

Economic Analysis Technical Report

Aurora Corridor Improvement Project N 165th Street to N 205th Street



AURORA CORRIDOR



Economic Analysis Technical Report

Aurora Corridor Improvement Project: N 165th Street – N 205th Street

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Acronyms and Abbreviations

BAT	Business Access and Transit
City	City of Shoreline
CMSA	Seattle Consolidated Metropolitan Statistical Area
FAZ	Forecast Analysis Zone
FHWA	Federal Highway Administration
FTE	full-time equivalent
I-5	Interstate 5
LID	Low Impact Development
OFM	Office of Financial Management
PSRC	Puget Sound Regional Council
SR	State Route
WSDOT	Washington State Department of Transportation

Glossary

Amenity Zone	The area between the roadway and sidewalk, which may include natural drainage systems, landscaping, signage, shelters, benches and other pedestrian-oriented elements, or some combination of these, which are provided to enliven the pedestrian experience.
Aurora Commercial District	Commercial area along Aurora Avenue N from N 145th Street to N 205th Street. This district provides the primary economic base for the City of Shoreline.
Acquisition	The purchasing of property, residences, or businesses for right-of-way necessary to construct or support a project.
Business Trade Area	Geographic area from which 80 to 90% of the customers of a particular business originate. The size of trade areas vary by type of business.
Capture Rate	Percentage of the competitive market that a product or service obtains.
Compliant Parking	Parking stalls that are fully contained on private property and do not require backing

	onto the right-of-way for egress.
Convenience Business	Also called a “drive-by” business, is a store or business that a customer typically patronizes as an impulse when driving by.
Destination Business	Specific store or commercial center that a customer makes a premeditated decision to patronize.
Forecast Analysis Zone (FAZ)	Groups of census tracts defined by the Puget Sound Regional Council, used to project the distribution of future population and employment.
Full Time Equivalent (FTE)	FTE is a computed statistic that represents the number of full-time employees that would be employed if the reported number of hours worked by part-time employees were worked by full-time employees. For example, assuming a 40-hour full time work week, two employees each working 20 hours would constitute 1 FTE.
Low Impact Development (LID)	An approach to stormwater management that uses the natural processes of vegetated areas to infiltrate, filter, store, evaporate, and detain runoff close to its source.
Non-Compliant Parking	Parking stalls that are located fully or partially in the public right-of-way, and/or require backing onto the right-of-way for egress.
North American Industry Classification System (NAICS)	Classification system developed jointly by the U.S., Canada, and Mexico to provide comparability in statistics about business activity across North America.
Preferred Alternative	Developed to minimize adverse impacts that had been identified through environmental and economic analysis of the initial three project alternatives.
Project Area	Properties fronting Aurora Avenue from North 165th to North 205th. These are the properties directly affected by the proposed roadway improvements.
Right-of-Way	Land set aside for use as a roadway corridor. Rights-of-way are purchased prior to the construction of a new road, and usually enough land to include sidewalks, planting strips, retaining walls, or any other features that are included as part of the roadway improvement.
Shoreline Trade Area	Geographic area from which 80 to 90% of the customers of the Aurora Commercial District originate.
Sector	Within the context of an economic analysis, a high-level grouping of specific industries with common characteristics based on the standard industrial classification system.
Triple Net Rental Rate	Tenant pays operating expense such as utilities, taxes, insurance, and cleaning.
Underutilized Property	Indicated when the assessed value of land exceeds the assessed value of the buildings upon it.

Chapter 1. Introduction and Summary

Introduction

The City of Shoreline (City) and the Washington State Department of Transportation (WSDOT) have initiated an improvement project for State Route (SR) 99, Aurora Avenue N, in the City of Shoreline. The Project is intended to improve safety for the 33,000 to 39,000 vehicles and pedestrians that currently use the highway daily and accommodate future traffic growth. The Project will provide additional lanes for business access and transit; improvements to intersections, including proposed new traffic signals at the intersections of Aurora Avenue N with Firlands Way N/N 196th Street and N 182nd Street; a landscaped center median with left and U-turn pockets; stormwater facilities, including Low Impact Development (LID) elements in the median and/or amenity zone; new curbs, gutters and sidewalks; and new street and sidewalk lighting.

Improvement of the portion of Aurora Avenue N from N 145th Street to N 165th Street has been recently completed (this project is often referred to as “the first mile”). Construction of that phase was initiated in summer 2005 and completed in summer 2007. The improvement project from N 165th Street to N 205th Street is currently in the planning and design phases, with construction planned to begin in early 2009.

Project

Proposed improvements to Aurora Avenue N between N 165th Street and N 205th Street, including additional lanes for business access and transit; improvements to intersections, a landscaped center median with left and U-turn pockets; stormwater facilities, including Low Impact Development; new curbs, gutters and sidewalks; and new street and sidewalk lighting.

Low Impact Development (LID)

An approach to stormwater management that uses the natural processes of vegetated areas to infiltrate, filter, store, evaporate, and detain runoff close to its source.

Amenity Zone

The area between the roadway and sidewalk, which may include natural drainage systems, landscaping, signage, shelters, benches and other pedestrian-oriented elements, or some combination of these, which are provided to enliven the pedestrian experience.

The City is currently preparing the environmental analysis to inform the decisions of the City, State, and Federal Highway Administration (FHWA). Three alternatives were initially considered for the project:

- **Alternative A** – a 98-foot roadway cross-section (plus 3 feet of additional width on each side of the roadway for utilities) that does not include an amenity zone, shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.
- **Alternative B** – 110-foot roadway cross-section that does include an amenity zone, shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.
- **Alternative C** – 110-foot roadway cross-section that does include an amenity zone, shifted to the west of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.

After the environmental analysis for the three initial alternatives was completed, a fourth **Preferred Alternative** was developed to minimize impacts that had been identified. The Preferred Alternative was adopted by the City Council on July 23, 2007, following a public hearing that was held a week earlier on July 16, 2007. A more complete description of the four alternatives is included in Appendix A of this report.

Preferred Alternative

Developed to minimize adverse impacts that had been identified through environmental and economic analysis of the initial three project alternatives.

At the initiation of the environmental process for this project, the City committed to evaluating potential economic impacts beyond what is required for the environmental analysis. Property Counselors is the economic consultant on the environmental team charged with estimating these business, property, and related economic impacts. This report documents the results of the economic analysis for the four alternatives.

The analysis includes several elements:

- Profile of the existing business district and growth trends, based upon recorded data and interviews with business and property owners.
- Case studies of similar highway improvement projects, including the recently completed improvement of Aurora Avenue N from N 145th Street to N 165th Street, and other projects in the region and elsewhere.

- Discussion of potential impacts of the four alternatives on business receipts, property values, tax revenues, and employment after completion of construction.
- Discussion of potential impacts of the Project on business receipts, tax revenues, and employment during construction.
- Recommended mitigation measures during the construction period and thereafter.

The economic analysis addresses current and future conditions in the following three designated geographic areas:

- The **Project Area** includes the properties fronting Aurora Avenue from North 165th to North 205th (see Figure 1). These are the properties that could be directly affected by the proposed roadway improvements.
- The **Aurora Commercial District** is the larger commercial area along Aurora Avenue from N 145th Street to N 205th Street within the City of Shoreline (see Figure 2). This district provides the primary economic base for the City.
- The **Shoreline Trade Area** represents the geographic area from which 80 to 90% of the customers to the Commercial District originate (see Figure 3). Economic trends in the trade area will affect levels of business activity in the Aurora Commercial District and Project Area. The area is defined as the six Puget Sound Regional council (PSRC) Forecast Analysis Zones (FAZs) that extend approximately 2 to 3 miles from the center of the Aurora Commercial District.

Project Area

Properties fronting Aurora Avenue from North 165th to North 205th. These are the properties directly affected by the proposed roadway improvements.

Aurora Commercial District

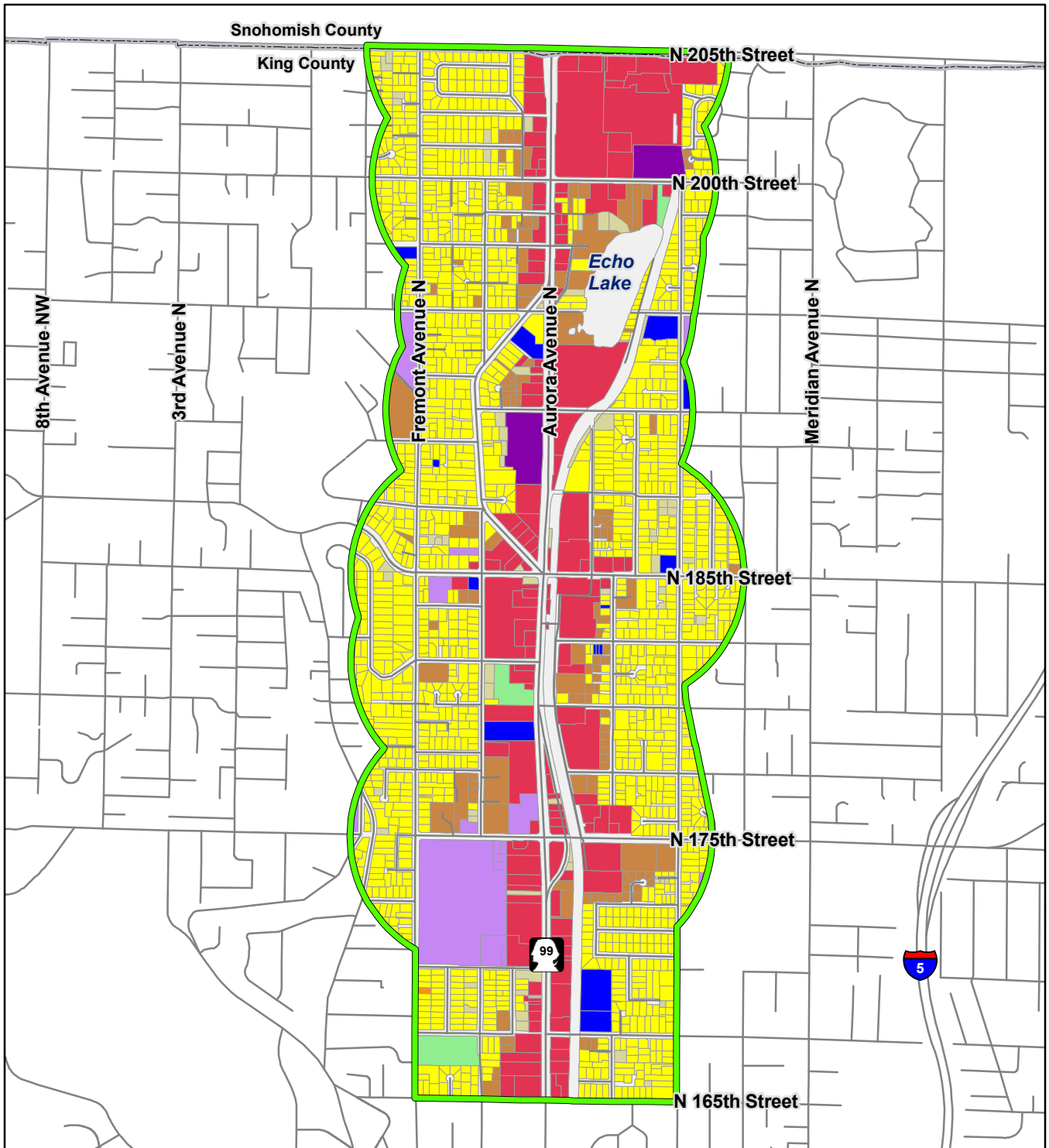
Commercial area along Aurora Avenue N from N 145th Street to N 205th Street. This district provides the primary economic base for the City of Shoreline.

Shoreline Trade Area

Geographic area from which 80 to 90% of the customers of the Aurora Commercial District originate.

Forecast Analysis Zone (FAZ)

Groups of census tracts defined by the PSRC, used to project the distribution of future population and employment.



Sources: City of Shoreline (2006); Jones & Stokes (2007); King County (2007)

Land Use within Project Area

- | | | |
|---------------|--------------------|-----------------------|
| City Boundary | Single-Family | Park & Ride |
| Study Area | Multi-Family | Open Space/Recreation |
| Road | Mobile Home | Vacant |
| | Civic/Quasi-Public | Right of Way |
| | Commercial | Other |
| | Industrial | |

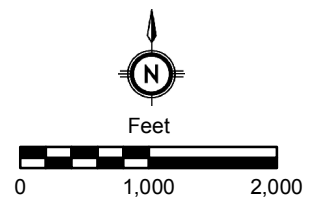
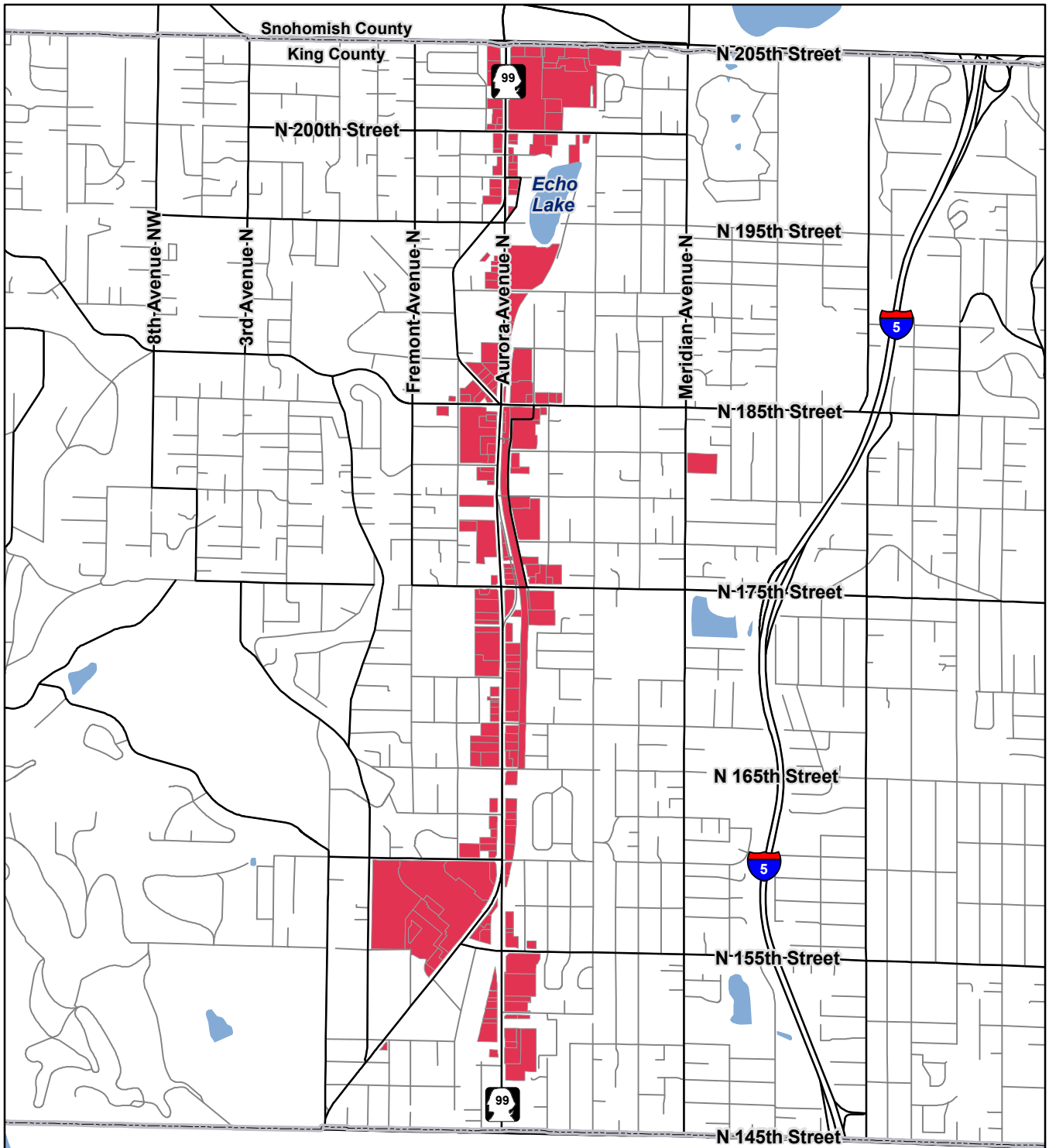






Figure 1. Project Area
Aurora Corridor Improvement Project
November 2007



Sources: City of Shoreline (2006); Jones & Stokes (2007); King County (2007)

-  City Boundary
-  Aurora Commercial District
-  Arterial
-  Local Street

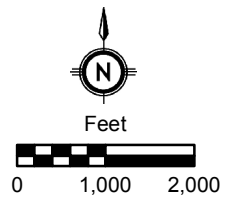
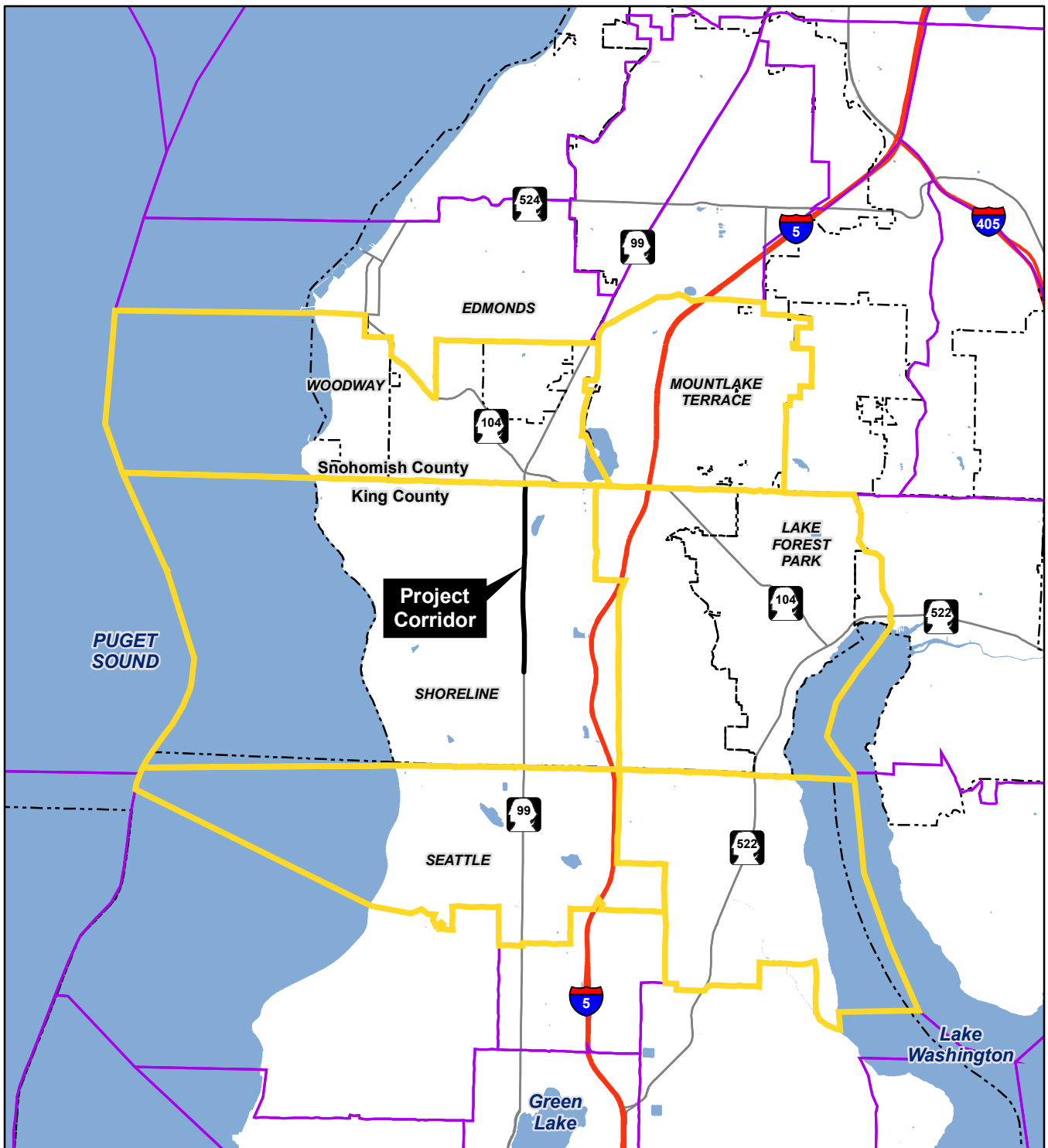








Figure 2. Aurora Commercial District
Aurora Corridor Improvement Project
November 2007



Sources: City of Shoreline (2006); Jones & Stokes (2007); PSRC (2007)

-  City Limits
-  Puget Sound Regional Council (PSRC) Forecast Analysis Zone (FAZ)
-  Shoreline Trade Area
-  Interstate
-  State Route
-  Water Body

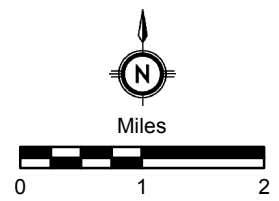


Figure 3. Shoreline Trade Area
Aurora Corridor Improvement Project
November 2007

This report is organized in seven chapters to address these elements.

1. Introduction and Summary
2. Current Business Profile
3. Projected Growth Trends
4. Case Studies of Business Impacts from Arterial Improvements
5. Potential Ongoing Impacts to Businesses after Construction
6. Potential Impacts to Businesses during Construction
7. Recommended Mitigation Measures

The major findings and conclusions of these chapters are summarized in the following Executive Summary section.

Executive Summary

Current Business Profile

This section summarizes the current business profile within the City, and particularly within the Aurora Commercial District, to establish a baseline by which future growth and potential impacts may be assessed. In addition to compiling sales, employment, tax assessor, and forecast data, information presented in the business profile was corroborated through direct interviews between Property Counselors and 30 business owners in the Project Area (see Appendix B for a copy of the interview questionnaire and listing of interviewees). The current business profile is discussed in more detail in Chapter 2 of this report.

The business trade area for different establishments within the Aurora Commercial District varies by type of business. Auto dealers, motels, and some specialty services and retailers serve a larger regional trade area consisting of King and Snohomish Counties, or in some cases, even farther away. Grocery stores, restaurants, fast food establishments, and personal service businesses tend to serve smaller trade areas, typically limited to neighborhood residents located adjacent to Aurora Avenue N.

The Aurora Commercial District includes a mix of businesses that serve trade areas ranging from the immediate neighborhood, to the City of Shoreline and the adjacent City of Lake Forest Park, to north King and south Snohomish Counties. Both the local Shoreline trade area and the larger regional trade area are characterized by relatively high incomes and low population growth rates.

The Aurora Commercial District within the City includes an estimated 300 businesses with \$465 million in annual taxable sales, which is approximately 70% of total sales in the City. New and Used Auto Dealer sales account for nearly 20% of total taxable retail sales in the Aurora Commercial District. Other major concentrations in the retail trade sector are Building Materials/Garden Equipment and Supplies (14.5%) and General Merchandise (9.9%). The only significant category in the industry/services sector is Food Services (6.8%). Businesses in which the Aurora Corridor has a relatively low level of activity are Furniture and Home Furnishings, Electronics and Appliances, Apparel, Construction, Manufacturing, Information, and Finance/Insurance. Of the \$465 million in taxable sales in the Aurora Commercial District, \$403 million was generated by businesses in the Project Area.

