

2.0 PROJECT DESCRIPTION & ALTERNATIVES

This EIS analyzes the environmental impacts associated with three alternatives for the future of an approximately 9.8-acre site in the City of Burien, Washington. The Project site is located in the north-central portion of the City of Burien, roughly 1 mile from downtown and directly east of Seahurst (Ed Munro) Park. Two of the three potential alternatives represent “action alternatives” that would result in changes to the current land use of the site. The third alternative, the No Action Alternative, assumes that the site would remain undeveloped for the foreseeable future. Inclusion of the No Action Alternative for comparison is a requirement of the SEPA Rules (WAC 197-11-440).

2.1 Project Description

The Project consists of the construction of a multi-family residential development, including a supporting clubhouse and swimming pool, with primary access from an extension of SW 136th Street in Burien. The Project site is bordered by existing rights-of-way (ROW) for SW 136th Street and 12th Avenue SW, located to the south and east, respectively. Directly southeast of the site, the Highline School District owns a vacant former elementary school that was used most recently as a senior center. Burien’s Seahurst Park abuts the site to the west, and existing multi-family residential developments are located to the north and south (see Figure 2.1-1). Currently, the Project site is undeveloped. Most of the site is covered with fairly mature second-growth forest and is characterized by steep slopes. A wetland is also established along the northern portion of the site’s western border. Buildings proposed for the Emerald Pointe development range from three to five stories in height.

The two action alternatives for the Emerald Pointe Project include Alternative 1, which proposes the construction of 201 DUs, and Alternative 2, which proposes construction of 179 DUs. (Both action alternatives would include one manager’s unit, located in the clubhouse building.) Alternative 2 is the Preferred Alternative. Residential units in both action alternatives would be contained within a number of multi-story buildings. Residents would have access to the clubhouse and pool facilities. All dwelling units, excepting the manager’s unit, in the action alternatives are expected to be market-rate condominium units, providing from one to three bedrooms. A principal difference between the two alternatives is the number of one-bedroom units each would provide (see Table 2.1-1).

Total impervious surface proposed in both of the action alternatives would be approximately 180,000 square feet, or roughly 42 percent of the site’s approximately 428,500 square feet. The access drive would be gated to vehicles, but pedestrians would be able to pass freely into the Project.

In the No Action Alternative, the site would remain undeveloped. Details for each of these alternatives are provided below.

Table 2.1-1: Market-rate Dwelling Unit Types per Action Alternative¹

Alternative	1 BR	22 BR	3 BR	Total Units	Garage Parking (SF)	Parking Stalls (Total)
Alternative 1	96	52	52	200	64,020	351
Alternative 2	72	52	54	178	59,856	316

¹ A Manager's unit is provided within the clubhouse in both alternatives.

Source: Richert and Associates, Architects & Planners 2006.

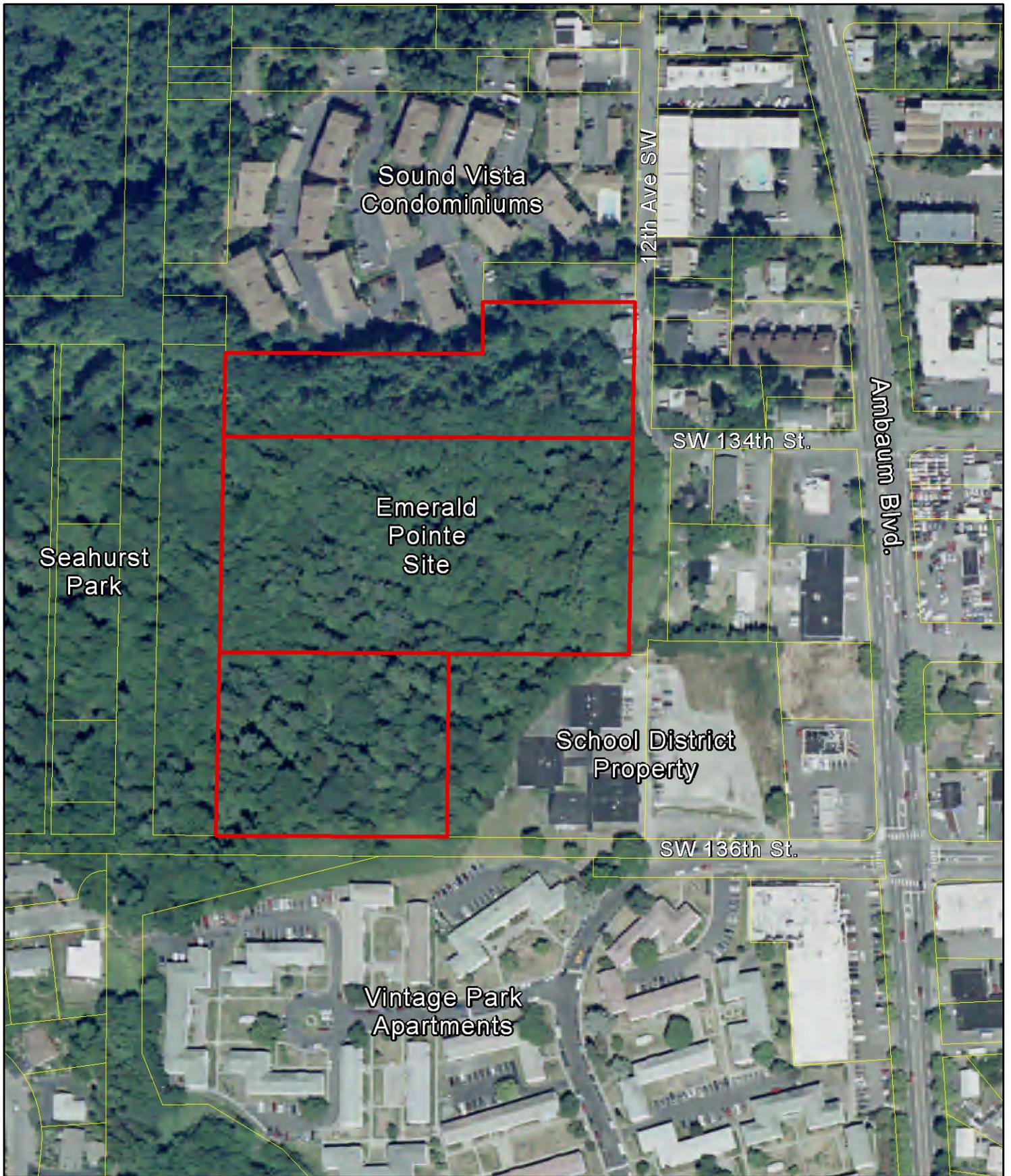
2.2 Description of Alternative 1

Alternative 1 proposes to construct 200 market-rate, multi-family condominium units and one manager's unit (located in the clubhouse) on the Project site (see Figure 2.2-1). Proposed density is approximately one unit per 2,410 square feet (18.1 du per acre) in the RM-2400-zoned area and one unit per 2,068 square feet (21.1 du per acre) in the RM-1800-zoned area. Average density for the Project is approximately one unit per 2,143 square feet (20.3 du per acre). New dwelling units proposed in Alternative 1 would be located within a total of five buildings, each with below-grade parking on the first level. Collectively, the five residential buildings in Alternative 1 would provide approximately 227,000 gross square feet of living space (not including the manager's unit), with a total residential building footprint of approximately 67,000 square feet (roughly 45,500 square feet in the three northern buildings and 21,500 square feet in the two southern buildings). Total gross floor area for the manager's unit would be approximately 1,000 square feet.

