



# ENVIRONMENTAL ANALYSIS

This chapter analyzes the impacts of the Proposal and the No Action Alternative on the following elements of the environment:

- Land Use
- Plans and Policies
- Aesthetics
- Transportation
- Construction Impacts

This analysis reviews the affected environment, potential significant impacts, and mitigation measures for each element of the environment. The affected environment discussion describes the current character and environment on the project site and surrounding area. The impact analysis describes potential significant impacts associated with implementation of the alternatives. Mitigation measures identify regulatory requirements and other potential measures to reduce the significant environmental impacts of the alternatives.

## 3.1 LAND USE

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### 3.1.1 Affected Environment

The analysis area for land use patterns consists of the proposal site and surrounding area. For purposes of reviewing neighborhood land use patterns, we have examined land use patterns in an area generally bounded by Lake Washington to the west, State Street to the east, 7<sup>th</sup> Avenue South to the north and NE 64<sup>th</sup> Street to the south (see Figure 3.1-1).

#### Land Use Patterns

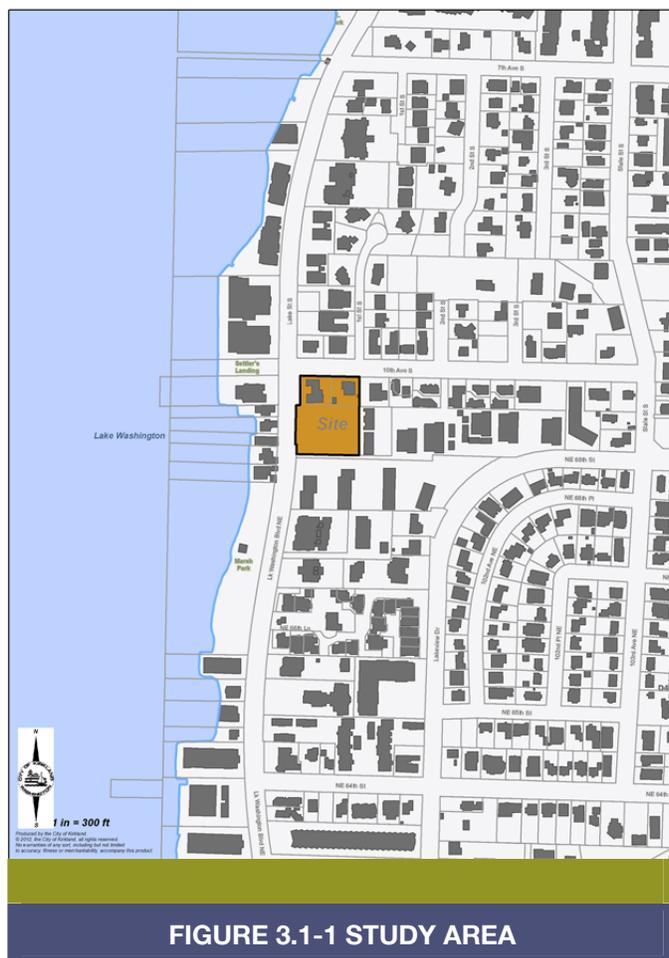
##### Project Site

Based on data from the King County Department of Assessments, the project site consists of 52,600 sf, or approximately 1.21 acres. Topographically, the site consists of two relatively flat

areas separated by a steep grade change that runs north south through the approximate center of the site (See Figure 2.9). The eastern portion of the site sits about ten feet higher than the western portion of the site.

The northeastern portion of the site is developed with a private single family residence and shed. This area is landscaped with lawn and ornamental landscaping(See Figure 3.1-2). Access to this portion of the site is from 10<sup>th</sup> Avenue South. Pedestrian access is provided via a sidewalk on 10<sup>th</sup> Avenue South. The southeastern portion of the site is undeveloped and covered in brush and shrubs.

Adjacent to the corner of 10<sup>th</sup> Avenue South/Lake Street South, the northwest portion of the site is developed with a 2,114 sf commercial building containing a dry cleaner and restaurant and paved parking area. In the remainder of the western portion of the site, there is some remnant asphalt pavement and concrete slabs from a prior use. The western portion of the site contains shrubs, deciduous trees (alder, cottonwood and maple), and brush primarily along the southern edge and in the steep slope area (See Figure 3.1-3). Access to the western portion the site is from Lake Street South. Pedestrian access is via a sidewalk on Lake Street South. A crosswalk is located at Lake Street South and 10<sup>th</sup> Avenue South.



## Surrounding Area

Immediately adjacent to the site, properties are developed for residential uses. Directly west of the site, properties are developed with single family and multifamily waterfront residential buildings. Public waterfront access is provided by Settler’s Landing, a small public park with 60 linear feet of waterfront. To the north and south, adjoining properties are developed with multifamily residential buildings. To the east, adjoining properties are developed with a single family residential building and multi-family development (See Figure 3.1-4).

