



**City of Bellevue  
Development Services Department  
Land Use Staff Report**

**Proposal Name:** City of Bellevue Emerald Ridge  
**Wastewater Pump Station Replacement**

**Proposal Address:** NE corner of SE 32nd Street and 118th Ave. SE

**Proposal Description:** The applicant requests a Critical Areas Land Use Permit in order to replace an existing city-operated wastewater pumping station within the city right-of-way. (The existing pumping station will be abandoned after installation of the new pump station.) The project also includes security fencing, an electrical cabinet (10' width x 4' depth x 10' height) with covering, pavement widening for parking stalls, and street frontage curb and gutter. Project is located adjacent to a wetland. The applicant proposes mitigation. The site is located in the R-20 zoning district.

**File Number:** 10-106657-XE

**Applicant:** Karissa Kawamoto, HDR, Inc.

**Decisions Included:** Critical Areas Land Use Permit  
(Process II. LUC 20.30P)

**Planner:** Carol J. Hamlin, Senior Planner *CJH*

**State Environmental Policy Act  
Threshold Determination:** Exempt per BCC 22.02.045

**Director's Decision:** **Approval with Conditions**  
Michael A. Brennan, Director  
Development Services Department

By: *[Signature]*  
Carol W. Helland, Land Use Director

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Application Date: March 12, 2010  
Notice of Application Publication Date: April 8, 2010  
Decision Publication Date: May 20, 2010  
Project Appeal Deadline: June 3, 2010  
Expiration: In accordance with LUC 20.30P.150, a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Clearing and Grading Permit or other necessary development permits within one year of the effective date of the approval.

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Appeal of the Decision must be received in the City's Clerk's Office by 5 p.m. on the date noted for appeal of the decision.

**I. Proposal Description**

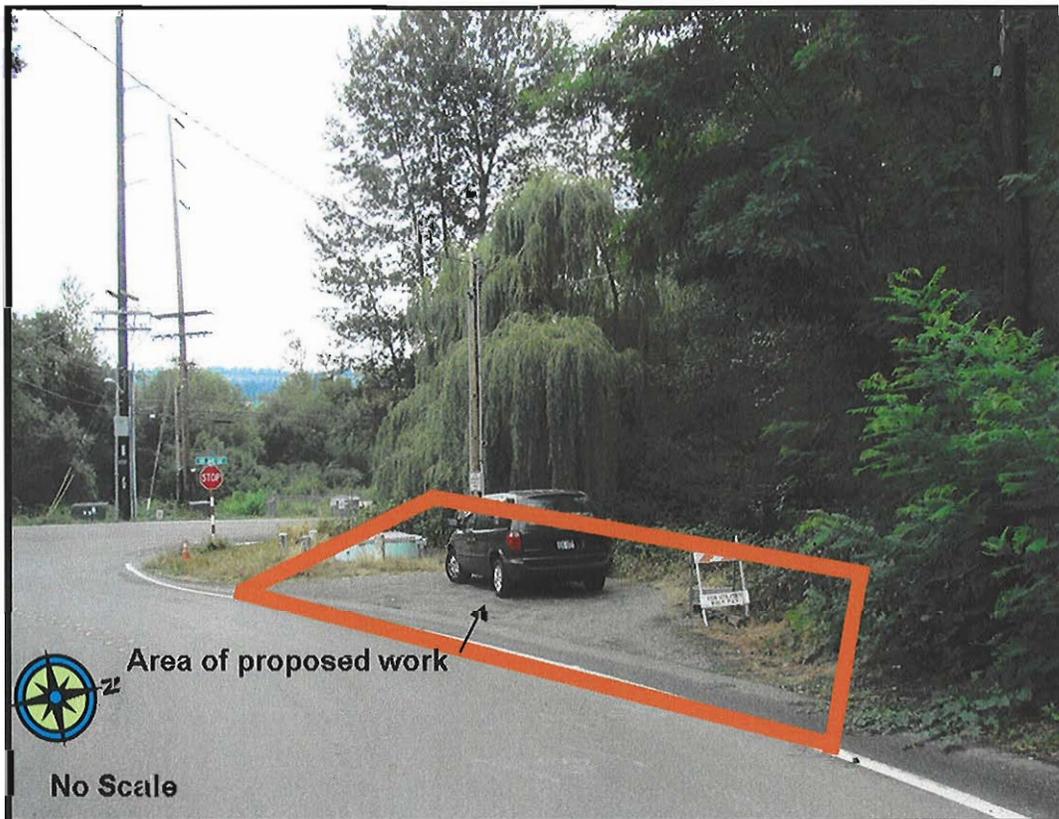
The City of Bellevue Utilities Department is proposing to rehabilitate the Emerald Ridge sanitary sewer pump station. The site is located at the NE corner of SE 32<sup>nd</sup> Street and 118<sup>th</sup> Ave. SE. See attached vicinity map (Attachment A).