Residential buildings proposed in Alternative 1 include the following:

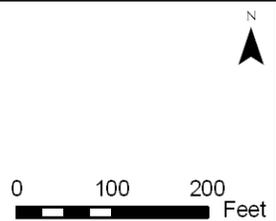
- **Five-story buildings** – Three five-story buildings would be constructed in the northern half of the Project site. Each of these three buildings would provide a total of 52 dwelling units in four stories over one level of parking. Twenty of the 52 dwelling units are expected to be one-bedroom units, 16 would be two-bedroom units, and 16 would be three-bedroom units. These dwelling units are expected to range from 810 square feet to 1,600 square feet in size. Residential uses in these buildings would comprise a total of approximately 183,600 square feet. Building heights of the proposed five-story buildings would be approximately 53 feet, as measured from the adjacent surface parking area to the highest point on the roof (see Figure 2.2-2).
- **Three-story buildings** – Two three-story buildings would be constructed in the southern half of the Project site. Each of these buildings would provide 22 new dwelling units in two stories over one level of parking. Eighteen of the 22 units would be one-bedroom units, two others would be two-bedroom units, and two would be three-bedroom units. Overall, these dwelling units would range from approximately 810 square feet to 1,315 square feet. Gross residential square footage for these two buildings would total approximately 43,696 square feet. A maximum height of approximately 35 feet is expected for both three-story buildings, as measured from the adjacent surface parking area to the highest point on the roof (see Figure 2.2-2).

A summary of the characteristics of buildings proposed in Alternative 1 is provided in Table 2.2-1.



Emerald Pointe EIS - Burien, WA
Figure 2.1-1 Existing Conditions

- Emerald Pointe Parcels
- Other Parcels



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Emerald Pointe EIS - Burien, WA
Figure 2.2-1 Site Plan: Alternative 1 - 200 unit

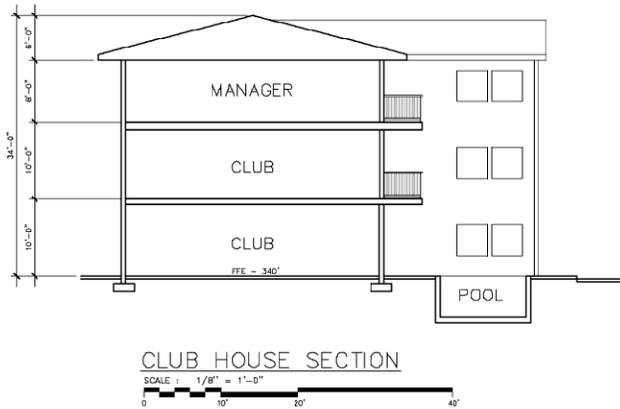
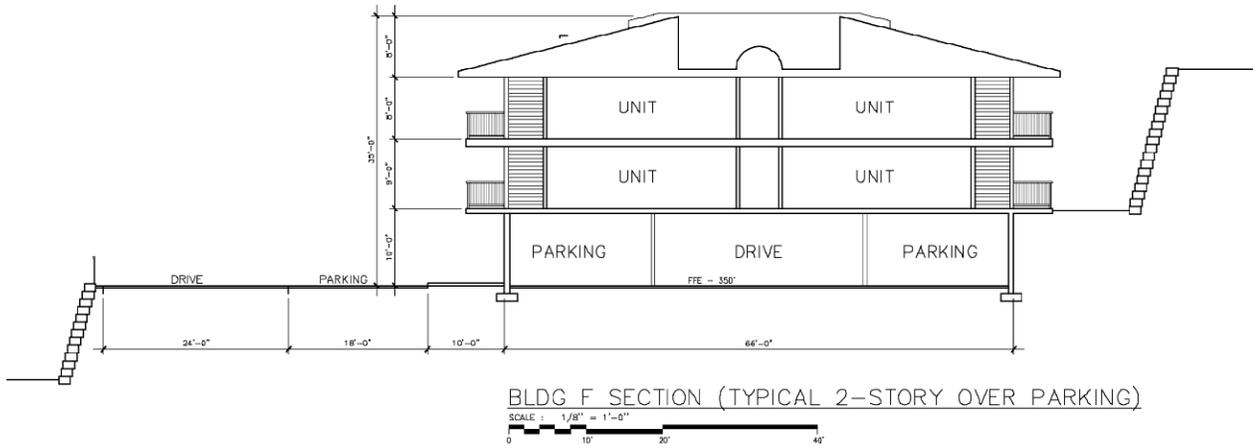
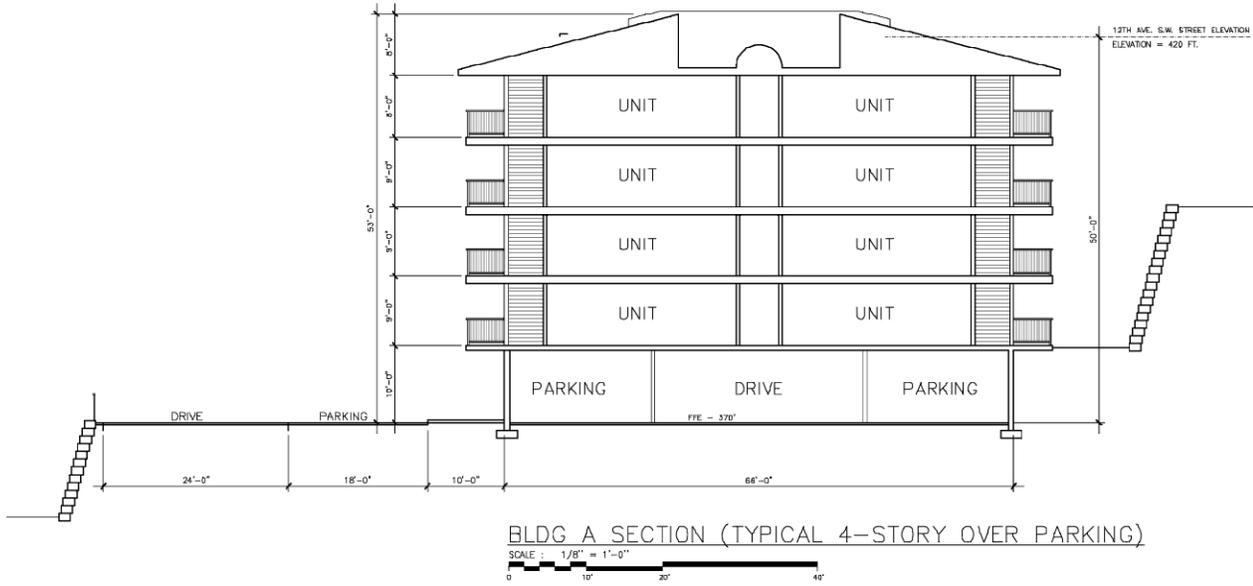
Source: Richert & Associates 01/06/07

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Emerald Pointe EIS - Burien, WA
Figure 2.2-2 Building Sections: Alternative 1, Alternative 2, & Clubhouse

Source: Richert & Associates 1/31/07

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FIGURE

2.2-2]

Table 2.2-1: Summary of Buildings Proposed in Alternative 1

Building	Dwelling Units				Residential Area (sf)	Stories	Bulk & Size	
	1BD	2BD	3BD	Total			Approx. Height (ft)	Footprint (sf)
A	20	16	16	52	61,200	5	53	15,180
B	20	16	16	52	61,200	5	53	15,180
C	20	16	16	52	61,200	5	53	15,180
D	18	2	2	22	21,848	3	35	10,820
E	18	2	2	22	21,848	3	35	10,820
Clubhouse		1		1	1,000	3	34	1,800
Totals	96	53	52	201	228,296	N/A	N/A	68,980

Source: Richert and Associates 2007.