In the larger surrounding area, the majority of the area is developed with multifamily residential uses, especially to the north and south along Lake Street South/Lake Washington Boulevard (See Figure 3.1-5).

In this area, the only exceptions to the multifamily residential development pattern are a few scattered single family residences, public waterfront parks and a small commercial use on the corner of NE 64<sup>th</sup> Street/Lake Washington Boulevard. In addition to Settler’s Landing, larger

waterfront parks include David E. Brink Park to the north and Marsh Park to the south (See Figure 3.1-6). To the east, property is developed with a mix of single and multifamily residential development (See Figure 3.1-7).



**FIGURE 3.1-2 EXISTING DEVELOPMENT EASTERN PORTION OF SITE**



**FIGURE 3.1-3 EXISTING DEVELOPMENT WESTERN PORTION OF SITE**



East of site



East of site



South of site



North of site



West of site



West of site



West of site

FIGURE 3.1-4 ADJOINING DEVELOPMENT



**FIGURE 3.1-5: EXISTING DEVELOPMENT EXAMPLES: LAKE STREET S/LAKE WASHINGTON BOULEVARD**



**FIGURE 3.1-6 WATERFRONT PARKS**



**FIGURE 3.1-7 EXISTING DEVELOPMENT EXAMPLES: 10<sup>TH</sup> AVENUE SOUTH**

## Density

### Overview

Density is generally defined as the amount of residential development permitted on a given parcel of land. It is typically measured in dwelling units per acre - the larger the number of units permitted per acre, the higher the density; the fewer units permitted, the lower the density. Minimum lot area per dwelling unit requirements are a common direct way to regulate density.

Alternatively, jurisdictions may elect not to address density directly, but rather use development standards, such as lot coverage, maximum height and parking standards, to control the overall size, intensity and density of development.

Many jurisdictions, including Kirkland, use both approaches as a way to regulate density. In residential zones (single family and multifamily), the Kirkland's Zoning Code establishes minimum lot area per dwelling unit for each residential zone (see Table 3.1-1). Residential uses are also allowed in many of the City's commercial zones, including the Community Business (CB), Neighborhood Business (BN), Central Business District (CBD), Totem Lake (TL), Juanita Business District (JBD), and Rose Hill Business District (RHBD) zones. In these commercial zones, residential densities are not regulated by lot size, but rather by development standards, such as building height, lot coverage, parking standards, setback requirements and other similar standards.

### Existing Densities

As shown in Figure 3.1-8, multifamily residential densities surrounding the project site vary significantly. In general, the majority of the surrounding area is developed with multifamily residential densities ranging roughly between 10 to 30 units per acre. Immediately north, south and west of the project site, developed multifamily residential densities range from 10 to 40 units per acre. Property immediately east of the subject site is developed with a mix of single and multifamily development, although located in a medium density (RM 3.6) zone.

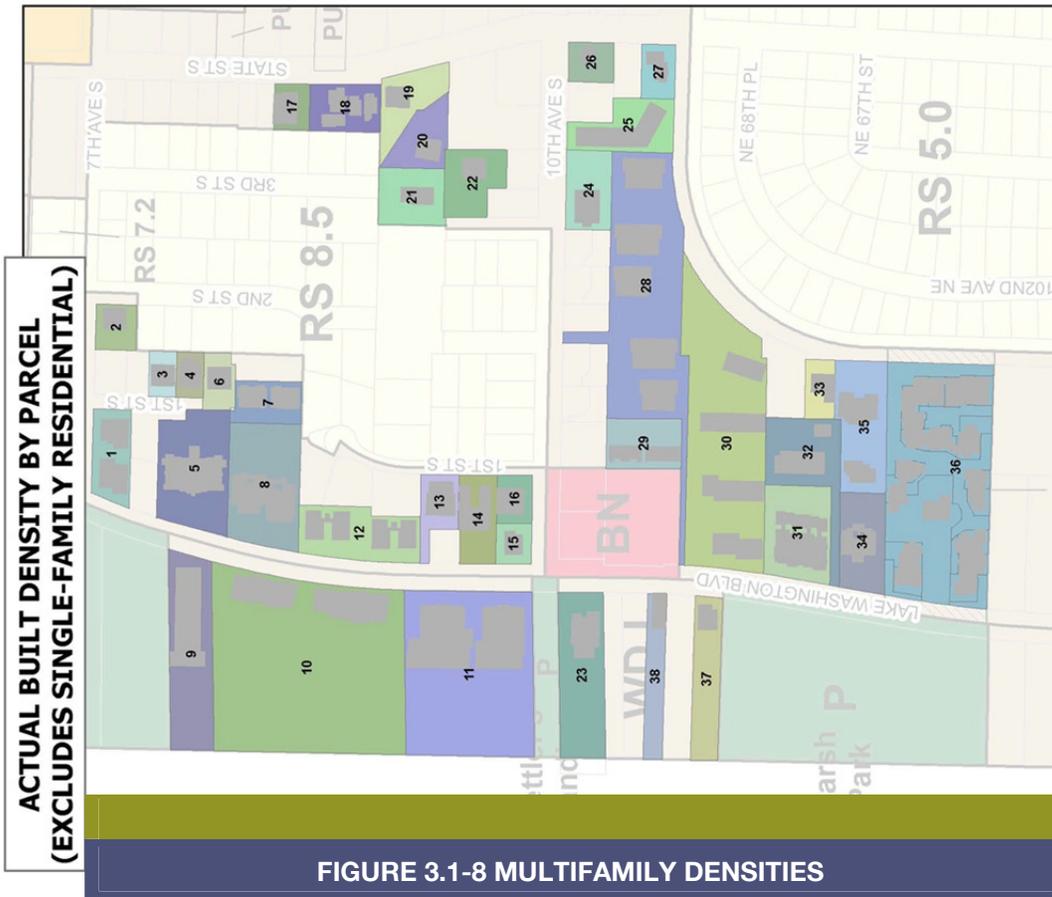
In the larger surrounding area, developed residential densities range from a low of 5 units per acre to a high of 177 units per acre, with most of the developments at 10 to 40 units per acre. Because many of these properties are less than one acre in size, actual development is proportional to the ratio of the site size to one acre. The highest density development in the area, at 177 units per acre, contains 38 units on a lot size of 9,343 sf. This development was constructed when the lakebed area was allowed to be included in the density calculation. This is no longer permitted, only upland area is used to calculate density and overwater structures are no longer permitted.