The existing pump station has deteriorated both structurally and mechanically since it was built in the 1960's. The existing pump station structure will be re-used as a manhole access to the new pump station.

A new wet well equipped with submersible pumps and an underground valve vault will be installed immediately next to the decommissioned facility. Other elements of the project include installation of a covered electrical control panel, perimeter security fencing, new concrete curb and gutter along SE 32<sup>nd</sup> Street, wet well supply and exhaust fans, and new pavement area adjacent to SE 32<sup>nd</sup> for maintenance vehicle parking (2 utility maintenance trucks).

See attached plans (Attachment B).

**Area of Proposed Work**



Due to the identification of a Category III wetland located on the private property immediately north of the Emerald Ridge site, a Critical Areas Land Use Permit (CALUP) is required with wetland mitigation for proposed work within the wetland buffer.

Proposed mitigation is at a site within the Mercer Slough, approximately 1500 feet north of the pump station site. The applicant has worked with the Parks & Community Services Department and will install 136 plants within the buffer to the wetland (on Parks & Community Services Department property). These plants include native trees, shrubs and groundcover that are appropriate for wetland buffer locations.

### Emerald Ridge Mitigation Vicinity Map



Project site is 1500 feet to the south of the mitigation site (not shown on the map).

See Section III.B for map detail of mitigation area.

## II. Site Description, Zoning, Land Use and Critical Areas

### A. Site Description

The existing pump station is located at the northeast corner of the intersection of SE 32nd Street and 119<sup>th</sup> Avenue SE. The project is located entirely within the City's SE 32<sup>nd</sup> Street right-of-way. The right-of-way extends approximately 20 feet north from the edge of the pavement on SE 32<sup>nd</sup> Street where it abuts the Emerald Ridge Condominium property. The pump station is relatively nondescript, consisting of a 7-foot diameter steel sewer structure that rises approximately 2 feet above the ground

surface. The existing ground surface contains a mixture of gravel, weeds, and Himalayan blackberry.

### **B. Zoning and Land Use Context**

The site is located within the city's right-of-way of SE 32<sup>nd</sup> Street, north of I-90 and east of 118<sup>th</sup> Ave. SE. The site is zoned R-20. Type III wetlands are located immediately adjacent to the north and a multi-family condominium development (zoned R-20) is located to the northeast.

Surrounding land use in the vicinity consists of single and multi-family residential, commercial, and open space/undeveloped areas.

### **C. Critical Areas Functions and Values**

#### **Wetland Areas**

Bellevue's wetlands act as areas for collection of surfacewater runoff, stream and flood overflow and filtration to groundwater. Wetlands also provide habitat for a variety of wildlife species and important linkages between habitat areas in the City. Wetland areas are a visual amenity in the City, with a "green" backdrop for urbanized areas, enhancing property values and buffering urban development.

### **III. Consistency with Land Use Code Requirements:**

#### **A. Zoning District Dimensional Requirements:**

The site is located in the R-20 zoning district. The dimensional requirements of LUC 20.20.010 are not applicable for a pump station replacement within the City's right-of-way.

#### **B. Critical Areas Requirements LUC 20.25H**

##### **Wetlands**

The applicant identified one wetland located immediately north of the project area on the condominium property. The wetland is located in a depression, approximately 5 to 6 feet below the elevation of the project and adjacent roadways. Access to the property was denied; therefore, the wetland boundaries were estimated based on aerial photo interpretation and field investigation. Using the Washington State Department of Ecology rating system, the wetland rated as a Category III, with a moderate score for water quality function, low score for hydrologic function and a low score for habitat function (HDR, 2009).

The City of Bellevue applies a standard 60-foot buffer for Category III wetlands with a habitat score of less than 20 points. Due to the surrounding structures, roadways, and gravel areas, the actual wetland buffer that exists is less than the 60-foot standard requirement. The project would affect 1,682 square feet of wetland buffer requiring a 1:1 mitigation ratio for impacts to the wetland.

**Description of Impact Areas**

The project is located within the Mercer Slough drainage basin. Table 1 summarizes the impacts to critical areas. The applicant names the adjacent wetland to the project site as Wetland A (no relation to the prior wetland classification by the city).

**Table 1. Impact and Mitigation Areas**

Critical Area	Type of Impact	Impact Area (square feet)	Mitigation Area (square feet)
Wetland A	No Impact		
Wetland A buffer	Vegetation Clearing	1,542	1,700 <sup>a</sup>

<sup>a</sup> The City of Bellevue Critical Area Ordinance (CAO) requires compensatory mitigation at a 1:1 ratio for impacts to the buffer of Category III wetlands (Land Use Code [LUC] 20.25H.105).

**Wetland A adjacent to the project site**

Wetland A is a depressional wetland located on a privately-owned parcel immediately northeast of the intersection of SE 32nd Street and 118th Avenue SE (Figure 1). The parcel is located immediately north of the proposed project site. Wetland A is approximately 0.39 acre in size.

