume			V/C Ratio		LOS	
	AM	PM	Directional Capacity	AM	PM	AM	PM
Steilacoom Blvd. SW							
west of 83 rd Ave. SW/Hipkins Rd SW	995	1330	2050	0.49	0.65	B	C
west of 87 th Avenue SW	1063	985	1825	0.58	0.54	C	C
east of Phillips Road	1629	1759	2050	0.79	0.86	D	D
west of Phillips Road SW	1235	1636	1825	0.68	0.90	C	D
southeast of 88 th Street SW	776	1068	1825	0.43	0.59	B	C
east of Lakewood Drive SW	547	788	2050	0.27	0.38	A	B
west of Bridgeport Way SW	400	505	1825	0.22	0.28	A	A
west of Gravelly Lake Drive SW	451	519	1825	0.25	0.28	A	A
east of Bridgeport Way SW	529	713	1825	0.29	0.39	A	B
west of South Tacoma Way	733	863	2050	0.36	0.42	B	B
west of Lakeview Avenue SW	826	885	2050	0.40	0.43	B	B
east of Farwest Drive SW	657	805	1825	0.36	0.44	B	B
Union Ave. SW							
northeast of Berkeley Street SW	420	362	720	0.58	0.50	C	B
southwest of North Thorne Lane SW	195	421	720	0.27	0.58	A	C
Vernon Ave. SW							
south of Washington Blvd. SW	153	186	720	0.21	0.26	A	A
north of Washington Blvd. SW	261	226	720	0.36	0.31	B	B
Veterans Drive SW							
south of Highland Avenue SW	296	185	720	0.41	0.26	B	A
west of Gravelly Lake Drive SW	307	399	720	0.43	0.55	B	C
Washington Blvd. SW							
east of Vernon Avenue SW	551	706	975	0.57	0.72	C	C
west of Edgewood Drive SW	698	665	975	0.72	0.68	C	C
west of Vernon Avenue SW	349	660	975	0.36	0.68	B	C
west of Gravelly Lake Drive SW	1007	985	975	1.03	1.01	F	F
Whitman Ave. SW							
south of Ardmore Drive SW	352	520	975	0.36	0.53	B	C
Wildaire Rd. SW							
east of Gravelly Lake Drive SW	92	147	720	0.13	0.20	A	A
40th Ave. SW							
north of 100 th Street SW	188	385	975	0.19	0.39	A	B
74th St. W.							
west of Lakewood Drive SW	1065	1397	2050	0.52	0.68	C	C
83rd Ave. SW							
north of Steilacoom Blvd. SW	297	358	975	0.30	0.37	A	B
84th St. S.							
east of South Tacoma Way	435	639	2050	0.21	0.31	A	B
87th Ave. SW							
south of Steilacoom Blvd. SW	118	170	720	0.16	0.24	A	A
north of Steilacoom Blvd. SW	439	552	975	0.45	0.57	B	C
88th St. SW							
east of Steilacoom Blvd. SW	1014	836	1825	0.56	0.46	C	B
93rd St. SW							
east of Whitman Avenue SW	218	322	975	0.22	0.33	A	B
96th St. S.							
west of South Tacoma Way	277	388	975	0.28	0.40	A	B
east of South Tacoma Way	473	728	1825	0.26	0.40	A	B

Table 7-2 City of Lakewood existing corridor level of service. (continued)

Street Name/Section	Highest One-Way Peak Hour Volume			V/C Ratio		LOS	
	AM	PM	Directional Capacity	AM	PM	AM	PM
100th St. SW							
west of South Tacoma Way	626	829	1825	0.34	0.45	B	B
east of Lakeview Drive SW	829	1084	2050	0.40	0.53	B	C
west of Lakeview Drive SW	1009	1014	2050	0.49	0.49	B	B
east of Bridgeport Way	658	798	2050	0.32	0.39	B	B
west of Bridgeport Way	425	695	2050	0.21	0.34	A	B
east of Lakewood Drive SW	770	959	2050	0.38	0.47	B	B
east of Gravelly Lake Drive	469	475	1825	0.26	0.26	A	A
104th St. SW							
west of Hipkins Road SW	246	388	720	0.34	0.54	B	C
108th St. SW							
west of Pacific Highway SW	453	551	720	0.63	0.77	C	D
east of Bridgeport Way SW	385	446	975	0.39	0.46	B	B
west of Bridgeport Way SW	336	364	975	0.34	0.37	B	B
west of Davisson Road SW	105	132	720	0.15	0.18	A	A
east of Davisson Road SW	282	334	975	0.29	0.34	A	B
112th St. SW/S.							
between Military Rd SW and Farwest Dr. S	236	268	720	0.33	0.37	B	B
west of Butte Drive SW	95	129	720	0.13	0.18	A	A
east of Bridgeport Way SW	213	309	975	0.22	0.32	A	B
east of Gravelly Lake Drive	338	327	975	0.35	0.34	B	B
west of Bridgeport Way SW	454	314	720	0.63	0.44	C	B
150th St. SW							
west of Woodbrook Road SW	265	295	720	0.37	0.41	B	B
east of Woodbrook Road SW	250	279	720	0.35	0.39	B	B

The HCM methodology for signalized intersection analysis was also used at several major traffic signal-controlled intersections. At these intersections, level of service is related to the average delay experienced by all vehicles as they approach the intersection. Table 7-3 summarizes the relationship between level of service and average delay for signalized intersections.

The analysis was performed for the following signalized intersections.

- Steilacoom Boulevard SW/83rd Avenue SW
- Steilacoom Boulevard SW/87th Avenue SW
- Steilacoom Boulevard SW/88th Avenue SW
- Bridgeport Way SW/Custer Road
- Bridgeport Way SW/108th Street SW

- Bridgeport Way SW/112th Street SW
- Gravelly Lake Drive SW/100th Street SW
- Lakeview Drive SW/100th Street SW
- Lakeview Drive SW/108th Street SW

Table 7-3 Level of service criteria for signalized intersections.

Level of Service	Average Delay (seconds per vehicle)
A	≤ 5.0
B	$> 5.0 - \leq 15.0$
C	$> 15.0 - \leq 25.0$
D	$> 25.0 - \leq 40.0$
E	$> 40.0 - \leq 60.0$
F	> 60.0

Source: Highway Capacity Manual, 1995.

The results of the signalized intersection LOS analysis are summarized in Table 7-4.

Table 7-4. Existing signalized intersection LOS summary.

Signalized Intersection	Level of Service	Delay
Steilacoom Boulevard SW/83rd Avenue SW	C	19.4
Steilacoom Boulevard SW/87th Avenue SW	B	13.8
Steilacoom Boulevard SW/88th Avenue SW	B	8.6
Bridgeport Way SW/Custer Road	C	23.6
Bridgeport Way SW/108 th Street SW	B	14.8
Bridgeport Way SW/112 th Street SW	B	10.4
Gravelly Lake Drive SW/100th Street SW	B	10.5
Lakeview Drive SW/100 th Street SW	B	11.6
Lakeview Drive SW/108 th Street SW	C	17.2

As shown in Table 7-4, all analyzed intersections are currently operating at acceptable LOS C or better conditions.

7.1.4 Accident Information

Accident records for the City of Lakewood were reviewed for the years 1992 through 1996 (January-June 1996). Accident rates and accident severity (property damage only, personal injury, fatality) were reviewed for all signalized intersections and roadway segments in the City of Lakewood. Table 7-5 shows the number of accidents that occurred each year between the

years 1992 and 1996 at signalized intersections. Table 7-6 shows the average annual accidents by severity and the accident rates at each signalized intersection.

As shown in Tables 7.5 and 7.6, the following intersections have averaged ten or more accidents per year for the past five recorded years:

- 100th Street SW/Lakeview Avenue SW
- Bridgeport Way SW/Pacific Highway SW
- Bridgeport Way SW/108th Street SW
- Bridgeport Way SW/100th Street SW
- South Tacoma Way/100th Street SW
- South Tacoma Way/96th Street SW
- South Tacoma Way/Steilacoom Blvd. SW
- Steilacoom Blvd. SW/83rd Avenue SW

A closer review of the accidents which occurred at these intersections show that no fatalities have occurred at these locations in the five-year period represented. Furthermore, these intersections averaged accident rates below 1.0 per million entering vehicles (mev), with the exception of the South Tacoma Way/Steilacoom Blvd. SW intersection. Therefore, most intersections experiencing frequent accidents also tended to have the highest traffic volumes. The intersection of 100th Street SW/59th Avenue SW should be noted for its relatively high accident rate of 1.10 accidents per million entering vehicles, despite its relatively low average number of accidents.

Table 7-5 1992-1996 total annual accidents – signalized intersections.

Intersection	1992	1993	1994	1995	1996¹	Total
100th St. SW/40th Ave. SW	4	8	9	10	1	32
100th St. SW/Lakeview Ave. SW	7	9	6	12	9	43
100th St. SW/David Lane SW	4	3	7	6	1	21
100th St. SW/Lakewood Dr. SW	9	3	3	7	2	24
100th St. SW/59th Ave. SW	8	10	5	11	0	44
108th St. SW/Bridgeport Way SW	0	0	2	0	0	2
108th St. SW/Lakeview Ave. SW	0	1	1	0	0	2
108th St. SW/Pacific Highway SW	0	0	1	0	1	2
Ardmore Dr. SW/Whitman Ave. SW	6	3	5	7	1	22
Bridgeport Way SW/Pacific Highway SW	17	12	13	15	2	59
Bridgeport Way SW/112 th Street SW	10	7	4	7	1	29
Bridgeport Way SW/108 th Street SW	8	12	14	8	5	49
Bridgeport Way SW/Lakewood Mall Blvd. SW	8	7	10	6	6	37
Bridgeport Way SW/100 th Street SW	15	12	3	14	2	46
Bridgeport Way SW/59th Avenue SW	4	2	5	8	2	21
Bridgeport Way SW/Gravelly Lake Drive SW	6	7	4	6	6	29
Bridgeport Way SW/93rd Street SW	6	1	5	6	0	18
Bridgeport Way SW/Steilacoom Blvd. SW	7	8	11	5	3	34
Bridgeport Way W/Custer Road W.	8	11	8	9	4	40
Bridgeport Way W./75th Street W.	7	5	6	6	0	24
Custer Road SW/88th Street SW	2	2	3	6	1	14
Custer Road SW/John Dower Road SW	7	5	6	11	3	32
Gravelly Lake Dr. S/Pacific Highway SW	6	2	6	4	1	19
Gravelly Lake Dr. S./Nyanza Road SW	0	1	2	7	1	11
Gravelly Lake Dr. S./Veterans Drive SW	4	5	4	8	2	23
Gravelly Lake Dr. S./Washington Blvd. SW	2	3	5	2	3	15
Gravelly Lake Dr. S./Nyanza Road SW	3	0	2	2	0	7
Gravelly Lake Dr. S./112th Street SW	7	8	5	9	0	29
Gravelly Lake Dr. S./Wildaire Road SW	5	3	1	6	0	15
Gravelly Lake Dr. S./Lakewood Mall	2	6	3	5	3	19
Gravelly Lake Dr. S./Alfareta Dr. SW	6	9	6	6	2	29
Gravelly Lake Dr. S./100th Street SW	4	7	4	9	0	24
Gravelly Lake Dr. S./Mount Tacoma Dr. SW	2	3	7	7	0	19
Gravelly Lake Dr. S./Bridgeport Way SW	0	1	0	0	1	2
Lakeview Ave. SW/108th St. SW	4	2	5	3	6	20
Lakewood Dr. S./100th St. SW	0	1	0	1	0	2
Lakewood Dr. W/Steilacoom Blvd. SW	1	0	1	0	0	2
Lakewood Dr. W/Custer Road W	7	6	16	15	0	44
Military Rd. SW/112th St. SW	5	1	2	2	2	12
Pacific Highway SW/Gravelly Lake Dr. SW	0	0	1	0	0	1
Pacific Highway SW/108 th St. SW	3	7	6	7	1	24
South Tacoma Way/112th St. S	2	4	9	10	3	28
South Tacoma Way/Pacific Highway SW	6	4	16	11	4	41
South Tacoma Way/SR-512	15	8	11	9	0	43
South Tacoma Way/100th St. SW	17	13	9	14	6	59
South Tacoma Way/96th St. S	16	25	16	15	2	74
South Tacoma Way/Steilacoom Blvd. SW	13	13	16	14	6	62
South Tacoma Way/88th St. S	6	4	2	5	2	19
South Tacoma Way/84th St. S	5	8	5	8	4	30
Steilacoom Blvd. S/Farwest Dr. SW	8	4	5	3	4	24
Steilacoom Blvd. S/87th Ave. SW	6	8	4	6	2	26
Steilacoom Blvd. S/83rd Ave. SW	8	14	14	11	5	52

Table 7-5 1992-1996 total annual accidents – signalized intersections (continued).

Intersection	1992	1993	1994	1995	1996 ¹	Total
Steilacoom Blvd. S/Briggs Ln. SW	5	6	10	5	3	29
Steilacoom Blvd. S/Weller Rd. SW	2	0	1	6	1	10
Steilacoom Blvd. S/Phillips Rd. SW	3	11	4	8	0	26
Steilacoom Blvd. S/88th St. SW	9	7	11	7	0	34
Steilacoom Blvd. S/Ardmore Dr. SW	10	3	3	3	1	20
Steilacoom Blvd. S/Bridgeport Way SW	2	0	0	0	0	2
Steilacoom Blvd. S/Gravelly Lake Dr. SW	1	4	4	0	1	10
Steilacoom Blvd. S/Lakewood Dr. W	9	8	6	12	5	40
Steilacoom Blvd. S/Lakeview Ave. SW	3	5	5	2	1	16
Steilacoom Blvd. S/South Tacoma Way	0	0	1	0	0	1
Washington Blvd. S/Edgewood Ave. SW	0	3	0	3	0	6
Washington Blvd. S/Vernon (92nd) Ave. SW	5	6	4	3	1	19

¹January 1 – June 30, 1996.