There are 43,560 square feet in one acre. Four units per acre equals a minimum lot size of 10,890 sf; 8 units per acre, 5,445 sf; 24 units per acre, 1,815 sf, etc.

**Table 3.1-1** City of Kirkland Residential Zones

Zoning Designations	Minimum Lot Area per Dwelling unit (SF)	Units per Acre
RS 35	35,000	1.24
RS 12.5	12,500	3.48
RS 8.5	8,500	5.12
RS 7.2	7,200	6.05
RS 6.3	6,300	6.91
RS 5.0	5,000	8.7
RM 3.6	3,600	12.1
RM 2.4	2,400	18.2
RM 1.8	1,800	24.2

Source: City of Kirkland Zoning Code



No.	PIN	No. of Units	Lot Size	Units Per Acre	SqFt per Unit
1	5555000000	4	16,695	10.4	4,174
2	1720800400	4	9,000	19.4	2,250
3	1720800335	3	6,000	21.8	2,000
4	2560880000	2	6,002	14.5	3,001
5	4098500000	11	38,938	12.3	3,540
6	8937000000	4	8,400	20.7	2,100
7	2560900000	4	13,868	12.6	3,467
8	3810950000	11	42,233	11.3	3,839
9	7698200000	38	9,343	177.2	246
10	8127900000	23	42,833	23.4	1,862
11	9197570000	13	58,469	9.7	4,498
12	1924100000	8	27,900	12.5	3,488
13	2286600000	4	11,100	15.7	2,775
14	3298580000	4	16,078	10.8	4,020
15	0825059209	4	7,365	23.7	1,841
16	0825059272	7	8,772	34.8	1,253
17	7698320000	2	7,492	11.6	3,746
18	7981500000	4	15,874	11.0	3,969
19	0825059276	4	16,624	10.5	4,156
20	3888350000	4	14,754	11.8	3,689
21	0825059238	2	17,939	4.9	8,970
22	9354900055	4	17,998	9.7	4,500
23	9195250000	6	20,299	12.9	3,383
24	9354900370	9	17,500	22.4	1,944
25	1419780000	12	22,330	23.4	1,861
26	9354900430	2	9,000	9.7	4,500
27	0825059244	3	8,880	14.7	2,960
28	0825059024	60	101,750	25.7	1,696
29	6641300000	8	18,150	19.2	2,269
30	6818000000	56	102,700	23.8	1,834
31	7804260000	12	29,486	17.7	2,457
32	8662700000	7	28,687	10.6	4,098
33	0825059219	2	8,450	10.3	4,225
34	6640800000	16	21,621	32.2	1,351
35	9320450000	9	30,928	12.7	3,436
36	Murp #1	21	80,593	11.4	3,838
37	1310400000	5	5,493	39.7	1,099
38	0825059114	2	3,780	23.0	1,890

Source: City of Kirkland

### Characteristics of Density

In public policy discussions, density is sometimes used as a proxy for other community characteristics, including design quality, traffic congestion, property values and others. In preparation of this EIS, a short review of available information on the impacts of density was conducted. In general, much of the available information is based on a macro, neighborhood or community-wide impacts and does not address single site impacts. It is recognized that conditions at a single site can vary significantly from the macro-level conclusions described below.