**Site adjacent to wetland**



**Wetland A**

Wetland A is a palustrine wetland that contains both forested and scrub-shrub vegetation communities. Vegetation observed in Wetland A includes black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), red alder (*Alnus rubra*), red-osier dogwood (*Cornus sericea*), reed canarygrass (*Phalaris arundinacea*), and giant horsetail (*Equisetum telmateia*). Willow (*Salix* species) and birch (*Betula* species) trees were also observed in Wetland A. Direct precipitation and surface water runoff from adjacent areas are likely the primary sources of hydrology for Wetland A.

On the south side of Wetland A, the buffer is primarily comprised of Himalayan blackberry (*Rubus procerus*), reed canarygrass, and maintained roadside grasses. On the north side of Wetland A, the buffer contains big-leaf maple (*Acer macrophyllum*), trailing blackberry (*Rubus ursinus*), English ivy (*Hedera helix*), and ornamental trees.

According to the Washington Department of Ecology (Ecology) wetland rating system (Hruby 2004), Wetland A provides moderate water quality functions and low hydrologic and habitat functions. Wetland A is surrounded by development (residential and industrial); therefore, the wetland has the potential and opportunity to trap and filter sediments from surface water runoff from these areas. Since it is situated in the lower portion of the watershed, Wetland A provides limited opportunities and lower potential for hydrologic functions, such as reducing erosion and flooding. Wetland A also has low potential for habitat function, as it has minimal habitat diversity and interspersion, and is isolated from other habitat types.

The City has adopted the Ecology rating system for wetlands. Based on the functions (and corresponding function scores from the wetland rating system) described above, the City rates Wetland A as a Category III wetland, which requires a 60-foot buffer.

### **Mitigation Sequence**

Land Use Code 20.25H.210 requires that mitigation for impacts to wetland buffer follow this approved order:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing the impacts by limiting the degree or magnitude of the action and its implementation with appropriate technology or by taking affirmative steps, such as project redesign, relocation or timing, to avoid or reduce the impacts;
3. Rectifying the impact by repairing, rehabilitating or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;
6. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

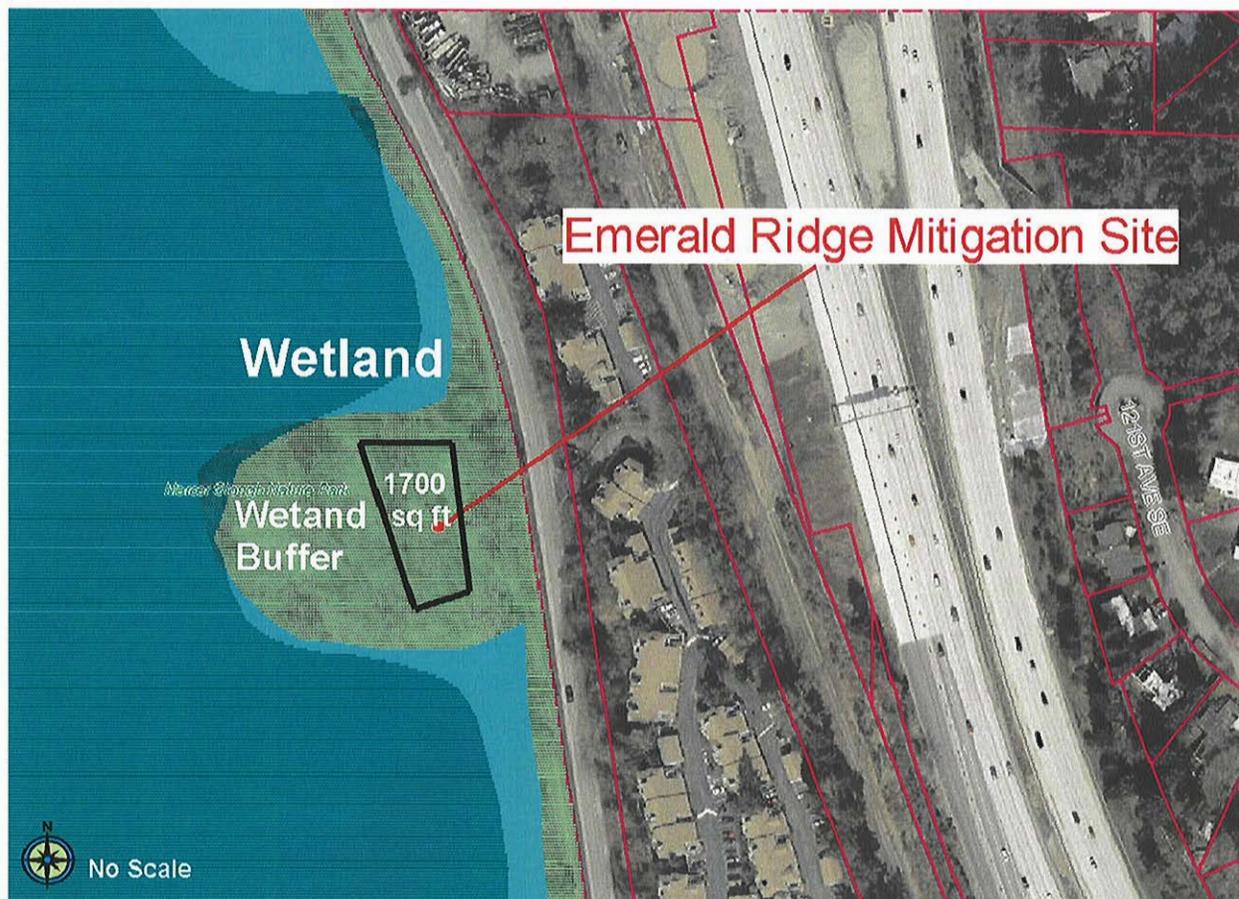
The proposed action avoids and minimizes impacts to the critical area through the use of specific design techniques. Where impacts are unavoidable, the proposed action includes enhancement of an existing wetland buffer at an off-site location. The off-site location is situated in the same drainage basin where the impacts occur. The enhancement of an existing wetland buffer is considered compensation for the impacts.