Business Trade Area

Geographic area from which 80 to 90% of the customers of a particular business originate. The size of trade areas vary by type of business.

Sector

Within the context of an economic analysis, a high-level grouping of specific industries with common characteristics based on the standard industrial classification system.

Current land values in the Aurora Commercial District are approximately \$40 to \$50 per square foot. Older buildings are selling for \$100 to \$150 per square foot, with new buildings selling for as much as \$300 per square foot. The existing assessed value of the 2-mile portion from N 165th to N 205th shows an assessed land value that exceeds the assessed value of improvements (buildings) by a factor of more than 3.4. As developed sites usually have building values that exceed the underlying land value, this measure indicates that the property along the 2-mile project area in total is underutilized.

Underutilized Property

Indicated when the assessed value of land exceeds the assessed value of the buildings upon it.

Projected Growth Trends

This section summarizes the trends in business growth that are projected for the City and for the Aurora Commercial District, to assess the potential for new future development. Projected growth trends are discussed in more detail in Chapter 3 of this report.

Future demand for development along the corridor is related to (1) trade area resident spending, and (2) the ability of the district to capture that spending. Based upon population and employment forecasts developed by the Puget Sound Regional Council (PSRC), the Shoreline Trade Area is likely to experience relatively low population growth rates but greater increases in household income. Based upon these expected rates, spending by residents of the regional trade area extending north into Snohomish County and south into Seattle is projected by Property Counselors to grow from \$1.9 million to \$2.5 million by 2025. If the Aurora Commercial District and the City as a whole maintain current capture rates, this translates to approximately 900,000 square feet of new retail development that could be supported over that period. If the Aurora Commercial District can increase its capture rate, the amount of development would be proportionately higher. Office uses, lodging, and other service uses would provide additional demand for commercial development.

Capture Rate

Percentage of the competitive market that a product or service obtains.

Case Studies of Business Impacts

This section describes the case studies that were evaluated to assess the potential for impacts to businesses that could result from this Project. Case studies summarized here are described in more detail in Chapter 4 of this report.

The Aurora Avenue N improvements, between N 145th Street and N 165th Street, provide a relevant case study for economic impacts. This portion of Aurora Avenue N is similar in terms of business character and

highway configuration. In addition, the elements proposed for this project are similar to those completed in the improvement of the first mile. A comparison of before and during construction taxable sales data indicates that overall, taxable receipts increased in total by 6.6% during project construction; however sales trends varied by sector. For example, miscellaneous retail sales increased by 12.9%, while motor vehicle sales declined by 1.1% and food services declined by 8.5%. Please note, these numbers represent averages within each sector. In sectors that showed increases, it is possible that some individual businesses experienced increases while others experienced decreases, but the average overall was an increase. Likewise, in sectors that showed overall decreases, it is possible that some individual businesses experienced decreases while others experienced increases, but the average overall was a decrease. The increases recorded during construction of the first mile cannot be presumed to be a direct result of project construction; however, they do provide evidence that several business sectors were able to increase sales in spite of the adjacent roadway construction that was going on at the time.

SR 99 has been improved in other jurisdictions to the north and south of Shoreline. In the cities of SeaTac and Federal Way, the right-of-way was widened and a median with left-turn pockets was installed. In the cities of Edmonds and Lynnwood, the right-of-way is narrower than the right-of-way proposed for this project, and a two-way left-turn lane is maintained. None of the jurisdictions along SR 99 documented sales before, during, and after construction for purposes of comparison. However, feedback from construction managers indicates that sales declines were observed during construction of these projects.

The impact of roadway improvement projects, particularly projects involving access management and restrictions on left turns, has been the subject of many studies across the country. While the studies differ in their scope and degree of quantification, several conclusions are common to all:

- The studies all distinguished between destination businesses and convenience businesses. A destination business is a specific store or commercial center that a customer makes a premeditated decision to patronize. Customers of destination businesses are more likely to tolerate restrictions on access. A convenience business, or drive-by business, is a store or business that a customer typically patronizes as an impulse when driving by. Potential customers of convenience businesses are more likely to choose an alternative establishment if

Right-of-Way

Land set aside for use as a roadway corridor. Rights-of-way are purchased prior to the construction of a new road, and usually enough land to include sidewalks, planting strips, retaining walls, or any other features that are included as part of the roadway improvement.

Destination Business

Specific store or commercial center that a customer makes a premeditated decision to patronize.

Convenience Business

Also called a "drive-by" business, is a store or business that a customer typically patronizes as an impulse when driving by.

they perceive restriction on access or limitation on parking. Such businesses require visibility, signage, and convenient access. The most common types of convenience businesses are gas stations, convenience stores, fast food restaurants, and some personal services.

- The studies also distinguished between businesses at mid-block locations that do not receive direct left-turn access, and businesses that do receive direct left-turn access.
- Impacts on business sales vary by type of business and location. Studies indicated that convenience retailers could suffer losses of as much as 25% during construction; while destination businesses typically experience smaller losses in the realm of approximately 5%. After construction is complete, studies show that destination businesses do not experience significant loss of on-going business due to left-turn restrictions; while convenience businesses may experience losses in the range of 1% to 5%.
- Studies that addressed property value impacts indicate that access management projects do not typically have a negative effect on property values.

It should be noted that after the proposed Project is completed, all except 26 businesses along the 2-mile corridor would have direct access via left-turn and U-turn pockets or at signalized intersections; and some businesses that do not currently have direct left-turn access would receive it as a result of Project. The trends discussed in these studies would be potentially applicable only to the 26 businesses that would not have direct left-turn access.

Estimate of Ongoing Impacts to Business after Construction

This section summarizes the ongoing impacts that could potentially occur after construction of the proposed Project is completed. Potential on-going impacts to businesses after construction are discussed in more detail in Chapter 5 of this report.

Business Receipts

Business receipt impacts were estimated for property acquisitions (including parking) and access restrictions. Table 1 summarizes

estimated building impact and property acquisitions for the four Project alternatives.

Table 1. Estimated Building Impacts due to Property Acquisition

	Existing Base ¹	Alternative A	Alternative B	Alternative C	Preferred Alternative
Property Acquisition (Square feet)	5,556,592	150,185	164,713	183,861	142,199
Building Impact (Square feet)	1,390,473	2,672	6,127	8,686	1,590

¹ Existing base consists of properties and businesses within the Project Area.

Source: CH2M Hill 2007

Alternative C requires the greatest level of land acquisition and would result in the highest level of building impacts. The Preferred Alternative requires the least land acquisition and would have the lowest level of building impacts. Acquisition and any necessary relocation would be conducted in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act, as amended. For properties with buildings that would be partially impacted, business owners may choose to remodel on site and maintain existing business, or they may choose to relocate.

The other most tangible impact of property acquisition is loss of parking. Fifteen to 17 businesses, depending on the alternative, were identified as losing 20% or more of their existing parking, resulting in fewer than 3.3 spaces per 1,000 square feet of building. The 20% threshold represents a level at which it is expected parking loss could be mitigated with employee parking off-site, based on typical ratios of employee parking demand to overall parking demand. The 3.3 factor represents current City zoning requirements. This is the level of parking supply expected to meet the needs of most retail businesses at all times except peak periods of retail (Urban Land Institute 1993). Table 2 summarizes the annual estimated losses related to parking acquisition for each alternative, based upon 2006 sales receipts and proportionate sales reduction factors for the 15 to 17 businesses. The table shows that the taxable sales loss for property acquisitions is estimated to be greatest for Alternative B. The figures do not reflect any effort to reconfigure parking to minimize the number of lost stalls. In that respect, the numbers in Table 2 represent worst case.

Table 2. Potential Annual Taxable Sales Receipt Impacts due to Property Acquisition and Loss of Parking¹

Potential Taxable Sales Impacts (Percent of Existing Base)				
Existing Base ²	Alternative A	Alternative B	Alternative C	Preferred Alternative
\$403,198,000	– \$4,033,000 (1.0%)	– 4,063,000 (1.0%)	– \$3,101,000 (0.7%)	– \$1,808,000 (0.4%)

1. Impacts shown in this table are based on an assumption of full loss of impacted parking spaces. Potential impacts would be lower if some parking is regained by reconfiguration of the remaining space on properties, which would result in a lower impact on taxable sales.

2. Existing base consists of Project Area business receipts in 2006.

Source: CH2M Hill 2007, Property Counselors 2007

Table 3 summarizes the estimated annual losses in taxable sales related to left-turn restrictions. Losses are estimated at 5% of sales for businesses in convenience sectors, conservatively based upon case studies described in the previous section. The estimated annual sales loss related to access limitations is small and applies equally to all alternatives.

Table 3. Potential Annual Taxable Sales Receipt Impacts due to Left-Turn Access Limitations

2006 Annual Sales of Convenience Businesses ¹	\$3,574,000
Estimated Annual Loss	– \$178,000

1. Existing base consists of 2006 sales Project Area businesses.

Source: Property Counselors 2007

It is expected that the estimated losses summarized in Tables 2 and 3 would be recovered as buildings are expanded and new businesses are attracted to the Aurora Commercial District.

Property Values

Table 4 summarizes the current land values in the Project Area, and projected future land values after construction of the project is completed. Land prices are projected to increase by approximately 15% after project construction is complete, based on experience in comparable business districts in which similar types of roadway improvements have been completed. The estimated effect of the project on land values is the same for the four build alternatives.

Table 4. Estimated Changes in Land Values in Project Area After Project Construction

	Current Value	Estimated Value After Construction
Land Value (per square foot)	\$40 to \$50	\$45 to \$58
Assessed Value of Land In Project Area	\$182,678,900	\$210,080,700

Source: Property Counselors 2007

Tax Revenue

The tax revenues to state and local government will change with land ownership, land value, and business receipts. The projected loss in sales tax revenue for the Preferred Alternative is expected to be less than the increase in property tax revenue due to property value increases; thus, the net impact is expected to be positive for the City and state, assuming no changes in land use. The projected loss in sales tax revenue for Alternatives A, B, and C is expected to be greater than the increase in property tax revenue due to property value increases, at least in the short term; thus, the net impact on tax revenue is expected to be negative for the City and state.

It is expected that there will be demand for new development, including expansion of existing businesses and addition of new businesses. Taxes from the new development would ultimately lead to increases in overall tax revenues to the City and state under all four alternatives.

Employment Impacts

According to 2006 Shoreline retail employment and taxable sales, businesses averaged approximately \$157,000 in receipts per each full-time equivalent (FTE) employee. Decrease in sales resulting from the Project could result in a proportional decrease in employment. Based on the projected sales impacts summarized in Tables 2 and 3, a corresponding decrease in FTE employees ranging between 13 and 27 could potentially occur (projection depends on alternative, with the Preferred Alternative at the low end of the potential range). These figures represent between 0.1% and 0.3% of the 10,456 Retail, Service and Finance, Insurance and Real Estate jobs in the City.

It is expected that any employment losses that result from property acquisition would be ultimately offset by employment associated with new development expected to occur within the Aurora Commercial District after roadway improvements are completed. Also, potential impacts shown Table 2 are based in part on an assumption of full loss of

Full Time Equivalent (FTE)

FTE is a computed statistic that represents the number of full-time employees that would be employed if the reported number of hours worked by part-time employees were worked by full-time employees. For example, assuming a 40-hour full time work week, two employees each working 20 hours would constitute 1 FTE.

impacted parking spaces. Estimated impacts are expected to be lower if some parking is regained by reconfiguration of the remaining space on some properties.

Any decreases in employment due to Project-related impacts are expected to be offset by employment associated with new development in the corridor after Project completion.

Potential Impacts During Project Construction

This section summarizes the impacts that could potentially occur during construction of the proposed Project. Potential impacts to businesses during project construction are discussed in more detail in Chapter 6 of this report.

Business Receipts

Based upon the experience of case studies evaluated for similar types of projects (described in the previous section), potential losses in business receipts resulting from project construction are estimated to vary from 1% to 3% for destination businesses; and from 9% to 15% for convenience businesses. The lower ends of the ranges are based upon the experience of the first mile, and the higher ends of the ranges are based upon the experience of projects in other cities. Please note, the factors derived from the first mile construction experience are much lower than average factors derived from the experience of projects elsewhere. The experience from the first mile also indicates that some businesses may be able to increase sales in spite of construction; and that potential exists for losses that directly result from Project construction to be offset or even exceeded by increase in sales unrelated to construction.

Project construction is scheduled to begin in early 2009 and last for 2 to 4 years, depending on phasing. Businesses are likely to experience some loss in sales throughout the period regardless of how the Project is phased.

Tax Revenues

Local governments are expected to experience a loss of sales tax from the lost business receipts, but an increase in revenue from sales tax on construction activities related to the Project.

No tax revenue impact is estimated for the state. Business receipts losses will be captured by other jurisdictions and still taxable by the state. In the case of the construction tax revenues, the state will be paying a portion of those taxes in project costs.

Employment

Similar to the potential employment impacts discussed for conditions after Project construction, any decrease in sales that occurs as a direct result of construction could result in a corresponding decrease in employment. Based on 2006 Shoreline retail employment and taxable sales (described in previous section), one FTE person is employed for each \$157,000 in sales receipts. Decrease in sales that result from Project construction could result in a proportional decrease in employment along these lines. However, the following two factors could potentially offset this impact:

- Experience in other areas suggests that employers that do experience sales loss often maintain their employees in expectation of sales recovery at construction completion.
- Based upon experience of the first mile, it is possible that sales losses that directly result from project construction could be offset by sales growth that some businesses may be able to maintain in spite of project construction.

An increase in construction-related employment would also be expected throughout the course of Project construction. Based upon project costs and employment data for other roadway construction projects, it is estimated that one FTE person is employed for each \$500,000 of project construction cost. For example, \$20 million in construction cost would translate to 40 FTE people employed by the project.

Mitigation

This section summarizes the mitigation measures that are recommended to address potential impacts during and after project construction. Mitigation measures are discussed in more detail in Chapter 7 of this report.

A variety of actions to mitigate impacts during construction have been identified in case studies, economic development literature, and

interviews with businesses and property owners. The actions fall into several broad categories:

- **Overall Communication** including establishing a single point of contact and communicating construction progress through a variety of methods.
- **Construction Project Management** including actions to shorten construction duration, and avoiding times of day and year when commercial activities are particularly vulnerable.
- **Access Maintenance** including assuring business access during construction.
- **Signage** to direct potential customers to and through the district, and to individual businesses during open hours.
- **Promotion** including publicizing the fact that the district is open for business, and special events or programs.
- **Business Assistance** including technical and financial assistance for businesses.

These measures can reduce the levels of potential impact, but would not be expected to eliminate them altogether. Several actions can be taken to mitigate potential ongoing effects to businesses after construction:

- Provide convenient shared parking for businesses losing off-street parking.
- Consider altering roadway cross sections in some areas to reduce building acquisitions, but require dedication of full width of right-of-way at time of any redevelopment. (Note, this measure was implemented in the development of the Preferred Alternative)
- Coordinate all upcoming public improvements to assure business stability at completion of highway improvements.
- Use completion of improvements as centerpiece of new promotion of the district.
- Increase corridor-wide economic development activities to expand existing businesses and attract new development to district.

These efforts, particularly the economic development and promotion activities, can minimize the length of time required for businesses to recover.

Chapter 2. Current Business Profile

This chapter discusses existing business profile of the Shoreline Trade Area and the Aurora Commercial District. A profile of the Aurora Commercial District provides an understanding of how the district currently performs and a baseline for identifying potential impacts. The profile is presented in this chapter in terms of trade area demographics, business mix, and property values. In addition to compiling sales, employment, tax assessor, and forecast data, information presented in this chapter was corroborated through direct interviews between Property Counselors and 27 business owners in the Aurora Commercial District (see Appendix B for a copy of the interview questionnaire and listing of interviewees).

Trade Area Demographics

This section discusses population levels and economic trends for the City of Shoreline, its surrounding trade area, and the region as a whole. The Shoreline Trade Area represents the geographic area from which 80 to 90% of the customers to the Aurora Commercial District (see Figure 2) originate. The trade area for the City of Shoreline is larger in geographic area than the city itself, including portions of the cities of Edmonds, Mountlake Terrace, Bothell, Lake Forest Park, and Seattle (see Figure 3). The economic characteristics of this trade area are directly relevant to the development potential of the corridor and are influenced by regional Puget Sound market trends, due to of the corridor's large size and some of its regional uses.

Regional Overview

The Puget Sound region is defined generally as Seattle and its surrounding counties, and specifically as the Seattle Consolidated Metropolitan Statistical Area (CMSA). The CMSA contains six counties: King, Pierce, Snohomish, Kitsap, Island, and Thurston. King, Pierce, Snohomish, and Kitsap counties are members of the PSRC and are the subject of extensive economic modeling and forecasting. For the purpose of this discussion, the four-county area is considered to be the greater Seattle region.

Aerospace, forest products, defense, and international trade dominate the economic base of the region. Software, biotechnology, telecommunications, services, and tourism are also increasingly important sectors. While the Boeing Company remains the largest employer in the state, the economy has diversified extensively over the past two decades, and the state's economy has continued to grow in spite of large cuts in Boeing employment at the beginning of the 1990s. Although the economy of the region experienced the same slowdown as the rest of the country beginning in 2000–2001, the long-term outlook is good. The historical and projected levels of population and employment are summarized in Table 5.

Table 5. Puget Sound Region Projected Population and Employment Growth

	2000	2010	2020	2030	2040	Annual Growth Rate			
						2000-2010	2010-2020	2020-2030	2030-2040
Regional Population (1,000s)									
Puget Sound Region	3,276	3,696	4,149	4,544	4,988	1.2%	1.2%	.09%	.09%
King County	1,737	1,893	2,075	2,235	2,402	.09%	.09%	.07%	.07%
Snohomish County	606	734	862	967	1,084	1.9%	1.6%	1.2%	1.2%
Shoreline (North King C.)	67.1	68.1	69.2	70.3	70.7	.02%	.02%	.02%	0.1%
Regional Employment (1,000s)									
Puget Sound Region	1,760	1,935	2,225	2,498	2,789	1.0%	1.4%	1.2%	1.1%
King County	1,196	1,311	1,498	1,665	1,831	.09%	1.3%	1.1%	1.0%
Snohomish County	218	249	299	350	407	1.4%	1.8%	1.6%	1.5%
Shoreline (North King C.)	17.8	18.0	19.1	20.1	21.4	.01%	0.6%	0.5%	0.6%

Source: Puget Sound Regional Council 2006, Forecasts of Regional Population, Households, and Employment

Table 5 shows that the population of the four-county region was 3.3 million in 2000 and is projected by PSRC to reach 5.0 million by the year 2040. The population of King County represented approximately 53% of the regional population in 2000, but that share is projected to drop to 48% by 2040. King County's share of jobs exceeds its share of population, with 68% of regional jobs located in King County in 2000. The share is expected to decline slightly to 67% by 2040.

The Shoreline subarea (defined by PSRC as North King County and including Lake Forest Park) had a population of 67,100 in 2000. It is projected to grow somewhat slowly to 70,700 by 2040 as it reaches its physical capacity. The number of jobs stood at 17,800 in 2000, and is projected to increase to 21,400 by 2040.

City of Shoreline

Table 6 presents comparison of demographic characteristics of the City to the State of Washington. According to the 2000 census, Shoreline had a population of 53,025. The most recent estimate for the City (2006) from the Office of Financial Management (OFM) is 52,830 (OFM 2006).

Table 6. City of Shoreline Demographic Characteristics

	City of Shoreline	Washington
Population	53,025	5,894,121
Average Household Size	2.5	2.53
Median Age	39.3	35.3
Population Under 18 (% of Total)	22.5%	25.7%
Population 65 or Older (% of Total)	14.5%	11.2%
Owner Occupied Housing (% of Total)	68.0%	64.6%
Education Attainment (Pop. 25+ Yrs)		
High School or higher	90.2%	87.1%
Bachelor's Degree or higher	37.3%	27.7%
Median Household Income	\$51,658	\$45,776

Source: US Census Bureau, Profile of General Demographic Characteristics 2000

Notable differences between Shoreline and the state include an older median age, higher proportion of residents 65 years or older, and a substantially greater proportion of people with bachelor's degrees or

higher education attainment. Median household income exceeded the statewide median by 13%.

Shoreline Trade Area

The City has the potential to provide retail goods and services for an area beyond its own boundaries. The trade area for any commercial district is determined by several factors:

- Distance to surrounding population.
- Natural boundaries and impediments to travel.
- Transportation links.
- Competing development.
- Scope of existing development in the district.

The projected trade area for Shoreline consists of six FAZs designated by the PSRC (see Figure 3). These zones are identified in Table 7, which provides population projection and household projections for the market area through 2040. Zones 6410 and 6420 approximate the boundaries of the City itself, together with the adjacent City of Lake Forest Park.

The table shows that the population of the trade area was approximately 151,000 as of 2000. The entire area is projected to increase 18% by the year 2040. Broadview/Haller Lake is the FAZ with the fastest projected growth rate, increasing 29% between 2000 and 2040.

Total households in the trade area as of 2000 were nearly 63,000. This number is anticipated to increase by 29% by 2040. The ratio of population to housing units is projected to decline over the period, meaning that the average household size is projected to decline. Multifamily housing units in the area are projected to increase 69% over the period. Multifamily units as a percentage of total housing units are projected to increase from 32% to 41%.

Table 7. PSRC Population and Household Projections – Shoreline Trade Area

Population	FAZ	2000	2010	2020	2030	2040
Lake City	6223	25,782	26,342	27,342	28,784	29,600
Broadview/Haller Lake	6326	22,458	22,736	24,658	26,913	29,085
Richmond Highlands ¹	6410	35,243	36,360	36,827	27,119	37,557
North City ¹	6420	31,813	31,737	32,363	33,154	33,135
Woodway/Esperance	7015	15,856	15,854	16,918	18,211	19,561
Mountlake Terrace	7100	20,090	21,635	23,439	24,507	26,817
Total		151,242	154,664	161,859	168,688	175,755

Household	FAZ	2000	2010	2020	2030	2040
Lake City	6223	11,631	12,094	13,092	14,044	14,870
Broadview/Haller Lake	6326	10,399	10,667	11,892	13,352	14,823
Richmond Highlands ¹	6410	13,733	14,407	15,047	15,638	16,294
North City ¹	6420	12,345	12,500	13,133	13,869	14,252
Woodway/Esperance	7015	6,608	6,730	7,421	8,253	9,151
Mountlake Terrace	7100	7,847	8,618	9,665	10,455	11,832
Total		62,563	65,016	70,250	75,611	81,222

Multi-family Households	FAZ	2000	2010	2020	2030	2040
Lake City	6223	4,487	4,920	5,582	6,288	6,923
Broadview/Haller Lake	6326	4,396	4,756	5,601	6,591	7,611
Richmond Highlands ¹	6410	3,223	3,579	4,037	4,509	5,183
North City ¹	6420	2,663	2,965	3,342	3,822	4,410
Woodway/Esperance	7015	2,217	2,430	2,821	3,403	4,034
Mountlake Terrace	7100	2,744	3,178	3,736	4,224	5,042
Total		19,730	21,828	25,119	28,837	33,203

1. FAZs that include City of Shoreline

Source: Puget Sound Region Council, 2006 Forecasts of Population, Households, and Employment

Employment

Table 8 provides the employment profile of the City of Shoreline.