Table 7-6 1992-1996 average annual accident frequency by severity and rates – signalized intersections.

Intersection	Average Annual Accidents By Severity			Total	Accident Rate (per mev) ⁴
	PDO ¹	PI ²	F ³		
100th St. SW/40th Ave. SW	2.7	4.4	0	7.1	0.72
100th St. SW/Lakeview Ave. SW	3.8	5.8	0	9.6	0.82
100th St. SW/David Lane SW	2.7	2.0	0	4.7	0.56
100th St. SW/Lakewood Dr. SW	2.7	2.7	0	5.3	0.46
100th St. SW/59th Ave. SW	3.8	3.8	0	7.6	1.19
108th St. SW/Bridgeport Way SW	0.2	0.2	0	0.2	0.03
108th St. SW/Lakeview Ave. SW	0.2	0.2	0	0.2	0.07
108th St. SW/Pacific Highway SW	0.4	0	0	0.4	0.05
Ardmore Dr. SW/Whitman Ave. SW	2	2.9	0	5	0.72
Bridgeport Way SW/Pacific Highway SW	7.3	5.8	0	13.3	0.85
Bridgeport Way SW/112th Street SW	2.7	3.8	0	6.7	0.56
Bridgeport Way SW/108th Street SW	7.6	3.3	0	10.6	0.81
Bridgeport Way SW/Lakewood Mall Blvd. SW	5.1	3.1	0	8.1	0.68
Bridgeport Way SW/100th Street SW	5.6	4.7	0	10.6	0.76
Bridgeport Way SW/59th Avenue SW	1.8	2.9	0	4.8	0.54
Bridgeport Way SW/Gravelly Lake Drive SW	2.7	3.8	0	6.7	0.53
Bridgeport Way SW/93rd Street SW	1.8	2.2	0	3.8	0.33
Bridgeport Way SW/Steilacoom Blvd. SW	4	3.6	0	8	0.59
Bridgeport Way W/Custer Road W.	4.4	4.4	0	8.8	0.56
Bridgeport Way W./75th Street W.	2.9	2.4	0	5.3	0.54
Custer Road SW/88th Street SW	1.6	1.6	0	3.2	0.39
Custer Road SW/John Dower Road SW	3.3	3.8	0	7.1	0.81
Gravelly Lake Dr. S/Pacific Highway SW	3.1	1.1	0	4.2	0.35
Gravelly Lake Dr. S./Nyanza Road SW	1.8	0.7	0	2.5	0.22
Gravelly Lake Dr. S./Veterans Drive SW	1.3	3.8	0	5.1	0.64
Gravelly Lake Dr. S./Washington Blvd. SW	1.6	1.8	0	3.4	0.36
Gravelly Lake Dr. S./Nyanza Road SW	0.4	1.1	0	1.5	0.17
Gravelly Lake Dr. S./112th Street SW	4.2	2.2	0	6.4	0.65
Gravelly Lake Dr. S./Wildaire Road SW	2.4	0.9	0	3.3	0.35
Gravelly Lake Dr. S./Lakewood Mall	2.4	1.8	0	4.2	0.42
Gravelly Lake Dr. S./Alfareta Dr. SW	3.1	3.3	0	6.4	0.74
Gravelly Lake Dr. S./100th Street SW	2.4	2.9	0	5.3	0.46
Gravelly Lake Dr. S./Mount Tacoma Dr. SW	1.8	2.4	0	4.2	0.44
Gravelly Lake Dr. S./Bridgeport Way SW	0.2	0.2	0	0.4	0.05
Lakeview Ave. SW/108th St. SW	1.8	2.7	0	4.5	0.68
Lakewood Dr. S./100th St. SW	0.4	0	0	0.4	0.03
Lakewood Dr. W/Steilacoom Blvd. SW	0.2	0.2	0	0.4	0.04
Lakewood Dr. W/Custer Road W	5.1	4.7	0	9.8	0.64
Military Rd. SW/112th St. SW	1.6	1.1	0	2.7	0.51
Pacific Highway SW/Gravelly Lake Dr. SW	0.2	0	0	0.2	0.02
Pacific Highway SW/108th St. SW	2.7	2.7	0	5.4	0.62
South Tacoma Way/112th St. S	2.4	3.8	0	6.2	0.66
South Tacoma Way/Pacific Highway SW	4.4	4.7	0	9.1	0.76
South Tacoma Way/SR-512	4.7	4.9	0	9.6	0.68
South Tacoma Way/100th St. SW	7.6	5.3	0	12.9	0.79
South Tacoma Way/96th St. S	8.0	8.4	0	16.4	0.99
South Tacoma Way/Steilacoom Blvd. SW	5.6	8.2	0	13.8	1.00
South Tacoma Way/88th St. S	1.6	2.7	0	4.3	0.40
South Tacoma Way/84th St. S	3.3	3.3	0	6.6	0.59
Steilacoom Blvd. S/Farwest Dr. SW	2.4	2.9	0	5.3	0.49
Steilacoom Blvd. S/87th Ave. SW	4.4	1.3	0	5.7	0.49
Steilacoom Blvd. S/83rd Ave. SW	7.6	4.0	0	11.6	0.54

Table 7-6 1992-1996 average annual accident frequency by severity and rates – signalized intersections (continued).

Intersection	Average Annual Accidents By Severity			Total	Accident Rate (per mev) ⁴
	PDO ¹	PI ²	F ³		
Steilacoom Blvd. S/Briggs Ln. SW	2.2	4.2	0	6.4	0.86
Steilacoom Blvd. S/Weller Rd. SW	1.3	0.9	0	2.2	0.19
Steilacoom Blvd. S/Phillips Rd. SW	2.7	3.1	0	5.8	0.36
Steilacoom Blvd. S/88th St. SW	3.6	4.0	0	7.6	0.50
Steilacoom Blvd. S/Ardmore Dr. SW	1.8	2.7	0	4.5	0.35
Steilacoom Blvd. S/Bridgeport Way SW	0.2	0.2	0	0.4	0.03
Steilacoom Blvd. S/Gravelly Lake Dr. SW	1.3	0.9	0	2.2	0.39
Steilacoom Blvd. S/Lakewood Dr. W	3.6	5.3	0	8.9	0.78
Steilacoom Blvd. S/Lakeview Ave. SW	2.0	1.6	0	3.6	0.42
Steilacoom Blvd. S/South Tacoma Way	0.2	0	0	0.2	0.02
Washington Blvd. S/Edgewood Ave. SW	0.7	0.7	0	1.3	0.24
Washington Blvd. S/Vernon (92nd) Ave. SW	2.9	1.3	0	4.2	0.67

¹Property damage only²Personal injury³Fatality⁴mev = million entering vehicles

The frequency of accidents were also evaluated for roadway segments, or all sections of arterial roadways between signalized intersections. The results of this evaluation are summarized in Table 7-7.

As shown in Table 7-7, accidents were most frequently experienced along heavily traveled major arterials, such as Bridgeport Way, Lakewood Drive, Pacific Highway, South Tacoma Way, and Steilacoom Blvd.

Table 7-7 1992-1996 total annual accidents – roadway segments.

Roadway	Location	1992 Total	1993 Total	1994 Total	1995 Total	1996 Total	5-Year Total
40th Ave. SW	north of 100th St. SW	2	4	0	2	0	8
59th Ave. SW	south of Bridgeport Way SW	1	1	1	0	0	3
59th Ave. SW	between Mt. Tacoma Dr. SW and Gravelly Lake Dr. SW	1	2	1	0	0	4
74th St. W	between Custer Rd. W and Lakewood Dr. SW	1	3	4	1	1	10
75th St. W	between Bridgeport Way W and Custer Rd. W	0	2	0	0	0	2
75th St. W	between Bridgeport Way W and John Dower Rd. SW	0	0	0	2	0	2
78th St. SW	at 91st Ave. SW	0	0	0	1	0	1
83rd Ave. SW	north of Washington Blvd. SW	0	0	0	0	1	1
83rd Ave. SW	north of Steilacoom Blvd. SW	1	3	1	7	2	14
84th St. S	east of S. Tacoma Way	18	16	15	16	4	69
87th Ave. SW	north of Steilacoom Blvd. SW	1	2	2	0	3	8
88th St. SW	between Steilacoom Blvd. SW and Custer Road SW	6	7	8	7	3	31
93rd St. SW	west of Bridgeport Way SW	2	0	0	0	0	2
96th St. S	east of South Tacoma Way	11	10	14	15	8	58
96th St. SW	west of South Tacoma Way	0	3	5	1	0	9
100th St. SW	west of Gravelly Lake Drive	1	1	1	0	1	4
100th St. SW	between 40th Ave. SW and S. Tacoma Way	3	8	6	7	8	32
100th St. SW	between Lakeview Ave. SW and 40th Ave. SW	9	2	3	4	2	20
100th St. SW	between Lakewood Dr. SW and Lakeview Ave. SW	8	5	5	4	3	25
100th St. SW	between David Lane SW and Lakewood Dr. SW	1	4	4	3	0	12
100th St. SW	between Lakewood Dr. SW and Bridgeport Way SW	8	0	3	0	0	11
100th St. SW	between 59th Ave. SW and Bridgeport Way SW	1	2	3	0	2	8
100th St. SW	between Gravelly Lake Drive SW and 59th Ave. SW	5	11	11	3	1	31
104th St. SW	between Lake Louise Dr. SW and Interlaaken Dr. SW	1	0	5	1	4	11
108th St. SW	between Gravelly Lake Dr. SW and Davisson Rd. SW	1	0	0	1	0	2
108th St. SW	between Davisson Rd. SW and Bridgeport Way SW	1	1	0	2	0	4
108th St. SW	between Bridgeport Way SW and Lakeview Ave. SW	4	8	7	6	0	25
108th St. SW	between Lakeview Ave. SW and Pacific Highway SW	10	8	8	2	4	32
111th St. SW	between Lakeview Ave. SW and Bridgeport Way SW	2	0	1	2	1	6
111th St. SW	west of Bridgeport Way SW	0	0	0	1	0	1
112th St. S	between Steele St. and S. Tacoma Way	3	2	5	5	2	17
112th St. SW	east of Bridgeport Way SW	0	0	1	0	0	1
112th St. SW	between Gravelly Lake Dr. SW and Bridgeport Way SW	4	6	2	2	0	14
112th St. SW	between Farwest Dr. SW and Butte Dr. SW	4	5	2	4	0	15
112th St. SW	between 83rd Ave. SW and Interlaaken Dr. SW	0	1	1	0	0	2
150th St. SW	between Murray Road SW and McChord AFB	3	8	12	11	5	39
Alfaretta Dr. SW	west of Gravelly Lake Drive SW	0	0	1	1	0	2
Angle Lane SW	between Steilacoom Blvd. SW and Hipkins Road SW	0	2	0	1	0	3
Ardmore Dr. SW	between Meadow Rd. SW and Whitman Ave. SW	3	2	8	2	3	18
Berkeley St. SW	northwest of I-5 overpass	0	1	0	2	0	3
Bridgeport Way SW	between McChord Dr. SW and I-5 NB Ramps	32	27	25	25	11	120
Bridgeport Way SW	I-5 Overpass - between Ramps	0	1	0	0	0	1
Bridgeport Way SW	north of I-5 Overpass: S-B R	2	3	0	4	1	10
Bridgeport Way SW	between Pacific Hwy. SW and 112th St. SW	16	23	14	17	6	76
Bridgeport Way SW	between 112th St. SW and 108th St. SW	21	30	25	16	5	97
Bridgeport Way SW	between 108th St. SW and Lakewood Mall Blvd.	6	5	7	7	3	28
Bridgeport Way SW	between Lakewood Mall Blvd. SW and 100th St. SW	2	1	1	0	0	4
Bridgeport Way SW	between 100th St. SW and 59th Ave. SW	7	5	2	3	1	18
Bridgeport Way SW	between 59th Ave. SW and Mt. Tacoma Way SW	4	7	4	4	0	19
Bridgeport Way SW	between Mt. Tacoma Dr. SW and Gravelly Lake Dr. SW	2	3	0	3	3	11
Bridgeport Way SW	between Gravelly Lake Dr. SW and 93rd St. SW	2	1	2	4	1	10
Bridgeport Way SW	between 93rd St. SW and Steilacoom Blvd. SW	3	2	3	4	0	12
Bridgeport Way SW	from Steilacoom Blvd. SW to Custer Road W	11	8	14	11	5	49
Bridgeport Way W	between Custer Road W and 75th St. W	5	4	3	4	6	22
Bridgeport Way W	between 75th St. W and City Limit	6	3	6	8	2	25

Table 7-7 1992-1996 total annual accidents – roadway segments (continued)