### **Description of Mitigation Site**

The selected mitigation site is located approximately 1,500 feet northwest of the proposed project site (Figure 1). The mitigation site is located within the same drainage basin (Mercer Slough) as the project site. It is located within the Mercer Slough Nature Park and is adjacent to an existing City-owned and maintained restoration area. The mitigation site is situated in the buffer of the Mercer Slough wetland complex; the site currently contains a

canopy of red alder and big-leaf maple with an understory primarily dominated by Himalayan blackberry.

### Emerald Ridge Mitigation Site



### Mitigation Goals

Unavoidable impacts to the 60-foot buffer of Wetland A would be mitigated by enhancing approximately 1,700 square feet of the wetland buffer area within the proposed mitigation site.

The overall goal of the proposed enhancement is to increase wetland buffer functions such as improving wildlife habitat, screening the wetland from nearby human activities, and increasing sediment filtration and water temperature regulation of overland runoff. This goal will be achieved by enhancing the existing wetland buffer with native tree, shrub, and herbaceous species.

**Implementation Plan**

**Site Preparation**

Clearing and grading will not be required. Blackberry present at the site will be removed by hand prior to planting; roots and/or crowns of the blackberries will be removed to ensure complete removal of the plants.

**Planting Schedule**

One hundred thirty six plants will be installed at the mitigation site; 6 trees, 117 shrubs, and 13 herbaceous plants (Table 2). Native species have been selected that are appropriate to the conditions of the site and are similar to those installed at the adjacent restoration area.

**Table 2. Plant schedule for wetland buffer mitigation site.**

Common Name	Botanical Name	Quantity	Size & Condition	Spacing
<b>Trees</b>				
Western red cedar	<i>Thuja plicata</i>	3	5 gallon	9'
Douglas fir	<i>Pseudotsuga menziesii</i>	3	5 gallon	9'
<b>Shrubs</b>				
Red osier dogwood	<i>Cornus sericea</i>	50	2 gallon	3'
Salmonberry	<i>Rubus spectabilis</i>	28	2 gallon	3'
Nootka rose	<i>Rosa nutkana</i>	24	2 gallon	3'
Salal	<i>Gaultheria shallon</i>	15	2 gallon	3'
<b>Herbs</b>				
Sword fern	<i>Polystichum munitum</i>	13	1 gallon	3'
<b>Total</b>		<b>136</b>		

**Planting Plan**

The applicant has prepared detailed plan documents that show the mitigation site, mitigation area boundaries, plant species, size, and quantities selected for the site, and planting details. These plans are included in Appendix A (see file).

**Monitoring and Maintenance Plan**

Per discussions with the City of Bellevue, monitoring requirements will be waived for this project in-lieu of maintenance agreement between the Utilities Division and Parks. Since the site is located in a City-owned and operated park, a standard maintenance plan developed and implemented by the Parks & Community Services Department will satisfy both the monitoring and maintenance requirements for the project. The maintenance plan shall be submitted for review and approval to the Development Services Department prior to commencement of any work on either site. See condition X.1.

**Applicable Decision Criteria:**

***LUC 20.25H.055.C.2.a & b: Expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists.***

Response: Sewer pump stations are strategically located (typically at a low point in the pipes) in order to provide the optimum service to the neighborhood and function most

efficiently within the overall system. To relocate the pump station elsewhere would require a system wide study to ensure that the new location would function at the same level of service. It most likely would also require purchase of private property at great expense to the project. The Emerald Hills pump station was originally installed in the 1960's. It is entirely within a very narrow strip of city owned right-of-way. The redevelopment would not require the acquisition of new land and this outcome lowers project costs. Development has grown up around the facility and undeveloped properties in the immediate area are constrained by critical areas, park/natural uses, or high property values.