Essential site development aspects of Alternative 1 include the following:

- **Parking** - A total of 351 parking spaces would be provided in Alternative 1 for Emerald Pointe residents and visitors (see Table 2.1-1). Of these, 186 would be open-air surface parking spaces, of which eight would be handicap spaces. The remaining 165 stalls would be provided in the below-grade parking areas.
- **Clubhouse** - In addition to on-site residential buildings, Alternative 1 would include a clubhouse for Emerald Pointe residents. The clubhouse would contain two stories of common area for residents and a third story that would contain an approximately 1,000-square-foot manager's residence (see Figure 2.2-2). An outdoor pool, a workout room, meeting areas, and other amenities would be located in the clubhouse. In total, the clubhouse would provide approximately 5,400 square feet of usable space for the manager's quarters and common areas.
- **Site Design and Landscaping** - Native vegetation would be retained where possible around the periphery of the site, particularly on the slope below 12th Avenue SW. Ornamental trees would be planted along access roads throughout the site (see Figure 2.2-3). A natural wetland in the northwest corner of the site would remain undisturbed and a 65-foot natural vegetation area would be established around it. Public pedestrian access into Seahurst Park would be provided, although no public parking would be provided as part of this Project.

2.3 Description of Alternative 2 (Preferred Alternative)

Alternative 2 proposes to construct a total of 178 market-rate, multi-family condominium dwelling units and one manager's unit (located in the clubhouse building) on the Project site. Dwelling units in Alternative 2 would be contained within seven buildings. Alternative 2 proposes a finer-grain scale of development, comprised of more buildings, each with a smaller footprint that can be more easily sited on the site's steep slopes. Density proposed in the RM-2400-zoned area of Alternative 2 is the same as in Alternative 1, or approximately one unit per 2,410 square feet (18.1 du per acre). One unit per 2,407 square feet (18.1 du per acre) is proposed in the RM-1800-zoned area of Alternative 2, a lower density than that proposed in Alternative 1. Average density for the Project is approximately one unit per 2,408 square feet (18.1 du per acre). Alternative 2 is the Preferred Alternative.

Collectively, the seven residential buildings proposed would provide a total of almost 214,000 square feet of living space, with a total residential building footprint of approximately 61,100 square feet (approximately 37,000 square feet each in Buildings A, B, and E; approximately 30,000 square feet each in Buildings C and D; and approximately 22,000 square feet each in Buildings F and G). Similar to Alternative 1, each residential building would also provide below-grade parking for residents. Collectively, residential buildings in Alternative 2 would provide approximately 214,000 gross square feet of living space (not including the manager's unit), with a total residential building footprint of approximately 61,100 square feet. Total gross floor area for the manager's unit would be approximately 1,000 square feet.

Residential buildings proposed in Alternative 2 include the following:

- **Five-story buildings** – Five five-story buildings (four stories of residential above first-floor parking) would be constructed in the northern half of the Project site in Alternative 2. These buildings would have a smaller footprint than the five-story buildings proposed in Alternative 1. Additionally, the dwelling unit composition and unit count would vary from Alternative 1. Two of these buildings would include 32 dwelling units each, with twelve one-bedroom units, twelve two-bedroom units, and eight three-bedroom units, for a total of approximately 73,760 square feet (Buildings A and B in Figure 2.3-1). Two other buildings would include 20 dwelling units each, with four containing one bedroom, four two-bedroom units, and twelve three-bedroom units, for a total of 59,500 square feet (Buildings C and D in Figure 2.3-1). One additional 5-story residential building would include 30 dwelling units, including eight one-bedroom units, 12 two-bedroom units, and ten three-bedroom units, for a total of 36,880 square feet (Building E in Figure 2.3-1). These dwelling units are expected to range from 810 square feet to 1,600 square feet. As in Alternative 1, the height of the proposed five-story buildings is expected to be approximately 53 feet, as measured from the adjacent surface parking area to the highest point on the roof (see Figure 2.2-2).
- **Three-story buildings** – Two three-story residential buildings would be constructed in the southern half of the Project site (Buildings F and G in Figure 2.3-1). Each of these buildings would provide 22 new dwelling units. Sixteen of the 22 units would include one bedroom, four would be two-bedroom units, and two would be three bedroom units. These buildings would contain a total of approximately 43,700 square feet of residential space, in two levels of residential use over one level of parking. These dwelling units would range from approximately 810 square feet to 1,315 square feet. As in Alternative 1, the maximum height of proposed three-story buildings would be 35 feet, as measured from the adjacent surface parking area to the roof's highest point (see Figure 2.2-2).

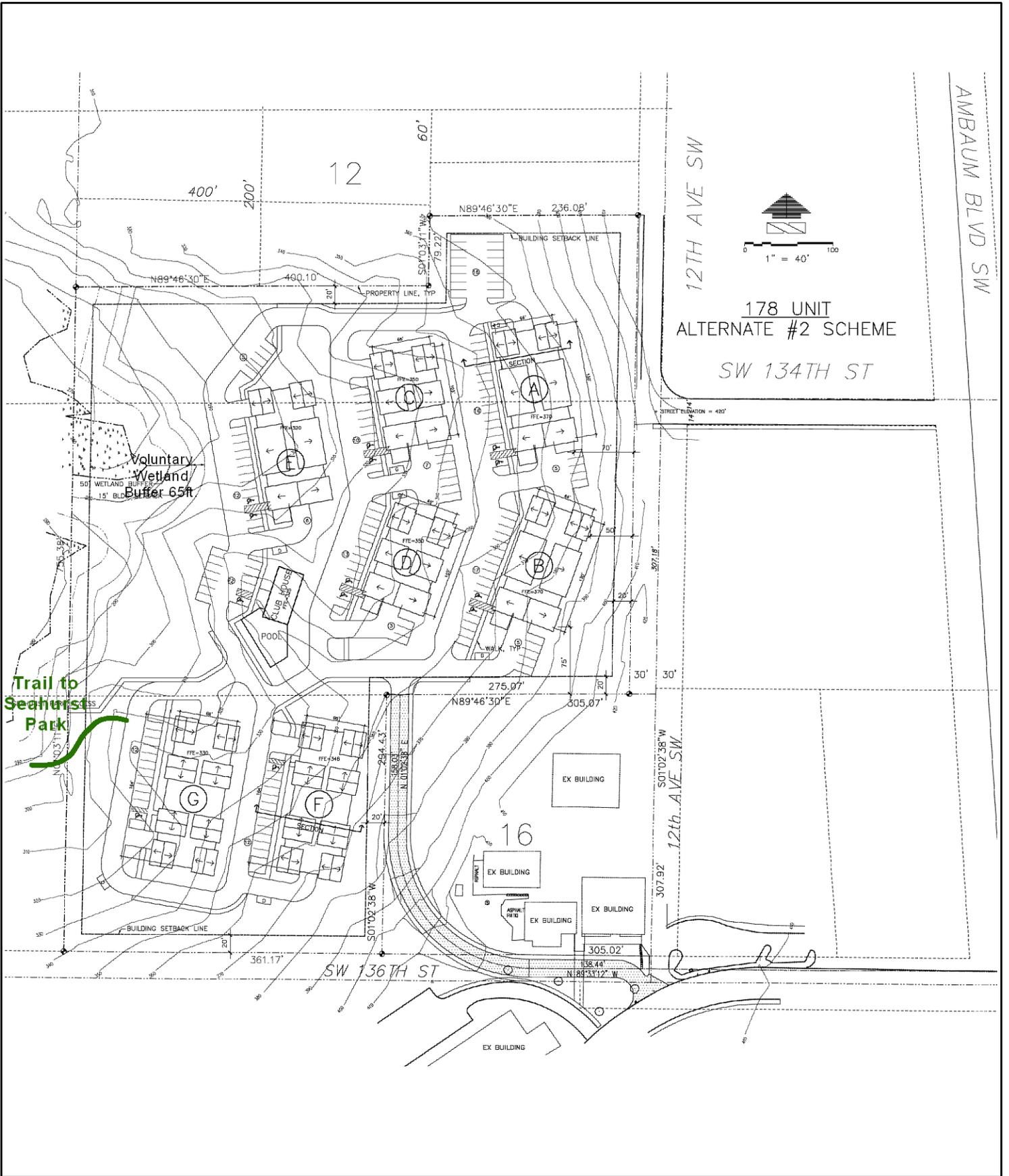
A summary of the characteristics of primary buildings proposed in Alternative 2 is provided in Table 2.3-1.