Table 8. Employment in the City of Shoreline (2006)

Industry/Trade	Number Employed
Construction and Resources (Mining, Forestry)	825
FIRE (Finance, Insurance, Real Estate)	570
Services	7,092
Manufacturing	159
Retail	2,794
WTU (Wholesale Trade, Transportation, Utilities)	137
Education	2,339
Government	2,444
Total	16,360

Source: Puget Sound Regional Council information, obtained from the Washington State Employment Security Department 2006

While the Services sector is the largest sector in aggregate, there are no major employers within these sectors. Most such businesses are small and serve the local population. The largest employers in Shoreline are the Shoreline School District, WSDOT, and major retailers (Costco, Home Depot, and Fred Meyer).

Income

The Office of Financial Management estimated the most recent figures for household income for the larger region for 2006. Median household income estimates for Puget Sound counties for 2006 are summarized in Table 9.

Table 9. Household Income Estimates – 2006 by County

County	Median Income
King	\$65,940
Kitsap	\$55,587
Pierce	\$57,102
Snohomish	\$63,313

Source: Office of Financial Management, 2006 Household Income Estimates Projections

2007 average household income estimates and total income by FAZ within the market area are summarized in Table 10.

Table 10. Household Income Estimates – Shoreline Trade Area

Area	FAZ	Adjusted 2006 Average Household Income	Aggregate Income
Lake City	6223	\$68,027	\$824,349,469
Broadview/Haller Lake	6326	\$68,450	\$712,226,797
Richmond Highlands ¹	6410	\$80,428	\$1,124,064,025
North City ¹	3420	\$73,639	\$689,629,069
Woodway/Esperance	7015	\$57,280	\$529,385,464
Mountlake Terrace	7100	\$72,425	\$519,145,166
Total		\$71,756	\$4,398,799,990

1. FAZs that include the City of Shoreline

Source: Puget Sound Regional Council 2006; US Census Bureau 2000; Property Counselors 2007

The two FAZs that roughly constitute the City of Shoreline (Richmond Highlands and North City) both have estimated average household incomes that exceed the average Trade Area household income.

Business Mix

Aurora Commercial District

The Aurora Commercial District is located along a portion of SR 99, which extends through much of western Washington. SR 99 is a heavily developed auto-oriented commercial district along much of its length in Pierce, King, and Snohomish Counties. Interstate 5 (I-5) supplanted SR 99 in the 1960s as the main north-south traffic route in western Washington. While I-5 is the more heavily traveled north-south route, SR 99 still carries a substantial level of north-south regional traffic. SR 99 has maintained its role as a provider of retail goods and services to a wide trade area.

The Aurora Corridor, a 3-mile-long stretch of SR 99 between N 145th Street and N 205th Street in Shoreline, has the primary concentration of commercial development in the City. Other concentrations of commercial development are described as follows:

- **North City:** This commercial district is centered near 15th Avenue NE and NE 175th Street in northeast Shoreline. Major businesses include Safeway, Walgreens, several restaurants, building materials outlets, auto parts and repair, and convenience retail. Enhancements to the North City commercial area were completed in mid-2006, with the goal of revitalizing the shopping district and improving traffic and pedestrian safety.
- **Richmond Beach:** A neighborhood shopping center anchored by QFC is located at Richmond Beach Road and 8th Avenue NW. Additional miscellaneous retail is across the street from this center as well.
- **N 145th Street/15th Avenue NE:** This commercial district straddles the Shoreline and Seattle boundary running along N 145th Street. Within the Shoreline portion are a former Albertson's grocery store (recently vacated), some restaurants, auto services, and convenience retail.

An inventory of businesses along the entire Aurora Commercial District and intersecting arterials, including the 2-mile project area, revealed a total of approximately 300 establishments. Table 11 summarizes the number of businesses by North American Industry Classification System (NAICS) type.

This data is based on businesses with taxable retail sales as reported by the Washington State Department of Revenue to the City of Shoreline. As indicated in Table 11, 130 of the businesses in the corridor are in retail trade and 158 are involved in services. The largest retail category is Food Services, more specifically, Limited Service Restaurants including fast food establishments. Other large categories are New and Used Auto Dealers, Food and Beverage Stores, and Finance/Insurance.

**North American Industry
Classification System (NAICS)**

Classification system developed jointly by the U.S., Canada, and Mexico to provide comparability in statistics about business activity across North America.

Table 11. Inventory of Businesses – Aurora Commercial District

NAICS Number	Type of Business	Aurora Corridor
44-45	Retail Trade	
441	Motor Vehicles & Parts	
	New/Used Auto Dealers 4411	17
	RV, Boat, Motorcycle Dealers 4412	
	Automotive Parts & Tire 4413	6
442	Furniture & Home Furnishings	8
443	Electronics & Appliances	6
444	Building Materials, Garden Equipment, & Supplies	10
445	Food & Beverage Stores	
	Grocery, Convenience Stores 4451	5
	Specialty Food Stores & Liquors 4452-53	6
446	Drug/health Stores	4
447	Gas Stations & Convenience Stores with pumps	8
448	Apparel & Accessories	8
451	Sporting Goods, Toys, Books, & Music Stores	9
452	General Merchandise Stores	2
4541	E-commerce & Mail Order	34
453	Miscellaneous Retailers	7
	Total Retail Trade	130
11	Agriculture, Forestry, Fishing	
21	Mining	
22	Utilities	
23	Construction	
31-33	Manufacturing	
42	Wholesale Trade	
48-49	Transportation & Warehousing	2
51	Information	2
52	Finance, Insurance	15
53	Real Estate, Rental, & Leasing	5
54	Professional, Scientific, & Technical Services	4
55-62	Management, Education, & Health Services	21
71	Arts, Entertainment & Recreation	8
72	Accommodations & Food Services	
	Accommodation	4
	Full Services Restaurants 7221	17
	Limited Service Restaurants 7222	36
	Drinking Places	5
81	Other Services	39
92,00	Public Administration, Other	
	Total Service/Other	158
	Total Businesses	288

Source: Washington Department of Revenue and City of Shoreline 2007

Of the 288 businesses, 213 are located in the Project Area, including 101 retail businesses, 96 service businesses, and 16 other businesses.

Taxable retail sales for business categories present in the Aurora Commercial District and the City of Shoreline are summarized in Table 12. Taxable sales for 2006 are divided by aggregate building area for each business category to provide an indication of sales on a per square foot basis. Of the \$465 million in taxable sales recorded in the Aurora Commercial District in 2006, \$403 million was generated by businesses in the Project Area.

New and Used Auto Dealer sales account for nearly 20% of total taxable retail sales in the Aurora Commercial District. Other major concentrations in the retail trade sector are Building Materials/Garden Equipment and Supplies (14.5%) and General Merchandise (9.9%). The only significant category in the industry/services sector is Food Services at 6.8%. Businesses in which the Aurora Corridor has a relative lack of activity are Furniture & Home Furnishings, Electronics & Appliances, Apparel, Construction, Manufacturing, Information, and Finance/Insurance.

Additional business profile information was obtained via interviews with individuals who operate a business and/or own property on Aurora Avenue N within Shoreline, both inside and outside the project area. Issues addressed in the interviews included identification of customers and competition, typical use patterns by time of day and day of week, advertising methods, parking use patterns, delivery vehicle requirements, business activity trends, anticipated effects due to roadway changes such as loss of parking, building improvements, and left turn/U-turn access. A copy of the interview questionnaire, and a list of business and property owners who were interviewed, is included in Appendix B of this report. Results of these interviews are summarized below.

Trade area of Aurora businesses varies by type of business. Auto dealers, motels, and some specialty services and retailers serve a larger regional trade area consisting of King and Snohomish Counties, or in some cases, even further away. Grocery stores, restaurants, fast food establishments, and personal service business tend to serve a smaller trade area, typically limited to neighborhood residents located adjacent to Aurora Avenue N.

Table 12. Taxable Retail Sales, Aurora Commercial District and City of Shoreline

NAICS No.	Industry	2006 Taxable Retail Sales	% of Total Sales in Corridor	Building Square Feet	Sales Square Feet	City of Shoreline	
						2006 Taxable Retail Sales	Aurora as % of City
44-45	Retail Trade						
441	Motor Vehicles & Parts						
	New & Used Auto Dealers 4411 & RV, Boat, Motorcycle Dealers 4412	\$90,662,101	19.50%	100,343	904	\$91,663,036	---
	Automotive Parts & Tire 4413	4,825,760	1.04%	40,445	119	7,903,173	---
442	Furniture & Home Furnishings	3,810,381	0.82%	95,443	40	4,130,173	---
443	Electronics & Appliances	5,417,263	1.17%	15,227	356	11,812,747	---
444	Building Material, Garden Equipment & Supplies	67,430,002	14.50%	164,967	409	85,375,502	---
445	Food & Beverage Stores						---
	Grocery & Convenience Stores 4451	22,306,320	4.80%	165,956	134	31,515,631	---
	Specialty Food Stores 4452 & Liquor Stores 4453	768,723	0.17%	20,824	37	348,318	---
446	Drug & Health Stores	11,065,838	2.38%	45,626	243	16,338,384	---
447	Gas Stations & Convenience Stores with Pumps	1,254,318	0.27%	17,725	71	6,788,925	---
448	Apparel & Accessories	5,996,611	1.29%	94,652	63	2,028,909	---
451	Sporting Goods, Toys, Book, & Music Stores	5,474,882	1.18%	47,257	116	11,651,534	---
452	General Merchandise Stores	45,926,198	9.88%	432,833	106	145,137,596	---
4541	E-commerce & Mail Order	15,267,988	3.28%	121,346	126	1,748,244	---
453	Miscellaneous Retailers	119,248,383	25.65%	273,512	436	21,497,177	---
	Total Retail Trade	\$399,454,768	85.91%	1,636,156	244	\$437,939,349	91%
11	Agriculture, Forestry, Fishing					151,778	---
2	Mining					56,970	---
22	Utilities					27,843	---
23	Construction	255,203	0%	12,837	20	88,821,248	---
31-33	Manufacturing	1,628,233	0.35%	21,912	74	4,276,976	---
42	Wholesale Trade					14,287,683	---
48-49	Transportation & Warehousing					764,260	---
51	Information	3,725,573	1%	1,200	3,105	27,157,037	---
52	Finance, Insurance	946,743	0.20%	65,700	14	3,148,505	---
53	Real Estate, Rental, & Leasing	9,047,064	2%	14,375	629	15,807,076	---
54	Professional, Scientific, & Technical Services	876,139	0%	35,224	25	7,952,350	---
55-62	Management, Education, & Health Services	999,275	0%	38,010	26	11,070,176	---
71	Arts, Entertainment, & Recreation	8,629,364	2%	132,272	65	11,699,817	---
72	Accommodations & Food Services						---
	Accommodations	602,012	13%	54,526	11	1,242,278	---
	Full Service Restaurants 7221	18,139,439	3.90%	80,289	226	8,948,784	---
	Limited Service Restaurants 722	12,911,858	2.78%	60,444	214		---
	Drinking Places	586,797	0.13%	48,331	12		---
81	Other Services	7,151,761	1.54%	162,452	44	20,474,881	---
	Total Services	49,896,645				91,388,286	55%
92,00	Public Administration, Other					157,571	---
	Total All Industries	\$464,954,229	100%	2,363,728	197	\$653,984,582	68%

Source: Washington Department of Revenue 2007; City of Shoreline 2007; Property Counselors 2007

Typical use patterns regarding busiest times of day and day of week also vary by business type. Auto dealers generally see the most customers throughout the day on weekends and evenings on weekdays, with Friday and Monday being the busiest weekdays. Full service restaurants report peak days of Friday through Sunday, whereas fast food establishments see their business spread out more evenly during the week. Meal times at both are the busiest times, typically 11:30 a.m. to 1:30 p.m. and 5:30 p.m. to 8:00 p.m. Grocery stores state their peak day is Saturday, and peak time of day throughout the week is 3:00 to 6:00 p.m. Personal service establishments such as banks and insurance offices are typically open only weekdays, and business traffic is fairly even during the day, although banks do see more customers at the lunch hour and between 4:00 and 6:00 p.m.

Advertising methods differ primarily by size of business and type of ownership (local, independent, franchise). Many smaller, locally owned establishments such as some restaurants, finance/insurance offices, retail stores, and personal services rely more on word of mouth, on-site signage, telephone indexes, and/or involvement in community events. Auto dealers, particularly those involved in new car sales, as well as fast food and motel franchises utilize the above as well as TV, radio, and print advertising, with the Internet also cited as a common marketing tool. The Internet is heavily used by some specialty businesses whose customers come from outside the North King County region.

With regard to parking and access issues, nearly all businesses interviewed stated they had sufficient on-site parking, both for customers and employees. In some cases, employees are required to park on adjacent property that is owned or leased by the business. Delivery vehicles are accommodated on site by most businesses, with some deliveries conducted at night to avoid tying up parking area during the day. The largest delivery vehicles servicing the corridor are auto transporters, which are present several times per week at the largest dealers. These vehicles typically off-load on adjacent properties (via agreements with neighboring owners) rather than on Aurora Avenue N itself.

Quality of access tends to vary by proximity to intersections, two-way center left-turn lanes, and designated left-hand turn lanes. In the recently completed roadway improvements of Aurora Avenue N between N 145th Street and N 165th Street, businesses located closest to intersections (where left turns as well as U-turns are allowed) typically report the highest satisfaction regarding access. In the remaining portion of Aurora

Avenue N within the City, between N 165th Street and N 205th Street, a continuous center left-turn lane is present through approximately 60% of the corridor, which allows turns in either direction, provides nearly equal access to most businesses.

Retail Development Market Conditions

Retail development along the Aurora Corridor falls into several distinct categories that differ according to the number and type of stores, the amount of space and site area, and the size of the market area they serve, both in terms of population and distance. Table 13 summarizes the characteristics of the major types of shopping centers.

Table 13. Types of Shopping Centers

<p>Neighborhood Shopping Center</p> <p>Anchors Supermarket and drug store</p> <p>Number of Stores 10-40 stores</p> <p>Total Retail Space 30,000-100,000 square feet</p> <p>Site Area 3-10 acres</p> <p>Market Area Population 10,000-30,000 people</p> <p>Market Area Radius 1-3 miles</p>	<p>Off-Price Centers</p> <p>Anchors Off-price/discount store</p> <p>Number of Stores 20-60</p> <p>Total Retail Space 100,00-500,00 square feet</p> <p>Site Area 5-15 acres</p> <p>Market Area Population 80,000-250,000 square feet</p> <p>Market Area Radius 6-15 miles</p>
<p>Community Shopping Center</p> <p>Anchors Junior department or discount store</p> <p>Number of Stores 25-80 stores</p> <p>Total Retail Space 100,000-450,000 square feet</p> <p>Site Area 10-30 acres</p> <p>Market Area Population 30,000-75,000 people</p> <p>Market Area Radius 3-8 miles</p>	<p>Specialty Center</p> <p>Anchors Specialty/theme retailer (s)</p> <p>Number of Stores Varies widely</p> <p>Total Retail Space Varies widely</p> <p>Site Area Varies widely</p> <p>Market Area Population Varies widely</p> <p>Market Area Radius Varies widely</p>
<p>Regional Shopping Center</p> <p>Anchors 1 or 2 full-line department stores</p> <p>Number of Stores 50-100 stores</p> <p>Total Retail Space 300,000-750,000 square feet</p> <p>Site Area 30-50 acres</p> <p>Market Area Population 100,000-250,000 people</p> <p>Market Area Radius 8-15 miles</p>	<p>Outlet Center</p> <p>Anchors Manufacturer's outlet stores</p> <p>Number of Stores 30-100 stores</p> <p>Total Retail Space 200,000-800,000 square feet</p> <p>Site Area 20-50 acres</p> <p>Market Area Population 200,000-600,000 people</p> <p>Market Area Radius over 50 miles</p>
<p>Super-Regional Shopping Center</p> <p>Anchors 3 or more full-line department stores</p> <p>Number of Stores 100-300 stores</p> <p>Total Retail Space 600,000-2,000,000 square feet</p> <p>Site Area 40-100 acres</p> <p>Market Area Population 250,000-600,000 people</p> <p>Market Area Radius 12-50 miles</p>	<p>Power Center</p> <p>Anchors Large warehouse/discount retailers</p> <p>Number of Stores 10-20 stores (mainly large retailers)</p> <p>Total Retail Space 250,000-800,000 square feet</p> <p>Site Area 20-50 acres</p> <p>Market Area Population 250,000-500,000 people</p> <p>Market Area Radius 12-50 miles</p>
<p>Strip Retail Center</p> <p>Anchors Convenience Grocery</p> <p>Number of Stores 3-20 stores</p> <p>Total Retail Space 10,000-30,000 square feet</p> <p>Site Area 1-3 acres</p> <p>Market Area Population under 20,000 people</p> <p>Market Area Radius under 2 miles</p>	<p>Sources</p> <p>Urban Land Institute, Dollars and Cents of Shopping Center</p> <p>Property counselors</p>

Source: Beyard 2002.

Located along the Aurora Commercial District are neighborhood, community, and strip retail centers, as well as one power center. Absent is a super-regional center, which typically has a market area radius ranging between 12 to 50 miles and a required population of 250,000 to 600,000 people. Alderwood Mall in Lynnwood and Northgate Mall in Seattle both fit this definition. These two super-regional centers strongly determine the boundary of the trade area for the Aurora Commercial District.

Table 14 summarizes major retail facilities currently operating within the Aurora Commercial District, including shopping and strip centers, and stand-alone buildings. The retail facilities are listed in the table according to their location from north to south. The first six centers are located in the Project Area, between N 165th Street and N 205th Street.

The two largest retail centers in the Aurora Commercial District are Aurora Village and Aurora Square. Aurora Village, located at the north end of the corridor, is a power center anchored by Costco and Home Depot. Other major tenants at this 572,000-square-foot center include Office Max, Petco, and Big 5 Sporting Goods. Aurora Square is a 360,000-square-foot community shopping center located at N 160th Street and Aurora Avenue N. Anchor tenants at this facility consist of Sears and Central Market. Other large tenants consist of Pier 1 Imports, Marshalls, Paper Zone, Big Lots, and Aaron Brothers Framing. Some non-profit entities also occupy large spaces at Aurora Village, paying below-market rent.

The third largest center in the Aurora Commercial District is Fred Meyer, located in the southwest quadrant of N 185th Street and Aurora Avenue. Large stand-alone grocery stores consist of Top Foods on N 175th Street and Safeway at N 155th Street. The most prominent strip centers include Parkwood Plaza, Westover Plaza, Pepper Hill Center, and the new Gateway Plaza. This latter center, located across the street from Fred Meyer at N 185th Street, is anchored by Bartells.

Table 14. Major Retail Facilities – Aurora Commercial District

Name and Location	Site Type	Year Built	Square Feet	Anchor Tenants	Other Tenants	Rental Rates
Aurora Village Aurora Ave. N./N 205th St.	Power	1993	572,141	Costco Home Depot	Office Max Big 5 Kinko's Petco	\$20 -\$32
Strip Retail Building 20019 Aurora Ave. N.	Strip Center	2002	7,246	Love's Package		\$12-\$18
Gateway Plaza Aurora Ave. N./N 185th St.	Neighborhood	2006	63,340	Bartell Drugs	Gold's Gym John L. Scott Starbucks	\$20
Fred Meyer 18325 Aurora Ave. N	Community	1961 - 2006	134,142	Fred Meyer	Radio Shack Kennelly Keys Spiros Allstate	
Top Foods 1121 N. 175th St.	Grocery	2003	56,035	Top Foods		
Walgreens 17524 Aurora Ave. N	Drug Store	2006	14,735	Walgreens		
Von's Square 16300 Aurora Ave. N	Strip Center	1987	9,321		Denist Travel Agency Salon	\$16.88
Strip Retail Building 16053 Aurora Ave. N	Strip Center	1945	5,405	AA Repair	Cellular Nail Salon	
7-11 Center 916 N. 106th St.	Strip Center	1973	14,181	7-11	Shoreline CC Salon Korean BBQ	\$18
Aurora Square 15711 Aurora Ave. N	Community	1967/1996	360,000	Sears Central Market Pier 1	Paper Zone Aaron Bros. Marshalls Rent-A-Center	\$10-\$18
Safeway Aurora Ave. N./155th St.	Grocery	1967	47,736	Safeway		
Parkwood Plaza 15220 Aurora Ave. N.	Neighborhood	1959 - 1978	74,300	Jo-Anns Fabrics Shari's Wendy's	Dollar Express Passport Digital Mom's Teriyaki	\$21
New Retail/Office Building 15225 Aurora Ave. N.	Stand-Alone	2007	9588	Cascade Bank	Sun Insurance	\$26 Retail \$20 Office
Westover Plaza 15001 Aurora Ave. N.	Strip Center	1984	24599		All State Wells Fargo Finance Qualstar	
Pepper Hill Center 14701 Aurora Ave. N.	Strip Center	1958 - 1985	33845		Toshi's Care Plus Quiznos	\$16-\$18
Walgreens 14510 Aurora Ave. N.	Drug Store	2000	15048	Walgreens		

Source: Commercial Brokers Association, Property Counselors 2007

Recent development, in addition to Gateway Plaza, consists of the following:

- Walgreens, one-half block north of the N 175th Street intersection
- Watermark Credit Union in the 16300 block of Aurora Avenue N
- Sun Insurance/Cascade Bank, a 9,600-square-foot retail/office building under construction in the 15400 block of Aurora Avenue N
- McDonald's, reconstruction of this fast food establishment on a different portion of their existing site at 15225 Aurora Avenue N
- Napa Auto Parts, new store at 16340 Aurora Avenue N

New and pre-owned car dealerships represent a significant business category on the Aurora Corridor. The most prominent dealers are Carter Subaru, Chuck Olson Chevrolet, Sandberg Oldsmobile/Cadillac, and Rich's Car Corner. In addition, there are numerous pre-owned dealers that front Aurora Avenue in Shoreline. These auto sales businesses serve a market area that extends beyond the trade area identified previously, attracting customers from throughout and beyond Puget Sound. Other major businesses in the corridor include Sky Nursery, Dunn Lumber Company, and several national chain restaurants.

Retail market conditions in the area are monitored by organizations such as OfficeSpace.com. Table 15 summarizes supply, vacancy, and rent conditions in the North End market, consisting of north Seattle, south Snohomish County, and Everett, as of the fourth quarter of 2006.

Table 15. North End Retail Market Fourth Quarter 2006

Submarket	Number of Buildings ¹	Total Square Feet	Vacant Square Feet	Vacancy Rate	Average Rent Rate ²
Everett/Snohomish County	117	4,377,931	196,791	4.50%	\$16.56
Lynnwood/Mountlake Terrace	71	1,897,953	45,265	2.38%	\$20.65
Northgate/North Seattle	67	2,387,275	85,643	3.59%	\$20.63
Total	255	8,663,159	327,699	3.78%	\$18.58

1. Excludes owner-occupied buildings and buildings under construction or proposed.

2. Net lease basis

Source: OfficeSpace.com 2007.

The North End market had a relatively low vacancy rate of 3.8% as of the end of 2006. Average rental rates among the three subareas range between \$16.56 and \$20.65 per square foot per year.