The existing pump station is within a highly disturbed wetland buffer bounded on two sides by streets (118<sup>th</sup> Ave SE and SE 32<sup>nd</sup> St). North of the facility is the wetland and a major condominium complex. Office buildings are immediately to the east. The ground surface is primarily gravel and grasses around the pump station and the new facility would not further degrade the wetland buffer. The designers faced a very difficult challenge of siting a new facility and associated improvements into a constrained space while minimizing the area of disturbance.

Off-site mitigation within the Mercer Slough Nature Park is proposed since opportunities to successfully replace wetland buffer on site is limited. The proposed mitigation location is approximately 1,500 feet northwest of the project. It is within the same drainage basin and situated in the buffer of the larger Mercer Slough wetland complex. This site was chosen in conjunction with City of Bellevue Parks staff who will conduct the required maintenance as part of their overall Mercer Slough restoration efforts.

The new pump station wet well is located immediately west of the existing underground facility instead of closer to the wetland (north). Minor improvements such as an upgraded and covered electrical panel, security fencing, and a small paved area for a maintenance vehicle to park off the street are proposed but in areas already cleared of vegetation in the past.

Disturbance to vegetation near the wetland will be minimized to the greatest extent possible. The habitat is not used for salmonid rearing or spawning or by any species of local importance. The proposal does not involve crossing over a wetland or stream or in-water work. All work will be consistent with applicable City codes and standards.

***LUC20.25H.100 – Development on site within a wetland buffer shall incorporate the following performance standards:***

***A. Lights shall be directed away from the wetland.***

Response: Security lights, if any, will be focused south towards the new sewer pump station and away from the wetland.

***B. Activity that generates noise shall be located away from the wetland.***

Response: Any noise from the new facility will be minimized to the greatest extent possible through design and would be similar or less to what was experienced in the past from the previous pump station. A concrete pad is proposed in the parking area for a portable emergency generator; however this would only occur in the case of an emergency or extended power outage and then it would be removed.

***C. Toxic runoff from new impervious area shall be routed away from the wetlands.***

Response: No toxic runoff is anticipated from the new impervious area. Stormwater

from the parking area will be directed to the existing system in SE 32<sup>nd</sup> St.

**D. *Treated water may be allowed to enter the wetland buffer.***

Response: This criterion is not applicable to this project.

**E. *The outer edge of the wetland buffer shall be planted with dense vegetation to limit pet or human use.***

Response: The northern boundary of the wetland buffer is already vegetated with dense underbrush and trees and that area will be retained. For security concerns, the perimeter of the pump station would be fenced with black coated chain link to allow visibility into the facility as well as prevent vehicular sight distance interference around the corner. To compensate for the wetland buffer impacts, off-site mitigation will be completed. This enhancement effort would cover approximately 1,700 square feet of wetland buffer area within the proposed mitigation site (i.e. Mercer Slough wetland complex). The mitigation buffer plantings would include native trees, shrub, and herbaceous species.

**F. *Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the Bellevue's "Environmental BMPs."***

Response: This criterion is not applicable to this project.

***LUC 20.25H.215 Mitigation Sequencing***

**A. *Avoiding the impact altogether by not taking a certain action or parts of an action.***

Response: The Emerald Hills Pump Station rehabilitation project would require additional alteration of the wetland buffer. Due to the locational requirements of a sanitary sewer pump station and the ability to reuse elements of the existing facility, the current site was retained for the project improvements. The wetland will not be directly affected by the proposal.

**B. *Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts.***

Response: The design uses gravel where possible to minimize impervious surface and limits disturbance extents to only the areas needed. The existing buffer is degraded and does not provide much function; however, the 5 to 6 foot grade change between the wetland and the project also acts as protection. The project would attempt to minimize ground disturbance as much as possible towards the wetland. The new pump station wet well will be located to the west of the existing facility, with the intent of reducing impacts to the north.

**C. *Performing mitigation via option 3. Compensation for the impact by replacing, enhancing, or providing substitute resources or environments.***

Response: The wetland to the north is a depressional wetland approximately 0.39 acre in size. The adjacent buffer would be impacted (approximately 1,682 square feet) by the Emerald Ridge Pump Station Rehabilitation. Due to limited size and opportunity to mitigate for impacts on site, a suitable buffer mitigation area of the

Mercer Slough wetland complex was identified with the assistance of Bellevue Parks staff. This enhancement effort would cover approximately 1,700 square feet of wetland buffer area within the proposed mitigation site. The overall goal of the enhancement would be to 1) increase wetland buffer functions, such as, improving wildlife habitat, 2) screen the wetland from nearby human activities, and 3) increase the sediment filtration and water temperature regulation of overland runoff. The mitigation planting would include native trees, shrub, and herbaceous species.

**D. *Monitoring the hazard or other required mitigation and taking remedial action when necessary.***

Response: Maintenance of the off-site buffer mitigation area by parks department staff, in-lieu of monitoring, is proposed to ensure plant survival and function.