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Emerald Pointe EIS - Burien, WA
Figure 2.3-1 Site Plan: Alternative 2 - 178 unit

Source: Richert & Associates 1/31/07

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Table 2.3-1: Summary of Buildings Proposed in Alternative 2

Building	Dwelling Units				Bulk & Size			
	1BD	2BD	3BD	Total	Residential Area (sf)	Stories	Approx. Height (ft)	Footprint (sf)
A	12	12	8	32	36,880	5	53	8,580
B	12	12	8	32	36,880	5	53	8,580
C	4	4	12	20	29,752	5	53	6,800
D	4	4	12	20	29,752	5	53	6,800
E	8	12	10	30	36,880	5	53	8,700
F	16	4	2	22	21,848	3	35	10,820
G	16	4	2	22	21,848	3	35	10,820
Clubhouse		1		1	1,000	3	34	1,800
Totals	72	53	54	179	214,840	N/A	N/A	62,900

Source: Richert and Associates 2007.

Essential site development aspects of the alternative include the following:

- **Parking** - A total of 316 parking spaces would be provided in Alternative 2 for Emerald Pointe residents and visitors (see Table 2.1-1). Of these, 145 would be open-air surface parking spaces, of which 13 would be handicap spaces. The remaining 171 spaces would be provided in below-grade parking areas.
- **Clubhouse** - In addition to on-site residential buildings, Alternative 2 would include a clubhouse for Emerald Pointe residents. The clubhouse would contain two stories of common area for residents and a third story that would contain an approximately 1,000-square-foot manager's residence (see Figure 2.2-2). An outdoor pool, a workout room, meeting areas, and other amenities would be located in the clubhouse for use by Emerald Pointe residents. In total, the clubhouse would provide approximately 5,400 square feet of usable space for the manager's quarters and common areas.
- **Site Design and Landscaping** - Native vegetation would be retained where possible around the periphery of the site, particularly on the slope below 12th Avenue SW. Ornamental trees would be planted along access roads throughout the site (see Figure 2.3-2). A natural wetland in the northwest corner of the site would remain undisturbed, as would a 65-foot natural vegetation area around it. Public pedestrian access into Seahurst Park would be provided, although no public parking would be provided as part of this Project.

2.4 Grading/Stormwater Treatment for Action Alternatives

Grading: Given the site's steep slopes, site construction would require considerable grading that would alter the existing hillside slopes. The new site grade would typically have slopes of approximately 2:1 (horizontal:vertical) and numerous retaining walls. The proposed development would alter moderate to steep slopes throughout the property. Construction of either alternative would involve hillside cuts of up to approximately 30 feet high and fill areas of up to approximately 20 feet. Walls constructed to retain fill may be as high as 10 feet and walls constructed at the toe of cut slopes may be as high as 18 feet. Site development is planned to balance cutting and filling where possible to limit importing and

exporting material. Cutting and filling totals are expected to be approximately 24,000 cubic yards of cut and 24,700 cubic yards of fill. Additional information about the feasibility of proposed cut/fill and other site work is discussed in Section 3.3.

The Project would also include construction of smaller 4- to 10-foot-high retaining walls to provide grade separation adjacent to roads and parking areas. Basement walls for some of the buildings would support cut slopes as high as 18 feet. Basement walls constructed adjacent to cut slopes would likely require temporary support systems, such as soldier piles, tiebacks and/or soil nails, to retain hillside at locations where the vertical cut heights exceed 8 to 10 feet.

The site construction would expose steep temporary cut and fill slopes that would be susceptible to erosion from rainfall. Accordingly, temporary protection from surface erosion would be provided for all cut and fill slopes. The TESC plan would be reviewed and monitored by a geotechnical engineer for steep slope and soils stability issues during the construction period. Construction planning anticipates that major grading and infrastructure development will occur at one time, with actual building construction phased over multiple years. Infiltration of construction site runoff appears infeasible, given the site location in a critical (steep slope) area. If 100% infiltration of construction site runoff is not feasible, an NPDES Permit for construction activities would need to be submitted along with the associated Storm Water Pollution Prevention Plan (SWMPP). Temporary stormwater detention facilities would be provided to accommodate surface runoff flows and to prevent off-site sediment transport.

Stormwater System: The stormwater drainage system would collect runoff from all impervious surfaces, such as internal roads and surface parking lots, roofs, and sidewalks, and adjacent landscaping areas (see Figure 2.4-1). The proposed internal roads would both collect and convey surface runoff water. Catch basins to collect runoff would be located in the center of the roads and in landscaped areas, as needed. Roof downspouts and retaining wall underdrains would be connected to the on-site storm drainage system. In Alternative 1, runoff would be conveyed to one large storage vault along the western edge of the parcel. Alternative 2 runoff would be conveyed to two separate storage vaults (one at the north end and one at the south end) along the western edge of the development, near the lowest points of the site. Both vaults would act as water quality and detention structures. Each vault would be designed in accordance to Section 3.1.2 of the 2005 King County Storm Water Manual. The detention portion of the vaults would be designed using a continuous hydrological model to Level 2 requirements, which matches the historic durations for 50 percent of the 2-year through the 50-year peak durations and matching the 2-year and 10-year peaks. The site disturbing activities of this alternative would trigger Full Drainage Review (as defined in the 2005 Manual) and Technical Information Report (TIR) requirements. Items to be included in the TIR are described in Chapter 1 of the Manual. At the time of submittal, City staff would review the TIR to ensure compliance with applicable regulations, and provide more detailed comments to the submittal, as appropriate.