The following is a brief summary of information from the Environmental Protection Agency (EPA), Urban Land Institute (ULI), American Institute of Architects (AIA) and other sources with respect to density and community character, traffic congestion, and property values.

- **Community Character.** In general, publications note that design, rather than density, drive community character. The following is an excerpt from *Livability 101*, from the AIA:

*In terms of building community, the most critical test of design quality is whether the new development enriches and enlivens the public realm. In existing neighborhoods, new buildings should emphasize continuity with existing neighborhood fabric, including similar materials, continuity along the street, and massing that establishes a sense of respect for nearby buildings. For any new construction, the street level should be designed to engage pedestrians, with lively retail use wherever possible and facades that feature multiple doorways and avoid blank walls. Buildings should use handsome, durable materials, particularly at and near street level, that convey a sense of commitment to being a good neighbor for years to come.<sup>1</sup>*

- **Traffic congestion.** A study by the University of California Energy Institute considered 2001 National Household Transportation Survey data to document the relationship between fuel usage and land use density. This study found that, for area-wide densities greater than 50 units/square mile, total annual mileage on all household vehicles and total fuel usage generally decline with increasing housing density. Similarly, the ULI reports that doubling density decreases the vehicle miles travelled by 38%.<sup>2</sup> At the site-specific level, however, it is acknowledged that the additional of residential units can impact local traffic congestion. Please see Section 3.4 of this Draft EIS for discussion of potential transportation impacts associated with the proposal.
- **Property Values.** In *Higher-Density Development Myth and Fact*, the ULI notes that the value of real estate is determined by many factors and isolating the impact of one factor can be difficult. The publication cites several studies and concludes that multifamily housing has either no impact or potentially a slightly positive impact on appreciation rates. In particular, researchers at Virginia Tech University have concluded that over the long run, well-placed market rate apartments with attractive design and landscaping actually increase the overall value of detached houses nearby. The report further states that citizens should use the entitlement process to demand

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<sup>1</sup> American Institute of Architects. *Livability 101*. 2005.

<sup>2</sup> Urban Land Institute. *Higher-Density Development Myth and Fact*. 2005.

high-quality development in their communities while understanding that density and adjacent property values are not inversely related.

These publications point to the benefits of well-designed higher density housing at a community-wide basis. Because site-specific characteristics can vary widely, they do not address impacts, either positive or negative, at the site level. However, they do suggest that, even at the site-specific level, good design may be a key factor in maintaining and strengthening community character and preserving property values. Please see the aesthetics discussion in Section 3.3 of this Draft EIS for a review of aesthetics impacts and mitigating measures for the proposal.

## **Regulatory Overview**

### City of Kirkland Zoning Code

#### *Project Site*

The subject property is zoned Neighborhood Business (BN). Kirkland Zoning Code Section 40.10 establishes the use and development standards for the BN zone.

Permitted uses include a range of retail uses, private club or lodge, office, stacked dwelling units, church, school/daycare center, assisted living facility and convalescent center/nursing home. For residential and office uses such as the proposed action, the BN zone requires minimum setbacks of 20 feet from front property lines, 10 feet from rear property lines, and five feet from side property lines with both side yards equaling a total of 15 feet; maximum lot coverage of 80%; and maximum building height of 30 feet above average building elevation<sup>3</sup>. There is no minimum lot size established for office or minimum lot area per unit for stacked dwelling units. Required on-site parking is one space for each 300 sf of gross general office floor area, one space for each 200 sf of gross medical office floor area and 1.7 spaces for each dwelling unit (See Table 2-1).

In addition, the BN zone lists two special regulations that apply to stacked dwelling units:

1. This use, with the exception of a lobby, may not be located on the ground floor of a structure.
2. Chapter 115 KZC contains regulations regarding home occupations and other accessory uses, facilities and activities associated with this use.

Chapter 95 KZC establishes the requirements for landscape buffers. For stacked dwelling units in the BN zone, the ground floor use determines the applicable landscape buffer.

Based on a proposed ground floor office use, the proposal must meet the requirements for Landscape Category C. For Landscape Category C, Section 95.42 establishes that if the adjoining property is a low density use, then landscaping that complies with Buffering Standard 1 is required. When property adjoins a medium or high density residential use, landscaping must comply with Buffering Standard 2.

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<sup>3</sup> KZC 5.10.045 defines average building elevation as the weighted average elevation of the topography, prior to any development activity, either (1) under the footprint of a building as measured by delineating the smallest rectangle which can enclose the building footprint and then averaging the elevations taken at the midpoint of each side of the rectangle, or (2) at the center of all exterior walls of a building or structure.