Roadway	Location	1992 Total	1993 Total	1994 Total	1995 Total	1996 Total	5-Year Total
Bristol Ave. SW	south of 100th St. SW	0	0	1	0	0	1
Butte Drive SW	between 116th St. SW and 104th St. SW	7	4	7	1	4	23
Custer Ave. SW	north of Steilacoom Blvd. SW	1	0	0	0	0	1
Custer Road SW	between 88th St. SW and John Dower Road SW	10	8	6	7	1	32
Custer Road SW	between John Dower Road SW to Bridgeport Way W	5	4	6	3	4	22
Custer Road SW	between Bridgeport Way W and Lakewood Dr. SW	20	17	21	8	4	70
Davissom Road SW	north of 111th St. SW	0	0	1	0	0	1
Dekoven Dr. SW	south of 100th St. SW	4	2	1	1	1	9
Dresden Lane SW	at 87th Ave. SW/Dresden Lane SW	1	0	0	0	0	1
Durango St. SW	north of Steilacoom Blvd. SW	2	0	2	2	0	6
Edgewood Ave. SW	between Veterans Dr. SW and Washington Blvd. SW	3	1	5	2	1	12
Farwest Dr. SW	between Steilacoom Blvd. SW and 112th St. SW	14	7	8	14	2	45
Gravelly Lake Dr. SW	between I-5 overpass to Pacific Highway SW	3	3	4	6	2	18
Gravelly Lake Dr. SW	between Pacific Highway SW to Nyanza Road SW	2	6	5	4	3	20
Gravelly Lake Dr. SW	between Nyanza Rd. and Veterans Dr. SW	8	2	6	8	0	24
Gravelly Lake Dr. SW	between Veterans Drive SW and Washington Blvd. SW	1	1	0	1	2	5
Gravelly Lake Dr. SW	between Washington Blvd. and Nyanza Road SW	3	2	6	4	7	22
Gravelly Lake Dr. SW	between Nyanza Rd. SW and 112th St. SW	3	1	2	2	1	9
Gravelly Lake Dr. SW	between 112th St. SW and Wildaire Road SW	1	5	4	1	0	11
Gravelly Lake Dr. SW	between Wildaire Road SW and Lakewood Mall	9	1	5	7	0	22
Gravelly Lake Dr. SW	between Lakewood Mall and Alfaretta Dr. SW	3	5	5	3	0	16
Gravelly Lake Dr. SW	between Alfaretta Dr. SW and 100th St. SW	2	0	1	2	2	7
Gravelly Lake Dr. SW	between 100th St. SW and Mt. Tacoma Dr. SW	6	6	5	6	1	24
Gravelly Lake Dr. SW	between Mt. Tacoma Dr. SW and Bridgeport Way SW	3	2	4	4	2	15
Gravelly Lake Dr. SW	between Bridgeport Way SW and Steilacoom Blvd. S	6	1	6	5	3	21
Hillgrove Lane SW	at Waverly Dr. SW	0	0	1	0	0	1
Hipkins Rd. SW	between 104th St. SW and Steilacoom Blvd. SW	9	10	14	9	5	47
Holden Road SW	between Lake Louise Dr. SW and 112th St. SW	1	0	2	0	0	3
Huggins Meyers Rd. SW	at and south of 112th St. SW	1	1	0	0	0	2
Idlewild Rd. SW	at 112 th St. SW	2	0	0	0	0	2
Interlaaken Dr. SW	east and west of Lake Steilacoom	12	12	14	21	6	65
Interlaaken Dr. SW	between Washington Blvd. SW and Lake Steilacoom Dr. SW	6	8	3	0	0	17
John Dower Rd. SW	between Steilacoom Blvd. SW and Custer Rd. SW	1	1	1	1	0	4
Lake City Blvd. SW	at and south of 116th St. SW	2	0	0	0	1	3
Lake Grove Ave. SW	east and west of Gravelly Lake Dr. SW	4	2	0	0	1	7
Lakeview Ave. SW	between Steilacoom Blvd. SW and 100th St. SW	1	5	3	4	1	14
Lakeview Ave. SW	between 100th St. SW and 108th St. SW	1	1	5	2	1	10
Lakeview Ave. SW	between 108th St. SW and 111th St. SW	7	2	4	1	3	17
Lakewood Drive SW	between Bridgeport Way SW and 100th St. SW	3	0	2	4	0	9
Lakewood Drive SW	between 100th St. SW and Steilacoom Blvd. SW	20	22	16	15	6	79
Lakewood Dr. SW/W	between Steilacoom Blvd. SW and 74th St. W	9	14	15	14	4	56
Lakewood Dr. W	between 74th Street W and Lakewood City Limit	0	3	3	3	3	12
Lakewood Mall Blvd.	west of Bridgeport Way SW	1	1	2	0	0	4
Lake Louise Dr. SW	east of Holden Road SW	2	0	0	2	0	4
McChord Drive SW	west of Bridgeport Way SW	3	3	4	0	0	10
Meadow Road SW	north of Dekoven Dr. SW	1	0	0	0	0	1
Military Road SW	north of 112th St. SW	2	4	5	1	1	13
Military Road SW	between 112th St. SW and Wildwood Ave. SW	13	6	6	3	1	29
Mt. Tacoma Dr. SW	west of Gravelly Lake Dr. SW	3	5	6	4	2	20
Mt. Tacoma Dr. SW	east of Gravelly Lake Dr. SW	0	0	1	2	0	3
Murray Road SW	between 146th St. SW and 150th St. SW	8	5	6	3	3	25
New York Ave. SW	east of Pacific Highway SW	0	0	2	0	0	2
North Gate Road SW	between Nottingham Rd. SW and Edgewood Ave. SW	2	0	1	0	0	3
North Thorne Lane SW	west of Union Ave. SW	2	0	2	0	0	4
Nyanza Park Dr. SW	east of Nyanza Road SW	1	2	0	0	0	3

Table 7-7 1992-1996 total annual accidents – roadway segments (continued).

Roadway	Location	1992 Total	1993 Total	1994 Total	1995 Total	1996 Total	5-Year Total
Nyanza Road SW	between Gravelly Lk. Dr. SW and Gravelly Lk. Dr. SW	4	2	3	2	1	12
Onyx Dr. SW	between 87th Ave. SW and Zircon Dr. SW	2	4	3	6	1	16
Onyx Dr. SW	between Coral Lane SW and Phillips Rd. SW	0	3	2	2	1	8
Onyx Drive SW	north of Phillips Road SW	0	0	0	0	1	1
Pacific Highway SW	between Gravelly Lake Dr. and Bridgeport Way SW	14	16	17	9	10	66
Pacific Highway SW	between Bridgeport Way SW and 108th St. SW	18	12	13	10	8	61
Pacific Highway SW	between 108th St. SW and S. Tacoma Way	0	3	1	4	0	8
Pacific Highway SW	west of Pacific Highway SW	0	1	0	0	2	3
Phillips Road SW	north of Steilacoom Blvd. SW	7	4	3	6	2	22
Portland Ave. SW	between Berkley Ave. SW and N. Thorne Lane	8	5	6	8	0	27
Short Lane SW	north of 104th St. SW	2	0	1	0	0	3
S. Tacoma Way	between 112th St. S and Pacific Highway SW	0	5	4	4	1	14
S. Tacoma Way	between Pacific Highway SW and SR-512	6	2	5	6	4	23
S. Tacoma Way	between SR 512 and 100th St. SW	8	6	6	11	6	37
S. Tacoma Way	between 100th St. SW and 96th St. S	3	6	3	9	1	22
S. Tacoma Way	between 96th St. S and Steilacoom Blvd. SW	19	18	23	17	6	83
S. Tacoma Way	between Steilacoom Blvd. SW and 88th St. S	0	2	1	1	1	5
S. Tacoma Way	between 88th St. S to 84th St. S	7	18	18	12	3	58
S. Tacoma Way	between 84th St. S and Tacoma-Lakewood City Limit	4	7	8	9	4	32
Steilacoom Blvd. SW	between Farwest Dr. SW and 87th Ave. SW	11	12	13	11	6	53
Steilacoom Blvd. SW	between 87th Ave. SW and 83rd Ave. SW	14	9	6	17	6	52
Steilacoom Blvd. SW	between 83 rd Ave. SW and Briggs Ln. SW	5	7	3	6	2	23
Steilacoom Blvd. SW	between Briggs Ln. SW and Weller Rd. SW	2	3	2	5	3	15
Steilacoom Blvd. SW	between Weller Rd. SW and Phillips Rd. SW	5	2	3	4	0	14
Steilacoom Blvd. SW	between Phillips Road SW and Edgewater Dr. SW	10	9	6	12	2	39
Steilacoom Blvd. SW	between 88th St. SW and Ardmore Dr. SW	4	7	7	11	4	33
Steilacoom Blvd. SW	between Ardmore Dr. SW and Bridgeport Way SW	11	9	12	7	0	39
Steilacoom Blvd. SW	between Bridgeport Way SW and Gravelly Lake Dr. SW	2	7	4	8	2	23
Steilacoom Blvd. SW	between Gravelly Lake Dr. SW and Lakewood Dr. SW	1	2	0	0	0	3
Steilacoom Blvd. SW	between Lakewood Dr. SW and Lakeview Ave. SW	9	5	6	8	5	33
Steilacoom Blvd. SW	between Lakeview Ave. SW and S. Tacoma Way	13	16	12	11	3	55
Union Avenue SW	between N. Thorne Lane SW and Berkeley St. SW	20	25	21	17	8	91
Vernon Ave. SW	south of Washington Blvd.	3	0	4	0	1	8
Vernon Ave. SW	north of Washington Blvd.	0	1	0	0	1	2
Veterans Dr. SW	between Gravelly Lake Dr. SW and Nottingham Ave. SW	7	6	8	1	6	28
Washington Blvd. SW	between Military Rd. SW and Edgewood Ave. SW	3	1	0	2	1	7
Washington Blvd. SW	between Edgewood Ave. SW and Vernon Ave. SW	3	5	1	1	0	10
Washington Blvd. SW	between 92nd Ave. SW and Gravelly Lake Dr.	14	6	11	14	4	49
W. Thorne Lane SW	between Portland Ave. SW and Union Ave. SW	2	0	2	2	0	6
Whitman Ave. SW	south of Steilacoom Blvd. SW	5	1	1	0	0	7
Wildaire Road SW	between Gravelly Lake Drive SW and Davisson Road SW	1	1	0	2	0	4
Zircon Dr. SW	east and west of Ruby Dr. SW	2	1	3	1	0	7
Zircon Dr. SW	at Bluffs Condo	0	0	0	1	0	1
Zircon Dr. SW	northeast of 99th Ave. SW	0	1	0	1	0	2

7.1.5 Transit Service

Pierce Transit provides transit service to the City of Lakewood. There are currently nine local routes serving the City of Lakewood, offering connections to McChord Air Force Base, Parkland Transit Center, Fort Lewis, Steilacoom, Tacoma Mall, and downtown Tacoma. Eight of these routes connect at the Lakewood Transit Center, adjacent to the north side of Lakewood Mall.

In addition to the local transit routes, regional express routes to Seattle and Olympia also serve the SR-512 Park and Ride, located at the confluence of SR-512 and South Tacoma Way. Table 7-8 includes a list and description of Pierce Transit's bus routes currently serving the City of Lakewood.

Pierce Transit also provides door-to-door service via the *Shuttle* for the mentally ill and physically impaired. This service is available through the Pierce Transit Dispatch Office. Rideshare and ridematch programs are also available for commuters who want to start or join a carpool or vanpool.

7.1.6 Pedestrian and Bicycle Facilities

Table 7-9 lists the locations of nonmotorized transportation facilities in the City of Lakewood. Most other areas in the City of Lakewood lack the existence of sidewalks or paved shoulders.

A review of City of Lakewood traffic accidents was conducted to determine the number of accidents involving pedestrians and/or bicyclists that occurred between the years 1990 and 1996 (through September 1996). The results of the review are shown in Table 7-10.

Table 7-8 Pierce Transit Bus Service Routes.

Route No.	Route Description	Service Area	Schedule
48	Sheridan-M Street	Lakewood Mall to Downtown Tacoma	Weekdays – every 30 minutes Sat./Sun. – every 1 hour
200	Bridgeport	Tacoma Community College to Lakewood Mall	Weekdays – every 30 minutes Sat./Sun. – every 1 hour
202	S. 72nd Street	Lakewood Mall to Sumner	Weekdays – every 30 minutes Sat./Sun. – every 1 hour
204	Lakewood-Parkland	Parkland to Lakewood Mall	Weekdays - every 30 minutes Sat./Sun. - every 1 hour
206	Fort Lewis	Lakewood Mall to Fort Lewis	Weekdays - every 30 minutes Saturdays - every 30 minutes Sundays - every 1 hour
210	Lakewood	Downtown Tacoma to Lakewood Mall	Weekdays - every 15 minutes Saturdays - every 30 minutes Sundays - every 1 hour
212	Steilacoom	Lakewood Mall to Steilacoom	Weekdays - every 30 minutes Weekends - every 1 hour
214	Washington	Lakewood Mall to Pierce College	Weekdays(AM)-every 30 min. Weekdays(PM)-every 1 hour Sat./Sun. - every 1 hour
300	S. Tacoma Way	Tacoma Mall to McChord Commissary	Weekdays - every 30 minutes Saturdays - every 30 minutes Sundays - every 1 hour
591X, 592X, 594X	Seattle Express	Downtown Seattle (all), Tacoma Dome (591X, 594X), Downtown Tacoma (594X), SR-512 Park & Ride (all)	Wkdys(5-8am)-every 15 min. Wkdys(8am-6pm)-every 30 min. Saturdays - every 30 minutes Sundays - every 1 hour
601X, 603X, 605X, 620X	Olympia Express	Olympia (all), SR-512 P&R (all), Tacoma Community College (601X), Tacoma (602X, 605X, 620X)	Wkdys.-every 15 min. to 1 hour Sat./Sun. - no service

Source: Pierce Transit, 1997.

Table 7-9 Existing Non-Motorized Transportation Facilities.

Location	Facility
Fort Steilacoom Park Trails	Multi-Use Trails
84th St. S - S. Tacoma Way to Tacoma City Limit	Sidewalks
87th Ave. SW - Steilacoom Blvd. to Onyx Dr. SW	Paved Shoulders
96th St. S - 40th Ave. SW to 26th Ave.	Sidewalks
108 th St. SW - Davisson Rd. SW to Lakeview Ave. SW	Sidewalks
112 th St. SW - Military Rd. SW to Butte Dr. SW	Paved Shoulders
Berkeley St. SW (156th St. - Portland Ave. SW to SR 5 Northbound Access)	Sidewalks
Bridgeport Way - Arrowhead Rd. to Lakewood Dr. SW	Sidewalks
Bristol Ave. SW - Lakewood Mall to 100th St. SW	Sidewalks
Hipkins Rd. SW - Angle Lane SW to Steilacoom Blvd.	Paved Shoulders Exist: (Narrow - 92nd St. to Angle)
Lake St./Maple St./Orchard St./Washington St. SW (Tillicum Sidewalks)	Sidewalks
Gravelly Lake Dr. SW - North End Nyanza Rd. SW to Bridgeport Way	Sidewalks
Whitman Ave. - Motor Ave. to Ardmore Ave.	Sidewalks

Table 7-10 Year 1990-1996 (through September) traffic accidents involving pedestrians or bicyclists.