Emerald Pointe EIS - Burien, WA
Figure 2.3-2 Landscape Plan: Alternative 2 - 178 unit

- | | | |
|----------------------|-----------------------|-----------------------|
| Douglas Fir | Purple Flowering Plum | Mixed Evergreen Trees |
| Bigleaf Maple | Flowering Cherry | Shrubs |
| White Eastern Redbud | Vine Maple | Ground Cover |
| | Staghorn Sumac | |

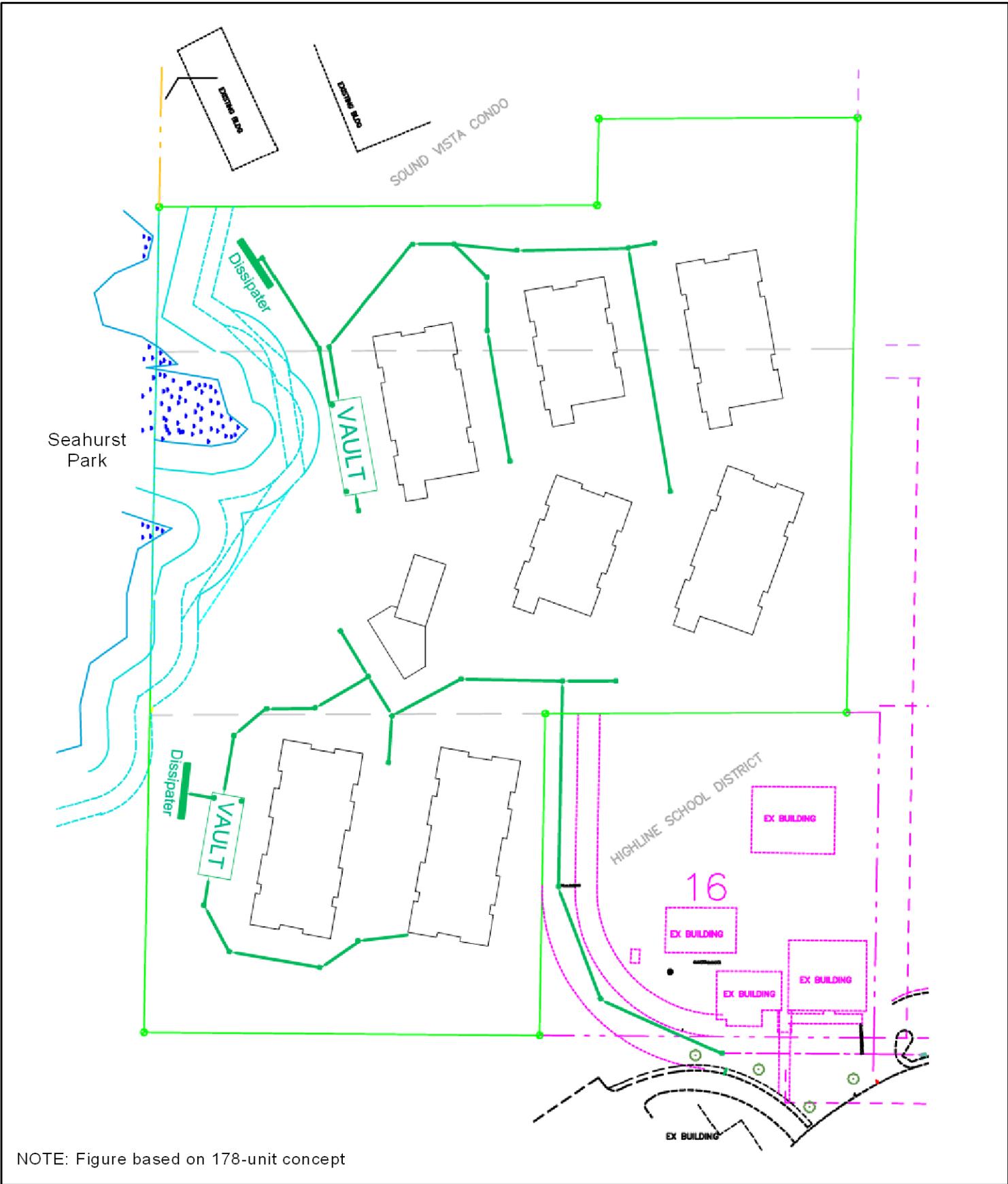
Source: RW Thorpe & Associates 03/13/07

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FIGURE

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NOTE: Figure based on 178-unit concept

Emerald Pointe EIS - Burien, WA
Figure 2.4-1 Conceptual Drainage & Stormwater Plan

- Voluntary Wetland Buffer
- ▨ Wetland
- Stormwater System Lines & Features
- ~ Property Boundary



Source: Touma Engineers

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FIGURE

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Water from each vault would be released through a riser and conveyed to level spreaders that would distribute the outflow over a wide area located upslope of the wetland buffer limits. Final level spreader design would need to be evaluated and approved by a licensed geotechnical engineer and would potentially require additional review by the City. This discharge strategy would allow the natural ground surface to accept the released flow without causing erosion, gradually reintroducing the runoff into the wetland.

The on-site conveyance system would be designed to handle a 100-year flow event. Wet vault design would provide oil control through methods such as a Frop-T structure in the last catch basin before the vault or a baffled oil/water separator at the vault inlet. Algae control would be provided through reduced oxygen levels and lack of sunlight in the vaults. Vault overflow measures would be provided for extreme precipitation events. These would likely consist of an outflow manhole equipped with water energy dissipators and an armored surface below it to accommodate large flows that exceed the design dispersion system, while also dispersing flows into the wetland without causing erosion. Armoring may consist of rip rap, erosion control mats, interlocking concrete block mats or other methods.

Routing of off-site runoff from upslope of the site is required to divert offsite surface runoff around the Project walls and buildings. This water could be routed through a separate bypass system or added to the site storm drainage system. A separate bypass system is favored.

2.5 Site Access for Action Alternatives

Primary transportation access to the Project in both action alternatives would be via a new private access road near the southeast corner of the Project site. This new road would extend from SW 136th Street, within the existing City ROW, and cross the western portion of the Highline School District property, located directly to the east (see Figure 2.2-1 and Figure 2.3-1). The Applicant would purchase property or an easement for the access road from the Highline School District prior to construction.

The internal transportation network for Alternative 1 would include north-south linear drives that provide access to the front of all five residential proposed buildings and feed into a primary east-west “backbone” drive located along the center of the site (see Figure 2.2-1). This backbone drive would connect to the new private access road. Buildings B, C, E, would also be bordered to the rear by roads of the internal transportation network. Accommodation of emergency vehicle access would be difficult in Alternative 1.

Transportation access and infrastructure in Alternative 2 would be similar to Alternative 1, but slightly less linear in design. Due to the additional buildings proposed in Alternative 2, the two drives in the northeastern portion of the site would bend slightly in some locations to accommodate the alternative building placements (see Figure 2.3-1). In Alternative 2, Buildings C, D, E, and G would be bordered to the rear by internal roads. Additionally, due to the placement of the clubhouse adjacent to Building E (compared to Building D in Alternative 1), the east-west “backbone” drive in this alternative would not be linear, but would curve slightly to the south near Building F and head north at the clubhouse area. The internal drive of Alternative 2 would accommodate emergency vehicle access.

In both alternatives, adequate parking spaces for disabled visitors and residents would be provided near each building.

2.6 Description of the No Action Alternative

In accordance with the SEPA Rules (WAC 197-11-440), this document also analyzes a No Action Alternative in addition to the proposed action alternatives. In the No Action Alternative, no changes to the current land use would be expected. This analysis considers foreseeable future conditions of the Project site, based on current conditions.