Buffering Standard 1 requires a 15-foot wide landscaped strip with a 6-foot high solid screening fence or wall. The buffer must be planted with a mix of trees, shrubs and living ground cover as established in Section 95.42 KZC.

Buffering Standard 2 requires a 5-foot wide landscaped strip with a 6-foot high solid screening fence or wall. The buffer must be planted with a mix of trees and living ground cover as established in Section 95.42 KZC.

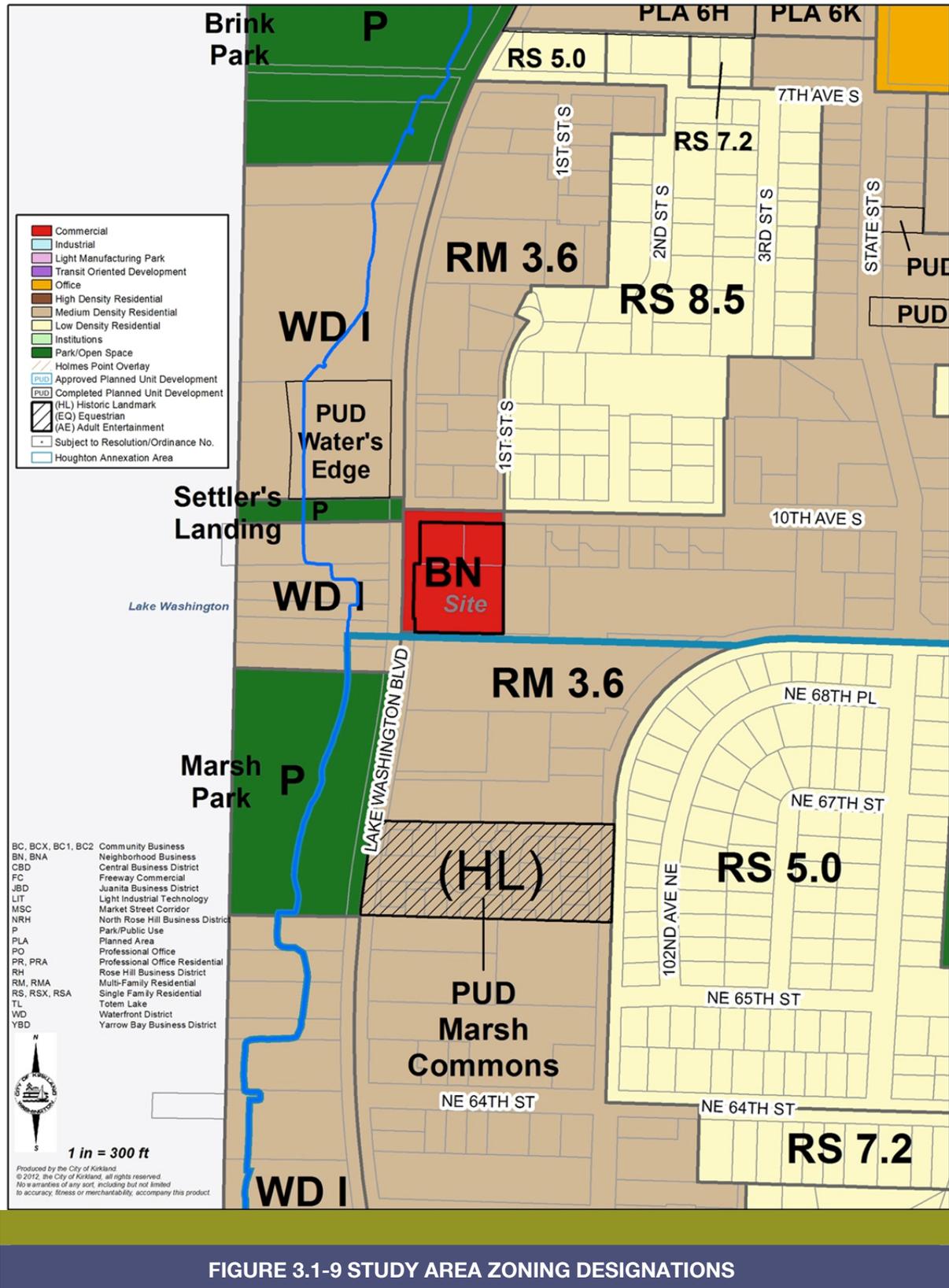
KZC 95.42.5 establishes that, where there are multiple buffering requirements along the same property line, a gradual transition between the different land use buffers must be provided and must occur totally within the area with the less stringent buffering requirement. The specific design of the transition must be approved by the City.