**IV. Public Notice and Comment**

Application Date: March 12, 2010  
Public Notice (500 feet): April 8, 2010  
Minimum Comment Period: April 22, 2010

The Notice of Application for this project was published in the King County Journal and the City of Bellevue weekly permit bulletin on April 8, 2010. It was mailed to property owners within 500 feet of the project site. Two inquiries of a general nature were received.

**V. Summary of Technical Reviews**

**Clearing and Grading:**

The Clearing and Grading Division has reviewed the proposed site development for compliance with Clearing and Grading codes and standards. A Clearing & Grading (XB) permit will be required since the work is within the buffer of a critical wetland.

**Utilities:** The Utilities Department is the applicant. This project is necessary in order to upgrade a deteriorating wastewater pump station.

**Transportation:** No concerns. The proposed work will be out of the sight line for traffic.

**Fire:** No concerns.

**VI. State Environmental Policy Act (SEPA)**

The project is exempt from environmental review since the work is within the buffer to the critical wetland Category III, but not within the actual critical wetland which would require environmental review (BCC 22.02.045).

**VII. Changes to Proposal due to Staff Review**

As a result of City review, the applicant will install a black chain link fence (instead of metal) and paint the electrical box a dark green to be more compatible with the wetland environment. See condition X.2.

**VIII. Decision Criteria of Land Use Code 20.30P.140**

**Critical Areas Land Use Permit Decision Criteria 20.30P.140**

The proposal, as conditioned below, meets the applicable regulations and decision criteria for a Critical Areas Land Use Permit pursuant to LUC Section 20.30P.

**A. *The proposal obtains all other permits required by the Land Use Code***

Response: The Emerald Ridge Pump Station Rehabilitation would apply for all permits required by land use and building departments including a critical area land use permit, clear and grade permit, building permit, electrical permit, and right-of-way permit. The project will be subject to the noise ordinance (hours of construction). See condition X.3.

**B. *The proposal utilizes to the maximum extent possible the best available construction, design, and development techniques which result in the least impact on the critical area and critical area buffer.***

Response: The pump station itself is virtually all underground. Some support equipment such as the electrical panel is above grade. Gravel would be used in areas where possible instead of the more impervious asphalt. The design footprint has little room to spare on the site, thus the design engineers tried to be as efficient with surface structures as possible to minimize impacts and disturbance to the wetland buffer. A small paved area is proposed to allow off-street vehicle parking. Striping of the parking area is not proposed so as not to attract attention of non city users. A daily maintenance visit by one City utility vehicle is anticipated at the site. The project will be subject to rainy season restrictions in order to prevent erosion into the wetland. See condition X.4.

**C. *The proposal incorporates the performance standards of LUC 20.25H to the extent applicable.***

Response: The project will be designed to meet the performance standards of LUC 20.25H. See Section III.B above.

**D. *The proposal will be served by adequate public facilities including streets, fire protection, and utilities.***

Response: The Emerald Hills Pump Station Project is a rehabilitation of an existing facility. The current facility is adequately served by public services.

**E. *The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.120.***

Response: An off-site wetland buffer enhancement mitigation effort is proposed. Approximately 1,682 square feet of buffer would be impacted by the project. The mitigation site is located within the Mercer Slough Nature Park and is adjacent to an existing City-owned and maintained restoration area. The buffer plantings would include native trees, shrubs, and herbaceous species.

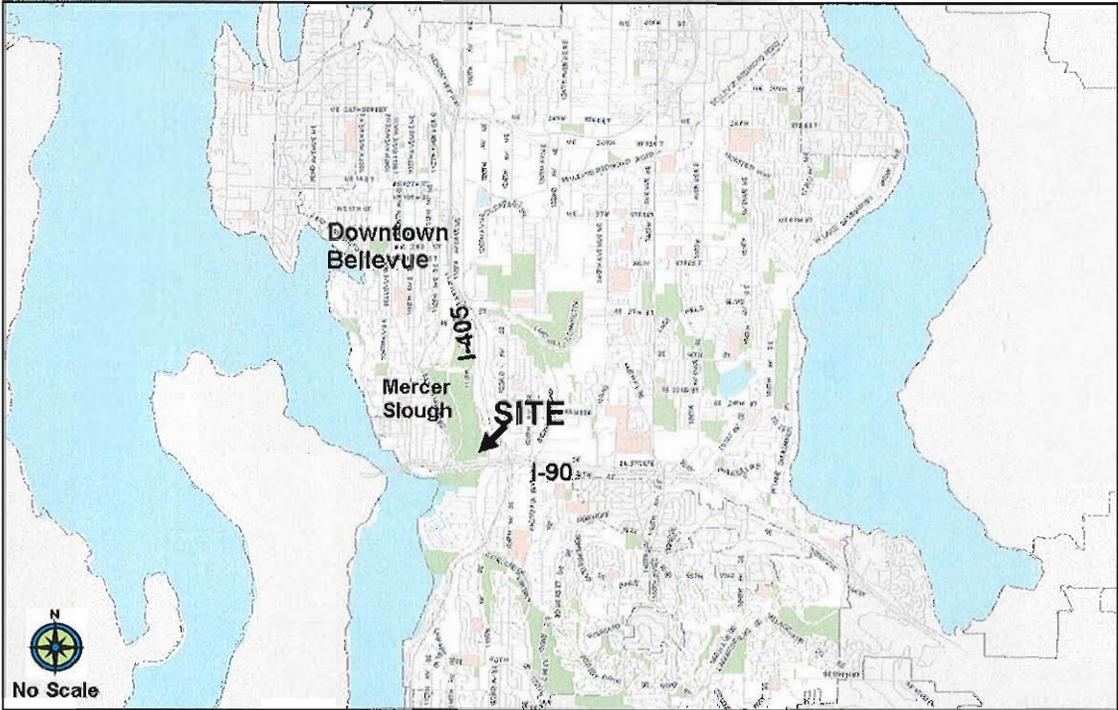
**F. *The proposal complies with other applicable requirements of this code.***