Currently, the Project area is an undeveloped parcel characterized by natural vegetation adjacent to the open space areas of the eastern portion of Seahurst Park (see Figure 2.1-1). Vegetation on the Project site is characterized primarily by tree species, including a mix of Douglas-fir, big-leaf maple, and red alder, and a wetland is established along the western edge of the site. Moderate to steep slopes have been identified throughout the site. Steep slopes are defined in the current Burien Zoning Code as a slope of “40 percent or steeper within a vertical elevation change of at least 10 feet” between its “toe” and “top” (i.e. boundaries of area with 40 percent grade or steeper) (BMC 19.10.515). However, the site is vested under the King County development code (that predates the City Code) which does not address steep slopes.

A number of informal trails have been established across the site; these appear to be footpaths created over time by nearby residents and Seahurst Park visitors. These informal trails on the site connect with Seahurst Park trails in a number of locations.

While the site is privately-owned and could be sold or developed at some point, the No Action Alternative assumes that the Project site would remain undeveloped for the foreseeable future. Any future development proposal that is not vested under prior regulations would be subject to the current BMC regulations. Under the BMC, the site is zoned for residential single-family development (RS 12,000).

2.7 Summary of Impacts for Each Alternative

A summary of impacts of each alternative is provided in Table 2.7-1. This table provides a summary by each element of the environment, broken down for each alternative. It summarizes both anticipated impacts and recommended mitigation measures.

2.7-1 Summary of Impacts

A summary of environmental impacts, mitigation measures, and significant unavoidable impacts is presented in Table 2.7-1.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
TRANSPORTATION				
<i>Short Term Impacts</i>				
Vehicle trips generated by construction would increase.	Construction traffic would adhere to permit requirements. All study area intersections would operate within adopted Level of Service (LOS) standards. No mitigation necessary or proposed.	Impacts would be similar to Alternative 1, with slightly less vehicular traffic generated.	Construction traffic would adhere to permit requirements. All study area intersections would operate within adopted Level of Service (LOS) standards. No mitigation necessary or proposed.	No changes to vehicle trips in area.
<i>Long Term Impacts</i>				
Vehicle trips generated by operation would increase. Intersection LOS standards and safety standards would not be significantly affected.	All study area intersections would operate within adopted LOS standards. No mitigation necessary or proposed.	Impacts would be similar to Alternative 1, with slightly less vehicular and pedestrian traffic generated.	All study area intersections would operate within adopted LOS standards. No mitigation necessary or proposed.	No changes to vehicle trips in area.
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
DRAINAGE AND WATER QUALITY				
<i>Short Term Impacts</i>				
Site development (clearing and grading) would expose approximately 75% of the site to rainfall and erosion.	Alternative 1 would require approval of grading and drainage plans, temporary erosion and sedimentation control (TESC) plans, storm water pollution prevention plans (SWPPP) plans, and all offsite areas included in any temporary construction	Similar to Alternative 1. Site development (clearing and grading) would expose approximately 75% of the site to rainfall and erosion.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
	easements. Implementation of construction-phase best management practices (BMPs) per SWPPP required.			
<i>Long Term Impacts</i>				
New impervious pollution-generating and non-pollution-generating surfaces (e.g., roads, roofs, and walks) would be created by Alternative 1, replacing the existing vegetation and topsoil. Additional impervious surface would increase runoff volume and reduce the water quality of runoff to the wetland	<p>Site design would incorporate a drainage system of a size and type to relieve hydrostatic pressure on walls and adequately convey surface and subsurface flows out to the main trunk lines and ultimately to vault retention systems.</p> <p>The potential for impacts to water quality and significant increases in runoff rates and quantity would be mitigated through adherence to the 2005 King County Surface Water Design Manual design criteria in approved plans. This includes provision of stormwater treatment vaults designed to Level 2 requirements using a continuous hydrological model approach.</p>	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
EARTH AND GEOTECHNICAL				
<i>Short Term Impacts</i>				
<p><i>Landslides & Steep Slopes:</i> Proposed hillside cuts would slightly reduce overall hillside stability during construction. The grading would typically produce slopes on the order of 2:1 (horizontal: vertical).</p>	<p>Mitigation measures would be required to minimize off-site sediment transport during construction, including:</p> <ul style="list-style-type: none"> • Protecting cuts and fill stockpiles from rainfall. • Revegetating cut and fill slopes. • Provide temporary detention to remove sediment and to control discharge flows. • Excavations may require shoring and/or dewatering to provide for the stability of the adjacent slopes during construction if found to intercept springs or groundwater flows. • Confirmation of stability and settlement of fills placed over colluvial soils that are saturated and potentially susceptible to liquefaction is needed prior to construction. Toe buttressing and drainage measures may be 	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
	necessary to address stability issues.			
<i>Seismic:</i> Proposed hillside grading has potential for slightly reduced overall seismic safety. The seismic stability would be reduced to a greater extent in areas of fill.	Confirmation of stability and settlement potential of hillside cuts and fills is needed prior to construction, especially over colluvial soils that are and potentially susceptible to liquefaction. Stability analysis needed prior to construction to confirm adequate factor of safety on hillside cuts and fills, particularly on colluvial soils.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Settlement:</i> Introduction of fill over loose colluvial soils and landslide deposits in the western portion of the site may induce settlement or potential movement of underlying soils.	Stability analysis needed prior to construction to confirm adequate factor of safety on hillside cuts and fills, particularly on colluvial soils.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Erosion:</i> Site erosion and local hillside instability may be increased in the areas proposed for storm water discharge.	Refer to discussion above under stormwater.	Similar to Alternative 1.	Similar to Alternative 1.	None.
Long Term Impacts				
<i>Landslides & Steep Slopes:</i> The completed site construction would not significantly affect the stability of the hillside slopes. Development of landscape irrigation systems may slightly affect slope stability	Site retaining walls, particularly walls overlying colluvial soil, would need to be evaluated for overall stability. Cantilever soldier pile walls may be needed to provide lateral support where walls with heights of 10' to 15'	Similar to Alternative 1.	Similar to Alternative 1.	The site would remain undeveloped. However, colluvial slopes near the wetlands would continue to be susceptible to minor sloughing and slumping from groundwater seepage.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
by increasing soil moisture.	<p>are needed. Taller walls at the Project's property lines would require permanent tiebacks and tieback easements from adjacent property owners.</p> <p>The Applicant could pursue a street vacation of the SW 136th Street right-of-way (ROW) in lieu of a construction easement to facilitate future maintenance.</p>			
<p><i>Seismic:</i> Proposed hillside grading has potential for slightly reduced overall seismic safety as compared to existing conditions. Seismic stability would be reduced in areas where fill is placed over colluvial soils due to possible liquefaction during a seismic event. This would occur primarily along the western portion of the site.</p>	<p>Confirmation of stability and settlement potential of hillside cuts and fills is needed prior to construction, especially over colluvial soils that are and potentially susceptible to liquefaction.</p> <p>Stability analysis needed prior to construction to confirm adequate factor of safety on hillside cuts and fills, particularly on colluvial soils.</p>	Similar to Alternative 1.	Similar to Alternative 1.	None.
<p><i>Erosion:</i> Site erosion and local hillside instability may be increased in the areas proposed for storm water discharge.</p>	Refer to discussion above under stormwater.	Similar to Alternative 1.	Similar to Alternative 1.	The site would remain undeveloped. However, colluvial slopes near the wetlands would continue to be susceptible to minor sloughing and slumping from groundwater seepage.
<p><i>Settlement:</i> Some settlement of buildings constructed partially on cuts</p>	Stability analysis needed prior to construction to confirm adequate factor of safety on	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
and partially on fills may occur after completion of building construction.	hillside cuts and fills, particularly on colluvial soils.			
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
PLANTS AND ANIMALS				
<i>Short Term Impacts</i>				
<i>Vegetation & Terrestrial:</i> During the construction process, some remaining vegetation would potentially be damaged and soils would be compacted from foot traffic and construction equipment.	No mitigation proposed. Vegetation would be temporarily affected by the compaction impacts and would be expected to recover over time.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Wildlife:</i> Short-term impacts to wildlife would stem from construction-related noise and human disturbance. Wildlife using the Project site and adjacent habitat would likely avoid the area during the construction period.	Refer to mitigation identified for noise impacts.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Fisheries:</i> Construction activity may potentially increase short-term sedimentation, resulting in temporary, adverse insignificant impacts to fish habitat effects to fish species.	Approved TESC plans required by the City and SWSSD. Completed systems and surface treatments would require monitoring until	Short-term impacts to fisheries are similar, but slightly less than those described under Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
	vegetation is established.			
<i>Threatened, Endangered & Sensitive Species:</i> Short-term impacts to state-listed TES species would stem from construction-related noise and human disturbance. Bald eagles, peregrine falcons, and pileated woodpeckers would likely avoid the Project site and adjacent park habitat during construction activity.	No mitigation needed for insignificant impacts. Refer to "Long-term Impacts."	Similar to Alternative 1.	Similar to Alternative 1.	None.
Long Term Impacts				
<i>Vegetation & Terrestrial:</i> 7.4 acres of upland forest (second-growth, large diameter trees) would be cleared from the site. Construction activity might increase seed dispersal from non-native species, which could contribute to a long-term increase of non-native species throughout the Project site and into the existing park boundary.	To the degree possible, the existing native vegetation on the west side of the Project site would be maintained in the wetland enhancement buffer, rather than replacing it with landscaping. At a minimum, trees measuring 26 inches dbh and greater should be retained along this side of the property. Alternative 1 will retain up to 2.4 acres of second-growth forest. Implement and maintain a well-designed landscape plan emphasizing native species.	Long-term impacts to vegetation are similar, but slightly less than those described under Alternative 1. Approximately 7.2 acres of upland forest (second-growth, large diameter trees) would be cleared from the site.	Similar to Alternative 1. Alternative 2 will retain up to 2.6 acres of second-growth forest.	None. The absence of development and disturbance on the site, combined with the ongoing maturation of the forested stands, would increase habitat quality for wildlife. Douglas-fir trees would be expected to deteriorate over time as western hemlock and western red cedar species gradually dominate the forest canopy.
<i>Wildlife:</i> Approximately 7.4 acres of wildlife habitat would be lost, resulting in impacts on habitat	Revegetate in landscape area; plant 2 native trees for each significant (>26" dbh) tree removed.			