Based on a proposed ground floor retail use, the proposal must meet the requirements for Landscape Category B. Landscape Category B requires compliance with Buffering Standard 1 if the adjoining property is low, medium or high density use or zoning. As noted above, Buffering Standard 1 requires a 15-foot wide landscaped strip with a 6-foot high solid screening fence or wall. The buffer must be planted with a mix of trees, shrubs and living ground cover as established in Section 95.42 KZC.

Chapter 5 KZC defines a land use buffer as any structural, earth or vegetative form that is located along a boundary for the purpose of minimizing visual and noise impacts. Land use buffers may include, but are not limited to, berms, high shrub, dense stands of trees, trellises and fences.

### *Surrounding Area*

As shown in Figure 3.1-9, zoning designations in the surrounding area include RM 3.6 to the north, east and south and WDI to the west. Also, a corner of an RS 8.5 zone is adjacent to the northeast corner of the site. Chapter 5 KZC defines the RM 3.6 and WD I zones as medium density zones and RS 8.5 as a low density zone. Primary uses and development standards for these zones are summarized in Table 3.1-2.



**FIGURE 3.1-9 STUDY AREA ZONING DESIGNATIONS**

Source: City of Kirkland

**Table 3.1-2 Zoning Standards**

	<b>RM 3.6</b>	<b>WD I</b>	<b>RS 8.5</b>
Permitted Uses	Detached dwelling units Attached, stacked dwelling units Church Piers, docks, boat lifts serving dwelling units School/daycare center Limited retail uses Assisted living facility Nursing home Public utility Government/Community Facility Public park	Detached dwelling units Attached, stacked dwelling units Public access facility Piers, docks, boat lifts serving dwelling units Marina Restaurant/tavern Public park Public utility Government/Community Facility Assisted living facility Boat launch Water taxi	Detached dwelling units Church School/day care Golf course Public utility Government/Community facility Public park
Minimum Lot Area per Unit	3,600 sf for residential uses	3,600 sf for residential uses	8,500 sf for residential units
Maximum Structure Height	25' to 30' <sup>1</sup>	30'	25'
Maximum Lot Coverage	60% to 70% <sup>2</sup>	80%	50% to 70% <sup>2</sup>

1. Height standards are based on adjoining zoning designations. For example, if adjacent to a low density zone (other than RSX), height is limited to 25' above average building elevation. Otherwise, a 30 ft height is permitted.
2. Lot coverage varies based on the use. For example, in the RM 3.6 zone, residential development is limited to 60% lot coverage, a convalescent center or nursing home to 70%, etc.