Response: As conditioned, the project will comply with other applicable requirements of this code. See conditions X.1-4.

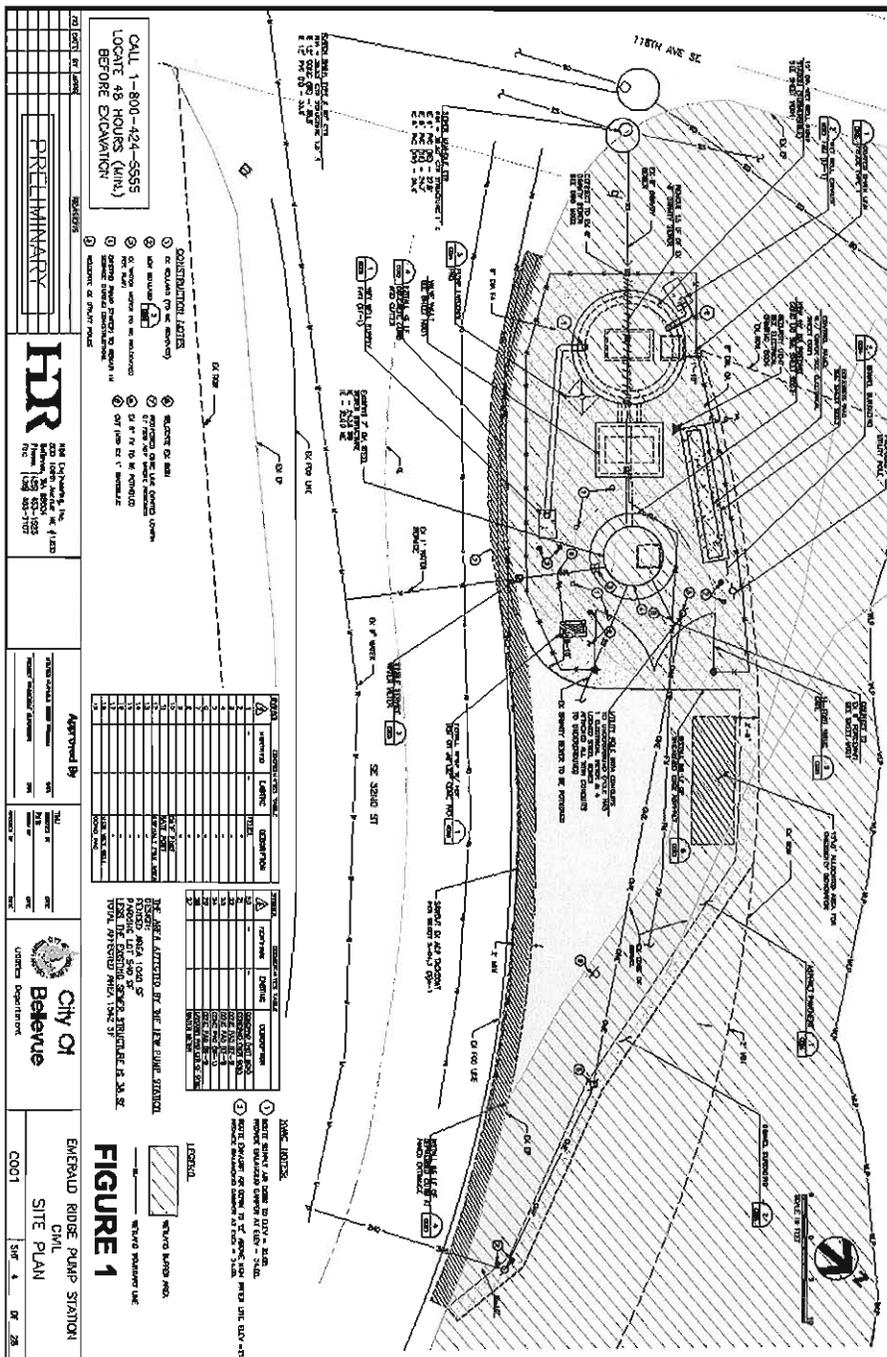
Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures representing the best available technology must be implemented prior to beginning or resuming site work.