Type	Year						
	1990	1991	1992	1993	1994	1995	1996 ¹
Pedestrian	19	19	23	24	20	14	14
Bicycle	10	19	16	11	15	15	12

¹January through September only.

As shown in Table 7-10, more traffic accidents involved pedestrians than bicycles. Almost all of the accidents included in Table 7-10 were personal injury accidents. Only two of the listed accidents, both of which involved bicyclists, resulted in property damage only. Ten fatalities were experienced in the accidents listed in Table 7-10. Of these ten, nine accidents involved pedestrians and one accident involved a bicyclist. Fatalities were experienced at the following locations:

- Farwest Drive SW south of Steilacoom Blvd. SW (accident involved a bicyclist)
- Farwest Drive SW north of 102nd Street SW
- Military Road SW southeast of Wildwood Avenue SW
- Pacific Highway SW southwest of BNRR bridge
- Pacific Highway SW northeast of Clover Creek bridge
- Pacific Highway SW northeast of 47th Avenue SW
- Pacific Highway SW southwest of 112th Street SW
- Pacific Highway SW northeast of New York Avenue SW
- South Tacoma Way south of 86th Street S
- 108th Street SW at Kendrick Street SW

7.1.7 Transportation Demand Management

Travel Demand Management (TDM) and Transportation System Management (TSM) strategies attempt to optimize the capacity of the existing transportation system and avoid new construction where it is not necessary. TSM strategies focus on managing transportation facilities and the supply of transportation options. The goal of TSM is to maintain and enhance optimal system efficiency for moving people. TDM strategies use similar concepts to affect travel demand and the desire to use transportation facilities. The goal of TDM is to reduce, eliminate, or shorten trips, or shift trips to non-peak periods.

Washington State currently has its own TDM law in effect, the Commute Trip Reduction Act (CTR). This law requires companies with 100 or more full-time employees that begin work between 6:00 am and 9:00 am to establish and implement a TDM program. The law includes trip reduction goals for all qualifying businesses of 15% by 1995, 25% by 1997, and 35% by 1999.

The Washington State Department of Transportation (WSDOT) recently published a summary of CTR effects on travel in the eight counties affected by the act, between 1993 and 1995. The report shows that the total number of Single-occupant vehicle (SOV) trips decreased by 5.6% during this period. SOV trips in Pierce County areas that include CTR companies declined by a composite of 5.4%. A total of 57 companies in the urbanized Tacoma/Fife area showed reductions of 5.9%, and 28 companies in rural Pierce County showed reductions of 4.6%.

CTR applies to several major employers in and around the City of Lakewood. These CTR qualified employers are listed in Table 7-11.

Table 7-11 Regional CTR qualifying companies.

Company	Location
Intel	Dupont (West of I-5)
State Farm Insurance	Dupont (West of I-5)
Fort Lewis Veterans Administration Medical Center	American Lake (West of I-5)
U.S. Army/Fort Lewis	East of I-5, South of 150th St. SW/Perimeter Rd.
McChord Air Force Base	East of I-5, North of 150th St. SW/Perimeter Rd.
U.S. Army/Madigan Hospital	East of I-5/Exit 122
Pierce College	Steilacoom
U.S. Army Logistics Center	East of I-5, South of 150th St. SW/Perimeter Road
Boeing Commercial Airplane Group	Berkeley
Pacific Lutheran University	Parkland (West of SR-7)
Interstate Distributor Company	Parkland
Westmark Products, Inc.	Parkland
Western State Hospital	Fort Steilacoom
Clover Park Technical College	Lakeview (West of I-5)
McNeil Island Corrections Center	McNeil Island

Source: Pierce County

7.2 Trends and Projections

7.2.1 Land Use Forecasts

7.2.1.1 Pierce County Transportation Plan

The Pierce County Transportation Plan was developed over a four-year period and involved hundreds of people. The long-term objective of the Transportation Plan is to achieve greater efficiency in the movement of people and goods by reducing the dependency of travelers on single-occupant vehicles, and effectively coordinate all modes of transportation provided through the public and private sectors. The Transportation Plan provides information to help local jurisdictions, such as the City of Lakewood, make transportation decisions. The plan includes policies that encourage coordination with local jurisdictions.

The Pierce County Transportation Plan includes 236 roadway improvement projects, which include new roads and improvements to existing roads. The projects that would affect the City of Lakewood are listed in Table 7-12. As shown, the projects have been placed into four priority categories: Premier, High, Medium, and Low. These planned projects will be used as a starting point for identifying improvements for the City of Lakewood Transportation Plan.

Table 7-12 Pierce County Recommended Road Improvement Projects.

PCPT Project #	Rating	Project Name	Project Limits	Proposed Improvements
C8, W2, M3	Premier	Cross Base Highway	176th Street E/SR 7 to I-5	New arterial
C9 (M12, W7, W8)	Premier	I-5/SR 512 Interchange	I-5, SR 512, S Tacoma Way, Pacific Hwy. SW, 100th St. SW, 108th St. SW, 112th St. SW	Reconfigure Ramps, extend 112 th Street across I-5
W19	Premier	108th Street SW	Bridgeport Way SW to Pacific Highway SW	Widen from 2 to 4 lanes; add drainage and pedestrian facilities and turn lanes
W21A	Premier	Bridgeport Way W	I-5 to Chambers Creek Road W	Minor channelization; add drainage, pedestrian facilities, turn lanes
W21B	Premier	Bridgeport Way W	Chambers Creek Road W to Tacoma City limits	Minor channelization; add drainage, pedestrian facilities, turn lanes
W24A	Premier	Steilacoom Blvd. SW	87th Ave. to 88th St. SW	Channelization; add drainage, pedestrian facilities
W24B	Premier	88th Street SW - Custer Road W	Steilacoom Blvd. SW to Lakewood Dr. SW	Channelization; add fifth lane, sidewalks, signals
W1A	High	Steilacoom Bypass	Steilacoom-DuPont Road to Washington Blvd. SW	New arterial on new alignment; 3 lanes
W5	High	84th Street S. – Steilacoom Blvd. SW	Steilacoom Blvd./Durango St. SW to 84th St./S. Tacoma Way	Realignment
W10A	High	Oakbrook Connection - 75th Street W Extension	Phillips Road SW to Bridgeport Road W	New arterial and bridge
W11	High	Farwest Drive SW North Extension	Steilacoom Blvd. SW to Onyx Drive SW	New arterial connection
W16	High	54th Street West Extension	75th Avenue W to Bridgeport Way W	New arterial
W28	High	40th Street W.	Bridgeport Way W to Grandview Drive W	Channelization; add drainage facilities; 1/4 mile of 5 lanes
W31	High	Union Avenue SW	North Thorne Lane SW to Berkeley Street SW	Widen from 2 to 3 lanes (south half); add drainage, pedestrian facilities
M24 ¹	Medium	South Tacoma Way	112th Street S to Pacific Hwy. SW	Widen from 2 to 4 lanes
M29A	Medium	112th Street S	South Tacoma Way to SR 7 (Pacific Avenue)	Channelization; add turn lanes, drainage, pedestrian facilities
W13A	Medium	Elwood Drive SW - 87 th Avenue SW connector to Steilacoom Blvd. SW	Elwood Drive SW south of Steilacoom Blvd. SW	Arterial and intersection improvements
W24C	Medium	Steilacoom Boulevard SW	88th Street SW to Lakewood Drive SW	Channelization; add sidewalks; realign at Gravelly Lake Dr. SW
W25	Medium	South Tacoma Way	100th Street SW to Tacoma city limits	Channelization; add sidewalks
W26	Medium	Gravelly Lake Drive SW	I-5 to 112th Street SW	Widen to 5 lanes from 3 lanes; paved shoulders
W27	Medium	Military Road SW - Washington Blvd. SW	SW 112th Street to Gravelly Lake Drive	Widen from 3 to 5 lanes; new signals; paved shoulders
W29	Medium	108th Street	Bridgeport Way to Davison Avenue	Widen from 2 to 4 lanes

Table 7.12 Pierce County Recommended Road Improvements Projects (continued)

PCPT Project #	Rating	Project Name	Project Limits	Proposed Improvements
W30A ¹	Medium	Interlaaken Drive SW – Short Lane SW - 104th Street SW	Mates Avenue to Idlewild Avenue SW	Channelization; sidewalks; new road, new bridge
W32	Medium	Veterans Drive SW	Gravelly Lake Drive SW to Fort Lewis	Widen from 2 to 3 lanes; paved shoulders; minor realignment
M11 ¹	Low	112th Street S. connection across I-5	Bridgeport Way SW to South Tacoma Way	New arterial, freeway overpass
W1B ¹	Low	Steilacoom Bypass	Steilacoom-DuPont Road SW to Washington Boulevard SW	Improved arterial on Northgate Road alignment
W13B	Low	87th Avenue SW connector	100th Street SW to 104th Street SW	New arterial
W18	Low	112th Street SW connection	Butte Drive SW to Interlaaken Drive SW	New two lane arterial
W30B	Low	Interlaaken Drive SW - Short Lane SW - 104th Street SW	Motor Ave. SW to Idlewild Ave. SW	Add curb, gutter, close bridge to general traffic

7.2.1.2 WSDOT's State Highway System Plan

The State Highway System Plan provides service objectives and action strategies for maintaining, operating, preserving, and improving our state highways. Table 7-13 lists the financially constrained 20-year transportation improvement projects (TIP) proposed for the City of Lakewood and categorizes these projects by funding programs and subprograms described in the WSDOT State Highway System Plan, 1997-2016.

Table 7-13 20-year transportation improvement projects (TIP) - 1997 to 2016.

Project/Mileposts	Description ¹	Cost Estimate (Million \$)	Funding Program
SR-5			
122.00 to 123.00	Interchange Improvements, Construct HOV Lanes, IVHS, Enhanced Transit.	\$18.42M to \$24.57M	I1
123.00 to 123.00	Interchange Improvements, Construct HOV Lanes, IVHS, Enhanced Transit.	\$14.37M to \$19.17M	I1
124.00 to 125.00	Interchange Improvements, Construct HOV Lanes, IVHS, Enhanced Transit.	\$18.42M to \$24.57M	I1
125.00 to 126.00	Interchange Improvements, Construct HOV Lanes, IVHS, Enhanced Transit.	\$16.02M to \$21.36M	I1
126.00 to 127.48	Interchange Improvements, Construct HOV Lanes, IVHS, Enhanced Transit.	\$13.72M to \$18.29M	I1
123.00 to 124.50	TSM	\$1.80M to \$2.40M	I2
126.00 to 127.00	TSM	\$1.80M to \$2.40M	I2
SR-512			
0.00 to 2.27	Widen to 8 lanes creating HOV lanes, IVHS, and Enhanced Transit.	\$25.80M to \$34.40M	I1

¹These projects are all included in the Financially Constrained Plan of WSDOT's State Highway System Plan, 1997-2016.

These highway funding programs and subprograms include the following: Highway Improvement - Mobility (I1), and Highway Improvement - Safety (I2).

Mobility

The objective of the Mobility subprogram is to improve mobility within congested corridors. The Mobility subprogram has a 20-year cost of \$15.1 billion and a plan target to fund \$6.14 billion of 20-year needs.

The Mobility subprogram consists of the following:

Puget Sound Core Freeway HOV Lanes - The Puget Sound Core Freeway HOV Lane System will be fully completed.

Urban and Rural Mobility Improvements - Strives to maintain level of service (LOS) C on rural highways and LOS D in urban areas. In urban areas, local and regional jurisdictions will cooperatively seek to mitigate congestion.

Access Control - A cost-effective method for WSDOT to ensure the smooth flow of traffic on state highways as significant development and future traffic occurs.

Urban Bicycle Connections - Provides bicycle connections along or across state highways within urban growth areas to complete local bicycle networks.

Some assumptions underlying the State Highway System Plan mobility solutions and trade-off decisions include the following:

Transportation demand management (TDM), traffic operations, access controls, and land use alternatives through the GMA are the first choices in meeting the mobility service objective. System expansion for single occupancy vehicles is a last resort strategy.

The State Highway System Plan assumes some form of high capacity transit will be funded and in operation in the Central Puget Sound region and in Clark County in the next 20 years.

Travel forecasts are based on projections of the trend line growth in travel, with consideration to the assumed effects of changing population and transportation demand management.

7.2.1.3 Safety

The service objective of this subprogram is to provide the safest possible highways within available resources. It has a 20-year cost of \$2 billion and a plan target to fully fund over 20 years.

WSDOT is aggressively pursuing this objective by targeting collision reduction and collision prevention improvements. Specifically, the Safety Program has the following two subcategories and their respective elements.

Collision Reduction

High Accident Location - Identifies short sections of highway that exhibit accident rates above the statewide average for similar highways.

High Accident Corridors - Identifies longer sections of highway (typically greater than 1 mile) that exhibit accident and severity rates above the statewide average.

Pedestrian Accident Locations (PALS) and safe walking routes for school children.

Collision Prevention

Risk Reduction - Proactively identifies sections of highways that have a high probability of vehicles leaving the roadway.

Interstate Safety - Provides funding for improvements on the interstate system as defined by federal guidelines.

At-Grade Intersections - Identifies intersections that have a high accident potential and recommends safety solutions such as interchanges and grade separations.

Signals and Channelizations - Identifies high priority intersection improvements such as new traffic signals and added turn lanes.

Pierce County Non-Motorized Transportation Plan

Table 7-14 lists the proposed improvements to Pierce County's nonmotorized transportation system. Each project has been prioritized based on how the project compares to other recommended projects as well as its cost estimate and revenue availability. Projects were rated based on the following criteria: access to destination, history of nonmotorized collisions, links to existing facilities, traffic counts, and the availability of an existing paved facility. Those projects assigned premier priority are estimated to be funded by Pierce County Construction Fund over the next 20 years. The remaining projects, ranked high, medium, or low priority, would only be built through mitigation measures on new development projects or by the availability of an unanticipated funding source.