Retail rental rates at facilities in the Aurora Corridor generally range between \$12 and \$20 per square foot on a triple net basis. Higher rates (in the \$30 range) are obtained for smaller spaces at Aurora Village.

Triple Net Rental Rate

Tenant pays operating expense such as utilities, taxes, insurance, and cleaning.

Office Development Market Conditions

This section discusses existing office development in the Aurora Commercial District and regional office market conditions.

Existing Inventory

Table 16 summarizes existing office buildings or mixed-use buildings offering office space. Facilities consist primarily of smaller medical/dental and other professional buildings, plus City offices in the two-story Highland Plaza Building. Total supply is approximately 240,000 square feet. Development is generally concentrated in four areas: N 175th Street/Midvale Avenue N; N 180th Street/Midvale Avenue N; 18500 block of Firlands Way N; and N 200th Street, south of Aurora Village. All of the office buildings shown in the table except the last two are located in the Project Area.

Rental rates range between approximately \$17 and \$24 per square foot on a full-service basis, with newer medical/dental space typically leasing at the upper end of the range. There is minimal vacant office space currently available, and this low vacancy condition has been the case for many years in the area. Most buildings are single or two-story structures that were built in the 1960s and 1970s.

New office development is limited to a three-story building on N 185th Street, one block east of Aurora Avenue N; and the Sun Insurance/Cascade Bank mixed-use building in the 15400 block of Aurora Avenue N.

Table 16. Office Facilities – Aurora Commercial District – Shoreline

Name and Location	Year Built	Square Feet	Tenants
Aurora Village Medical Center 1151 N. 200th St.	1964-1976	29,337	Medical/Dental
Aurora Village Ortho Center 1501 N. 200th St.	1980	6,689	Medical/Dental
Anderson Building 18820 Aurora Ave. N	1975	11,778	Miscellaneous Professional Some Retail
Prudential Building 18551 Aurora Ave. N	1981	11,760	Prudential
Olympic Professional Building 18550 Firlands Way N	1973	6,949	Dentist Miscellaneous Professional
Moen Building 18514 Firlands Way N	1956	7,638	Vacant
Medical Building of Richmond Beach 18532 Firlands Way N	1954	4,061	Medical/Dental
Office Building 18528 Firlands Way N	1965	3,864	Dental
Washington Mutual Building 18200 Midvale Ave. N	1971	7,894	Washington Mutual
Office Building 18110 Midvale Ave. N	1972	7,612	Fireside Homes Farmers Insurance
Office Building 18130 Midvale Ave N	1975	2,560	Chenoweth Survey
Interurban Center 17962 Midvale Ave. N	1960	14,593	Sound Appraisal Ransom Enterprises Therapeutic Health
Shoreline Business Park 17544 Midvale Ave. N	1962	21,360	Miscellaneous Professional
Highland Plaza 1110 N 175th St.	1963	37,929	City of Shoreline Miscellaneous Professional
Highland Professional 1306 N 175th St.	1964	18,740	Medical/Dental
Highland West Medical 747 N 175th St.	1993	4,407	Medical/Dental
Office Building 15526 Aurora Ave. N	1995	2,200	Miscellaneous Professional
Pepper Hill Center 14701 Aurora Ave. N	1958 - 1985	33,845	Miscellaneous Professional

Source: Commercial Brokers Association, Property Counselors 2007

North End Office Market Conditions

Table 17 summarizes office market conditions by subarea in the North End market, including supply, vacancy, and rent levels, as of the fourth quarter of 2006.

Table 17. North End Office Market – Fourth Quarter 2006

Submarket	Number of Buildings ¹	Total Square Feet	Vacant Square Feet	Vacancy Rate	Average Rent Rate ²
Everett/Snohomish County	68	2,125,155	164,812	7.76%	\$20.66
Lynnwood/Mountlake Terrace	71	271,242	495,094	18.25%	\$20.99
Northgate/North Seattle	59	1,719,329	211,789	12.32%	\$22.51
Total	198	6,556,916	871,695	13.29%	\$21.28

1. Excludes owner-occupied buildings, government buildings, and buildings under construction or proposed.

2. Full service lease basis

Source: OfficeSpace.com 2007.

Supply is greatest in the Lynnwood/Mountlake Terrace subarea, with vacancy also highest at 18%. It is anticipated that vacancy rates will likely decline in the next few years, particularly in the Northgate/N Seattle area as the Downtown Seattle market continues to tighten and some downtown tenants migrate to the suburbs.

Shoreline's Aurora Corridor lies between the subareas Northgate/N Seattle and Lynnwood/Mountlake Terrace, both of which presently have relatively high vacancy rates (12% and 18%, respectively). At approximately 240,000 square feet, the Aurora Corridor market accounts for only 5 to 6% of the total office space existing in these subareas. The average North End rental rate of \$21.28 per square foot generally exceeds rents on Aurora Avenue N due to the lack of Class A and B buildings in the corridor. Many of the office buildings in Shoreline are older, Class C facilities that have received limited upgrades in recent years.

Building Classifications

Class A buildings have excellent location and access, attract high quality tenants, and are managed professionally. Building materials are high quality and rents are competitive with other new buildings.

Class B buildings have good locations, management, and construction, and tenant standards are high. Buildings should have very little functional obsolescence and deterioration.

Class C buildings are typically 15 to 25 years old but are maintaining steady occupancy.

Urban Land Institute 1993

Residential Development

Shoreline is a mature, built-out community with limited available area to support additional population growth. PSRC forecasts an additional 4,545 households between 2000 and 2030, with the majority of this growth consisting of multi-family households (3,571 new units). This residential growth will affect market conditions for apartment and condominium development in the area.

Apartment Market

Table 18 summarizes market conditions in the Shoreline apartment subarea.

Table 18. Shoreline Apartment Market Rent and Vacancy Data

	Data as of October 2006 ¹					
	All	Studio	1 BR	2 BR/1 BA	2 BR/2 BA	3 BR/2 BA
Market Vacancy	3.30%	3.80%	3.00%	2.90%	4.20%	4.50%
Actual Rent	\$802	\$560	\$701	\$847	\$953	\$1,274
Actual Rent per NRSF		\$1.19	\$1.02	\$\$.095	\$0.93	\$0.85
Buildings Surveyed	20	8	18	18	6	4
Units Surveyed	1,549	78	699	44	260	66

	Data for September 2002 – September 2006					
	September 2002	September 2003	September 2004	September 2005	September 2006	5-Year Average
Vacancy Rate	7.50%	7.10%	8.10%	4.90%	3.30%	6.40%
Average Rent	\$781	\$747	\$749	\$759	\$802	\$762
% of Buildings Offering Incentives	5%	79.2%	74.1%	45.5%	16.7%	53.4%
% Annual Turnover	43.8%	37.2%	39.1%	40.5%	34.3%	37.6%
Average Days Vacant	22	40	39	30	19	32
Project Average Rent Increase	5.0%	3.4%	4.6%	2.8%	4.0%	3.4%

1. BR = Bedroom; BA = Bathroom

Source: Dupre & Scott Apartment Advisors 2006

Overall vacancy as of fall 2006 was a relatively low 3.3%, compared to 4.2% for all of King County and 3.9% for Snohomish County. Over the past 5 years vacancy peaked at 8.1% in fall 2004 and has steadily declined since then. Average rent has increased 7.4% since late 2003 to its current level of \$802 per month.

There are 11 larger apartment complexes (25 units or more) near Aurora Avenue N, although none of these properties actually front Aurora. All these complexes were built prior to 1986. Several are located along Linden Avenue N, one block west of Aurora Avenue N. The largest complex in the corridor, Autumn Ridge (145 units), is located two blocks east of Aurora Avenue N off of N 152nd Street.

A major new apartment project recently broke ground in the 19200 block of Aurora Avenue N, just south of Echo Lake. A total of 500+ units is planned as part of a mixed-use center, including 200 low-income senior housing units and 300+ market rate units. Other development at or adjacent to this site consists of retail space and a new YMCA.

Condominium Development

The largest concentration of condominiums in the Aurora Commercial District is located at Echo Lake. There are 234 units along the west side of the lake, constructed between 1968 and 1986. Recent sales of one-bedroom units generally range between \$130,000 and \$190,000, with two-bedroom units selling at \$170,000 to \$220,000.

The most recent condominium project in the immediate vicinity of Aurora Avenue N is on Firlands Way N near N 195th Street. This 14-unit complex, constructed in 1993, has 1,500-square-foot, two-bedroom/2.5-bath units with recent sale prices of \$245,000 to \$295,000.

Property Values

A review of vacant land sales along Aurora Avenue N in recent years, or improved properties in which an existing older building represents a minimal proportion of the property's total value, provides the data shown in Table 19. Between early 2003 and mid-2006, there were approximately 10 recorded transactions where the property was acquired for the land rather than the existing improvements. Prices generally fell into the range of \$30 to \$40 per square foot.

Assessed values for land along the corridor currently range between \$20 and \$40 per square foot, with the majority of properties located between N 145th Street and N 185th Street assessed at \$35 or \$40 per square foot. Based on actual sale transactions in recent years, adjusted for appreciation, and the fact that assessed values typically lag market value, current land values likely fall in the \$40 to \$50 per square foot range.

The existing assessed value of the 2-mile portion from N 165th Street to N 205th Street shows an assessed land value that exceeds the assessed value of improvements (buildings) by a factor of more than 3.4. As developed sites usually have building values that exceed the underlying land value, this measure indicates that the property along the 2-mile project area is underutilized in total.

With regard to building values, there have been approximately a dozen improved property sales since mid-2004. Most buildings 20 or more years old indicated sale prices in the range of \$100 to \$150 per square foot of building area. Newer, small facilities tend to sell at prices of \$300 per square foot and higher.

Table 19. Property Sale Activity – Aurora Avenue N – Shoreline

Location	Sale Date	Analysis Price	Area (Square Feet)	Price per Square Foot
Land				
Walgreens site 17512-34 Aurora Ave N	November 2004 – February 2005	\$2,538,000	64,992	\$39
Skyline Windows 17214-36 Aurora Ave N	August 2006	\$1,479,450	29,600	\$50
Car lot site 15730 Aurora Ave N	May 2006	\$250,000	6,366	\$39
Vacant site 14927 Aurora Ave N	June 2005	\$1,050,000	60,000	\$18
Watermark Credit Union site 16330 Aurora Ave N	June 2003	\$1,038,000	34,600	\$30
Shoreline Bank site 16001 Aurora Ave N	April 2003	\$860,000	25,992	\$33
YMCA site (portion) 19200 Block Aurora Ave N	September 2006	\$1,983,000	62,914	\$32
Seattle Car Center 16523 Aurora Ave N	Listing	\$2,050,000	56,998	\$36
Buildings				
Walgreens 17524 Aurora Ave N	April 2007	\$4,672,830	14,738	\$317
Shoreline Motel 16526 Aurora Ave N	March 2007	\$1,000,000	8,876	\$113
Taco Bell 15010 Aurora Ave N	February 2007	\$1,768,431	3,448	\$513
Anderson Building 18820 Aurora Ave N	December 2006	\$1,725,000	11,778	\$146
Pepper Hill Strip Center 14701 Aurora Ave N	November 2006	\$5,275,000	33,845	\$156
Spiro's & Radio Shack Bldg. 20101 Aurora Ave N	August 2006	\$2,551,000	12,910	\$198
Starbuck's/Sundae's 20121 Aurora Ave N	April 2006	\$1,440,300	2,772	\$520
Chevron/Mini-Mart	March 2006	\$2,480,000	2,125	\$1,167

Location	Sale Date	Analysis Price	Area (Square Feet)	Price per Square Foot
NEC Aurora Ave N				
Retail Building 19828 Aurora Ave N	October 2005	\$783,000	5,964	\$131
Hooper Electric Bldg. 16715 Aurora Ave N	July 2005	\$1,229,419	11,392	\$108
Strong Building 19828 Aurora Ave N	October 2005	\$783,000	5,964	\$131
Office Building 15526 Aurora Ave N	April 2004	\$550,000	2,200	\$250
Shell/Food Mart 17505 Aurora Ave N	July 2004	\$750,000	2,164	\$347

Source: Metroscan, Property Counselors 2007

For comparison purposes, recent land sales on other major commercial corridors in the region were reviewed. On SR 99, commencing at the King-Snohomish County line and extending north to Lynnwood, land prices have typically fallen in the range of \$12 to \$25 per square foot. Along Lake City Way in North Seattle, transactions in the past 5 years indicate land sale prices of approximately \$30 to \$70 per square foot. In south King County, on Pacific Highway near SeaTac Airport, the majority of sales fall in the range of \$25 to \$45 per square foot.

Chapter 3. Projected Growth Trends

Future retail demand in Shoreline generally, and the Aurora Commercial District in particular, can be estimated in terms of sales and square feet of additional development. Projected levels of retail development are estimated in three steps: projected trade area spending, projected local capture, and supportable square feet of development.

Trade Area Spending

Trade area spending represents the potential purchasing power of the consumers available to Shoreline area businesses. The trade area will vary by sector. Generally, businesses such as grocery stores, drug stores, and personal service businesses will serve a local trade area with a radius of 1 to 3 miles. Other businesses will serve a larger trade area that might extend for 5 to 10 miles. The analysis of retail conditions in Chapter 2 presented demographic information for a local trade area, consisting of the City and immediately adjacent areas, and a larger trade area extending approximately 1 mile north and south beyond City limits. Some businesses will serve a much greater area beyond this, auto dealers in particular. However the potential for many sectors is limited by existing retail concentrations.

Market area spending is estimated as the product of population, per capita household income, and spending factors per \$1,000 of household income. Table 20 shows the assumptions for the spending estimates, which reflect the following:

- Population growth rates for the two trade areas are taken from the demographic data in Chapter 2. The populations of both trade areas are projected to grow at rates lower than 1% per year.
- Real household income growth (exclusive of inflation) is projected at 1% per year.
- Spending factors by business category for retail trade and selected service categories are derived at average levels for the State of Washington derived from Department of Revenue data.

Table 21 shows projected resident spending within the trade area. The table shows that the trade area spending for the designated trade areas is projected to grow from \$1.9 billion in 2005 to \$2.5 billion in 2025, a compound annual growth rate of 1.4% per year.

Projected Local Capture

The City of Shoreline and the Aurora Commercial District businesses will compete to capture this trade area spending. For purposes of this analysis, capture rates (actual City sales as a percentage of trade area spending) are held constant over the 20-year forecast period. This is a conservative assumption given the planned improvements and the increasing infill development expected for the Aurora Commercial District; however, it does provide a useful baseline for projections.

The 2005 capture rates are calculated based on existing City sales and trade area spending. Table 22 shows the 2005 capture rates and projected future rates. Two of the capture rates exceed 100%. In these cases, businesses are attracting sales from beyond boundaries of the assumed trade areas, in particular, the large retailers in Aurora Village.

These capture rates are applied to projected trade area spending to determine captured sales. Table 23 shows retail sales that are projected based on these rates. The table shows that under the stated growth and capture assumptions, Shoreline's gross sales in the retail trade and selected service categories would grow from \$842 million to \$1.1 billion.

Supportable New Development

The additional business sales will support new development in the City and the Aurora Commercial district. Sales increases are translated into gross building area using sales efficiency factors. The assumed factors and resultant levels of retail development are shown in Table 24.

Sales efficiency factors for most types of retail businesses can be derived from data by the Urban Land Institute (Beyard 2002). Businesses such as auto sales with large outdoor display areas have the highest sales efficiency factors. Grocery stores are also high-volume businesses. Other retail establishments have efficiency factors of approximately \$200 per square foot for new development.

Projected supportable development totals 880,000 square feet for retail trade and related services. This is a net figure, so any replacement development would be in addition to this amount. As noted earlier, this figure is conservative in the sense that it reflects a constant capture rate over the period. With increased capture over time, the amount of supportable development would be greater.

This projection covers retail trade and selected services only. Office uses, lodging uses, and other service uses would also support new development. The potential development in these sectors has not been quantified. However, the other sectors are not the ones considered to be vulnerable to changes in the highway configuration.

Table 20. City of Shoreline Retail Demand Projections, Population, and Spending Assumptions

	2005	2010	2015	2020	2025
Household Income (\$1,000)					
Shoreline Area	1,760,867	1,865,482	1,976,313	2,093,318	2,217,249
Larger Market Area	4,270,680	4,591,744	4,936,946	5,297,109	5,683,547
Growth Factors					
Real Annual Growth in Spending	1.0%	1.00%	1.0%	1.0%	1.0%
Population-Local	0.2%	0.16%	0.2%	0.2%	0.2%
Population-Larger Market Area	0.2%	0.46%	0.5%	0.4%	0.4%
Sales per \$1,000 HH Income					
Retail Trade					
Motor Vehicles & Parts	88.95	88.95	88.95	88.95	88.95
Furniture & Home Furnishing	15.58	15.58	15.58	15.58	15.58
Electronics & Appliances	21.10	21.10	21.10	21.10	21.10
Building Materials, Garden Equip & Supplies	30.34	30.34	30.34	30.34	30.34
Food & Beverage Stores	62.77	62.77	62.77	62.77	62.77
Drug/health Stores	23.69	23.69	23.69	23.69	23.69
Gas Stations & Convenience Stores W/pumps	39.40	39.40	39.40	39.40	39.40
Apparel & Accessories	25.23	25.23	25.23	25.23	25.23
Sporting Goods, Toys, Book & Music Stores	11.81	11.81	11.81	11.81	11.81
General Merchandise Stores	84.49	84.49	84.49	84.49	84.49
E-commerce & Mail Order	21.54	21.54	21.54	21.54	21.54
Miscellaneous Retailers	38.32	38.32	38.32	38.32	38.32
Total Retail Trade	463.21	463.21	463.21	463.21	463.21
Selected Services					
Arts, Entertainment & Recreation	5.63	5.63	5.63	5.63	5.63
Food Services	47.57	47.57	47.57	47.57	47.57
Personal Services	5.52	5.52	5.52	5.52	5.52
Subtotal	58.73	58.73	58.73	58.73	58.73
Total Retail and Selected Services	521.93	521.93	521.93	521.93	521.93

Source: Property Counselors 2007

Table 21. City of Shoreline Retail Demand Projections, Projected Resident Spending–Aurora Market Area

	Market Area	Resident Spending					
		2005 Gross	2005	2010	2015	2020	2025
Retail Trade							
Motor Vehicles & Parts	Regional	126,111,467	379,860,705	408,418,161	439,122,532	471,157,664	505,529,841
Furniture & Home Furnishing	Regional	5,289,766	66,530,027	71,531,672	76,909,334	82,520,070	88,540,124
Electronics & Appliances	Regional	14,541,295	90,120,949	96,896,130	104,180,661	111,780,911	119,935,620
Building Materials, Garden Equip & Sup	Regional	90,269,521	129,552,310	139,291,893	149,763,684	160,689,335	172,412,040
Food & Beverage Stores	Local	119,067,384	110,525,884	117,092,355	124,048,948	131,393,093	139,172,038
Drug/health Stores	Local	55,615,738	41,714,902	44,193,232	46,818,804	49,590,646	52,526,591
Gas Stations & Convenience Stores W/f	Local	36,245,749	69,370,483	73,491,864	77,858,101	82,467,581	87,349,960
Apparel & Accessories	Regional	2,848,422	107,728,005	115,826,863	124,534,583	133,619,704	143,367,609
Sporting Goods, Toys, Book & Music S	Regional	12,979,074	50,429,909	54,221,167	58,297,447	62,550,398	67,113,612
General Merchandise Stores	Regional	275,755,855	360,840,840	387,968,407	417,135,391	447,566,503	480,217,644
E-commerce & Mail Order	Regional	14,511,567	92,010,805	98,928,063	106,365,352	114,124,981	122,450,696
Miscellaneous Retailers	Regional	29,386,805	163,657,891	175,961,489	189,190,055	202,991,962	217,800,754
Total Retail Trade		782,622,643	1,662,342,711	1,783,821,297	1,914,224,894	2,050,452,849	2,196,416,527
Selected Services							
Arts, Entertainment & Recreation	Regional	12,393,151	24,061,800	25,870,736	27,815,666	29,844,891	32,022,153
Food Services	Regional	40,764,590	203,151,108	218,423,757	234,844,584	251,977,107	270,359,493
Personal Services	Local	6,677,352	9,724,369	10,302,105	10,914,165	11,560,323	12,244,736
Subtotal		59,835,093	236,937,277	254,596,598	273,574,415	293,382,321	314,626,382
Total Retail and Selected Services		842,457,736	1,899,279,988	2,038,417,895	2,187,799,309	2,343,835,170	2,511,042,909

Source: Property Counselors 2007

Table 22. City of Shoreline Retail Demand Projections, Potential Spending Capture Rates

	Market Area	Capture Rates			
		2005	2010	2015	2020
Retail Trade					
Motor Vehicles & Parts	Regional	33.2%	33.2%	33.2%	33.2%
Furniture & Home Furnishing	Regional	8.0%	8.0%	8.0%	8.0%
Electronics & Appliances	Regional	16.1%	16.1%	16.1%	16.1%
Building Materials, Garden Equip & Supplies	Regional	69.7%	69.7%	69.7%	69.7%
Food & Beverage Stores	Local	107.7%	107.7%	107.7%	107.7%
Drug/health Stores	Local	133.3%	133.3%	133.3%	133.3%
Gas Stations & Convenience Stores W/pumps	Local	52.2%	52.2%	52.2%	52.2%
Apparel & Accessories	Regional	2.6%	2.6%	2.6%	2.6%
Sporting Goods, Toys, Book & Music Stores	Regional	25.7%	25.7%	25.7%	25.7%
General Merchandise Stores	Regional	76.4%	76.4%	76.4%	76.4%
E-commerce & Mail Order	Regional	15.8%	15.8%	15.8%	15.8%
Miscellaneous Retailers	Regional	18.0%	18.0%	18.0%	18.0%
Total Retail Trade					
Selected Services					
Arts, Entertainment & Recreation	Regional	51.5%	51.5%	51.5%	51.5%
Food Services	Regional	20.1%	20.1%	20.1%	20.1%
Personal Services	Local	68.7%	68.7%	68.7%	68.7%

Source: Property Counselors 2007

Table 23. City of Shoreline Retail Demand Projections, Potential Sales

	Market Area	Captured Sales				
		2005	2010	2015	2020	
Retail Trade						
Motor Vehicles & Parts	Regional	126,111,467	135,592,370	145,786,037	156,421,507	167,832,863
Furniture & Home Furnishing	Regional	5,289,766	5,687,444	6,115,019	6,561,126	7,039,777
Electronics & Appliances	Regional	14,541,295	15,634,491	16,809,873	18,036,197	19,351,985
Building Materials, Garden Equip & Supplies	Regional	90,269,521	97,055,871	104,352,411	111,965,191	120,133,343
Food & Beverage Stores	Local	119,067,384	126,141,315	133,635,517	141,547,222	149,927,328
Drug/health Stores	Local	55,615,738	58,919,934	62,420,436	66,115,951	70,030,253
Gas Stations & Convenience Stores W/pumps	Local	36,245,749	38,399,151	40,680,489	43,088,921	45,639,940
Apparel & Accessories	Regional	2,848,422	3,062,563	3,292,802	3,533,021	3,790,764
Sporting Goods, Toys, Book & Music Stores	Regional	12,979,074	13,954,825	15,003,932	16,098,507	17,272,935
General Merchandise Stores	Regional	275,755,855	296,486,839	318,776,352	342,031,916	366,984,034
E-commerce & Mail Order	Regional	14,511,567	15,602,528	16,775,507	17,999,324	19,312,421
Miscellaneous Retailers	Regional	29,386,805	31,596,068	33,971,422	36,449,725	39,108,828
Total Retail Trade		782,622,643	838,133,401	897,619,797	959,848,608	1,026,424,472
Selected Services						
Arts, Entertainment & Recreation	Regional	12,393,151	13,324,853	14,326,599	15,371,762	16,493,172
Food Services	Regional	40,764,590	43,829,221	47,124,248	50,562,084	54,250,720
Personal Services	Local	6,677,352	7,074,062	7,494,340	7,938,032	8,407,992
Subtotal		59,835,093	64,228,136	68,945,186	73,871,878	79,151,883
Total Retail and Selected Services		842,457,736	902,361,537	966,564,984	1,033,720,486	1,105,576,355

Source: Property Counselors 2007

Table 24. City of Shoreline Retail Demand Projections, Potential Retail Development

	Sales / Sq. Ft.	2005-2010	2010-2015	2015-2020	2020-2025	2005-2025
Retail Trade						
Motor Vehicles & Parts	1,000	9,481	10,194	10,635	11,411	41,721
Furniture & Home Furnishing	200	1,988	2,138	2,231	2,393	8,750
Electronics & Appliances	200	5,466	5,877	6,132	6,579	24,053
Building Materials, Garden Equip & Supplies	300	22,621	24,322	25,376	27,227	99,546
Food & Beverage Stores	500	14,148	14,988	15,823	16,760	61,720
Drug/health Stores	200	16,521	17,503	18,478	19,572	72,073
Gas Stations & Convenience Stores W/pumps	250	8,614	9,125	9,634	10,204	37,577
Apparel & Accessories	200	1,071	1,151	1,201	1,289	4,712
Sporting Goods, Toys, Book & Music Stores	200	4,879	5,246	5,473	5,872	21,469
General Merchandise Stores	250	82,924	89,158	93,022	99,808	364,913
E-commerce & Mail Order	-					
Miscellaneous Retailers	200	11,046	11,877	12,392	13,296	48,610
Total Retail Trade		178,759	191,578	200,396	214,411	785,144
Selected Services						
Arts, Entertainment & Recreation	200	4,659	5,009	5,226	5,607	20,500
Food Services	200	15,323	16,475	17,189	18,443	67,431
Personal Services	200	1,984	2,101	2,218	2,350	8,653
Subtotal		21,965	23,585	24,633	26,400	96,584
Total Retail and Selected Services		200,724	215,163	225,029	240,811	881,728

Source: Property Counselors 2007

Chapter 4. Case Studies

The experience of similar commercial districts with comparable arterial improvement projects provides a useful starting point for identifying potential impacts on Aurora Avenue N. The experience of the first mile of Aurora Avenue N, from N 145th Street to N 165th Street, provides an excellent comparison for potential construction impacts, as the nature of the project improvements and the characteristics of the commercial districts are so similar. Several other sections of SR 99 have also been improved during the last decade, including sections in Edmonds/Lynnwood, SeaTac, and Federal Way. Many of these projects are also fairly recent and provide more insight into potential construction impacts rather than long-term impacts. There are several academic studies of impacts of access management projects in several states that provide a longer-term view, and quantitative estimates of potential impacts.