Source: City of Kirkland

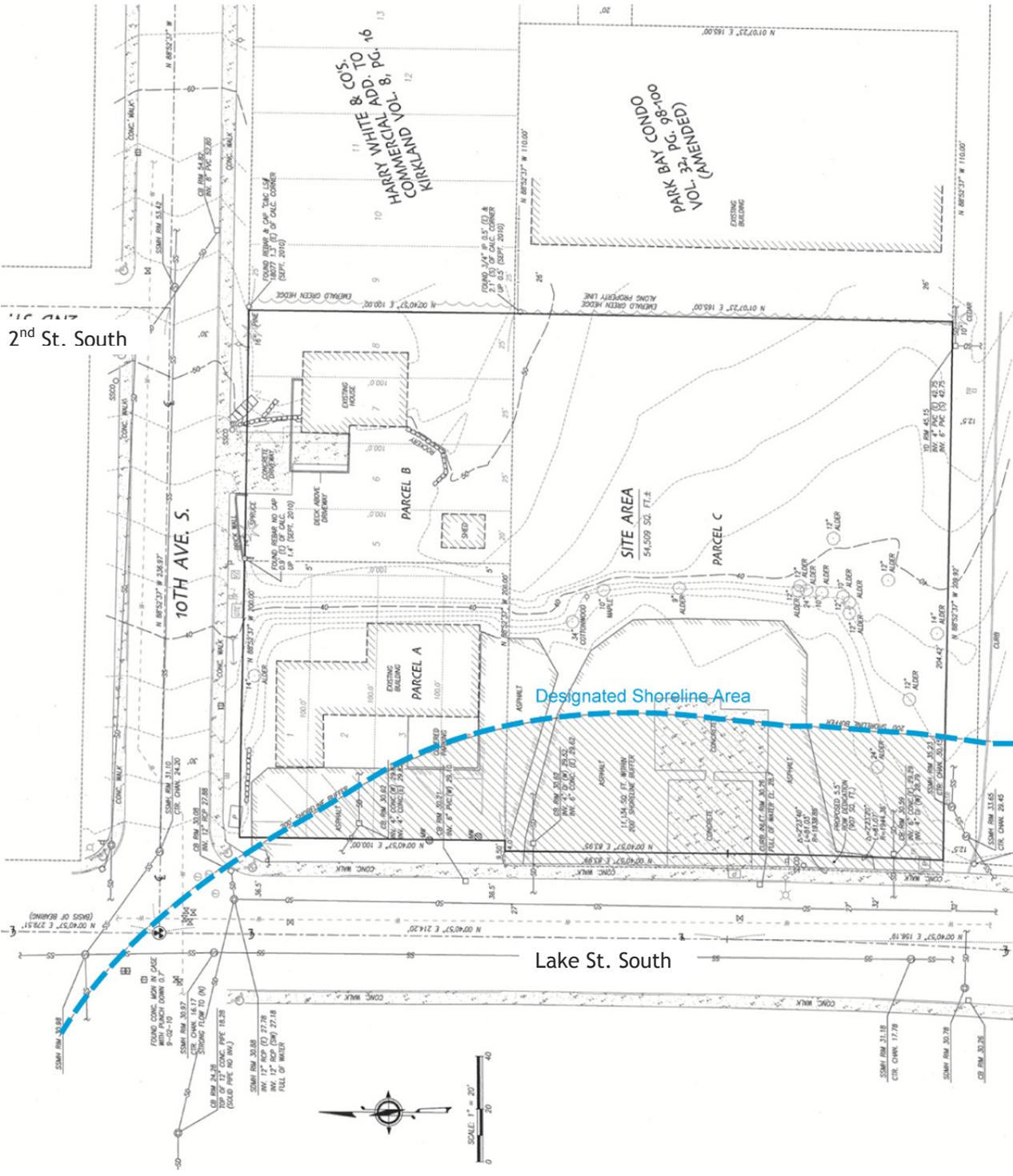
### Shoreline Master Program

Kirkland's Shoreline Master Program (SMP) contains policy direction for how Kirkland's water bodies governed by the Shoreline Management Act (SMA) should be treated, including land use designations, development, conservation and restoration goals and policies. Lake Washington is classified as a shoreline of statewide significance and therefore all lands within 200 feet of the lake's ordinary high water mark are subject to the jurisdiction of the SMA and the provisions of Kirkland's SMP.

On the project site, approximately 10,386 square feet is within the 200 foot shoreline area (see Figure 3.1-10) and is designated "Urban Mixed" which is defined as "high intensity land uses, including residential, commercial, recreational, transportation and mixed-use development." The Department of Ecology found the "Urban Mixed Use" environment designation for a portion of the site consistent with the SMA and WAC 173-26 (State Master Program Guidelines), when it approved the City's Shoreline Environments Designation Map in 2010. Only the portion of the site in the designated shoreline area is subject to the SMP requirements.

The required SMP development permit for the proposed action is a Shoreline Substantial Development Permit (SDP). Kirkland Zoning Code Chapter 83 establishes permitted uses and development standards for the Urban Mixed Use designation as follows:

- Maximize site development potential within the context of regulatory requirements and environmental and market conditions. Allowed uses: Stacked dwelling units, office and retail uses are permitted with approval of an SDP.
- Minimum lot area per unit: 1,800 square feet for multifamily residential; no minimum for commercial uses. Minimum lot size requirements apply only to the area within the shoreline jurisdiction. On June 7, 2011, the City approved an amendment to Chapter 83 that removed the minimum lot size requirement for multifamily residential, in order to match the BN zoning standard. However, the Proposal was submitted before the amendment was approved and is subject to the 1,800 sf minimum lot area per unit standard for the area within the shoreline jurisdiction.
- Structure height: 41 feet maximum for all uses.
- Maximum lot coverage: 80% for all uses.



**FIGURE 3.1-10 SHORELINE DESIGNATION AREA**

Source: City of Kirkland, Charles Morgan & Associates

### 3.1.2 Significant Impacts

#### Alternative 1 (No Action)

##### Land Use Patterns

Under the No Action alternative, there would be no change to the site. The existing single family residence in the northeastern portion of the site and commercial buildings on the lower portion of the site would remain as the currently existing. No additional development would occur on the site.

Since the site would experience no change from existing conditions, it is not anticipated that new significant land use compatibility impacts would result from the No Action Alternative. Because much of the surrounding area is well landscaped and maintained, existing site features in the vacant portion of the lower site, including outdoor storage, discarded items, broken pavement and overgrown vegetation, may be considered incompatible with the surrounding area.

#### Alternative 2

##### Land Use Patterns

Under the Proposed Action, use of the site would be intensified with redevelopment for 143 residential dwelling units, approximately 6,200 sf of office space and supporting parking. Existing retail, restaurant and single family residential uses would be replaced by multifamily residential and office uses. Existing site structures would be demolished and vegetation removed and replaced with the proposed development. The existing site elevation would be significantly altered, particularly in the eastern portion of the site.