7.2.1.4 Pierce County Long-Range Transit Plans

Pierce County's Transportation Plan (June 1992) includes plans for improving transit service. The transportation improvement projects developed for the Transportation Plan have been divided into four priority categories: premier, high, medium, and low. There are four HOV projects on the list of improvements, and all of them have been placed in the premier priority category. These are:

- C17 (N23,W41) - HOV lanes on I-5 from Thurston County line to the King County line;

Table 7-14 Pierce County recommended non-motorized transportation improvement projects in Lakewood.

ID #	Project Location	Proposed Facility	Estimated Cost	Priority¹
WC8	Cross-Base Highway - Tillicum to Spanaway	Trail	\$1,923,000	Premier
WW1A	112th St. SW - Steilacoom-Dupont Hwy. to Military Rd. SW	Paved Shoulders	\$340,000	High
WFT1	American Lk./Ft. Lewis Trail - Flora Rd. to Veterans Dr. SW	Trail		Federal
WFT2	North Gate Rd./South Dr./Meyers - Steilacoom-Dupont Hwy. to Lakewood C/L	Paved Shoulders: PCTP Proposed Rd. W1B		Federal
WFT3	Murray Rd. Trail - Murray Rd. to Gravelly Lk. Dr. (E Side SR 5)	Trail		Federal
WLK1	Interlaaken Route (Lake City/Idlewild) – Washington Blvd. to Steilacoom Blvd.	Bicycle and/or Pedestrian Facility		City
WLK2	Lakewood Dr. SW/S. Orchard St. - Bridgeport Way to 4th St. W (Lakewood C/L)	Bicycle and/or Pedestrian Facility		City
WLK3	Military Road SW - Steilacoom C/L to Washington Blvd.	Bicycle and/or Pedestrian Facility		City
WLK4	Nisqually Delta/Mt. Rainier Trail - Thorne Lane to Gravelly Lk. Dr.	Trail		City
WLK5	Nisqually Delta/Mt. Rainier Trail (Tower/Lk. Steilacoom/104 St) - Gravelly Lk. to Angle Ln.	Trail		City
WLK6	108th St. SW - Lakeview Ave. SW to Pacific Hwy. SW	Bicycle and/or Pedestrian Facility		City
WLK7	112th St. SW - Butte Dr. to Huggins-Meyers	Proposed Road (PCTP W8): Bike and/or Pedestrian Facility		City
WLK8	112th St. SW - Gravelly Lake Dr. SW to Gravelly Lake Dr. SW	Bicycle and/or Pedestrian Facility		City
WLK9	Nyanza Road SW - Gravelly Lake Dr. SW to Gravelly Lake Dr. SW	Bicycle and/or Pedestrian Facility		City
WLK10	112th St. SW Connection Over I-5 - Lakeview Ave. SW to Steele St. S	Proposed Road (PCTP M11): Bike and/or Pedestrian Facility		City
WLK11	Angle Lane - Hipkins Rd. SW to Ft. Steilacoom Park	Bicycle and/or Pedestrian Facility		City
WLK12	Phillips Rd./Onyx Drive - Steilacoom Blvd. to 87th Ave. SW	Bicycle and/or Pedestrian Facility		City
WLK13	Washington Blvd./Woodlawn Ave./Thorne Lane – Berkeley Ave. to SR-5	Bicycle and/or Pedestrian Facility		City
WLK14	S. Tacoma Way - 100th St. S to Tacoma City Limit (Tacoma Water Ditch Trail)	Bicycle and/or Pedestrian Facility		City
WLK15	Bridgeport Way - SR 5 to Arrowhead Road SW	Bicycle and/or Pedestrian Facility		City
WLK16	Bridgeport Way - Lakewood Dr. to University Place City Limit (Flanegan)	Bicycle and/or Pedestrian Facility		City
WLK17	Steilacoom Blvd. SW - Steilacoom City Limit (Farwest Dr.) to S. Tacoma Way	Bicycle and/or Pedestrian Facility		City
WLK18	Chambers Canyon Trail Extension - Phillips Rd. SW to Tacoma Water Ditch Trail	Trail		City
WLK19	Custer Rd. SW/88th Street/74th Street – Steilacoom Blvd. to Lakewood Dr. SW	Bicycle and/or Pedestrian Facility		City
WLK20	Edgewood Ave. SW - Veterans Dr. to Washington Blvd.	Bicycle and/or Pedestrian Facility		City

Table 7-14 Pierce County recommended non-motorized transportation improvement projects in Lakewood (continued).

ID #	Project Location	Proposed Facility	Estimated Cost	Priority¹
WLK21	Farwest Dr. - Military Rd. to Steilacoom Blvd.	Bicycle and/or Pedestrian Facility		City
WLK22	Gravelly Lake Dr. SW - SR-5 to North End Nyanza Rd. SW	Bicycle and/or Pedestrian Facility		City
WLK23	Lakeview Ave. SW/Durango - 112th St. SW to 80th St. SW (Tacoma Water Ditch Trail)	Bicycle and/or Pedestrian Facility		City
WLK24	Union Avenue SW - Berkley St. W to Thorne Lane SW	Bicycle and/or Pedestrian Facility		City
WLK25	Veterans Dr./Kenwood - Edgewood Ave. to Gravelly Lake Dr.	Bicycle and/or Pedestrian Facility		City
WLK26	Washington Blvd. - Military Rd. SW to Gravelly Lake Dr.	Bicycle and/or Pedestrian Facility		City

¹ For federal and City projects, no priority is listed in the Pierce County Non-Motorized Transportation Plan. The first two projects in the table have an assigned priority because they are combined Pierce County/City of Lakewood projects.

- C19 (E2) - Capacity improvements (HOV and/or general purpose lanes) on SR 167 from SR 512 to the King County line;
- C20 - HOV lanes on SR 512 from I-5 to SR 167; and
- C18 (N22, W42, P37) - HOV lanes, improve interchanges, SR 16 from I-5 to Kitsap County line.

Pierce County will work with Pierce Transit during the design stages of the projects to determine the best way to meet transit needs and secure funding for implementation.

7.3 Summary of County Planning Policies for Transportation

This section summarizes the county wide planning policies for transportation. These policies are listed in the City of Lakewood's Interim Comprehensive Plan.

- Transportation Policy 1 - Include the following as transportation services deemed county-wide in nature: state and federal highways; principal arterials; public transit facilities and services; airports (passenger or freight); and rail facilities (passenger or freight).

- Transportation Policy 2 - Include the following facilities and system components in the multi-modal network: roads, including principal highways, arterials, and collectors; public transit, including bus, rail, and park & ride lots; non-motorized facilities; airports; parking facilities; and facilities related to transportation demand management.
- Transportation Policy 3 - Coordinate service levels between jurisdictions and other transportation service providers by designing roadway, intersection and transit LOS, understanding that the adopted LOS will affect not only the quality of the transportation system, but also the amount of public investment required and the permissible growth levels which the transportation system can support, and entering into interlocal agreements to establish uniform, coordinated service levels between jurisdictions for county-wide facilities.
- Transportation Policy 4 - The adopted LOS may be set below existing levels, set above existing levels, set at existing levels, set at different levels of service in different zones, set at different levels of service based on facility classifications, or set for multi-modal facilities.
- Transportation Policy 5 - Determine the adequacy of transportation facilities, taking into account existing development, approved but unbuilt development and proposed development through utilization of capacity-to-demand (LOS), availability of capacity including phased capacity, and/or coordination of appropriate standards of design across jurisdictional lines.
- Transportation Policy 6 - Address substandard LOS for existing facilities or existing deficiencies by designating funding mechanisms, prioritizing facilities needed to correct existing deficiencies, using transportation demand management to minimize demand, and/or using transportation systems management to redirect traffic to uncongested areas and to modify travel behavior.
- Transportation Policy 7 - Assign responsibility for the correction of existing transportation deficiencies in the urban growth areas: the county in unincorporated areas, a municipality in incorporated areas, and joint county-municipal when part of an agreement for a joint planning area.

- Transportation Policy 8 - Adopt parking regulatory codes for park-and-ride facilities and parking requirements for public facilities to encourage public transit use.
- Transportation Policy 9 - Address concurrency by providing transportation facilities needed to accommodate new development within six years of development approval, limiting new development to a level that can be accommodated by existing facilities and facilities planned for completion over the next six years, and encouraging new and existing development to implement measures to decrease congestion and enhance mobility through transportation demand and congestion management.
- Transportation Policy 10 - Address compatibility between land use and transportation facilities by requiring new transportation facilities and services in appropriate or desirable areas to be phased within a 20-year time frame consistent with tiered areas and six-year capital improvement programs, restricting the extension of new transportation facilities outside the urban growth area, using development regulations to ensure that development does not create demands exceeding the transportation system capacity, using land use regulations to increase the modal split between automobiles and other forms of travel, and approving transportation facilities in conjunction with land use approvals.
- Transportation Policy 11 - Address environmental impacts of the transportation policies through programming capital improvements and transportation facilities designed to alleviate and mitigate impacts on land use, air quality, and energy consumption (e.g., high-occupancy vehicle lanes, public transit, vanpool/carpool facilities, or bicycle/pedestrian facilities); and locating and constructing transportation improvements to discourage adverse impacts on water quality and other environmental features.
- Transportation Policy 12 - Address energy consumption/conservation by designing transportation improvements to encourage alternatives to automobile travel; locating and designing new development to encourage pedestrian or non-automobile travel; providing regulatory and financial incentives to encourage the public and private sector to conserve energy; and reducing the number of vehicle miles traveled and number of vehicle trips.

- Transportation Policy 13 - Provide the following facilities to encourage alternatives to automobile travel and/or to reduce the number of vehicle miles traveled (modal split, trip generation and trip length): structural alternatives (e.g., public transit, construction of new HOV lanes, limitations on highway/roadway construction, carpool/vanpool facilities, non-recreational bicycle/pedestrian facilities), and non-structural/regulatory alternatives (e.g., growth management, road/congestion pricing, auto-restricted zones, parking management, site design, ridesharing incentives).
- Transportation Policy 14 - Utilize the following transportation systems management measures to make the most efficient use of the existing roadway system: structural improvements (e.g., super street arterials, signalization improvements, computerized signal systems, one-way streets, ramp metering, designation of HOV lanes, reversible traffic lanes), and non-structural improvements (e.g., incident detection and monitoring systems, network surveillance and control, motorist information systems, turn prohibitions, alternative work hours).
- Transportation Policy 15 - Consider a number of financing measures, including but not limited to: general revenues; fuel taxes; toll roads; bonding; congestion pricing; public/private partnerships; assessment and improvement districts, facility benefit assessments, impact fees, dedication of right-of-way and voluntary funding agreements; and others, as may be appropriate.
- Transportation Policy 16 - Coordinate access needs and control for county and/or municipal funded transportation facilities through designating limited access facilities in the regional plan, determining access regulations through mutual agreement by the affected jurisdictions and/or by an agency designated by the affected jurisdictions, and developing access regulations by the agency having primary jurisdiction or funding responsibility.

7.4 Planning Implications

7.4.1 Existing Deficiencies

Existing transportation system deficiencies were identified based on LOS information, accident history, and an inventory of existing non-motorized facilities. These deficiencies are discussed in the following section.

7.4.1.1 Roadway Capacity Issues and LOS

The following roadway segments currently exceed the LOS D threshold during the am and/or pm peak hour.

- Gravelly Lake Drive SW north of Pacific Highway SW
- Murray Road SW north of 146th Street SW
- Washington Blvd. SW west of Gravelly Lake Drive SW

Several other locations in the City of Lakewood currently experience LOS D conditions, which may also be considered deficient in the near future. These roadway segments are listed as follows:

- Ardmore Drive SW southeast of Steilacoom Blvd. SW
- Ardmore Drive SW northwest of Whitman Avenue SW
- Gravelly Lake Drive SW south of Pacific Highway SW
- Gravelly Lake Drive SW west of end Nyanza Road SW (south)

- Steilacoom Blvd. SW east of Phillips Road
- 108th Street SW west of Pacific Highway SW

In addition to these locations, other future issues that could have a significant impact on roadway capacity in different areas of the city include:

- Construction of the proposed Cross Base Highway and potential land use changes in American Lake Gardens.
- Redevelopment of the South Tacoma Way (SR 99) corridor.
- Reconstruction of the I-5/SR 512 interchange and connection to 100th St. SW.
- Location of the RTA commuter rail station and associated redevelopment in the station area.
- Location of the proposed City Hall/Civic Center complex and potential redevelopment around the complex.
- Increase in freight and passenger rail service that may require grade separation of existing at-grade crossings. 100th St. SW and Bridgeport Way have been mentioned as possible locations.

7.4.1.2 High Accident Locations

Intersections which averaged 10 or more accidents per year for the past five recorded years will also be considered in the development of the Transportation Improvement Plan. These intersections include the following:

- 100th Street SW/Lakeview Avenue SW

- Bridgeport Way SW/Pacific Highway SW
- Bridgeport Way SW/108th Street SW
- Bridgeport Way SW/100th Street SW
- South Tacoma Way/100th Street SW
- South Tacoma Way/96th Street SW
- South Tacoma Way/Steilacoom Blvd. SW
- Steilacoom Blvd. SW/83rd Avenue SW

In addition to these intersections, the 100th Street SW/59th Avenue SW intersection should also be addressed in the transportation improvement plan, due to its relatively high accident rate of 1.10 accidents per million entering vehicles.

7.4.1.3 Non-Motorized (Pedestrian/Bicycle) Facilities

Few sidewalks and/or paved shoulders currently exist along roadways in the City of Lakewood (The existing facilities are listed in Table 7-9). Therefore, pedestrian and bicycle facility deficiencies exist throughout the City of Lakewood and should be considered a high priority for future improvements.

CHAPTER 8: UTILITIES

8.1 Existing Conditions

Utilities discussed in this chapter include water, sewer, solid waste, electricity, natural gas, telecommunications, and stormwater. Existing conditions for each are described below.