Aurora Corridor Improvement, N 145th Street – N 165th Street

The portion of the Aurora Corridor between N 145th Street and N 165th Street was improved over the period July 2005 through June 2007. The project involved:

- additional lanes for business access and transit;
- new sidewalks, crosswalks, and lighting;
- landscaped median with left turn and U-turn pockets;

- additional signals; and
- undergrounding of power lines.

The roadway section provides for a center median with turn pockets; and on each side of the roadway, two general-purpose lanes, one business access and transit lane, sidewalk, curb, gutters, and amenity zone.

The cross section is similar to that in Alternatives B, C, and the Preferred Alternative for the current Project.

The City compiled taxable sales data from state records for businesses in the first mile. The figures can be compared for a 1-year period prior to construction (July 2004 through June 2005) and a full year during construction (January 2006 through December 2006). The results are shown in Table 25. The comparison must be clarified in several respects.

- Business sales are taxable as retail sales if they involve the sale of goods or services to tangible goods. Most professional services, finance, insurance, and retail services are not subject to this tax and these business activities are not reflected in the comparison.
- Taxable sales data cannot be disclosed for categories of business with fewer than three taxpayers. Categories with two or fewer taxpayers must be aggregated with other categories.
- Sales for retail establishments with multiple locations (e.g. Starbucks, Safeway, Walgreens) are not included, as they report sales tax for all locations together.
- Several businesses classified as active do not report receipts.

Given these caveats, it is still possible to make meaningful comparisons for businesses in retail trade and other businesses likely to be affected by highway improvements.

The table shows that 76 businesses in the first mile identified as active in the retail sales database, in the year prior to the beginning of construction. Retail businesses that did not report taxable sales were not included, while non-retail businesses without sales were included. A comparison of before and during construction taxable sales data indicates that overall, taxable receipts increased in total by 6.6% during project construction from the year prior to construction through the calendar year 2006; however sales trends varied by sector. For example, miscellaneous retail businesses (including building materials, sporting goods, toys,

books, and music aggregated for confidentiality purposes) increased by 12.9%. Food and beverage sales (including drug and health stores for confidentiality reasons) increased by 4.3%. Motor vehicle sales (including gas station/convenience store sales for confidentiality purposes) increased by 1.0%. Most service categories declined, with a 4.4% drop in total.

Considering categories without the aggregation of otherwise confidential sales records, motor vehicles and parts declined by 1.1% and food services declined by 8.5%. Overall, the first mile is similar to the entire Aurora Corridor in terms of its auto orientation, but it does have a higher share of food service businesses, less retail trade, and smaller businesses on average.

In summary, businesses in several service categories and some retail categories did experience losses in sales, but taxable sales in total did increase. The increases recorded during construction of the first mile cannot be presumed to be a direct result of project construction, but they do provide evidence that several business sectors were able to increase sales in spite of the adjacent roadway construction that was going on at the time.

Table 25. Aurora Corridor 145th to 165th Taxable Retail Sales Impacts

	3 Digit NAICS	During Construction Jan 06–Dec 06	After Construction Jul 04–Jun 05	During Construction Jan 06–Dec 06	After Construction Jul 04–Jun 05	Change
Retail Trade						
Motor Vehicles & Parts	441	4	5	9,399,162	9,301,631	1.0%
Furniture & Home Furnishings	442	-	-	-	-	
Electronics & Appliances	443	-	0			
Building Materials, Garden Equip & Sales	444	1	1	(2)	(2)	
Food & Beverage Stores	445	3	3	16,013,536	15,350,939	4.3%
Drug/Health Stores	446	2	2	(3)	(3)	
Gas Stations & Convenience Stores	447	2	2	(4)	(4)	
Apparel & Accessories	448	-	-			
Sporting Goods, Toys, Books & Music Stores	451	2	2	(2)	(2)	
General Merchandise Stores	452	-	0			
Miscellaneous Retailers	453	15	13	11,067,379	9,803,804	12.9%
E-Commerce & Mail Order	454	-	-			
Total Retail Trade		29	28	36,480,077	34,456,374	5.9%
Services						
Professional, Scientific & Technical						
Veterinary	542	-	1	(5)	(5)	
Management & Education	551, 561, 562, 612	2	2	-	-	
Health Services	621	6	6	64,724	106,608	-39.3%
Arts, Entertainment & Recreation						
Amusement Gambling Recreation	713	2	2	(6)	(6)	
Other						
Accommodations & Food Services						
Accommodations	721	2	2	(7)	(7)	
Food Service	722	17	18	12,242,927	12,949,060	-5.5%
Repairs	811	7	7	2,305,926	2,433,881	-5.3%
Personal Services	812	2	2	(5)	(5)	0.0%
Other				630,478	455,811	38.3%
Total Services		38	40	15,244,055	15,945,360	-4.4%
Transportation & Utilities						
Warehousing	493	1	1	(5)	(5)	
Finance, Insurance & Real Estate						
Banking	522	4	4	-	-	
Insurance	524	1	1	-	-	
Rental and Leasing Services	532	1	1			
Information						
Telecommunications	517	1	1	(5)	(5)	
Public Administration, Other				10,032,191	7,545,368	33.0%
Total		75	76	61,756,323	57,947,102	6.6%

- Notes:
1. Includes businesses paying sales tax plus registered non-retail businesses
 2. Included with Miscellaneous Retail
 3. Included with Food
 4. Included with Auto Sales
 5. Included with Public Administration, Other
 6. Included with Food Services
 7. Included with Other Services

Source: City of Shoreline Taxable Sales Date, Property Counselors 2007

Other Major Arterial Improvement Projects in the Region

SR 99 has been improved in several cities throughout the region over the past decade. SR 99 in SeaTac (International Boulevard) was a four-phase improvement project that was completed in 2006/2007; Federal Way has completed two of four phases of highway improvements; Edmonds and Lynnwood improved SR 99 in sections over the period 2001 through 2004. The City of Seattle is planning for improvements to Aurora Avenue from the north end of the Battery Street Tunnel to N 145th Street.

The characteristics of the projects are summarized in Table 26.

Table 26. SR 99 Improvement Projects – King and Snohomish Counties

	Construction Period	Typical ROW (feet)	Previous ROW (feet)	Left Turn (widths expressed in feet)	Sidewalk/ Amenity (feet)	Travel Lanes (feet)	Transit/ Access (feet)
SR 99/Federal Way Ph. I & II	2002-2005	120 -130	100	15 Median/Left Turn	16	11 (4)	14
SR 99/SeaTac	1996-2007	107	100	Median/Left Turn	8	11.5 (4)	15
SR 99/Edmonds/ Lynnwood	2½ years 2001-2004	100	100	12 Two Way	8	11 (4)	14
SR 99/Seattle ¹	Proposed	82	82.5	10 Median/Left Turn	10.5	8.5 (4)	11

1. Project is still in environmental review and design stages.

Sources: Roberts 2007; Caulfield 2002; Kleitsch 2007; Waters 2007

All of the projects shown except the highway in Edmonds and Lynnwood include a median with left-turn pockets. That project was built within the existing 100-foot right-of-way. The other cities did require or will require expansions of the right-of-way to include wider sidewalks and amenity zones. All the projects have two transit/business access lanes, four travel lanes, and left-turn lanes (typically pockets within the median).

In addition to the typical cross section, there are other differences in the projects that are relevant to an analysis of business impacts.

- The roadway section may vary along the length of the project depending on intersections and mid-block turn pockets. Furthermore, the cross section may vary in response to right-of-way constraints and structures. The amenity zone width in SR 99 in Seattle will vary according to such constraints. In Federal Way, the median and

sidewalk widths are reduced in some cases because of restraints, but property owners agree to dedicate additional right-of-way at the time of any redevelopment.

- Construction conditions differed among projects and within portions of the projects. In Federal Way, construction was halted in the winter months to reduce disruption of business at the Commons Mall. In Lynnwood, construction continued throughout the winter. The project manager reported the schedule was not shortened noticeably as a result of working in the winter.
- All cities worked to ensure that businesses were assured access throughout construction. In Lynnwood/Edmonds, the construction contract required that access could be interrupted for no more than 1 hour at a time. In Federal Way, at least one access point, or one-half of a single access point, was kept open at all times.

None of the cities with completed projects monitored sales either during or after construction. However, feedback from construction managers indicates that sales declines were observed during construction of these projects, even when expressing general approval of the projects.

Bridgeport Way in University Place, Washington, underwent a similar improvement project from 1998 through 2002. The project featured four travel lanes with a center median. Businesses expressed concerns about loss of sales due to access restrictions related to the median. The City conducted a before and after comparison of business revenues in the area affected by construction of the segment from 35th Avenue to 40th Avenue in 1998. The construction period extended from July to November of that year. Sales tax revenues increased by 7% from 1997 to 1998. Tax collections declined by 5.6% in 1999, but the loss was attributed by the Finance Director to a 2- to 3-month vacancy in one large building (since occupied) and a delay in reporting December sales by two large stores (Caulfield pers. comm.). It should be noted that the construction period of four months was considerably shorter than the projected period in Shoreline.

Access Management Case Studies

The impact of roadway improvement projects, particularly projects involving restrictions on left turn lanes, has been the subject of many studies. The Federal Highway Administration has published two brochures that cite the results of such studies:

- Safe Access is Good for Business (FHWA 2006a)
- Benefits of Access Management Brochure (FHWA 2006b)

Three key studies and their findings are listed below.

- *Economic Impacts of Raised Medians on Adjacent Businesses.* (Frawley and Eisele 1999) – This study considered data collected on 10 highway corridors in Texas. The data addressed changes in customer activity, gross sales, and property values for various types of businesses.
- *Economic Effects of Restricting Left Turns.* (Weisbrod and Neuwirth 1998) – The researchers considered data from 20 case study sites, with more detailed study of nine sites. Records on more than 9,200 businesses were studied to compare sales and employment trends at sites with left-turn restrictions to patterns in the larger urban areas.
- *Iowa Access Management Research and Awareness Project.* (Iowa State University 1997) – Five business vitality case studies were conducted using statistics from the Iowa Department of Revenue and Finance. Business sales were compared before, during, and after construction of highway improvements. Trends were compared to business patterns in surrounding communities.

The research is useful in characterizing the type and amount of business impacts.

Business Classifications

The studies all distinguished between destination businesses and convenience businesses. A destination business is a specific store or commercial center that a customer makes a premeditated decision to patronize. Customers of destination businesses are more likely to tolerate restrictions on access. A convenience business, or drive-by business, is a store or business that a customer typically patronizes as an impulse when driving by. Potential customers of convenience businesses are more likely to choose an alternative establishment if they perceive restriction on access or limitation on parking. Such businesses require visibility, signage, and convenient access. The most common types of convenience businesses are gas stations, convenience stores, fast food restaurants, and some personal services.

The extent to which different categories of businesses are destination versus convenience is suggested by the factors summarized in Table 27. The figures represent the percentage of trips classified as convenience for traffic planning purposes. Hotels and specialty stores have low factors and are clearly destination businesses. Convenience stores and gas stations have the highest factors and are clearly convenience oriented. Services, supermarkets, and durable goods can also be classified as destination oriented, while restaurants and general merchandise stores would be more convenience oriented by this measure.

Table 27. Business Classification and Convenience Trips

Business Type	Convenience Trips (%)
Hotels	20
Specialty Stores	20
Services	30
Supermarkets	40
Durable Goods	40
Restaurants	50
General Merchandise	65
Convenience Stores	95
Gas Stations	95

Source: Weisbrod and Neuwirth 1998

The study by Frawley and Eisele also distinguished owner perceptions of business impacts by location—mid-block or with left-turn access. As shown in Table 28, convenience businesses with mid-block locations are perceived by business owners to be affected negatively by left-turn restrictions, while destination businesses are generally perceived as not affected. Businesses that have left-turn access are generally perceived by owners as affected positively.

Table 28. Perceived Business Impacts by Business Type and Block Location

Business Type	Mid-Block Location	Location with Left Turn Access
Fast Food Delivery	Positive	Positive
Electrical Supplies	None	Positive
Bowling Alley, Regional Mall		Positive
Auto Repair		Positive or None
Carpet Store	None	None
Beauty/Hair Salon, Bread Baking Company, Car Dealership, Diner, Interior Decorating, Health Food Store, Hotel, Mobile Home Sales, Museum, Tire Sales/Service, Trailer Park, Video Store, Wholesale Lumber	None	
Copy Service, Sports Equipment		None
Supermarket	None or Negative	Positive
Motel, Restaurant	None or Negative	
Real Estate Broker	Negative	Positive
Department Store	Negative	Positive or None
Auto Parts/Supplies, Gas Station	Negative	None
Art Gallery, Audio/Car Stereo, Bicycle Shop, Building Supplies, Deli/Sandwich Shop, Fast Food, Ice Cream/Yogurt Shop, Industrial/Agricultural Equipment, Oil Changing Service, Fast Food, Fishing Supplies, Flea Market, Garden/Lawn Supplies, Gift Shop, Gourmet Food, Party Supplies, Pawn Shop, Pharmacy, Recreational Vehicle Sales, Used Car Dealership	Negative	

Source: Frawley and Eisele 1999.

Impacts on Business Sales

The various case studies provide varying levels of quantification of business impacts during project construction and afterward. The most detailed results were reported by Frawley and Eisele. These results are summarized in Table 29.

The study results indicate that impacts were greatest during construction. The categories that were most affected were convenience businesses such as convenience/gas and fast food restaurants. Specialty retail declined only slightly. These results reflect differences between destination and convenience businesses. This study indicates that impacts after construction are generally small. Convenience/gas declined by 3%, and auto repair declined by 0.6%, but other categories showed increases. Destination businesses showed increases of approximately 1%, and even fast food restaurants showed a small increase. It should be noted that the number of businesses in several of these categories is only one or two.

Table 29. Summary of Changes in Gross Sales by Business Type

Business Type	Percent Change in Gross Sales	
	During	After
Durables Retail	15%	1%
Specialty Retail	- 4%	0.6%
Gas Station	0%	0%
Convenience/Gas	- 50%	- 3%
Fast Food Restaurant	- 22%	0.2%
Sit-Down Restaurant	- 1%	0.75%
Auto Repair	- 24%	- 0.6%
Other Services	- 75%	- 3%
Other	2.5%	0.25%

Source: Frawley and Eisele 1999.

The *Iowa Access Management Research and Awareness Project Report* references a 1996 study of highway reconstruction projects in Indiana, which showed that average loss of retail sales during a major construction project was 13%.

Studies generally acknowledge that businesses have concerns about the impact of raised medians. The FHWA *Benefits of Access Management Brochure* reports on the results of business owner surveys in several other states that indicated owners' concerns are not as great after the fact, as shown in Table 30.

Table 30. Reported Impacts of Selected Access Management Projects Percentage of Owners Reporting No Decline in Sales

Location	Study	Percentage of Owners Reporting No Decline
Texas	Frawley and Eisele	63
Texas	Frawley and Eisele	78 – 84
Iowa	Access Management Research and Awareness	67 – 91

Source: FHWA 2006b

The businesses that typically report declines are convenience businesses such as fast food restaurants and gas stations.

The conditions of the case studies are relevant to the Aurora Corridor project to the extent that almost all involved some type of raised median restricting left turns. Further project specifics related to spacing of left-turn pockets or provision for U-turns were not identified. Where data was available on actual sales, the results were generally comparable in that they represented sales for consistent periods before, during, and after construction. The losses in sales during construction were temporary as indicated by the “during” versus “after” comparison. The studies did not address the question of whether the “after impacts” were permanent as there were no ongoing monitoring efforts reported.

It should be noted that after the proposed Project is completed, all except 26 businesses along the 2-mile corridor would have direct access via left-turn and U-turn pockets or at signalized intersections; and some businesses that do not currently have direct left-turn access would receive it as a result of Project. The trends discussed in these studies would be potentially applicable only to the 26 businesses that would not have direct left-turn access.

Impacts on Truck Delivery

The FHWA *Safe Access is Good for Business* brochure considered impacts of medians on truck deliveries. The brochure references data about a median project in Fort Lauderdale where truckers were asked their opinion of the project.

- 90% responded that the project provided better safety.
- 70% responded that the project provided better traffic flow.
- 65% responded that they favor the project.

The brochure acknowledges some trucks and large vehicles may need to take alternate routes, as U-turns can be difficult to negotiate.

Property Values

The FHWA *Safe Access is Good for Business* brochure referenced four studies that concluded that most projects do not have a negative effect on property values. The FHWA *Benefits of Access Management* brochure references a study by Frawley and Eisele that corridors in Texas with access control improvements experienced an 18% increase in property values after construction.

Chapter 5. Potential Ongoing Impacts to Businesses after Construction

As suggested by the experience in the case studies described in Chapter 4, some types of businesses and specific properties could experience ongoing adverse impacts from a combination of factors. Those factors include loss of portions of buildings (remodeled where possible), loss of property and parking, and restrictions to access. These factors can potentially affect business receipts, property values, tax revenues, and employment.

Impact Factors

The factors used to estimate impacts are described below for buildings and property acquisitions, parking reduction, access restrictions, and property values.

Property Acquisitions

Owners of property acquired for highway improvement projects are compensated at the fair market value of the property. Existing businesses may be affected to the extent that their sales are increased or decreased, or the business is no longer viable on premises. In instances where the loss of property or buildings threatens the viability of a business, it may be possible to configure the site or rebuild a structure in a manner that maintains the business viability. In that case property owners may be compensated for the “cost to cure” as well as the loss of property. If the

business is no longer viable on the property, the business owner is eligible for relocation expenses, including direct moving expenses, reestablishment expenses such as improvements or modifications to real property and advertising, and related moving expenses such as search, planning, and replacement of printed materials. The impacts to businesses are considered in this analysis and may be independent of the compensable value to the property owner. For example, a business that is occupying public right-of-way will be affected by the loss of use of that property, but the loss is not compensable.

The building impacts and land acquisitions were estimated for each of the alternatives (CH2M Hill 2007). The estimates are provided by parcel number and may include more than one business, or represent only a portion of a site. The number and amount of property acquisitions are summarized for each alternative in Table 31.

The table shows 140 parcels were identified adjacent to the project area, with a total land area of 5,556,592 square feet or 128 acres. Of that amount, the estimated property acquisition varies by alternative: from 142,199 square feet for the Preferred Alternative to 183,861 square feet for Alternative C. The projected impact on individual properties varies between properties. In Alternative B, 24% of parcels and 35% of total land area would not be affected by acquisition. However, 35% of the new right-of-way would be acquired from parcels losing more than 15% of their total area. In effect, the acquisition is spread less broadly among the properties under this alternative.

The only full property acquisitions are the McCaughan properties north of Walgreens (17550 and 17560 Aurora Avenue N) where two used car dealerships are currently located. Seattle City Light owns the property at 18551 Aurora Avenue N, where the James Alan Salon is located. The City would seek transfer of property rights for this parcel under all four alternatives. Relocation will be required for the three businesses located on these properties under all four alternatives.

Table 32 lists the other properties with active businesses that would experience acquisition of 15% or more of the total property.