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
connections in the WRIA 9 Nearshore Subbasin.				
<i>Fisheries:</i> Development of the site would potentially cause an insignificant impact on groundwater infiltration on site and below the site, including in North Creek and its tributaries. Alternative 1 would result in minor, long-term effects on habitat quality for fish in the off-site stream channels.	No mitigation needed for insignificant impacts.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Threatened, Endangered & Sensitive Species:</i> The removal of trees on the site would result in a minor cumulative negative impact on State-listed bald eagles, peregrine falcons, and pileated woodpeckers by removing the potential nesting, perching, and roosting sites in this area.	Replacement trees should correspond with species used as nesting, foraging, and roosting habitat by pileated woodpeckers.	Long-term impacts to TES species are similar.	Similar to Alternative 1.	None.
Cumulative Impacts				
Alternative 1 would contribute to the increase of impermeable surface area in the watershed and the corresponding effects to groundwater, surface water, and aquatic habitat. Impacts from removal of upland habitat would	Mitigation includes vegetation retention, revegetation, and erosion and sedimentation control. Refer to mitigation proposed under short and long term impacts.	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
contribute to cumulative habitat loss in the WRIA 9 Nearshore Subbasin. Removal of upland, mature trees would contribute to the cumulative loss of perch and potential nesting habitat for bald eagles and nesting and foraging habitat for pileated woodpecker.				
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
WETLANDS				
<i>Short Term Impacts</i>				
Potential indirect impacts could result from sedimentation and runoff during construction. Proposed impervious surfaces in Alternative 1 would increase surface water runoff on the Project site and potentially contribute to long-term issues of erosion and sedimentation in the wetland habitat and surrounding areas, as well as a change in groundwater hydrology. Over the long-term the wetland may become smaller or there could be a change in	BMPs would be applied during the construction process to reduce sedimentation and erosion issues. A stormwater system would be developed in accordance with the 2005 King County Stormwater Design Manual to meet the detention, retention, and release rates. The Project proponent will implement a voluntary 50-foot-wide buffer around the existing wetlands to help	Similar to Alternative 1. Alternative 2 will result in the loss of approximately 7.2 acres of existing wildlife habitat.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<p>vegetation species composition.</p> <p>Alternative 1 will result in the loss of approximately 7.4 acres of existing wildlife habitat.</p>	<p>protect the function of these systems.</p> <p>Work with the City of Burien Parks Department to install educational interpretive signage proximate to the sensitive wetlands area.</p>			
<i>Long Term Impacts</i>				
<p>The addition of approximately 7.5 acres of impervious surfaces in Alternative 1 would increase surface water runoff on the Project site and potentially contribute to long-term issues of erosion and sedimentation in the wetland habitat and surrounding areas, as well as a change in groundwater hydrology. Over the long-term, the wetland may become smaller or there could be a change in vegetation species composition.</p> <p>Same as those described under short-term impacts.</p>	<p>A stormwater system would be developed in accordance with the 2005 King County Stormwater Design Manual to meet the required detention, retention, and release rates.</p> <p>The Project proponent will implement a voluntary 50-foot-wide buffer around the existing wetlands to help protect the function of these systems.</p> <p>Work with the City of Burien Parks Department to install educational interpretive signage proximate to the sensitive wetlands area. Same as those described under short-term impacts.</p>	<p>Similar to Alternative 1. Alternative 2 will result in the addition of approximately 7.5 acres of impervious surfaces.</p>	<p>Similar to Alternative 1.</p>	<p>None.</p>
<i>Cumulative Impacts</i>				
<p>Removal of upland habitat in the WRIA 9 watershed will have minor cumulative</p>	<p>Refer to mitigation described under short- and long-term impacts.</p>	<p>Similar to Alternative 1.</p>	<p>Similar to Alternative 1.</p>	<p>None.</p>