8.1.1 Water

The City of Lakewood's water service is provided by the Lakewood Water District, the South East Tacoma Mutual Water Company, the Parkland Light and Water Company, and City of Tacoma Light and Water. A discussion of these water systems follows.

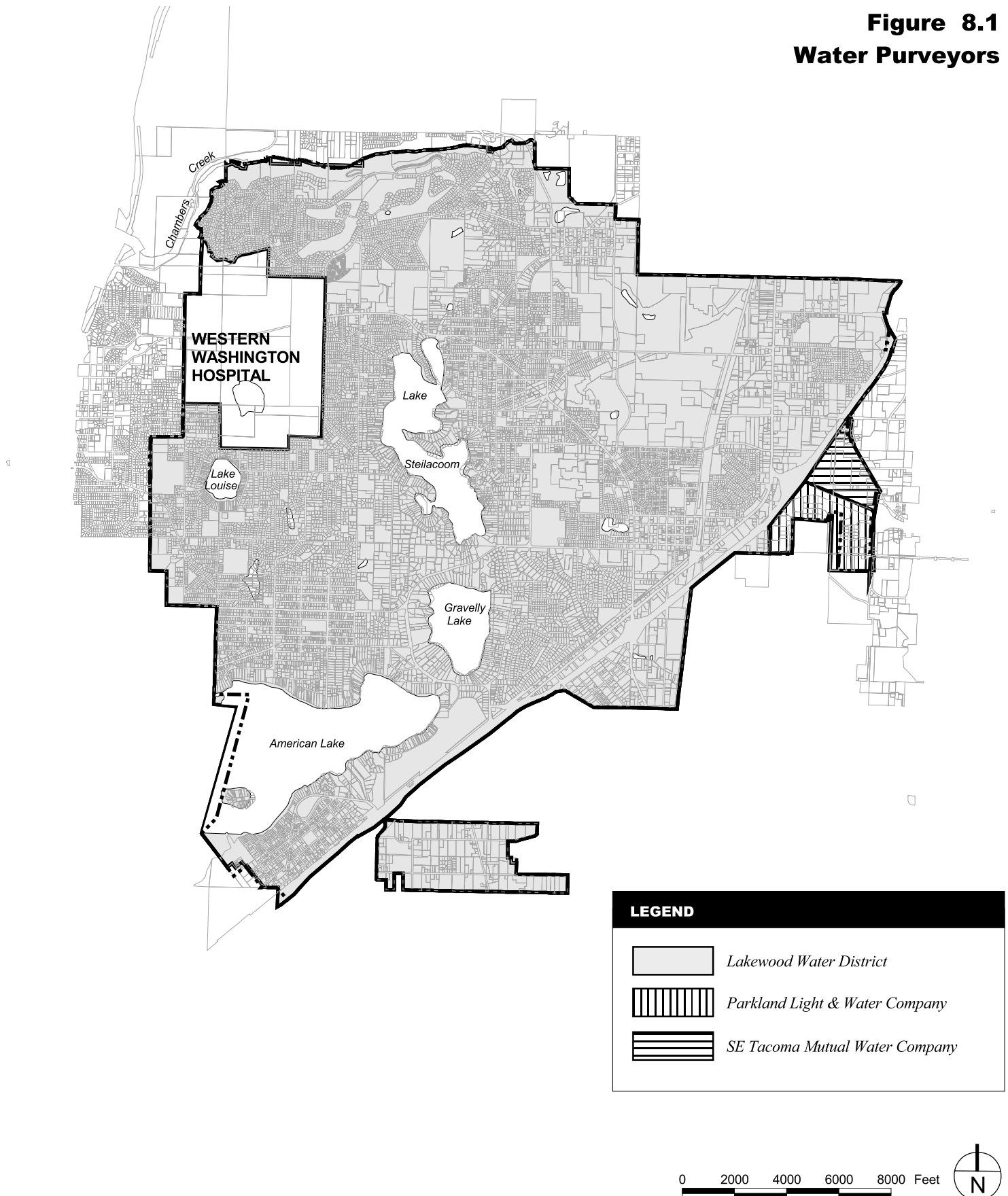
8.1.1.1 Lakewood Water District

The majority of the City of Lakewood is served by the Lakewood Water District. Sources for background information included in this report include interviews with Randy Black, the Water District's Manager, the *September 1997 Comprehensive Water Plan for Lakewood Water District*, and the *1997 Lakewood Water District Wellhead Protection Program, Economic and Engineering Services*, May 7, 1997.

The Lakewood Water District was established in 1943. Figure 8-1 shows the water purveyor service area boundaries within the city, including the Lakewood Water District service area. As shown, the District's service area includes the majority of the city limits and UGA, with the following exceptions:

- South Tacoma State Game Farm
- The west side of McChord Air Force Base
- A small area near Meadowpark Golf Course

Figure 8.1
Water Purveyors



- The area north of McChord Air Force Base, east of I-5

The Lakewood Water District also serves a portion of the Town of Steilacoom, and sells water to Pierce College, which operates its own distribution system for domestic use.

The District relies exclusively on groundwater for its source of supply. A total of 33 wells are owned and operated by the District. Of the 33 wells, 29 are currently active with a total capacity of 46.9 million gallons per day (MGD). Twelve of these wells are used on a regular basis. The District operates and maintains 14 reservoirs, with a total capacity of 19.72 million gallons (MG). The District's service area is divided into five pressure zones, three of which are created by the system's elevated reservoirs and two of which are established by two booster stations. A total of seven booster stations are located throughout the water system with a total combined pumping capacity of 6,200 gallons per minute (gpm) (8.9 MGD).

The Lakewood Water District has two existing interties with the City of Tacoma. These two interties are located at 80th South and South Tacoma Way and at 96th South and I-5. The first can provide approximately 2,000 gpm at 87 pounds per square inch (psi), and the second can provide approximately 2,800 gpm at 82 psi.

The District serves an estimated population of 66,400. The total number of connections served by the District in 1996 was 15,600, of which 1,060 were commercial. Current average day water demand in the Lakewood Water District is estimated to be 9.5 MGD and current peak day demand is estimated at 19.9 MGD. A minimum fire flow requirement of 3,000 gpm for a 2-hour duration has been established for high density residential, commercial, and industrial land uses.

8.1.1.2 South East Tacoma Mutual Water Company

A small area of the City of Lakewood, located on the east side of the city, is served by the South East Tacoma Mutual Water Company (SETMWC). The source for information provided in this report is the South East Tacoma Mutual Water Company's

1993 Water System Plan, Economic and Engineering Services, Inc, December 1993, and interviews with Water Company staff.

The SETMWC is a private water company owned by its customers, with a service area encompassing approximately 5.4 square miles. The majority of the service area is in unincorporated Pierce County, and a small portion, containing approximately 37 service connections, is within the City of Lakewood. These services are in a commercial/industrial area of the city, and are served by water mains ranging from 8 to 12 inches in size. The Water Company currently utilizes untreated groundwater as its sole source of supply. The system has two interties with the Parkland Light and Water Company and one with the City of Tacoma.

8.1.1.3 Parkland Light and Water Company

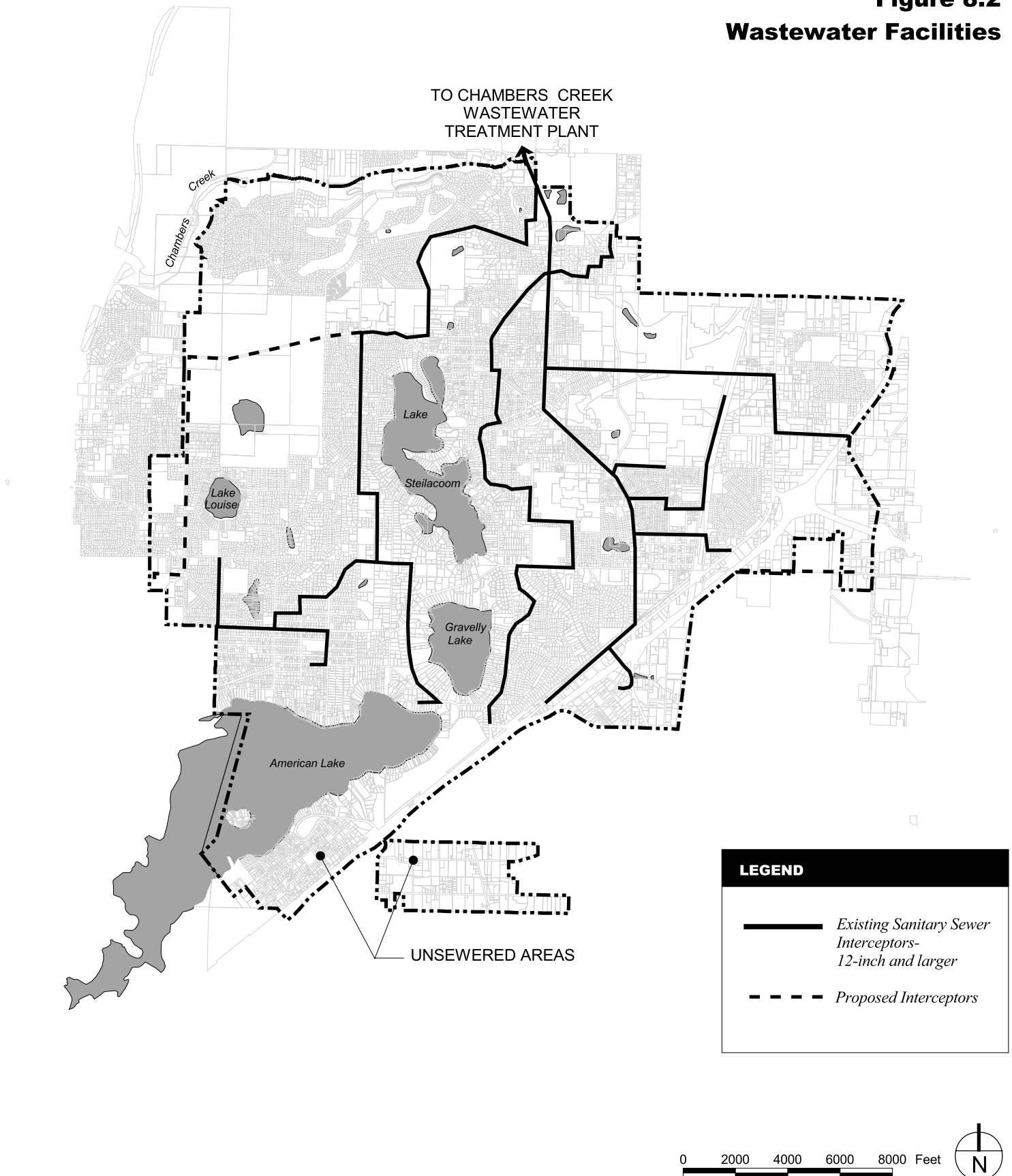
The Parkland Light and Water Company serves a portion of the City of Lakewood on its east side. Information provided in this report is based on discussions with the Parkland Light and Water Company.

The Parkland Light and Water Company serves approximately 30 connections in the City of Lakewood. Figure 8-1 shows the portion of the city served by the Water Company. Pierce County zoning for this area is industrial, and the area is served by a 12-inch main along 112th Street S. The Parkland Light and Water Company's water system is supplied by groundwater from a series of wells throughout their system.

8.1.2 Sewer

Sewer service is provided to the City of Lakewood by Pierce County. The city is part of the Clover/Chambers Creek basin, which also includes portions of the cities of Tacoma, Fircrest, Steilacoom, DuPont, McChord Air Force Base, Ft. Lewis, and other portions of Pierce County. The source for information provided in this report is the *1991 Pierce County Department of Utilities General Sewerage Plan Update*, Brown and Caldwell Consultants, November 1991 and interviews with Pierce County Department of Utilities staff.

Figure 8.2
Wastewater Facilities



Garbage collection is mandatory within the city limits of Lakewood. The city is served by two certified solid waste companies. Lakewood Refuse, Inc. serves the majority of the study area, with weekly pick-up service for approximately 8,600 residences and up to six day-a-week service for 1,012 commercial customers. The company offers garbage rate discounts to residences who choose to use the company's curbside recycling services. The second company, the Pierce County Refuse Company, serves a small portion of the area west of Far West Drive and east of South Tacoma Way. They also offer curbside recycling, giving a discount to those customers who recycle. Lakewood Refuse, Inc. owns the principal transfer station within the City of Lakewood, located in the industrial park near the company's headquarters.

Pierce County contracts for disposal with a private vendor, Land Recovery, Inc (LRI). Both solid waste companies which serve the City of Lakewood dispose of their waste at the LRI-owned Hidden Valley Landfill. Residents of unincorporated Pierce County and 20 cities and towns generate about 7.9 pounds per person per day, 4.5 pounds of which need disposal. Transfer capacity (500 tons per day) for the county was mainly provided by three transfer facilities in 1997: Purdy, which handled approximately 100 tons per day; Murrey's, which handled approximately 200 tons per day; and Lakewood, which handled approximately 200 tons per day. The Lakewood transfer station is the only one located within the city limits. The remaining tonnage is hauled directly to the Hidden Valley Landfill. Approximately 600 tons per day of municipal waste from unincorporated Pierce County and 20 cities and towns was disposed of at the 172-acre Hidden Valley Landfill in 1997.

Currently, approximately 40 percent (or 400 tons per day) of solid waste is long hauled for disposal outside the county at the Roosevelt Regional Landfill. The Hidden Valley Landfill is scheduled to close by the end of 1998. After closing of this landfill, all waste will be long hauled for disposal outside the county unless an additional in-county landfill site can be identified and constructed. The old landfill site will remain open for waste transfer and composting activities.

8.1.4 Electricity

Electrical power is supplied to the City of Lakewood by Tacoma City Light, Lakeview Light and Power, and Puget Sound Energy. Sources for electrical utility information provided in this report include interviews with representatives from the companies, and the *1996 City of Lakewood Interim Comprehensive Plan*, Pierce County, February 20, 1996.