Table 31. Summary of Estimated Property Acquisition**Alternative A**

	Parcels	Parcels % of Total	Take	Take % of Total	Total Property	Property % of Total
No Take	29	20.7%	-	0.0%	837,792	15.1%
Less than 5% of Property	71	50.7%	52,610	35.0%	3,895,654	70.1%
5% to 10% of Property	20	14.3%	34,210	22.8%	521,697	9.4%
10% to 15% of Property	5	3.6%	16,402	10.9%	139,011	2.5%
Over 15% of Property	15	10.7%	46,963	31.3%	162,438	2.9%
Total	140	100.0%	150,185	100.0%	5,556,592	100.0%

Alternative B

	Parcels	Parcels % of Total	Take	Take % of Total	Total Property	Property % of Total
No Take	34	24.3%	-	0.0%	1,929,342	34.7%
Less than 5% of Property	58	41.4%	46,017	27.9%	2,678,818	48.2%
5% to 10% of Property	21	15.0%	41,379	25.1%	590,249	10.6%
10% to 15% of Property	9	6.4%	20,328	12.3%	171,725	3.1%
Over 15% of Property	18	12.9%	56,989	34.6%	186,458	3.4%
Total	140	100.0%	164,713	100.0%	5,556,592	100.0%

Alternative C

	Parcels	Parcels % of Total	Take	Take % of Total	Total Property	Property % of Total
No Take	26	18.6%	-	0.0%	1,157,394	20.8%
Less than 5% of Property	57	40.7%	51,947	28.3%	2,928,069	52.7%
5% to 10% of Property	33	23.6%	75,126	40.9%	1,127,161	20.3%
10% to 15% of Property	11	7.9%	27,551	15.0%	219,569	4.0%
Over 15% of Property	13	9.3%	29,237	15.9%	124,399	2.2%
Total	140	100.0%	183,861	100.0%	5,556,592	100.0%

Recommended Alternative

	Parcels	Parcels % of Total	Take	Take % of Total	Total Property	Property % of Total
No Take	39	27.9%	-	0.0%	1,480,717	26.6%
Less than 5% of Property	62	44.3%	51,077	35.9%	3,448,867	62.1%
5% to 10% of Property	21	15.0%	29,891	21.0%	406,319	7.3%
10% to 15% of Property	9	6.4%	11,897	8.4%	101,412	1.8%
Over 15% of Property	9	6.4%	49,334	34.7%	119,277	2.1%
Total	140	100.0%	142,199	100.0%	5,556,592	100.0%

Source: CH2M-Hill, Property Counselors

Table 32. Properties with Greater than 15% Acquisition by Alternative

Alternative A	Alternative B	Alternative C	Preferred Alternative
Echo Lake Apartments	Echo Lake Apartments	Valero Gas	Echo Lake Apartments
Echo Lake Tavern	Echo Lake Tavern	Jack in the Box	Echo Lake Tavern
Key Bank	Key Bank	Moorman Retail Property	Key Bank
Aurora Rents	Aurora Rents	Echo Lake Apartment	Aurora Rents
		Echo Lake Tavern	
		Key Bank	

Source: CH2M Hill 2007, Property Counselors 2007

Property acquisitions can affect business operations in three major ways—through building impacts, loss of parking, or loss of display and outside storage areas. The potential impact of parking loss is considered separately later in this section.

Table 33 summarizes the commercial building impacts for parcels that would require partial acquisitions, estimated for each of the four alternatives.

Table 33. Summary of Building Impacts for Partial Acquisitions

	Existing Building (square feet)	Building Impact (square feet)	% of Building Impacted
Alternative A			
Old Country Buffet	6,825	168	2.5%
Chuck Olson Chevrolet	23,512	689	2.9%
Anti Snoring & Minuteman Press	5,312	452	8.5%
Aurora Rents	7,287	1,363	18.7%
		2,672	
Alternative B			
Old Country Buffet	6,825	168	2.5%
Gerber Towing	2,325	66	2.8%
Chuck Olson Chevrolet	23,512	689	2.9%
Top Tattoo	1,982	187	9.4%
Anti Snoring & Minuteman Press	5,312	731	13.8%
Key Bank	7,728	1,908	24.7%

	Existing Building (square feet)	Building Impact (square feet)	% of Building Impacted
Aurora Rents	7,287	2,378	32.6%
		6,127	
Alternative C			
Old Country Buffet	6,824	168	2.5%
Gerber Towing	2,325	66	2.8%
Chuck Olson Chevrolet	23,512	1,744	7.4%
Shell	1,128	505	44.8%
Valero Gas	2,460	573	23.3%
Hollywood Video	6,030	311	5.2%
Fred Meyer	6,177	334	0.3%
Spiro's	3,810	360	9.4%
Top Tattoo	1,982	190	9.6%
Anti Snoring & Minuteman Press	5,312	727	13.7%
Key Bank	7,728	1,908	24.7%
Aurora Rents	7,287	1,800	24.7%
		8,686	
Preferred Alternative			
Top Tattoo	1,982		
Key Bank	7,728		
Aurora Rents	7,287	1,590	21.8%

Source: CH2M-Hill, Property Counselors 2007, King County Assessor 2007

For parcels requiring partial acquisition that would result in building impact, it is assumed that all building impacts can be remodeled through the compensation process. Thus, all businesses on partially acquired property are assumed to continue operations after project construction is complete.

Parking Impacts

Parking for customers and employees is important to all businesses along Aurora Avenue N, as described by business owners in the interviews conducted for this project. The property acquisitions summarized in Table 32 would result in losses of parking to many of businesses located adjacent to the project. The potential impact of this loss is assessed by

evaluating the demands for parking for individual types of business, and the existing parking supply.

Demand for parking varies by time of day, day of week, and type of business. Table 34 summarizes parking demand factors for five categories of business as presented in *The Dimensions of Parking* (Urban Land Institute 1993). For retail development generally, the average parking demand is 2.84 spaces per 1,000 square feet, with a peak demand of 3.8 at 1:00 p.m. A restaurant has a much greater demand, but the peak demand is in the evening. The City of Shoreline requires one space per 300 square feet of retail and office space, equivalent to 3.3 spaces per thousand. This amount of parking is expected to meet parking demand at all times except the peak periods of retail (Urban Land Institute 1993).

CH2M Hill estimated the loss in parking spaces associated with each of the alternatives. The existing supply was categorized as either compliant or non-compliant stalls. Compliant parking stalls are those that are fully contained on private property and do not require backing onto the right-of-way for egress. Non-compliant parking stalls are those that are located fully or partially in the public right-of-way and/or require backing onto the right-of-way for egress, which is not legal. The potential loss of parking due to right-of-way acquisition was estimated for both compliant and non-compliant stalls. For this analysis, potential parking loss was calculated in terms of (1) ratio of post-construction parking stalls to existing stalls (compliant and non-compliant), and (2) the ratio of post-construction stalls to building area. Estimated parking impacts are summarized in Table 35. Estimated impacts to parking at each business is summarized for Alternatives A through C and the Preferred Alternative in Tables 36, 37, 38, and 39, respectively.

These tables show that 15 to 17 businesses, depending on the alternative, were identified as losing 20% or more of their existing parking, resulting in fewer than 3.3 spaces per 1,000 square feet of building. It is expected that 20% parking loss could be mitigated with employee parking off site, based on typical ratios of employee parking demand to overall parking demand.

Impacts shown in Tables 35 through 39 are based on an assumption of full loss of impacted parking spaces. Potential impacts are anticipated to be lower, as some parking would be regained by reconfiguration of the remaining space on properties.

The City of Shoreline requires one space per 300 square feet of retail and office space, equivalent to 3.3 spaces per thousand.

Compliant Parking

Parking stalls that are fully contained on private property and do not require backing onto the right-of-way for egress.

Non-Compliant Parking

Parking stalls that are located fully or partially in the public right-of-way, and/or require backing onto the right-of-way for egress.

Table 34. Parking Demand Weekdays

	Office	Retail	Restaurant	Cinema (per Seat)	Lodging Per Room
8:00	1.90	0.70	1.00		0.65
9:00	2.30	1.60	2.00		0.55
10:00	3.00	2.60	4.00		0.45
11:00	3.00	3.30	6.00		0.35
12:00	2.70	3.70	10.00	0.10	0.30
1:00	2.70	3.80	14.00	0.15	0.30
2:00	2.90	3.70	12.00	0.15	0.35
3:00	2.30	3.60	12.00	0.15	0.35
4:00	2.30	3.30	10.00	0.15	0.45
5:00	1.40	3.00	14.00	0.15	0.60
6:00	0.70	3.10	18.00	0.2	0.70
7:00	0.20	3.40	20.00	0.2	0.75
8:00	0.20	3.30	20.00	0.25	0.90
9:00	0.10	2.30	20.00	0.25	0.95
10:00	0.10	1.20	18.00	0.25	1.00
Average	1.72	2.84	12.07	0.18	.058
Peak	3.00	3.80	20.00	0.25	1.00
Peak Time	10:00AM	1:00PM	7:00PM	8:00PM	10:00PM

Source: Urban Land Institute, The dimensions of Parking

Table 35. Summary of Estimated Parking Impacts

	Alternative A	Alternative B	Alternative C	Preferred Alternative
Existing Stalls				
Compliant	4,292	4,292	4,292	4,300
Non-Compliant	193	193	193	193
Total	4,485	4,485	4,485	4,493
Spaces Lost				
Compliant	130	151	242	119
Non-Compliant	167	168	150	168
Total	297	319	392	287
Resulting Available Stalls	4,188	4,166	4,093	4,206
Available Stalls as %	93.4%	92.9%	91.3%	93.8%
Number of Parcels Losing Parking	41	41	52	40
Number of Parcels Losing More than 20%	24	24	25	23
Number of Parcels Losing More than 20% and Resulting in Less Than 3.3 Stalls per 1,000	15	15	16	17

1. Impacts shown in this table are based on an assumption of full loss of impacted parking spaces. Potential impacts would be lower if some parking is regained by reconfiguration of the remaining space on properties.

Source: CH2M Hill 2007, Property Counselors 2007

Table 36. Parking Impacts by Parcel – Alternative A

	Existing Compliant Stalls	Existing Non-Compliant Stalls	Compliant Stalls Impacted	Non-Compliant Stalls Impacted	Total Stalls Available	Stalls Available as % of Existing Total	EXISTING BUILDING (SF)	Stalls Available per 1000 SF
U-HAUL	47	0	8	0	39	83.0%	2,600	15.0
A 2 Z			12	0	(12)	#DIV/0!	569	(21.1)
OLD COUNTRY BUFFET	90	4	2	4	88	93.6%	6,825	12.9
GERBER TOWING	19	0	8	0	11	57.9%	2,325	4.7
1 STOP	25	5	0	5	25	83.3%	1,710	14.6
TAXPAYER: WAYNE DROKER	8	4	0	4	8	66.7%	0	
TAXPAYER: WAYNE DROKER	19	1	0	1	19	95.0%	1,440	13.2
TOBACCO LANE	0	2	0	2	0	0.0%	744	-
SUGAR'S	35	2	0	2	35	94.6%	3,200	10.9
CHUCK OLSON CHEVROLET	267	0	9	0	258	96.6%	23,512	11.0
APARTMENTS	27	3	0	3	27	90.0%	2,790	9.7
YOURIST	8	0	2	0	6	75.0%	286	28.0
METLIFE / FRED MEYER	230	0	15	0	215	93.5%	121,232	1.8
JACK ROBERTS APPLIANCE	59	23	0	23	59	72.0%	22,400	2.6
DISCOUNT TIRE	59	0	13	0	46	78.0%	7,331	6.3
MINI MALL	7	4	0	4	7	63.6%	2,600	2.7
MOORMAN	10	5	0	5	10	66.7%	3,000	3.3
SPARKY'S BAR & GRILL	68	0	9	0	59	86.8%	13,863	4.3
STARBUCKS & BLIMPIE SUBS	36	0	0	1	35	97.2%	2,772	12.6
COPY & MAIL, TROPICAL TAN	18	6	0	6	18	75.0%	4,931	3.7
TOP TATTOO	9	1	0	1	9	90.0%	1,982	4.5
JUST FOR YOU KID'S CONSIGNMENT /	0	5	0	5	0	0.0%	1,640	-
99c DISCOUNT STORE	0	10	0	10	0	0.0%	4,828	-
PHO '99 RESTAURANT	0	9	0	9	0	0.0%	5,964	-
JORDAN'S USED TIRES	0	9	0	9	0	0.0%	2,820	-
DELGRI	27	0	9	0	18	66.7%	1,008	17.9
ANTI SNORING & MINUTEMAN PRESS	0	15	0	15	0	0.0%	5,312	-
RONNA'S VIDEO AND MAGAZINE	7	7	0	7	7	50.0%	6,944	1.0
ECHO LAKE APARTMENTS	17	15	0	15	17	53.1%	7,080	2.4
ECHO LAKE TAVERN	10	0	5	0	5	50.0%	2,392	2.1
ANDERSON BUILDING	14	20	0	4	30	88.2%	10,780	2.8
WASHINGTON MUTUAL BLDG	65	3	3	3	62	91.2%	18,066	3.4
K C HOUSING AUTHORITY ADMIN	32	0	6	0	26	81.3%	45,318	0.6
TAXPAYER: INTERURBAN CENTER LLC	60	0	8	0	52	86.7%	17,593	3.0
KEY BANK	2	4	1	4	1	16.7%	7,728	0.1
AURORA RENTS	6	0	6	0	0	0.0%	7,287	-
TYEE PARTNERSHIP LLC	38	0	0	0	38	100.0%	21,212	1.8
SHORELINE AND AWNING	31	0	14	0	17	54.8%	16,538	1.0
TABOO VIDEO	0	11	0	11	0	0.0%	5,068	-
PAWN EXCHANGE	11	3	0	3	11	78.6%	4,800	2.3
PRE-OWNED OFFIC FURNITURE	0	8	0	8	0	0.0%	22,670	-

Table 37. Parking Impacts by Parcel – Alternative B

	Existing Compliant Stalls	Existing Non-Compliant Stalls	Compliant Stalls Impacted	Non-Compliant Stalls Impacted	Total Stalls Available	Stalls Available as % of Existing Total	Existing Building (SF)	Stalls Available per 1000 SF
U-HAUL	47	0	8	0	39	83.0%	2,600	15.0
A 2 Z			12	0	(12)	#DIV/0!	569	(21.1)
OLD COUNTRY BUFFET	90	4	2	4	88	93.6%	6,825	12.9
GERBER TOWING	19	0	8	0	11	57.9%	2,325	4.7
B & D SHEET METAL	29	0	5	0	24	82.8%	11,392	2.1
1 STOP	25	5	0	5	25	83.3%	1,710	14.6
TAXPAYER: WAYNE DROKER	8	4	0	4	8	66.7%	0	
TAXPAYER: WAYNE DROKER	19	1	0	1	19	95.0%	1,440	13.2
TOBACCO LANE	0	2	0	2	0	0.0%	744	-
SUGAR'S	35	2	0	2	35	94.6%	3,200	10.9
CHUCK OLSON CHEVROLET	267	0	23	0	244	91.4%	23,512	10.4
APARTMENTS	27	3	0	3	27	90.0%	2,790	9.7
YOURIST	8	0	2	0	6	75.0%	286	21.0
METLIFE / FRED MEYER	230	0	15	0	215	93.5%	121,232	1.8
JACK ROBERTS APPLIANCE	59	23	0	23	59	72.0%	22,400	2.6
DISCOUNT TIRE	59	0	13	0	46	78.0%	7,331	6.3
MINI MALL	7	4	0	4	7	63.6%	2,600	2.7
TAXPAYER: LEWALLEN B MOORMAN	10	5	0	5	10	66.7%	3,000	3.3
SPARKY'S BAR & GRILL	68	0	9	0	59	86.8%	13,863	4.3
STARBUCKS & BLIMPIE SUBS	36	0	0	2	34	94.4%	2,772	12.3
COPY & MAIL, TROPICAL TAN	18	6	0	6	18	75.0%	4,931	3.7
TOP TATTOO	9	1	0	1	9	90.0%	1,982	4.5
JUST FOR YOU KID'S CONSIGNMENT /	0	5	0	5	0	0.0%	1,640	-
99c DISCOUNT STORE	0	10	0	10	0	0.0%	4,828	-
PHO '99 RESTAURANT	0	9	0	9	0	0.0%	5,964	-
JORDAN'S USED TIRES	0	9	0	9	0	0.0%	2,820	-
DELGRI	27	0	9	0	18	66.7%	1,008	17.9
ANTI SNORING & MINUTEMAN PRESS	0	15	0	15	0	0.0%	5,312	-
RONNA'S VIDEO AND MAGAZINE	7	7	0	7	7	50.0%	6,944	1.0
ECHO LAKE APARTMENTS	17	15	0	15	17	53.1%	7,080	2.4
ECHO LAKE TAVERN	10	0	5	0	5	50.0%	2,392	2.1
ANDERSON BUILDING	14	20	0	4	30	88.2%	10,780	2.8
WASHINGTON MUTUAL BLDG	65	3	4	3	61	89.7%	18,066	3.4
K C HOUSING AUTHORITY ADMIN	32	0	6	0	26	81.3%	45,318	0.6
TAXPAYER: INTERURBAN CENTER LLC	60	0	8	0	52	86.7%	17,593	3.0
KEY BANK	2	4	2	4	0	0.0%	7,728	-
AURORA RENTS	6	0	6	0	0	0.0%	7,287	-
SHORELINE AND AWNING	31	0	14	0	17	54.8%	16,538	1.0
TABOO VIDEO	0	11	0	11	0	0.0%	5,068	-
PAWN EXCHANGE	11	3	0	3	11	78.6%	4,800	2.3
PRE-OWNED OFFICE FURNITURE	0	8	0	8	0	0.0%	22,670	-

Table 38. Parking Impacts by Parcel – Alternative C

	Existing Compliant Stalls	Existing Non-Compliant Stalls	Compliant Stalls Impacted	Non-Compliant Stalls Impacted	Total Stalls Available	Stalls Available as % of Existing Total	EXISTING BUILDING (SF)	Stalls Available per 1000 SF
U-HAUL	47	0	8	0	39	83.0%	2,600	15.0
A.Z.Z.			12	0	-12		569	(21.1)
OLD COUNTRY BUFFET	90	4	2	4	88	93.6%	6,825	12.9
GERBER TOWING	19	0	8	0	11	57.9%	2,325	4.7
B & D SHEET METAL	29	0	5	0	24	82.8%	11,392	2.1
1 STOP	25	5	0	5	25	83.3%	1,710	14.6
TAXPAYER: WAYNE DROKER	8	4	0	4	8	66.7%	0	
TAXPAYER: WAYNE DROKER	19	1	0	1	19	95.0%	1,440	13.2
TOBACCO LANE	0	2	0	2	0	0.0%	744	-
SUGARS	35	2	0	2	35	94.6%	3,200	10.9
CHUCK OLSON CHEVROLET	267	0	23	0	244	91.4%	23,512	10.4
APARTMENTS	27	3	0	3	27	90.0%	2,790	9.7
CARTER SUBARU	126	0	11	0	115	91.3%	20,167	5.7
YOURIST	8	0	2	0	6	75.0%	286	21.0
SHELL SERVICE STATION	8	0	8	0	0	0.0%	2,460	-
SANDBERG	266	0	25	0	241	90.6%	40,465	6.0
JACK IN THE BOX	12	0	1	0	11	91.7%	1,295	8.5
HOLLYWOOD VIDEO	22	0	1	0	21	95.5%	6,030	3.5
FRED MEYER	108	0	6	0	102	94.4%		
METLIFE / FRED MEYER	230	0	15	0	215	93.5%	121,232	1.8
RADIO SHACK	43	0	10	0	33	76.7%	9,100	3.6
SPIRO'S PIZZA AND PASTA	23	0	5	0	18	78.3%	3,810	4.7
DISCOUNT TIRE	59	0	13	0	46	78.0%	7,331	6.3
MINI MALL	7	4	0	4	7	63.6%	2,600	2.7
MOORMAN	10	5	10	5	0	0.0%	3,000	-
LOVER'S PACKAGE	22	0	1	0	21	95.5%	7,246	2.9
SPARKY'S BAR & GRILL	68	0	9	0	59	86.8%	13,863	4.3
STARBUCKS & BLUMPIE SUBS	36	0	0	3	33	91.7%	2,772	11.9
CHINA CHIPPER	68	0	4	0	64	94.1%	5,639	11.3
COPY & MAIL, TROPICAL TAN	18	6	0	6	18	75.0%	4,931	3.7
TOP TATTOO	9	1	0	1	9	90.0%	1,982	4.5
JUST FOR YOU KID'S	0	5	0	5	0	0.0%	1,640	-
99c-DISCOUNT STORE	0	10	0	10	0	0.0%	4,828	-
PHO 99 RESTAURANT	0	9	0	9	0	0.0%	5,964	-
JORDAN'S USED TIRES	0	9	0	9	0	0.0%	2,820	-
DELGRI	27	0	9	0	18	66.7%	1,008	17.9
ANTI SNORING & MINUTEMAN	0	15	0	15	0	0.0%	5,312	-
RONNAS VIDEO AND MAGAZINE	7	7	0	7	7	50.0%	6,944	1.0
ECHO LAKE APARTMENTS	17	15	0	15	17	53.1%	7,080	2.4
ECHO LAKE TAVERN	10	0	5	0	5	50.0%	2,392	2.1
ANDERSON BUILDING	14	20	0	4	30	88.2%	10,760	2.8
WASHINGTON MUTUAL BLDG	65	3	6	3	59	86.8%	18,066	3.3
KC HOUSING AUTHORITY ADMIN	32	0	6	0	26	81.3%	45,318	0.6
INTERURBAN CENTER LLC	60	4	8	0	52	86.7%	17,593	3.0
KEY BANK	2	4	2	4	0	0.0%	7,728	-
HIGHLAND ENTERPRISES LLC			7	0	-7		1,934	
HIGHLAND ENTERPRISES LLC	31	4	0	4	31	88.6%	13,345	2.3
AURORA RENTS	6	0	6	0	0	0.0%	7,287	-
SHORELINE AND AWNING	31	0	14	0	17	54.8%	16,538	1.0
TABOO VIDEO	0	11	0	11	0	0.0%	5,068	-
PAVIN EXCHANGE	11	3	0	3	11	78.6%	4,800	2.3
PRE-OWNED OFFIC FURNITURE	0	8	0	8	0	0.0%	22,670	-

Table 39. Parking Impacts by Parcel – Preferred Alternative

		Existing Compliant Stalls	Existing Non-Compliant Stalls	Compliant Stalls Impacted	Non-Compliant Stalls Impacted	Re-Gained Stalls	Total Stalls Available	Stalls Available % of Existing Total	Existing Building (SF)	Stalls Available per 1000 SF
2	65	A 2 Z	8		1	0	7	87.5%	569	12.3
4	67	OLD COUNTRY BUFFET	90	4	2	4	88	93.6%	6,825	12.9
5	68	GERBER TOWING	19	0	8	0	11	57.9%	2,325	4.7
6	69	B & D SHEET METAL	29	0	5	0	26	89.7%	11,392	2.3
7	70	1 STOP	25	5	0	5	25	83.3%	1,710	14.6
8	178	TAXPAYER: WAYNE DROKER	8	4	0	4	8	66.7%	0	#DIV/0!
9	179	TAXPAYER: WAYNE DROKER	19	1	0	1	19	95.0%	1,440	13.2
10	71	TOBACCOLANE	0	2	0	2	0	0.0%	744	-
11	72	SUGAR'S	35	2	0	2	35	94.6%	3,200	10.9
14	180	CHUCK OLSON CHEVROLET	267	0	23	0	244	91.4%	23,512	10.4
15	75	APARTMENTS	27	3	0	3	27	90.0%	2,790	9.7
22	200	TAXPAYER: HARRY & ROSALIE YOURIST	8	0	2	0	6	75.0%	286	21.0
35	93	METLIFE / FRED MEYER	230	0	15	0	215	93.5%	121,232	1.8
44	120	JACK ROBERTS	59	23	0	23	59	72.0%	22,400	2.6
62	195	MINI MALL	7	4	0	4	7	63.6%	2,600	2.7
63	133	TAXPAYER: LEWALLEN B MOORMAN	10	5	0	5	10	66.7%	3,000	3.3
65	135	SPARKY'S BAR & GRILL	68	0	9	0	59	86.8%	13,863	4.3
66	136	STARBUCKS & BLIMPIE SUBS	36	0	0	2	34	94.4%	2,772	12.3
72	142	COPY & MAIL, TROPICAL TAN, FASHION HERE,	18	6	0	6	18	75.0%	4,931	3.7
73	194	TOP TATTOO	9	1	0	1	9	90.0%	1,982	4.5
74	143	JUST FOR YOU KID'S CONSIGNMENT /	0	5	0	5	0	0.0%	1,640	-
75	196	99c DISCOUNT STORE	0	10	0	10	5	50.0%	4,828	1.0
76	144	PHO 99 RESTAURANT	0	9	0	9	4	44.4%	5,964	0.7
78	145	JORDAN'S USED TIRES	0	9	0	9	4	44.4%	2,820	1.4
79	146	DELGRI	27	0	9	0	18	66.7%	1,008	17.9
80	147	ANTI SNORING & MINUTEMAN PRESS	0	15	0	15	0	0.0%	5,312	-
81	148	RONNA'S VIDEO AND MAGAZINE	7	7	0	7	7	50.0%	6,944	1.0
82	149	ECHO LAKE APARTMENTS	17	15	0	15	17	53.1%	7,080	2.4
83	150	ECHO LAKE TAVERN	10	0	5	0	5	50.0%	2,392	2.1
87	152	ECHO COVE CONDO, HOLIDAY RESORT, BP	?	?	0	3			7,900	-
89	154	ANDERSON BUILDING	14	20	0	4	30	88.2%	10,780	2.8
104	161	WASHINGTON MUTUAL BLDG	65	3	4	3	61	89.7%	18,066	3.4
105	162	TAXPAYER: K C HOUSING AUTHORITY ADMIN	32	0	6	0	26	81.3%	45,318	0.6
107	165	TAXPAYER: INTERURBAN CENTER LLC	60	0	8	0	52	86.7%	17,593	3.0
116	101	KEY BANK	2	4	2	4	0	0.0%	7,728	-
120	102	AURORA RENTS	6	0	6	0	0	0.0%	7,287	-
124	106	SHORELINE AND AWNING & SHORELINE GOLF	31	0	14	0	17	54.8%	16,538	1.0
125	107	TABOO VIDEO	0	11	0	11	0	0.0%	5,068	-
127	108	PAWN EXCHANGE	11	3	0	3	11	78.6%	4,800	2.3
128	109	OFFIC FURNITURE	0	8	0	8	0	0.0%	22,670	-

Table 40 summarizes the businesses projected to lose 20% or more of their existing parking supply (includes compliant and non-compliant parking) with the resulting total being less than the 3.3 spaces required by City code. As the figures do not reflect possible reconfiguration of parking to minimize the number of lost stalls, the numbers represent worst case.