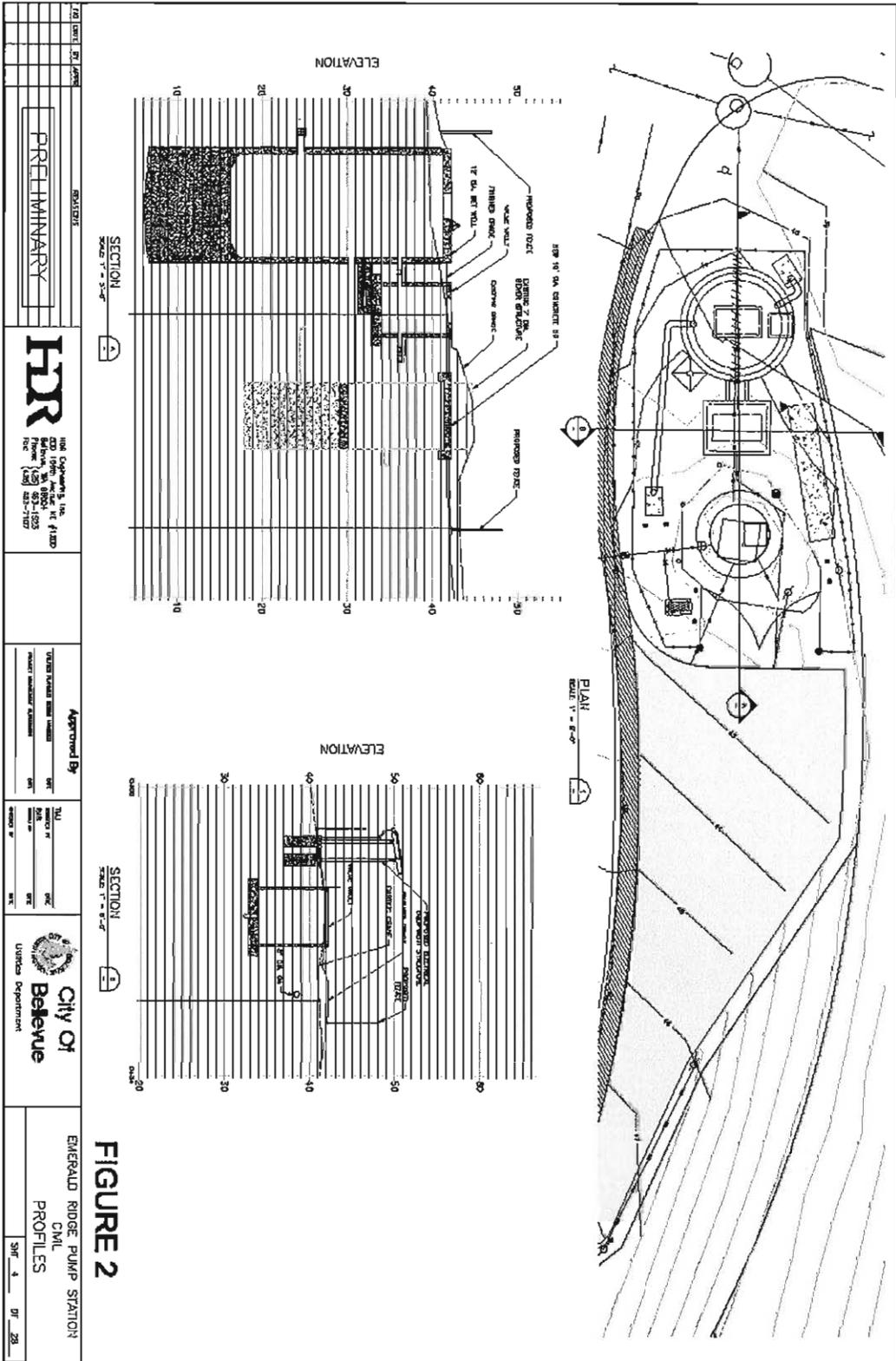
Authority: Bellevue City Code 23.76.093.A,  
Reviewer: Janney Gwo, Development Services Department

**Attachment A  
Vicinity Map**



Attachment B  
Plans





**FIGURE 2**

DATE	REVISION	BY	CHKD
<b>PRELIMINARY</b>			
<b>HDR</b>		HDL Companies, Inc. 620 10th Avenue, Suite 410 Bellevue, WA 98004 Tel: (206) 283-1100 Fax: (206) 283-1107	
DESIGNER: _____ CHECKED: _____ PROJECT MANAGER: _____		Approved By: _____ Title: _____ Date: _____	
 <b>City of Bellevue</b> Utilities Department		<b>EMERALD RIDGE PUMP STATION</b> CIVIL <b>PROFILES</b>	
SHEET #		OF #	
		28	