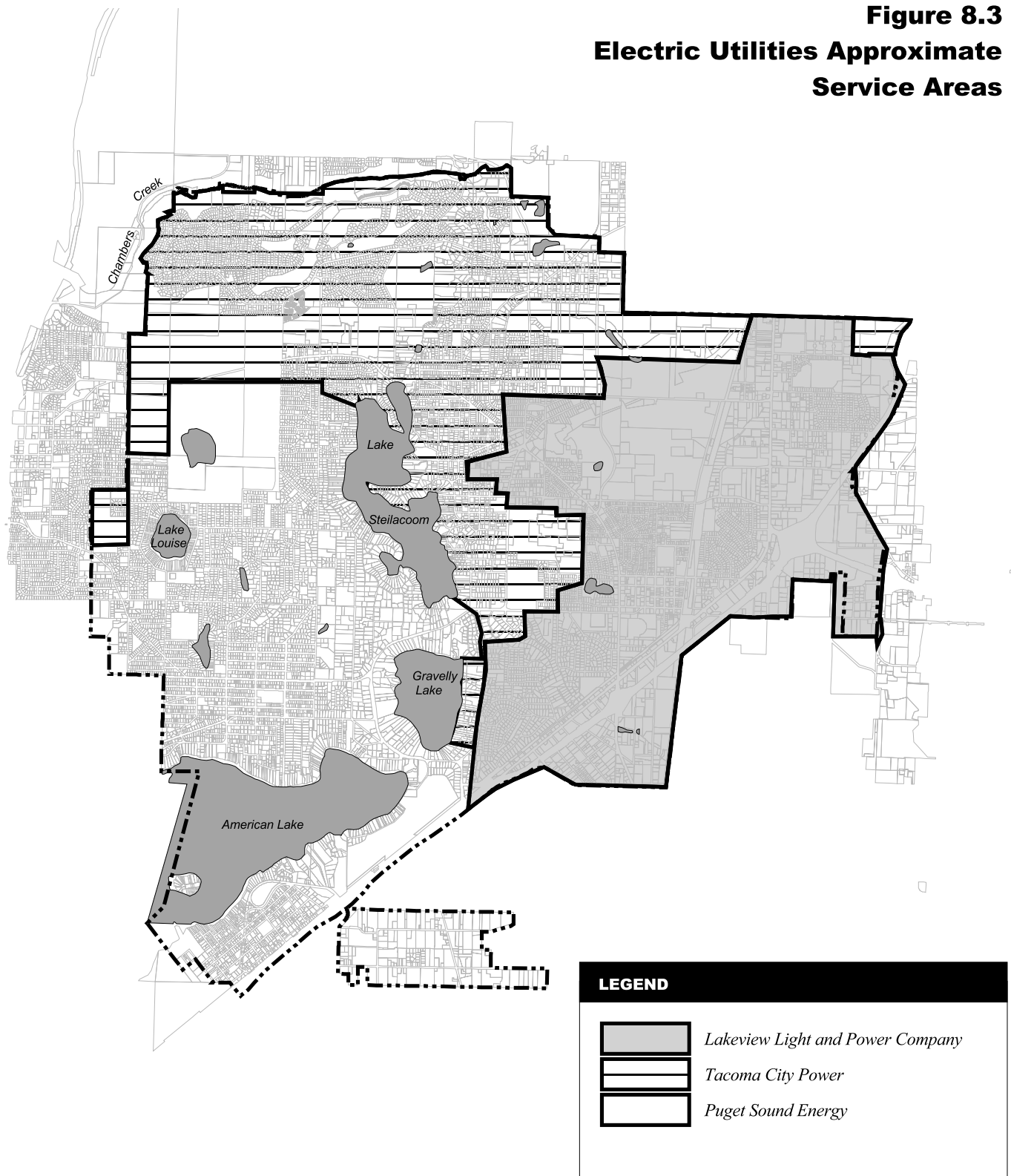
All three power companies have access to the Bonneville Power Administration (BPA) and other generating plants, as they are part of the Northwest Power Pool Grid.

Of the three power companies that serve Lakewood, Tacoma City Light serves the largest number of customers (approximately 10,700). Approximately 70% of these customers are residential; the remainder are commercial customers. Lakeview Light and Power estimates they serve approximately 9,000 customers in the City of Lakewood, and Puget Sound Energy serves approximately 9,451 customers. Of the 9,451 customers served by Puget Sound Energy, approximately 8,315 are residential, 56 are commercial, and 580 are classified as other. Figure 8-3 shows the approximate service areas for the three power companies.

8.1.4.1 Tacoma City Light

Tacoma City Light has approximately 18.7 miles of transmission line located in the City of Lakewood. Southwest Substation and Far West Switchyard provide transmission access to the city and 5 distribution substations, with a total nameplate capacity of 81.9 mega volt amperes (MVA), supply the customer load. Tacoma City Light's distribution system includes both overhead and underground equipment. The underground services are primarily located in the northeast and central areas of the City of Lakewood. A total of 42 primary underground services, including the Lakewood Mall, are served by Tacoma City Light.

Figure 8.3
Electric Utilities Approximate
Service Areas



8.1.4.2 Puget Sound Energy

Puget Sound Energy has four substations in the City of Lakewood: Holden, Gravelly Lake, Tillicum, and Southgate. The Lakewood circuits receive power from the Puget Sound Energy (PSE) White River Generating Plant and PSE Frederickson Generating Plant. The White River Plant provides base load generation, and the Frederickson Plant is used for short-term peaking. Puget Sound Energy's distribution system includes both overhead and underground equipment.

8.1.4.3 Lakeview Light and Power

Lakeview Light and Power has four substations at three different sites in the City of Lakewood. Service can be provided with only three of the four substations; one substation is used for backup. Most of the commercial and industrial customers in the City of Lakewood are served by Lakeview Light and Power.

8.1.5 Natural Gas

Puget Sound Energy, one of four major utilities that purchase gas for distribution in Washington State, is the only natural gas provider for the City of Lakewood. The source for gas utility background information for this report is the *1996 City of Lakewood Interim Comprehensive Plan*, Pierce County, February 20, 1996 and discussions with Puget Sound Energy staff.

Puget Sound Energy served approximately 1,529 customers in the City of Lakewood, as of August 1, 1997. Last year, a new 12-inch gas main through the City of Lakewood was constructed along Lakewood Avenue to provide adequate service to the area.

8.1.6 Telecommunications

The source for telecommunications and cable services background information for this report is the *1996 City of Lakewood Interim Comprehensive Plan*, Pierce County, February 20, 1996.

U.S. West Communications provides local standard telephone service and limited long distance service to the City of Lakewood. Long distance providers for the city include AT&T, MCI, and Sprint. U.S. West Cellular (New Vector) and AT&T Cellular provide cellular phone service to the city.

Cable service is provided throughout the City of Lakewood by TCI Cablevision. Viacom, which received a franchise license by the City of Lakewood in 1996, has served the Lakewood community since 1969. Many apartment complexes in the city are serviced by Satellite Master Antenna systems.

8.1.7 Stormwater

The City of Lakewood stormwater utility was recently formed upon incorporation of the city. Stormwater charges, currently \$40 per year for a single-family residence, are included on sewer bills mailed by Pierce County. The county returns stormwater revenues back to the city. Currently, stormwater revenues are used primarily to fund operation and maintenance of stormwater facilities.

In 1991, prior to the city's incorporation, the Pierce County Storm Drainage and Surface Water Management Plan was completed. This plan included identification of study areas in the county where significant drainage problems were identified. Portions of three of the study areas are located within the City of Lakewood. The Chambers Bay Study Area includes the northern sections of the city. The Clover Creek/Steilacoom Lake Study Area includes the area around Steilacoom Lake and the central portions of Lakewood. The American Lake Study Area includes the remainder of the city limits, including the areas around Lake Louise, Gravelly Lake, American Lake, and areas west of Far West Boulevard.

This planning document included the creation of a computer model to simulate the rainfall-runoff characteristics of the county's drainage system. As part of this computer model, stormwater facilities existing at the time of the report were documented for each study area.

8.2 Trends and Projections

8.2.1 Water

8.2.1.1 Lakewood Water District

Population and water use projections are contained in the September 1997

Comprehensive Plan for the Lakewood Water District. This document states that population projections were based on the 1984 Puget Sound Council of Governments Report, as contained in the Pierce County Coordinated Water System Plan. For the boundaries of the Lakewood Water District, the projected year 2005 average day water use is 10.5 MGD, the projected year 2005 peak day water use is 21.6 MGD, and the District is projected to contain 27,000 equivalent residential units (ERUs) in 2005.

Currently, the District is constructing an 8 million gallon reservoir near Western State Hospital and a greensand filtration facility to remove iron and manganese from Wells N-1 and N-2. Capital projects for the years 1998-2001 are included in the District's Water System Plan and are shown in Table 8-1.

Table 8-1 Lakewood Water District 1998 - 2001 Proposed Capital Improvements

1998 Improvements	Cost	2000 Improvements	Cost
Booster Pumps	\$220,000	J-2 Well Site Replacement	\$160,000
Three Standby Generators	\$120,000	Touch Read Meter Replacement	\$250,000
Washington Reservoir Rebuild	\$1,200,000	Vehicles	\$65,000
Touch Read Meter Replacements	\$250,000	Well Controls Repair/Repl.	\$65,000
Wells	\$275,000	Total, 2000 Projects	\$490,000
Vehicles	\$169,000		
Well Controls Repair/Repl.	\$65,000		
Office Addition	<u>\$138,000</u>		
Total, 1998 Projects	\$2,517,000		
1999 Improvements	Cost	2001 Improvements	Cost
Booster Pump	\$120,000	Touch Read Meter Replacement	\$250,000
Touch Read Meter Replacements	\$250,000	Vehicles	\$102,000
Vehicles	\$96,000	Well Controls Repair/Repl.	<u>\$70,000</u>
Treatment at Well Q-1	\$800,000	Total, 2001 Projects	\$372,000
Well Controls Repair/Repl.	<u>\$60,000</u>		
Total, 1999 Projects	\$1,326,000		

Source: 1997 Comprehensive Plan for Lakewood Water District

The District also plans annual expenditures for water line repair and replacement, which are not included in Table 8-1. The District has established a prioritization methodology for repair and replacement projects, which incorporates the age, material of construction,

and condition of pipe. In the near future, water line repair and replacement will focus in areas northeast of Steilacoom Lake and Gravelly Lake.

It does not appear that any rate increases are projected before the year 2000. The capital improvements shown above will be funded partially on a pay-as-you-go basis, partially from interest income from the District's capital reserves, and partially by use of capital reserves.

8.2.1.2 South East Tacoma Mutual Water Company

Future conditions for the SETMWC were projected in the *1993 South East Tacoma Mutual Water System Plan* through the year 2013. Population projections were made using information on the number of dwelling units as supplied by the SETMWC and an average capita/household density of 2.59 from Pierce County Planning TAZ information. The projected population for the entire SETMWC service area in the year 2013 is 16,919. Per capita demand is projected to be 106 gallons per capita per day (gpcd) in the year 2013.

The SETMWC has no major water system improvements planned in the Lakewood area. The Water Company plans to begin chlorination treatment in 1998. In addition, corrosion control treatment at Wells 2 and 6 will slightly raise pH throughout the Water Company's system.

8.2.1.3 Parkland Light and Water Company

The Parkland Light and Water Company has an intertie with the Lakewood Water District on 112th Street planned within the next year.

8.2.2 Sewer

8.2.2.1 Growth and Demand Projections

Population projections for the Chambers Creek study area are made in the *1991 Pierce County General Sewerage Plan Update*, through the year 2040. The projections through 2020 are based on 1988 data supplied by the Puget Sound Council of Governments (PSCOG), and projections through 2040 were made by extrapolation. Wastewater flows are also projected through the year 2040. A per capita sewage flow criterion of 95 gpd was used, based on previous planning efforts and a comparison to actual flows at the Chambers Creek Plant. Table 8-2 summarizes the population and wastewater flow projections for the Lakewood area and the Total Chambers Creek service area. The city should be aware that the population projections used in this 1991 report are not consistent with recent PSRC projections showing a 1997 population of 62,240, a 2017 population of 93,000, and a 2020 population of 96,000.

Table 8-2 Projected Population and Average Dry Weather Wastewater System Flows

Year	<u>Lakewood</u>		<u>Total Service Area</u>	
	Population	Avg. Dry Weather Wastewater Flows (MGD)	Population	Avg. Dry Weather Wastewater Flows (MGD)
2000	61,650	5.8	267,570	25.2
2020	73,480	7.0	432,190	41.0
2040	90,120	8.6	553,370	52.6

Source: 1991 Pierce County General Sewerage Plan Update

8.2.2.2 Capital Improvements

The existing sewer service in Lakewood is projected to satisfy future development adequately, according to the Pierce County Department of Utilities. Previous planning documents analyzed sewers, constructed as part of ULID 73-1 for Lakewood and Parkland, through the year 2005. Existing capacity was compared to projected flow requirements past the year 2005 for a population density of 9.05 persons per acre.

Currently, there are no plans to provide sewer service to American Lake Gardens and Tillicum. The 1991 Pierce County General Sewerage Plan Update indicates that service could be provided to these areas by a gravity sewer system and isolated individual

pumping units. These pumping units could pump to a pump station which could be located on the west side of I-5, at the north end of this area. The force main would route through the Tacoma Country Club golf course on the west side of the freeway or through McChord Air Force Base on the east side of the freeway.

The recent Chambers Creek Regional Wastewater Treatment Plant expansion to 18 MGD will need to be followed by additional expansion if additional areas are brought into the utility service area as predicted. Pierce County has received approval to expand the plant to 24 MGD to meet projected needs. Construction on this expansion is expected to be completed before the year 2000. A list of other improvements at the Chambers Creek Regional Wastewater Treatment Plant is not yet available.