Table 40. Businesses Losing 20% or More of Existing Parking by Alternative

Alternative A	Alternative B	Alternative C	Preferred Alternative
Jack Roberts Appliance	Jack Roberts Appliance	Valero Gas	Tobacco Lane
Moorman Mall	Moorman Mall	Moorman (2 Buildings)	Jack Roberts
Consignment	Consignment	Consignment	Moorman (2 Buildings)
Discount Store	Discount Store	Discount Store	Consignment
Pho 99 Restaurant	Pho 99 Restaurant	Pho 99 Restaurant	Discount Store
Jordan Tires	Jordan Tires	Jordan Tires	Pho 99 Restaurant
Anti Snoring	Anti Snoring	Anti Snoring	Jordan Tires
Ronna's Video	Ronna's Video	Ronna's Video	Anti Snoring
Echo Lake Tavern	Echo Lake Tavern	Echo Lake Tavern	Ronna's Video
Key Bank	Key Bank	Key Bank	Echo Lake Tavern
Aurora Rents	Aurora Rents	Aurora Rents	Key Bank
Shoreline Awning	Shoreline Awning	Shoreline Awning	Aurora Rents
Taboo Video	Taboo Video	Taboo Video	Shoreline Awning
Pawn Exchange	Pawn Exchange	Pawn Exchange	Taboo Video
Office Furniture	Office Furniture	Office Furniture	Pawn Exchange

Source: CH2M Hill 2007, Property Counselors 2007

Left-Turn Restrictions

In addition to impacts related to property acquisitions, some businesses could potentially be affected by left-turn access restrictions. As presented in the case study section, the businesses that are most likely to be affected are those that are convenience-oriented and are without direct left-turn access. These businesses include gas stations, convenience stores, fast food outlets, pharmacies, personal services, and used car dealers. The City analyzed all parcels along the Corridor and identified only 26 businesses that would not have direct left-turn access after Project completion; and some businesses that do not currently have direct

left-turn access would receive it as a result of Project. Of the 26 businesses that would be without direct left-turn access, the following are considered convenience-oriented and are more likely to be affected by the changes in access than other businesses in the corridor.

Auto Sales and Service

- Shoreline Cars and Trucks, 16731 Aurora Avenue N
- Seattle Retail Auto Sales, 16523 Aurora Avenue N
- Action Auto Parts, 17012 Aurora Avenue N
- Car City, 17550 Aurora Avenue N
- Sam's Auto, 19425 Aurora Avenue N
- Jordan Used Tires, 19805 Aurora Avenue N

Miscellaneous Convenience Retail

- Tobacco Lane, 16737 Aurora Avenue N
- Hollywood Video, 18217 Aurora Avenue N
- Taboo Video, 17026 Aurora Avenue N

Miscellaneous Services

- Shoreline Motel, 16525 Aurora Avenue N
- Pawn Exchange, 17010 Aurora Avenue N

Taxable sales in these businesses were \$3,574,257 in 2006. Based on the experience of the case studies in Chapter 4, these businesses could experience a loss of sales of up to 5%, compared to pre-construction sales levels.

Estimated Impacts

Ongoing impacts are estimated for business receipts, property values, tax revenues, and jobs.

Business Receipts

Business receipts are affected by a combination of factors described earlier. Generally they fall into two categories: property acquisition (building, land, and parking) and restrictions on access. The businesses that would be affected by property acquisition under the four alternatives were identified earlier in this section. Potential losses in business receipts are estimated by adjusting the taxable sales figure for calendar year 2006.

- Businesses identified as having a parking loss greater than 20% reduction, with resultant parking factor of less than 3.3 spaces per 1,000 square feet of building area, were assumed to experience a proportionate decrease in sales. Businesses losing all parking were assumed to close or relocate, so loss of the full amount of existing revenue was assumed for this analysis. Businesses with losses of parking in the range of 20 to 50% could experience difficulty remaining open, but there also may be opportunities to regain some of the parking that is lost through restriping and/or joint parking/access agreements with neighbors.
- Businesses with outdoor display and sales (primarily auto dealers) that experience loss in parking were assumed to experience some loss in sales, all other factors being the same. The loss in vehicle display parking would essentially be parking at the back of the property, as the row of parking that was the second row from the arterial becomes first row parking. Also, auto sales are just one source of revenue for new auto dealers (parts and service being others), although sales do drive the other segments as well. Based on these factors, the major auto dealers were assumed to lose sales at an amount equivalent to 50% of the percentage loss in parking. This factor is considered to be a worst-case estimate of the impact of property loss given the scale of property acquisition considered in the analysis (5 to 10% of available parking). The used car lot that experiences a significant loss in parking does not typically have the same diversity of revenue sources, and is more likely to be closer to the threshold size to remain open. Thus, the loss in sales for used automobile dealers was assumed to be equal to the estimated reduction in vehicle parking.

These assumptions were not based on empirical evidence, but designed to conservatively reflect the relationships between sales and business characteristics, and to provide a consistent basis for comparison of alternatives.

The estimated losses in taxable sales for the four alternatives, based on the assumptions stated above, are summarized in Table 41.

Table 41. Potential Annual Taxable Sales Receipt Impacts due to Property Acquisition and Loss of Parking¹

Potential Taxable Sales Impacts (Percent of Existing Base)				
Existing Base ²	Alternative A	Alternative B	Alternative C	Preferred Alternative
\$403,198,000	– \$4,033,000 (1.0%)	– 4,063,000 (1.0%)	– \$3,101,000 (0.7%)	– \$1,808,000 (0.4%)

1. Impacts shown in this table are based on an assumption of full loss of impacted parking spaces. Potential impacts would be lower if some parking is regained by reconfiguration of the remaining space on properties, which would result in a lower impact on taxable sales.

2. Existing base consists of Project Area business receipts in 2006.

Source: CH2M Hill 2007, Property Counselors 2007

These estimates represent 0.4% to 1.0% of the 2006 taxable sales in the project area of \$403.2 million. This estimate does not reflect new development within the corridor that is expected to offset losses in sales that result from property acquisitions.

Table 42 summarizes the potential losses in taxable sales related to access restrictions for the four alternatives, estimated at 5% of sales for convenience sectors at mid-block locations.

Table 42. Estimated Annual Taxable Sales Receipt Impacts due to Left-Turn Access Limitations

2006 Annual Sales of Convenience Businesses ¹	\$3,574,000
Estimated Annual Loss	– \$178,000

1. Existing base consists of 2006 sales Project Area businesses.

Source: Property Counselors 2007

The businesses identified as convenience-oriented and at mid-block locations will experience a loss in convenience, even with allowable U-turns. The same businesses would be affected under any of the four alternatives. It is expected that the estimated losses summarized in Tables 40 and 42 would be recovered as buildings are expanded and new businesses are attracted to the Aurora Commercial District.

Property Values

Current land prices in the Corridor fall in the range of \$40 to \$50 per square foot, a premium of \$5 to \$10 above current assessed land values

as presented in Chapter 2. These prices are somewhat higher than prices along SR 99 in Snohomish County or south of Seattle. Recent land sales along SR 522 in Seattle were as high as \$70 per square foot. Given this precedent, it is projected that prices in the Aurora Corridor could reach \$50 to \$60 per square foot, an increase of approximately 20% over current levels, after construction is complete. This figure compares to the 18% figure identified in the FHWA *Benefits of Access Management* brochure. A factor of 15% is a realistic if conservative estimate for this analysis. The estimated effect of the project on land values is the same for the four build alternatives. Table 43 summarizes estimated changes in land values in the Project Area.

Table 43. Estimated Changes in Land Values in Project Area

	Current Value	Projected Value After Construction
Land Value (per square foot)	\$40 to \$50	\$45 to \$58
Assessed Value of Land In Project Area	\$182,678,900	\$210,080,700

Source: Property Counselors 2007

Tax Revenues

The tax revenues to state and local government will change with land ownership, land value, and business receipts. Table 44 summarizes the estimated change in tax base and associated revenues for the City, state, and other local governments. The projected loss in sales tax revenue for the Preferred Alternative is expected to be less than the increase in property tax revenue due to property value increases; thus, the net impact is expected to be positive for the City and state, assuming no changes in land use. The projected loss in sales tax revenue for Alternatives A, B, and C is expected to be greater than the increase in property tax revenue due to property value increases, at least in the short term; thus, the net impact on tax revenue is expected to be negative for the City and state. However, as presented in Chapter 3, it is expected that there will be demand for new development, including expansion of existing businesses and addition of new businesses. Taxes from the new development would ultimately lead to increases in overall tax revenues to the City and state under all four alternatives.

Table 44. Estimated Tax Revenue Impacts (Excluding Value of New Development)

	Alternative A	Alternative B	Alternative C	Recom'd Alt.
Tax Base Changes				
Assessed Value				
Existing Land Value	182,678,900	182,678,900	182,678,900	182,678,900
Increase in Land Value	27,401,835	27,401,835	27,401,835	27,401,835
Property Take	(5,256,475)	(5,764,955)	(6,435,135)	(4,976,965)
Existing Building Value	54,012,800	54,012,800	54,012,800	54,012,800
Building Take	(267,200)	(612,700)	(778,600)	1,000
Total	258,569,860	257,715,880	256,879,800	259,117,570
Net Change	21,878,160	21,024,180	20,188,100	22,425,870
Property Tax Rate				
State	2.4979	2.4979	2.4979	2.4979
City	1.3748	1.3748	1.3748	1.3748
Other Local Government	8.1574	8.1574	8.1574	9.1574
Total	12.0300	12.0300	12.0300	13.0300
Taxable Retail Sales				
Net change				
Property Take	(4,033,063)	(4,033,063)	(3,100,922)	(1,807,857)
Access Restrictions	(178,713)	(178,713)	(178,713)	(178,713)
Total	(4,211,776)	(4,211,776)	(3,279,635)	(1,986,570)
Sales Tax Rate				
State	6.50%	6.50%	6.50%	6.50%
City	0.85%	0.85%	0.85%	0.85%
Other Local Government	1.55%	1.55%	1.55%	1.55%
Total	8.90%	8.90%	8.90%	8.90%
Change in Tax Revenue				
City of Shoreline				
Property Tax Change	30,077	28,903	27,754	30,830
Sales Tax Change	(35,800)	(35,800)	(27,877)	(16,886)
Total	(5,723)	(6,897)	(123)	13,945
State of Washington				
Property Tax Change	54,649	52,516	50,427	56,017
Sales Tax Change	(273,765)	(273,765)	(213,176)	(129,127)
Total	(219,117)	(221,250)	(162,749)	(73,110)
Other Local Government				
Property Tax Change	178,468	171,502	164,682	205,362
Sales Tax Change	(65,283)	(65,283)	(50,834)	(30,792)
Total	113,185	106,219	113,847	174,570

Employment Impacts

According to 2006 Shoreline retail employment and taxable sales, businesses averaged approximately \$157,000 in receipts per each full-time equivalent (FTE) employee. As such, decrease in sales resulting from the project could result in a proportional decrease in employment. Based on the projected sales impacts summarized in Tables 41 and 42, a corresponding decrease in FTE employees ranging between 13 and 27 could potentially occur (projection depends on alternative, with the Preferred Alternative at the low end of the potential range). These figures represent between 0.1% and 0.3% of the 10,456 Retail, Service and Finance, Insurance and Real Estate jobs in the City.

It is expected that any employment losses that result from property acquisition would be offset to some degree by new development in the corridor. Also, potential impacts shown Table 41 are based in part on an assumption of full loss of impacted parking spaces. Estimated impacts are expected to be lower if some parking is regained by reconfiguration of the remaining space on some properties

Any decreases in employment due to Project-related impacts are expected to be offset by employment associated with new development in the corridor after Project completion.

Chapter 6. Potential Impacts to Businesses During Construction

Businesses will be affected during construction due to reduced access and overall inconvenience to customers. Estimated impacts are presented in this chapter in terms of business receipts, tax revenues, and employment.

Impacts on Business Receipts

Based upon the experience of case studies evaluated for similar types of projects (described in Chapter 4), potential losses in business receipts resulting from project construction are estimated to vary from 1% to 3% for destination businesses; and from 9% to 15% for convenience businesses. The lower ends of the ranges are based upon the experience of the first mile, and the higher ends of the ranges are based upon the experience of projects in other cities. Please note, the factors derived from the first mile construction experience are much lower than average factors derived from the experience of projects elsewhere. The experience from the first mile also indicates that some businesses may be able to increase sales in spite of construction; and that potential exists for losses that directly result from Project construction to be offset or even exceeded by increase in sales unrelated to construction.

Project construction is scheduled to begin in early 2009 and last for 2 to 4 years, depending on phasing. Businesses are likely to experience some

loss in sales throughout the period regardless of how the Project is phased.

Tax Revenues

Local governments are expected to experience a loss of sales tax from the lost business receipts, but an increase in revenue from sales tax on construction activities related to the Project.

No tax revenue impact is estimated for the state. Business receipts losses will be captured by other jurisdictions and still taxable by the state. In the case of the construction tax revenues, the state will be paying a portion of those taxes in project costs.

Employment

Similar to the potential employment impacts discussed for conditions after Project construction, any decrease in sales that occurs as a direct result of construction could result in a corresponding decrease in employment. Based on 2006 Shoreline retail employment and taxable sales (described in previous section), one FTE person is employed for each \$157,000 in sales receipts. Decrease in sales that result from Project construction could result in a proportional decrease in employment along these lines. However, the following two factors could potentially offset this impact:

- Experience in other areas suggests that employers that do experience sales loss often maintain their employees in expectation of sales recovery at construction completion.
- Based upon experience of the first mile, it is possible that sales losses that directly result from project construction could be offset by sales growth that some businesses may be able to maintain in spite of project construction.

An increase in construction-related employment would also be expected throughout the course of Project construction. Based upon project costs and employment data for other roadway construction projects, it is estimated that one FTE person is employed for each \$500,000 of project construction cost. For example, \$20 million in construction cost would translate to 40 FTE people employed by the project.

Chapter 7. Recommended Mitigation Measures

There are several actions that the City, contractors, and the business community can take to mitigate the impacts during construction and thereafter. These measures can reduce the levels of impact identified in previous chapters, but cannot be expected to eliminate them altogether.

Mitigation of Construction Impacts

A variety of actions have been identified in the FHWA *Safe Access is Good for Business* brochure as well as economic development articles and the experiences of the case study projects.

Overall Communication

1. Establish a single point of contact to communicate with business and property owners.
2. Communicate construction progress through websites, newsletters, designated business liaisons, and regular meetings.

Construction Contract Management

3. Provide incentives/disincentives to expedite construction.
4. Stagger construction along corridor to reduce periods of intense impact to individual businesses.
5. Avoid scheduling construction activities during peak shopping periods, particularly Christmas.

6. Schedule construction for after business hours in areas where there are no adverse impacts to adjacent residential areas.

Access to Businesses

7. Provide at least one access point to any individual business at all times or limit periods of lost access to 2 hours for paving at a time.
8. Maintain access to existing parking spaces.
9. Avoid blocking business entrances with construction equipment and barriers.

Signage

10. Provide signage outside districts to direct potential customers to and through business district.
11. Provide signage identifying individual businesses, indicating they are open for business, and identifying how to access them.
12. Provide maps showing how to access businesses and parking during construction.

Promotion

13. Publicize the fact that the district is open for business, and how to access it.
14. Promote events related to construction, either tied to historical activities or construction tours.
15. Promote sales and services to construction workers and the larger community, either through discounts or special products or services.

Business Assistance

16. Provide technical assistance and funding programs for affected businesses.

Mitigation of Ongoing Impacts of Project

The permanent elements of the Project have impacts that can be mitigated.

1. Provide convenient shared parking for businesses losing off-street parking.
2. Consider altering roadway cross sections in some areas to reduce building acquisitions and parking impacts, but require dedication of full width of right-of-way at time of redevelopment. (Note, this measure was implemented in the development of the Preferred Alternative)
3. Combine driveways to maximize parking.
4. Coordinate all upcoming public improvements to assure business stability at completion of highway improvements.
5. Use completion of improvements as centerpiece of new promotion of the district.
6. Increase corridor-wide economic development activities to promote the area, expand existing businesses, and attract new development to district.

These efforts, particularly the economic development and promotion activities, can minimize the length of time required for businesses to recover.

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Appendix A

Description of Alternatives

Features of the Aurora Corridor Improvement Project Build Alternatives

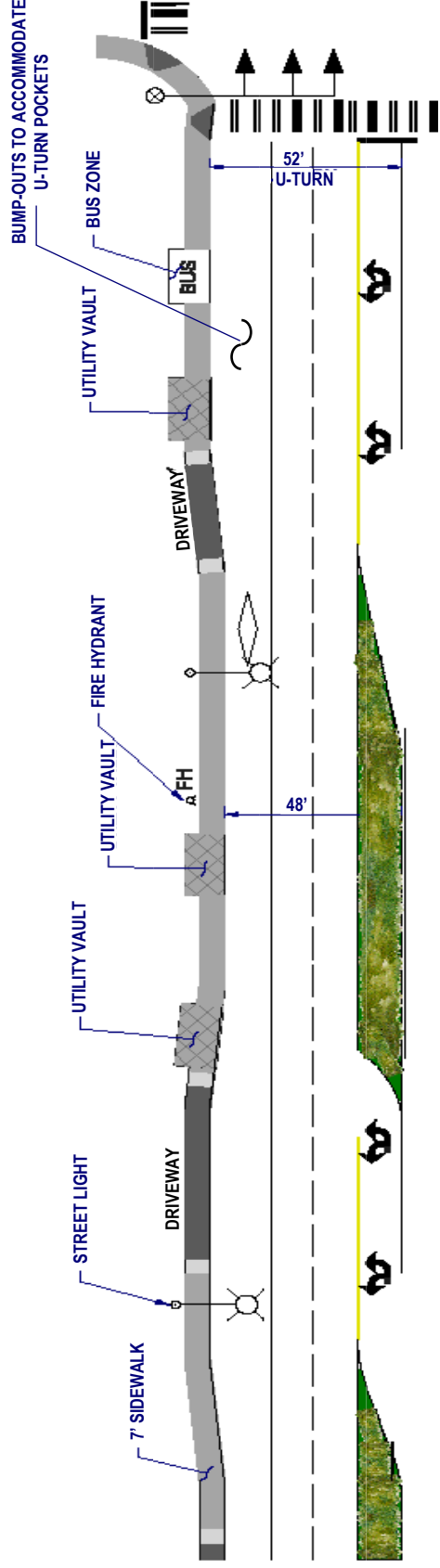
Features Common among Build Alternatives A, B, and C

General-purposes lanes	Project design includes two general-purpose lanes in each direction. Each Build Alternative would include one Business Access and Transit (BAT) lane in each direction.
BAT lane	7-foot sidewalks would be constructed along both sides of the corridor.
Sidewalk	Curb and gutter would be constructed along both sides of the corridor. Curb ramps would be constructed at all intersections in accordance with ADA requirements.
Curb and Gutter	Utilities would be placed underground for each of the three Build Alternatives.
Underground utilities	Each of the alternatives includes vegetative plantings. Extent and location vary as described below.
Vegetation	A center median would be added, with left-turn and u-turn pockets (width of the center median varies by alternative, as described below).
Center median	New traffic signals proposed at Aurora Avenue N/N 182nd Street and Aurora Avenue N/Firlands Way N (north of N 195th Street). Signalized intersections will be widened to improve east-west capacity and traffic flow.
Traffic signals	Improvements would be made to: - Echo Lake Place (north of N 195th Street), including realignment and a connection to Aurora Avenue N at Firlands Way N; and - Midvale Ave N (N 175th Street – N 183rd Street), including realignment, addition of a center turn lane, curb and gutter, and sidewalk on the east side of the roadway. The new Interurban Trail will serve as the walking path on the west side of the roadway.
Road improvements	

Features that vary among Alternatives A, B, and C

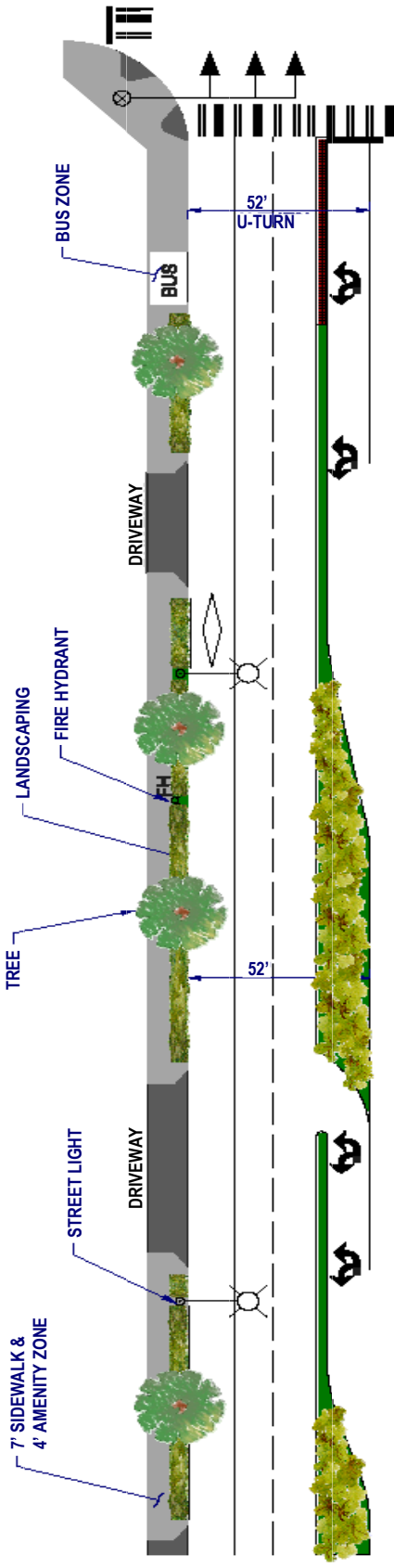
	Alternative A	Alternative B	Alternative C
Cross Section	Typically 98 feet from back-of-sidewalk to back-of-sidewalk. The cross section will be wider where utility vaults, light/signal poles, and bump outs are located, as described below. This dimension is 12 feet narrower than the cross sections proposed under Alternatives B and C, due to a narrower median (12 feet instead of 16 feet) and the absence of the 4-foot amenity zone on each side of the roadway. The City would also acquire a continuous 3-foot-wide easement behind the sidewalk on each side of the roadway for placement of utilities.	110 feet from back-of-sidewalk to back-of-sidewalk.	
Median Width	Center median would be 12 feet wide.	Center median would be 16 feet wide.	
Amenity Zone	No amenity zone provided. Utility vaults and light/signal poles would be located behind the sidewalks in the 3-foot easement area.	A 4-foot amenity zone would be located between the curb and sidewalk on each side of the street. Utility vaults, light/signal poles, bus stop signs, hydrants, and other pedestrian amenities would be located in this area.	
Bump Outs	Bump outs approximately 4 feet in additional width would be needed at u-turn and left-turn locations to achieve the turning radii needed to accommodate u-turns.	None needed. U-turns would be sufficiently accommodated within the standard roadway width.	
Placement of Alignment	Required widening would be shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.	Required widening would be shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.	Required widening would be shifted to the west of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.
Vegetation	Limited vegetation would be provided in the median.	More vegetation accommodated by wider median. Vegetation could also be planted in areas within the amenity zone.	