As described previously, the site is surrounded by properties that are zoned for and primarily developed in a multifamily land use pattern. The proposal is for a mixed use development in which multifamily housing would predominate. From this perspective, the Proposed Action would be consistent with the surrounding land use pattern. As required under the BN zoning, a portion of the ground floor of the Proposal would be for office use. While no office use was observed in the study area, the proposed office area is limited to 6,200 sf and is not expected to significantly impact existing land use patterns in the area.

Along the northeast boundary of the site, adjoining development consists of single family residences in a medium density residential zone. Along this edge, potential height and bulk impacts could be mitigated through appropriate use of landscape buffers. The proposed landscape buffers would be located in trenches along the east property line and much of the north and south property lines, resulting in buffers that would be significantly below the elevation of adjoining properties. At finished grade, the buffer would be 12 feet or more below the top of the retaining wall. Along the north and south property lines, landscape buffers would also be below retaining walls, gradually rising to meet adjoining grades toward the western part of the site. As assessed by the City's Urban Forester, much of the proposed landscape buffer area would not receive adequate sunlight, likely resulting in die-off of lower branches and hindered long-term tree growth. Adequate drainage and root growth area are also concerns.<sup>4</sup> Because buffer plantings would not be visible from adjoining properties and are unlikely to thrive, the proposed landscape buffer would not meet its intended purpose.

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<sup>4</sup> Personal communication. Deborah Powers, City of Kirkland Planning and Community Development. June 2012.

## Density

With 143 units on a 1.21 acre site, the proposal would result in a density of approximately 118.4 dwelling units per acre. As shown in Figure 3.1-9, this is at the high end, but within the range of densities found in the study area. As noted in the discussion of density above, the primary impacts of density are likely to be associated with site aesthetics and traffic congestion. These topics are discussed in Sections 3.3 and 3.4, respectively, in this Draft EIS.

## Regulatory Requirements

The proposal meets the fundamental use standards for the BN zone and for the Urban Mixed designation in the designated shoreline area. It should be noted that the shoreline Urban Mixed designation at the time the Proposal was submitted required a minimum lot area per unit of 1800 sf. Within the 10,370 sf designated shoreline area, a total of 5.77 units would be allowed. Rounding up is permitted if the density calculation result in a fraction greater than .50, resulting in a total of six permitted units in this area. The applicant is proposing five dwelling units in this area, consisting of two units on the third floor, two units on the fourth floor and one unit on the fifth floor (see Appendix 1).

Based on Chapter 95 KZC and the proposed ground floor office use, landscape buffers of at least 15 feet in width are required adjacent to the single family use to the east and at least five feet in width adjacent to the medium density use to the south and along the southern part of the eastern boundary. As shown in the landscape plan (Figure 2.3), the Proposal meets or exceeds the width requirements, but does not meet the requirement for a gradual transition between the differing land use buffers along the east property line.

It should be noted that the proposed buffer widths would not permit ground floor retail uses, which require a 15-foot wide buffer adjacent to all residential uses adjoining the site.

In addition, depending on the location, the proposed site elevation of the buffer area would be below the elevation of the adjacent properties and 10<sup>th</sup> Avenue South (See Figure 2-3 and Appendix 1). Vegetation planted in these buffers would be visible from the new units within the site, but would not be visible from the adjoining properties or 10<sup>th</sup> Avenue South for many years, if ever. As proposed, the buffers would not meet the intent of minimizing the visual impact of the development.

### 3.1.3 Mitigating Measures

#### Applicable Regulations and Commitments

The proposed development would be required to comply with applicable provisions of the Kirkland Zoning Code and Shoreline Master Program. Adherence to these regulations will help ensure that the proposal is consistent with the surrounding land use pattern.

As required by Section 95.42 KZC, required landscape buffers shall provide effective screening for adjacent properties. The proposed site plan needs to be revised to meet the intent of the required landscape buffers. Modifications to the proposed site plan to meet this requirement could include shifting the retaining walls along the east, north and south property lines from the outer edge of the buffer to the inner edge and installing the landscape buffer between the

retaining walls and property lines, widening the buffers to provide an adequate area along the retaining walls for a raised platform so that planted vegetation provides screening above the fence line at time of planting, or other measures as approved by the City.

In addition, to meet the requirement of 95.42.5 KZC, the proposed site plan needs to be revised to provide for a gradual transition in buffer widths along the east property line.

### **Other Mitigation Measures**

In order to allow for future retail use of the site, landscape buffers would need to be modified to meet the standard for Buffering Standard 1 which requires a 15-foot width.

### **3.1.4 Significant Unavoidable Adverse Impacts**

The proposal would result in a greater density of land use on the project site. This change to the land use pattern to include multifamily use is consistent with the surrounding land use pattern and the Kirkland Zoning Code. With recommended mitigation, no significant unavoidable adverse impacts are anticipated.