Figure 8-2 shows planned major interceptor construction routes through the city. Of note is the planned construction of a 26-inch diameter low pressure force main along 112th, Far West Drive, and Steilacoom Boulevard, connecting to the existing collection system at Hipkins Road and Steilacoom Boulevard. This force main will convey wastewater from the City of DuPont. This project will incorporate a separate 14-inch trunk line on Steilacoom Boulevard west of Far West Drive, to divert peak flows to the existing Steilacoom Pump Station. The only other planned capital improvement is a Spanaway Loop Bypass, which is a 72-inch interceptor that starts at I-5 on 112th Street E and terminates just before the intersection of 112th Street E and Steele Street. This project will be built in the fall of 1997.

8.2.3 Solid Waste

8.2.3.1 Collection

For cities using the county's disposal system, no immediate needs for refuse or residential recycling collection have been identified.

8.2.3.2 Transfer Capacity

The Pierce County transfer system will have an estimated capacity of 1,400 tons per day by late 1998, with planned modifications to private transfer facilities and the scheduled opening of the new Hidden Valley Transfer Station. The new Hidden Valley Transfer Station will be able to handle 600 to 800 tons per day, although its operation will not provide additional transfer capacity to handle growth since it will “replace” the landfill which handled up to 1,000 tons per day.

Pierce County long-term transfer capacity need projections through the 20-year planning period are shown in Table 8-3. A separate total for the City of Lakewood is not available.

Table 8-3 Pierce County Long Term Transfer Capacity Needs (tons/day)

<u>Year</u>	<u>Growth Rate</u>		
	<u>1 Percent</u>	<u>2 Percent</u>	<u>2.5 Percent</u>
1997	1,016	1,026	1,031
2003	1,078	1,155	1,195
2017	1,239	1,524	1,689

Source: Draft Chapters of 1997 Tacoma-Pierce County Solid Waste Management Plan

Based on current projections for transfer station requirements, the existing system will be adequate to handle future waste needs under most disposal scenarios through the year 2009, and possibly through the year 2017. The following options are being explored to increase transfer capacity to meet the needs of an out-of-county disposal system for the long term:

- Increase the capacity of the Hidden Valley Transfer Station.
- Compact and containerize waste at Purdy.
- Increase the capacity of the Murrey’s and Lakewood facilities.
- Site and construct a new centrally located transfer station.

8.2.3.3 Disposal

As mentioned previously, the Hidden Valley Landfill is scheduled to close in 1998. In May 1997, the county's agreement with LRI was modified to extend the long-haul agreement with the Roosevelt Regional Landfill through 2011. The Roosevelt Regional Landfill has a theoretical capacity of 120 million tons based on land area. However, the actual allowable waste disposal is currently limited to 2 million tons per year by a conditional use permit issued by Klickitat County. If an in-county landfill becomes available, however, the agreement allows the county to use that landfill at a rate to be determined later. Pierce County is currently completing a county landfill siting study (Phase II and Phase III).

Table 8-4 shows the projected long-term disposal needs for Pierce County/cities and towns and the total county. A separate total for the City of Lakewood is not available.

Table 8-4 Projected Long-Term Disposal Needs

	<u>Pierce County/Cities and Towns¹</u>	<u>Total County</u>
1998 to 2011 ²	6,011,192 to 6,454,808 tons	8,816,635 to 9,463,189 tons
1998 to 2017 ³	9,103,556 to 9,915,534 tons	13,224,477 to 14,194,272 tons
1998 to 2020 ⁴	10,786,792 to 11,831,223 tons	15,575,566 to 16,716,701 tons

Source: Draft Chapters of 1997 Tacoma-Pierce County Solid Waste Management Plan

¹ Does not include Tacoma/Ruston and Fort Lewis/McChord Air Force Base.

² The Pierce County - LRI Agreement expires on December 31, 2011.

³ The 20-year planning period ends in 2017.

⁴ County planning projections were extended to cover the first two decades of the 21st century.

8.2.4 Electricity

8.2.4.1 Tacoma City Light

Tacoma City Light uses information from the PSRC and local municipalities to project future load growth. Using residential and employment numbers, Tacoma City Light projects their total forecasted load to be 50.5 MVA by the year 2007. By these projections, no new substations are expected in the City of Lakewood in the next ten years. If there are large commercial or industrial developments, however, additional substations may be required.

Tacoma City Light is currently formulating a 6-year plan which may include projects in the City of Lakewood. A major line replacement, which would upgrade the present transmission lines from Southwest to Far West and Far West to McNeil substations, is currently being considered to increase the capacity for future loading.

8.2.4.2 Puget Sound Energy

Puget Sound Energy projects electrical growth for the years 2010 and 2020 using population and employment forecasts supplied by the PSRC, county and city planning departments, the state Office of Financial Management (OFM), and other agencies as well as other commercial and industrial forecasts. According to 1992 growth projections, the expected peak load growth by the year 2020 for the Tillicum and Lakewood areas are 14.6 MVA and 12.1 MVA, respectively.

Puget Sound Energy has no immediate plans for system improvements in the Lakewood area. There are plans being developed to rebuild an existing Tacoma Power 55 kilovolt (kV) line to provide a 115 kV connection to the Whiter River Station. Following the completion of this project, the White River-St. Clair 55 kV line will be normally open between the Puyallup and Lakewood areas, which will increase capacity.

8.2.4.3 Lakeview Light and Power

The Lakeview Light and Power Company indicates that they have no plans for additional substations in the near future. Capital improvements include undergrounding of existing and future utilities. All new utility extensions must be underground. Current projects for undergrounding include Silvan Park, which is located between 88th and 92nd and 1-5 and Tacoma Way. This project is about 50% complete, and will probably be completed in the next seven years. Future projects may include undergrounding utilities along Rainier Avenue (Southgate).

8.2.5 Natural Gas

According to Puget Sound Energy, almost any customers wishing to convert to natural gas can do so. The majority of the UGA of the City of Lakewood has access to gas lines. Puget Sound Energy must coordinate with the City of Lakewood Public Works Department to obtain permission to place gas pipelines within rights-of-way. According to Puget Sound Energy, demands will drive any plans to add gas lines to areas within the city. There are currently no plans to construct any new major gas mains in the area.

8.2.6 Telecommunications

U.S. West has indicated that all new telephone facilities will be underground, and whenever possible, overhead cable will be moved underground.

8.2.7 Stormwater

As part of the 1991 Pierce County Storm Drainage and Surface Water Management Plan, capital improvements were identified and prioritized for each basin. Computer modeling for this area was completed with projected land use over the 20-year planning period (ending in 2010).

Some of these proposed improvements were located inside the current city limits and additional improvements were located in upstream areas to the city. At the time of the study, county funding of stormwater projects was not sufficient to fund the recommended improvements, and the majority of the improvements identified in this report have not been completed.

At this time, the city has not completed a six-year capital improvement for future stormwater projects. The city does maintain stormwater facility design standards, and is planning on revising them in the near future.

8.3 Summary of Countywide Planning Policies

Countywide planning policies are documented in a December 17, 1996 document. As stated in this document, countywide planning policies are written policy statements used solely for establishing a countywide framework from which county and municipal comprehensive plans are developed and adopted. This December 17, 1996 document does not contain countywide planning policies related specifically to utilities. Policies related to fiscal impacts and siting of public capital facilities are identified and are applicable to utilities.

Regarding fiscal impacts, the countywide planning policies document states that “the purposes of fiscal impact analysis are to assess the relative costs of providing public facilities and services, with the public revenues that will be derived from decisions affecting jurisdictional responsibilities and/or boundaries and significant public and private development projects.” Conditions that could trigger this analysis would include expansions of public facility capacity, expansions of public facility service areas, and changes in jurisdictional responsibilities and/or boundaries. The appropriate amount of detail to be contained in a financial analysis shall be determined by the county and each municipality in the county, and the results are to be one of the factor in determining the merits of a proposal. Regarding siting of public capital facilities, the countywide planning policy states that each municipality shall incorporate a policy to identify and site essential public and capital facilities of a countywide or statewide nature. Policies shall be based on criteria including facility requirements such as zoning and size requirements, impact of the facility, and impacts to urban growth area designations.

The Interim Comprehensive Plan, completed in 1996 by Pierce County prior to the incorporation of Lakewood, contains the following review of countywide planning policies:

- Public facilities include domestic water systems and sanitary sewer systems (Urban Growth Areas, 3.2).

- Public services include governmental services such as power (Urban Growth Areas, 3.3).
- Relationship of sewer interceptors to comprehensive plans. The timing, phasing, and location of sewer interceptor expansions shall be included in the capital facilities element of the applicable municipal or county comprehensive plans and shall be consistent with countywide planning policies, the Urban Growth Area boundaries, and the local comprehensive land use plan. The phased expansions shall be coordinated among the county and the municipalities therein and shall give priority to existing urbanized unincorporated areas within the Urban Growth Area and to existing municipalities that do not have the ability to add capacity (Urban Growth Areas, 3.4.1).
- Sewer Interceptor Extensions/Expansions
 - a. Sewer interceptors inside Urban Growth Areas must follow tier phasing of capital facilities (years 1-6, 7-13, 14-20) unless: (i) sewer service will remedy groundwater contamination and other health problems by replacing septic systems and community on-site sewage systems, or (ii) a formal binding agreement to service an approved planned development was made prior to the establishment of the Urban Growth Area.
- On-Site and Community Sewage Systems
 - a. To protect the public health and safety of the citizens of Pierce County and of the municipalities in the county, to preserve and protect environmental quality including, but not limited to, water quality and to protect aquifer recharge areas, it is necessary to adopt policies on the location and use of on-site and community sewage systems;
 - b. The county and municipalities shall ask the Tacoma-Pierce County Board of Health to direct the Health Department to develop the necessary regulations to eliminate the development of new residential and commercial uses on-site and

community sewage systems within the Urban Growth Area in the unincorporated county or within municipal boundaries consistent with the countywide planning policies. The goal of these regulations shall be the elimination of all new permanent on-site and community septic systems within the urban areas in the unincorporated county or within municipal boundaries, but would allow for interim on-site approved septic systems where sewer facilities are not available. For commercial development, these regulations shall recognize the differences in the strength, nature, and quantity of effluent. These regulations shall be developed by July 1, 1993.

- c. New industrial development on community on on-site sewage systems shall not be allowed in urban areas in the unincorporated county or within municipal boundaries. Sanitary facilities necessary for recreation sites may be exempt from this policy.
- d. It is not the intent of these policies to require any individual property owner on an existing, properly permitted and functioning septic system to connect to a public sewer unless the septic system fails or the current use of the property changes or the density of development on the property increases (Urban Growth Areas, 3.4.3).
- The availability or potential for availability of sewer treatment plant capacity shall not be used to justify expansion of the sewer system or development in a manner inconsistent with the countywide planning policy, Urban Growth Area boundaries, and the applicable municipal or county comprehensive land use plans (Urban Growth Areas, 3.4.4).
- Where facilities and services will be provided by special purpose, improvement or facility service provision entities, such entities shall coordinate the provision of facilities and services with the county, and each affected municipality in the county, so that new growth and development is, in fact, served by adequate public facilities and services at the time of development (Urban Growth Areas, 3.5).

- The county, and each municipality in the county, shall adopt plans and implementation measures to ensure that sprawl and leapfrog development are discouraged in accordance with the following:
 - a. Urban growth within UGA boundaries is located first in areas already characterized by urban growth that have existing public facility and service capacities to serve such development (Urban Growth Areas, 3.6.1);
 - b. Urban growth is located next in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources (Urban Growth Areas, 3.6.2).
- Urban government services shall be provided primarily by cities and urban governmental services shall not be provided in rural areas (Urban Growth Areas, 3.6.5).
- Facility and service provision/extension to new development areas shall be subject to payment of the full, but fair, share of costs of needed facilities and services, consideration of the total impact of the facility or service extension on the achievement of other policies, goals and objectives, in addition to the impact on the area being served, and if necessary to minimize off-site impacts, specify that such service extensions (e.g., sewer, water) are not subject to connection by intervening landowners (Urban Growth Areas, 3.9).
- Joint jurisdictional planning shall occur in those other areas where the respective jurisdictions agree that such joint planning would be beneficial, including how zoning, subdivision, and other land use controls will be coordinated; how appropriate service level standards for determining adequacy and availability of public facilities and services will be coordinated; how the rate, timing, and sequencing of boundary changes will be coordinated; how the provision of capital improvements to an area

will be coordinated; and to what extent a jurisdiction(s) may exercise extrajurisdictional responsibility (Urban Growth Areas, 4.0).

- Joint planning may be based on factors including, but not limited to: contemplated changes in municipal and special purpose district boundaries; the likelihood that development, capital improvements, or regulations will have significant impacts across a jurisdictional boundary' and the consideration of how public facilities and services are and should be provided and by which jurisdiction(s) (Urban Growth Areas, 4.3).

8.4 Planning Implications

Development within the City of Lakewood will depend in part on the availability of utilities. The city currently does not provide utility service to its customers, and coordination with utility providers will be required. As an example, population projections used in previous (1991) sewer planning documents are not consistent with more recent PSRC projections. As an example, population projections used in previous (1991) sewer planning documents are not consistent with more recent PSRC projects. Utility providers must be informed of city planning policies, growth projections, and land use decisions. Utility providers must be given adequate time to respond to changes in policies and land use decisions so that adequate utility services can be developed.

Extension of sewer service to the currently unsewered areas of Tillicum and/or American Lake Gardens may be a future consideration.

There has been, in the recently completed visioning process, support expressed for further undergrounding of overhead utilities. The city will need to identify how to work with existing utility providers to identify priorities, funding mechanisms, and levels of service.

Several of the lakes inside the city limits have been identified as aquifer recharge areas. Aquifer time of travel areas for the 29 producing wells inside the city limits encompass a

large portion of the city limits. These considerations may influence future land use decisions.

A stormwater utility capital improvement program does not currently exist. Drainage problems occurring inside the city may be affected by stormwater facilities in upstream areas outside the city limits. The city may choose to work closely with other agencies, including the county and neighboring cities to address stormwater concerns.

The city may choose to provide utility services now provided by others, if feasible. If this is desirable by the city, criteria should be developed to evaluate feasibility, scheduling, and financial impacts.