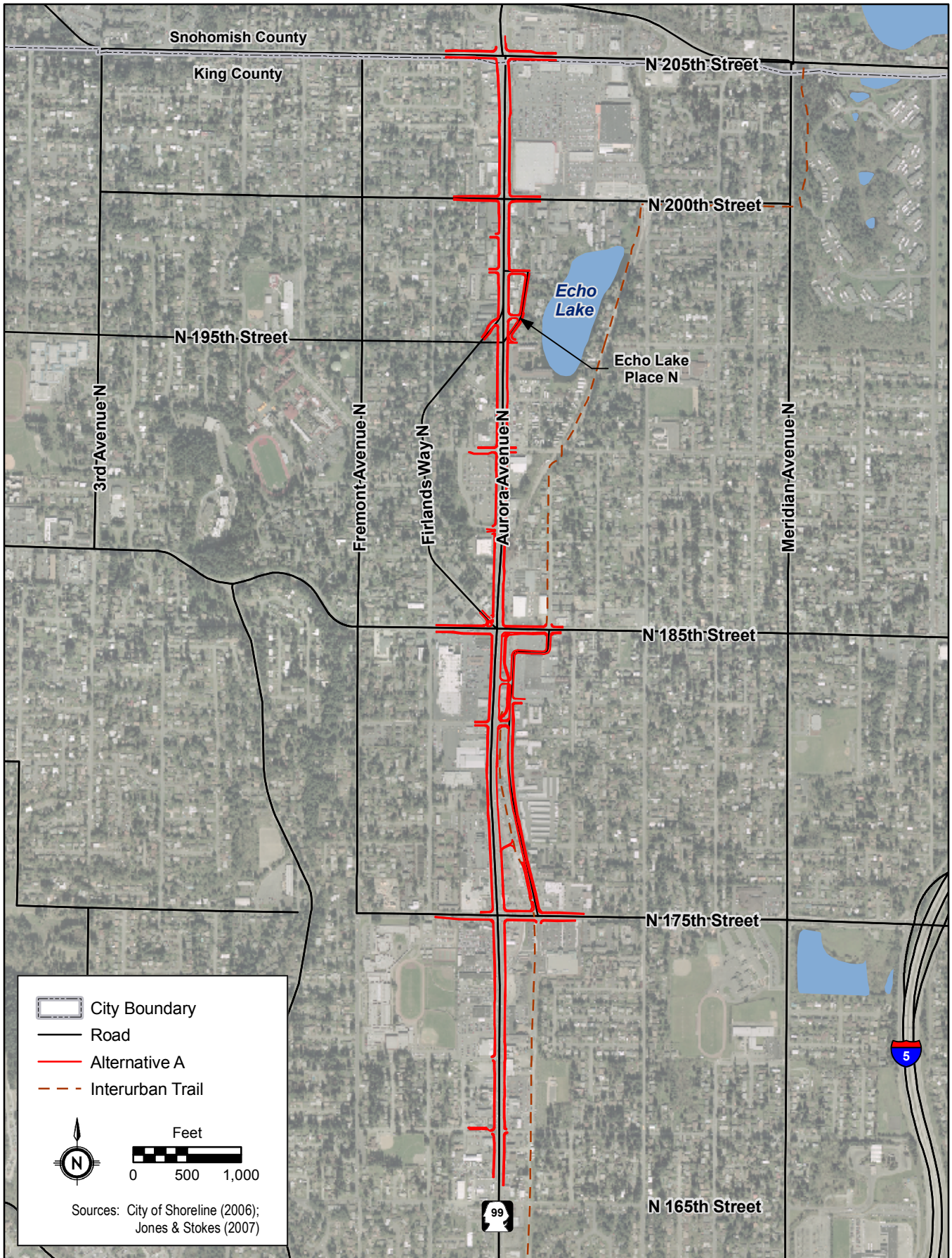
Alternative A




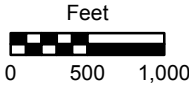
Alternatives B and C

Note: Drawing shows one direction of travel of the proposed roadway alternatives, which is typical of both directions

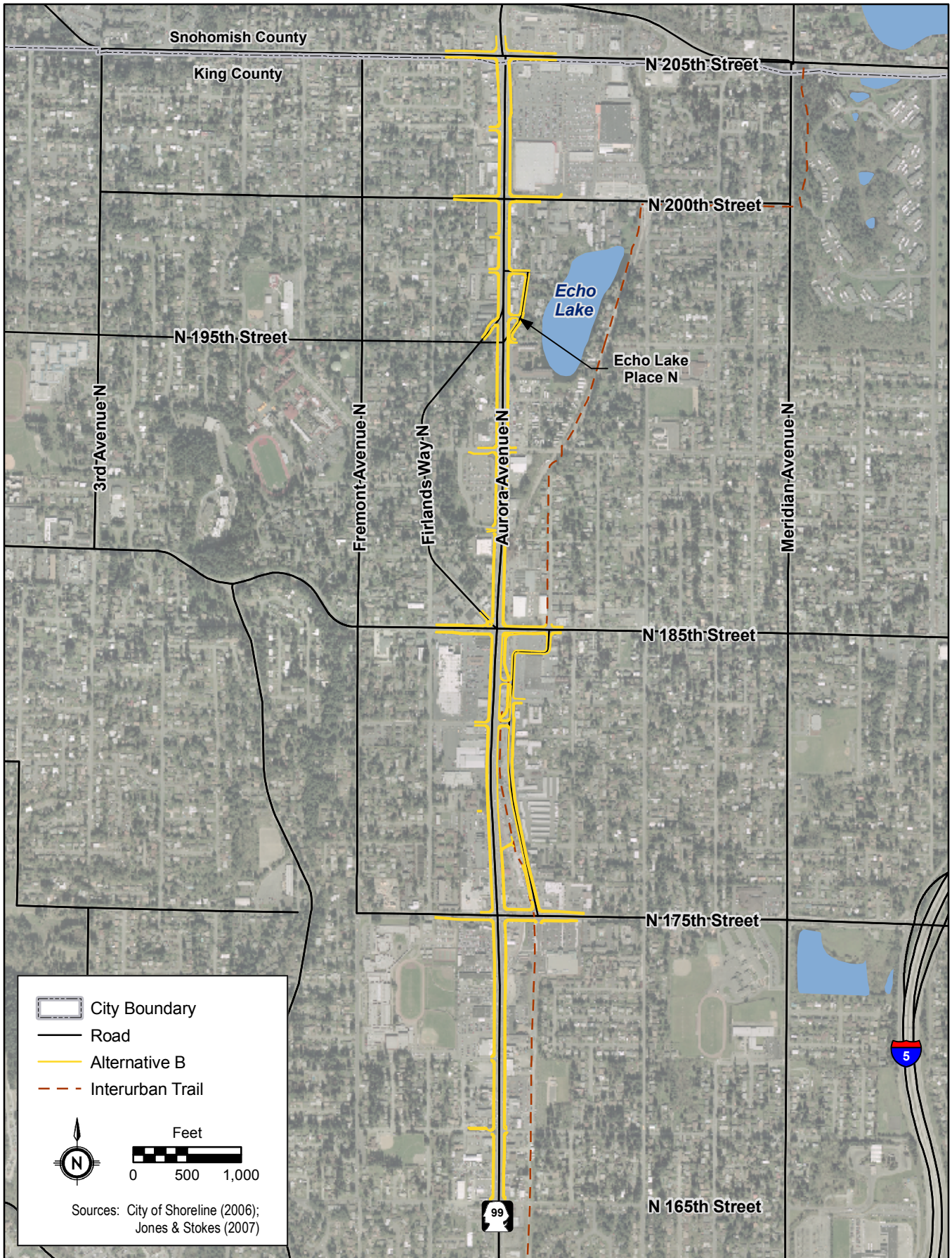










City Boundary
 Road
 Alternative A
 Interurban Trail

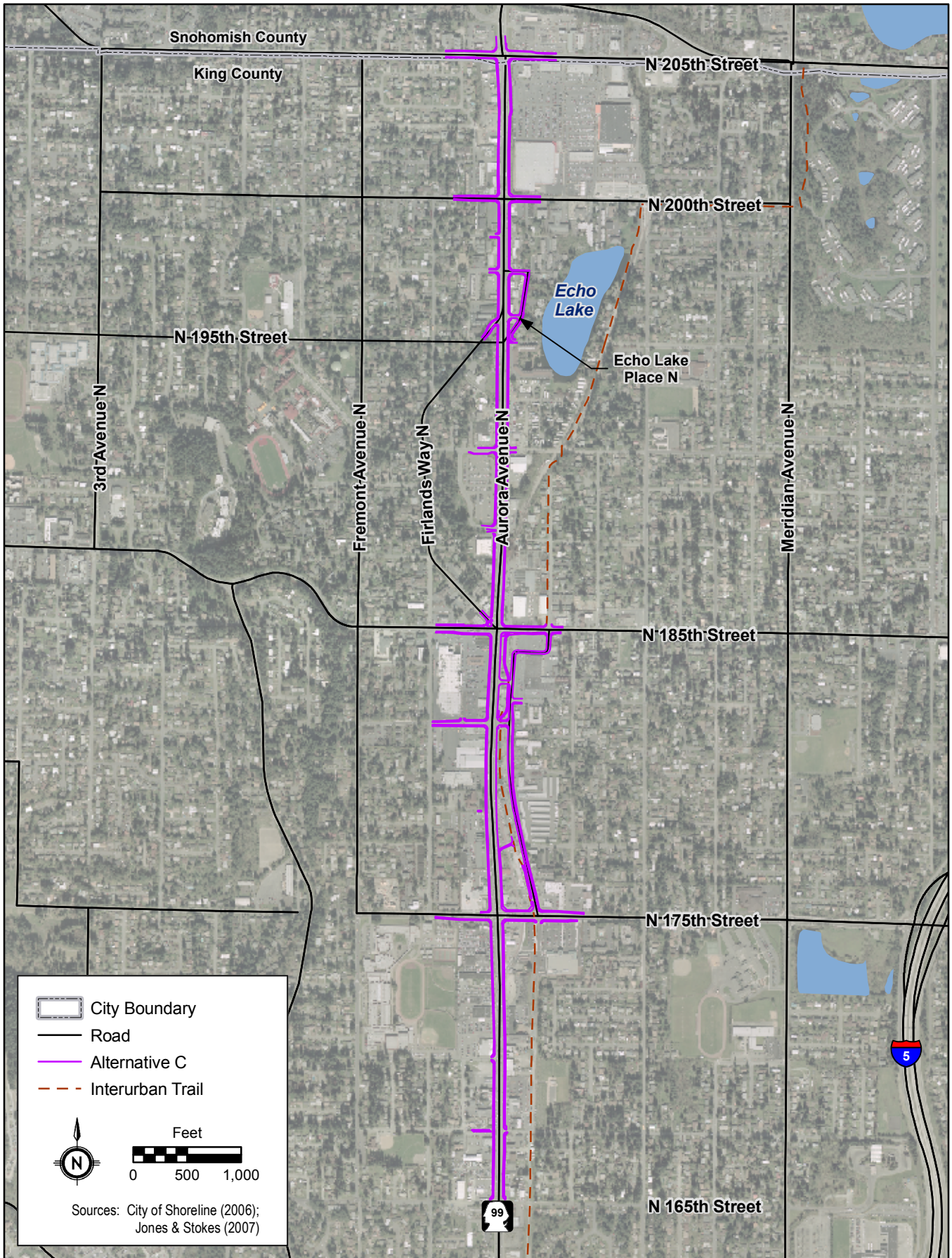
Sources: City of Shoreline (2006);
 Jones & Stokes (2007)



 City Boundary
 Road
 Alternative B
 Interurban Trail

Sources: City of Shoreline (2006);
Jones & Stokes (2007)

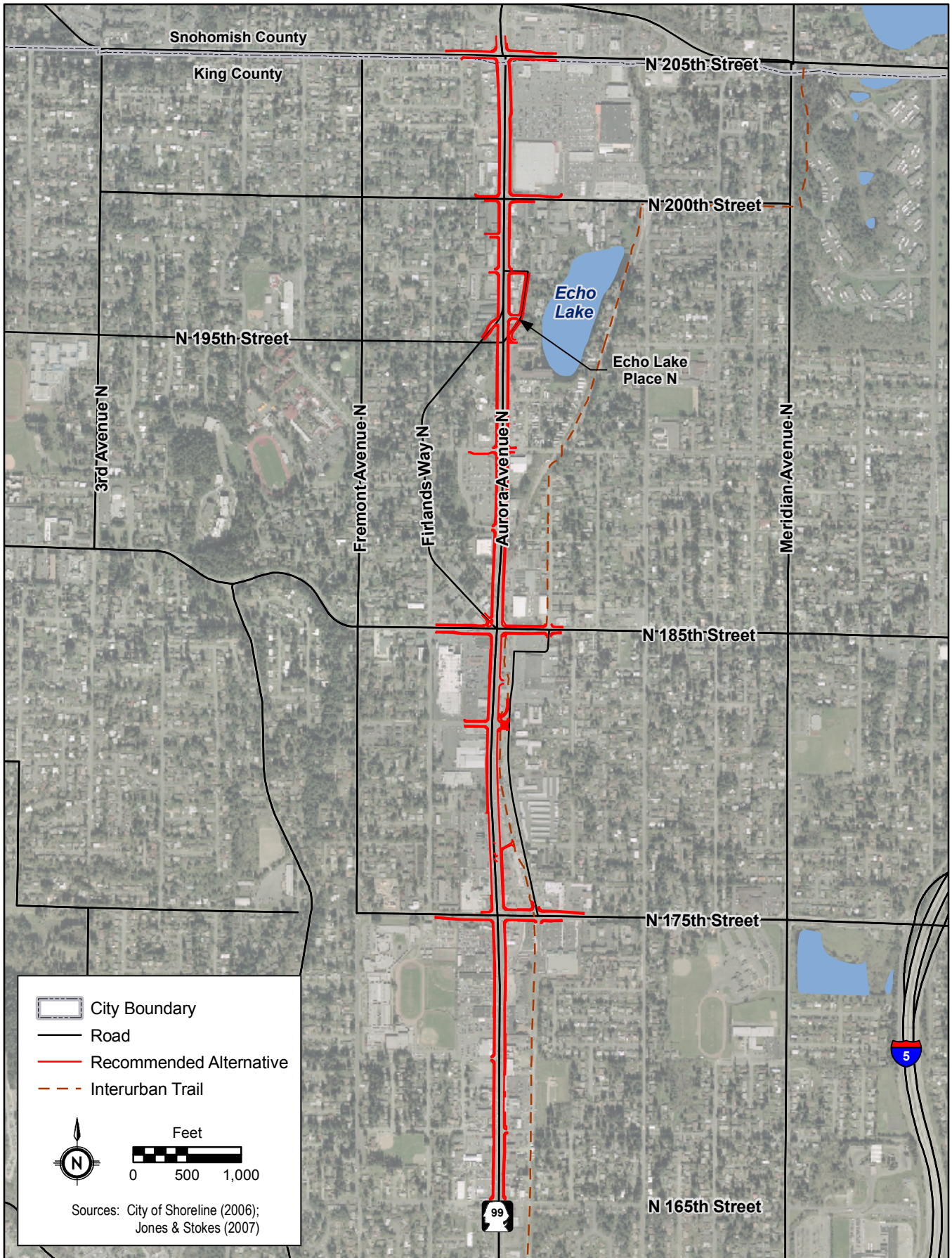


Preferred Alternative

The Aurora Corridor Improvement Project, N 165th Street to N 205th Street, will include the following elements:

- Business Access and Transit (BAT) lane in each direction;
- two general-purpose lanes in each direction;
- continuous 7-foot sidewalk, curb, and gutter on each side of the roadway;
- 4-foot amenity/utility zone between sidewalk and curb on each side of the roadway along most of the project length. The amenity/utility zone is reduced along approximately 5% (linear feet of zone) in order to avoid impacts to buildings and/or minimize impacts to parking spaces;
- 16-foot landscaped center median with left-turn and u-turn pockets;
- interconnected, coordinated signal system with transit signal priority;
- improvements to intersections, including proposed new traffic signals at the intersections of Aurora Avenue N with Firlands Way N/N 196th Street and N 182nd Street;
- marked pedestrian crossings at signalized intersections;
- improvements to Echo Lake Place, north of N 195th Street;
- new street and sidewalk lighting;
- undergrounding of utilities; and
- stormwater facilities, including Low Impact Development (LID) elements in the median and/or amenity zone.

The total width of the roadway will be 110 feet (narrower where sidewalk or amenity zone width is reduced), from back-of-sidewalk to back-of-sidewalk.



Appendix B

Business and Property Owner Interview Questions / List of Interviewees

Aurora Corridor Project

Questions for Aurora Business and Property Owner Interviews

Property Counselors

Businesses

1. Who are your customers?
 - General trade area.
 - Destination vs. impulse.
2. What are your typical patterns of business?
 - Day of week.
 - Time of day.
3. Do you own or lease your space?
 - Ownership of signage?
4. Who are your competitors?
 - Specific businesses or locations.
5. How do you advertise your business?
6. What are your current conditions related to parking and access?
 - Parking use patterns.
 - Customer parking vs. employee parking.
 - Designated parking spaces per lease.
 - Agreements with neighbors for parking.
7. What are your requirements for delivery vehicles?
 - Size, type, time of day.
8. What do you see as trends in your business activity levels?
 - Past 5 to 10 years.
 - Anticipated next 5 to 10 years.

9. How do you expect to be affected by roadway changes under different right of way alternatives?

- Loss of building?
- Loss of parking?
- Left turn access? Curb cuts?
- Visibility?
- Traffic volume?

10. Do you have any thoughts on how these issues could be addressed?

11. Do you have any other ideas or concerns that should be addressed in the economic analysis of the project?

Property Owners

1. What are the lengths of current leases or commitments for your property?
2. Do you have current plans for development or redevelopment of your property?
3. Do you have any ideas or concerns that should be addressed in the economic analysis of the project?

Property and Business Owners Interviewed for Project

- **Abel, Mary.** Goldie's, March 2, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Chang, John.** Owner EconoLodge, March 2, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Daher, George.** Owner City Vacuum, April 6, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Drager, Jeri.** Drager's Classic Appraisals, February 28, 2007. Personal conversation with Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Ellis, Art.** Property owner, March 2, 2007. Personal conversation with Greg Easton, Property Counselors, re potential property impacts of Aurora highway improvements.
- **Gunderson, Rosa.** Owner of DelGri Auto Sales, April 6, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Holmes, Kurtis.** Manager Taco Bell, March 7, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Larway, Joel.** Manager, Central Market, March 7, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Lewis, Rick.** Manager Quizno's, March 9, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Lewis, Jeff.** Shoreline Bank, March 2, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.

- **Mann, Dan.** Owner Tropical Tan, April 19, 2007. Personal conversation with Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Moorman, Ralph and Mike.** Property owners, April 13, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Morgan, Jay.** Property owner, March 2, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Morris, Tim.** Developer of Walgreen's site, March 8, 2007. Personal conversation with Grant Gladow, Property Counselors, re development conditions and potential business impacts of Aurora highway improvements.
- **O'Neil, Harley.** Property owner/Developer, April 19, 2007. Personal conversation with Grant Gladow, Property Counselors, re development conditions and potential business impacts of Aurora highway improvements.
- **Olson, Greg.** Owner Olson Chevrolet Kia, February 28, 2007. Personal conversation with Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Park, Edwin.** Valero Gas, March 2, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Pass, Mark.** Manager, Key Bank, March 14, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Reeves, Kevin.** Manager Carter Subaru, February 26, 2007. Personal conversation with Greg Easton and Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Sargent, Rich.** Manager, Rich's Car Corner, March 22, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.

- **Shaloum, Henry.** Property owner, April 16, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Steele, Larry.** Owner Aurora Rents, February 26, 2007. Personal conversation with Greg Easton and Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Stevens, Rick.** Highline Ice Arena, March 2, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Taylor, Greg.** Split End and Property manager, April 16, 2007. Personal conversation with Greg Easton, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Voltsis, Evan.** Owner Spiro's Restaurant, February 28, 2007. Personal conversation with Grant Gladow, Property Counselors, re potential business impacts of Aurora highway improvements.
- **Watley-Ames, Helen.** Triangle Properties, March 2, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of first mile Aurora highway improvements.
- **Zoretic, Dan.** Owner Sun Insurance, March 8, 2007. Personal conversation with Grant Gladow, Property Counselors, re business impacts of Aurora highway improvements.