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
contributions to regional wetland watershed impacts.				
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
LAND USE				
<i>Short Term Impacts</i>				
None.	None.	None.	None.	None.
<i>Long Term Impacts</i>				
<p>Alternative 1 would convert the currently undeveloped, vegetated site into a 201-unit multi-family development (including the manager's unit), with a clubhouse and pool facility.</p> <p>This would result in higher-intensity residential development than currently exists on the site. This increased intensity would increase automobile and pedestrian trips to, from, and around the Project site.</p> <p>Approximately 450 residents would inhabit Emerald Pointe in Alternative 1. This level of activity would be compatible with and similar to levels of activity on adjacent land uses.</p>	No mitigation is needed.	<p>Alternative 2 would convert the currently undeveloped, vegetated site into a 179-unit multi-family development (including the manager's unit), with a clubhouse and pool facility.</p> <p>This would result in higher-intensity residential development than currently exists on the site. This increased intensity would increase automobile and pedestrian trips to, from, and around the Project site.</p> <p>Approximately 400 residents would inhabit Emerald Pointe in Alternative 2. This level of activity would be compatible with and similar to levels of activity on adjacent land uses.</p>	No mitigation is needed.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
The development would be consistent with densities and development types located on surrounding parcels to the north, south and east. Proposed land uses proposed would be consistent with applicable land use policies and regulations.		The development would be consistent with densities and development types located on surrounding parcels to the north, south and east. Proposed land uses proposed would be consistent with applicable land use policies and regulations.		
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
AESTHETICS, LIGHT, AND GLARE				
<i>Short Term Impacts</i>				
During site preparation and construction, the visual quality of the site would be temporarily changed due to the removal of trees, site grading, and construction activities.	Construction sites should be maintained in an appropriate manner, with refuse and materials for recycling properly stored.	Similar to Alternative 1.	Similar to Alternative 1.	None.
<i>Long Term Impacts</i>				
<i>Aesthetics:</i> Permanent removal of existing forest on the site and development of housing may be perceived by some as a negative aesthetic impact. However, the site comprises	Until all on-site construction is completed, turf grass and erosion control measures established on future building sites should be maintained in good condition.	Impacts are similar, but slightly less than those described under Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<p>a relatively small portion of the neighborhood's open space acreage (less than 5 percent) and will remain in character with the surrounding property.</p> <p><i>Light and Glare:</i> Due to the increased number of residents, lighting from interior and exterior fixtures as well as headlights would increase under Alternative 1.</p>	<p>Retention and/or planting of attractive landscaping in appropriate locations along the northern, eastern, and southern property lines to provide visual screening and reduce light trespass.</p> <p>Design and installation of exterior lighting so as to minimize excessive lighting levels, glare, and light trespass onto adjacent properties.</p>			
Cumulative Impacts				
None.	None.	None.	None.	None.
Significant Unavoidable Adverse Impacts				
None.		None.		None.
NOISE				
Short Term Impacts				
<p>Development of the site would result in the generation of noise during construction, which is expected to occur in three phases over a period of 3 to 4 years. Noise during this phase would be intermittent and would vary considerably according to the nature of the construction activities. Chainsaws used in the removal of existing trees</p>	<p>Activities shall comply with the maximum noise levels and hours of operation identified in Burien Municipal Code (BMC) 9.105.400(2)(h) and other applicable State laws. The City may choose to condition construction permits to further reduce hours of operation to minimize evening and weekend noise to adjacent</p>	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
and use of heavy construction equipment, especially during grading activities, would be sources of higher-than-normal temporary noise levels.	sensitive residential neighborhoods.			
Long Term Impacts				
Alternative 1 would result in increased noise levels from the existing condition due to occupancy by residents. The scale and character of development would be very similar to surrounding existing multifamily residential development and is not expected to lead to a significant increase in noise.	No mitigation needed.	Alternative 2 would result in slightly less noise impacts as those identified in Alternative 1, with the development of 22 fewer residential units.	Same as Alternative 1.	None
Cumulative Impacts				
None.	None.	None.	None.	None.
Significant Unavoidable Adverse Impacts				
None.		None.		None.
PARKS AND RECREATION				
Short Term Impacts				
The private, informal trail system through the site connecting adjacent properties with Seahurst Park would be removed.	No mitigation needed.	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<i>Long Term Impacts</i>				
The 450 residents generated by Alternative 1 would create a demand for approximately 0.9 acres of new neighborhood park/ playground facilities, 1.1 acres of community parks, and 1.8 acres of public open space.	No mitigation necessary. The estimated increase in parks and recreation demand would be met with the combination of the proposed on-site recreation facilities and improved access to Seahurst Park for residents and the public.	Similar to Alternative 1, Alternative 2 would remove the private, informal user-made trail system through the site connecting adjacent properties with Seahurst Park. The 400 residents generated by Alternative 2 would create a demand for approximately 0.8 acres of new neighborhood park/ playground facilities, 1.0 acres of community parks, and 1.6 acres of public open space.	Similar to Alternative 1.	None. The informal user-made trail system on the site would remain. These trails would continue to provide unofficial access to Seahurst Park from 12th Avenue SW.
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.
PUBLIC SERVICES				
<i>Short Term Impacts</i>				
None.	None.	None.	None.	None.
<i>Long Term Impacts</i>				
<i>Fire:</i> Alternative 1 would not be adequately served by Fire District #2. The existing Alternative 1 site plan does	To offset the identified significant impact of Alternative 1 on fire protection resources, the Applicant will work with Fire District #2 staff	<i>Fire:</i> The Alternative 2 site plan meets Fire District No. 2's access requirements to adequately provide	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<p>not provide an sufficient turning radius at most corners of the internal roadway network—specifically, the intersection of the site access driveway and the internal road network—and the grade proposed for the entry access driveway exceeds the District’s maximum grade standard of 15 percent.</p> <p>Fire flow resulting from the proposed water infrastructure would be expected to adequately meet District requirements.</p>	<p>to address the issues identified in Section 3.11.2.1.</p>	<p>emergency services to the site. No impacts are anticipated.</p>		
<p><i>Police:</i> Alternative 1 would result in additional calls for police service. The Burien Police Department anticipates no change in staffing or resources would be needed to accommodate new development.</p>	<p>No mitigation needed.</p>	<p><i>Police:</i> Impacts on police services associated with Alternative 2 would be similar to those identified in Alternative 1, but with a slightly reduced demand for services due to a smaller population.</p>	<p>Similar to Alternative 1.</p>	<p>None.</p>
<p><i>Public Schools:</i> Alternative 1 would result in between 20 and 60 additional school-age children to the city. Highline School District staffing resources are expected to adequately accommodate this increase in student population.</p>	<p>No mitigation needed.</p>	<p><i>Public Schools:</i> Impacts on the School District associated with Alternative 2 would be similar to those identified in Alternative 1, but with slightly reduced demand due to a smaller population.</p>	<p>Similar to Alternative 1.</p>	<p>None.</p>

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
<i>Short Term:</i> None.		None.		None.
PUBLIC UTILITIES				
<i>Short Term Impacts</i>				
An existing sewer manhole is located near the wetland buffer. Careless construction could impact the wetland buffer. All work would be performed according to approved sewer and water plans. Abandonment of the existing 6-inch waterline through the wetland would avoid any possible damage to the wetland from a broken or leaking active line in the future.	Formal approval of utility plans and construction permits shall be received from the appropriate service agencies. Excavation and installation of on-site lines would be in accordance with approved construction and TESC plans. On-site inspections would be needed to ensure compliance with approved plans during construction. Completed systems and surface treatments would require monitoring until vegetation is established. Any work related to the establishment of the sewer connection near the wetland buffer shall be monitored by a	Similar to Alternative 1.	Similar to Alternative 1.	None.

Table 2.7-1: Summary of Environmental Impacts and Mitigation Measures

Alternative 1		Alternative 2 (Preferred Alternative)		No Action Alternative
Environmental Impacts	Mitigation	Environmental Impacts	Mitigation	Environmental Impacts
	certified wetland biologist.			
<i>Long Term Impacts</i>				
None.	None.	None.	None.	None.
<i>Cumulative Impacts</i>				
None.	None.	None.	None.	None.
<i>Significant Unavoidable Adverse Impacts</i>				
None.		None.		None.

