



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

Proposal Name: **Westad Vasa Creek Critical Area and Buffer Disturbance and Restoration**

Proposal Address: 16721 SE 35th Street

Proposal Description: The applicant requests a Critical Areas Land Use Permit to resolve an enforcement action for unpermitted disturbance involving bank stabilization and replacement of a footbridge within the critical area and critical area buffer of Vasa Creek, a Type F stream.

File Number: **12-107982-LO**

Applicant: Warren and Robin Westad

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

Planner: Kevin LeClair, Planner

State Environmental Policy Act Threshold Determination: **Determination of Non-Significance**

Carol V. Helland, Environmental Coordinator
Development Services Department

Director's Decision: **Approval with Conditions**

Carol V. Helland, Land Use Director
Development Services Department

Application Date: March 6, 2012
Notice of Application Publication Date: March 29, 2012
Decision Publication Date: August 16, 2012
Project/SEPA Appeal Deadline: August 30, 2012

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.



DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 100th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Warren and Robin Westad

LOCATION OF PROPOSAL: 16721 SE 35th Street

NAME & DESCRIPTION OF PROPOSAL:

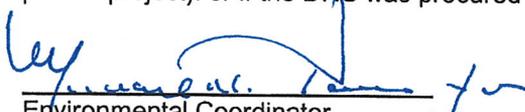
Westad Residence - Critical Areas Land Use Permit to resolve an enforcement action for unpermitted disturbance involving bank stabilization and replacement of a footbridge within the critical area and critical area buffer of Vasa Creek, a Type F stream. Proposal includes soft bank stabilization with stepped-back rockeries, installation native plantings and replacement of an existing footbridge spanning stream at a new, higher elevation.

FILE NUMBER: 12-107982-LO

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

- There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.
- This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **August 30, 2012**
- This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so that it is likely to have significant adverse environmental impacts; if there is significant new information indicating, or on, a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project); or if the DNS was procured by misrepresentation or lack of material disclosure.



Environmental Coordinator

August 16, 2012

OTHERS TO RECEIVE THIS DOCUMENT:

State Department of Fish and Wildlife
State Department of Ecology,
Army Corps of Engineers
Attorney General
Muckleshoot Indian Tribe

CONTENTS

I. Proposal Description	1
II. Site Description, Zoning, Land Use and Critical Areas	2
III. Consistency with Land Use Code Requirements:.....	4
IV. Public Notice and Comment.....	6
V. Summary of Technical Reviews	6
VI. State Environmental Policy Act (SEPA).....	6
VII. Changes to proposal as a result of City review.....	7
VIII. Decision Criteria.....	7
IX. Conclusion and Decision.....	8
X. Conditions of Approval	9

Attachments

1. Environmental Checklist
2. Westad Critical Areas Narrative Description and Mitigation Plan – Herrera Environmental Consultants, Inc – July 15, 2012

I. Proposal Description

The applicant requests a Critical Areas Land Use Permit to resolve an enforcement action for unpermitted disturbance involving repair of existing bank stabilization and replacement of a footbridge within the critical area and critical area buffer of Vasa Creek, a Type F stream, and its associated area of special flood hazard.

Land Use Code (LUC) 20.25H.075 prescribes a 50-foot critical area buffer from the top of bank of Type F streams on developed sites. The request is to permit the stabilization of the stream bank and the replacement of the footbridge. Bank stabilization and new or expanded bridges are considered allowed uses within critical areas and critical area buffers per LUC 20.25H.055, provided that compliance with specific performance standards is demonstrated. The objective of the foot bridge is to provide access to the balance of the Westad property located on the south side of the stream.

The scope of the restoration efforts include:

- Replacement and lifting the footings of the replaced foot bridge so that it is an additional 6 inches (0.5 feet) higher in elevation from the streambed. This will involve placing prefabricated, concrete retaining wall blocks at the footings.
- Reconstruction of an 88-foot long segment of rock wall (installed without permits in 2011) along the downstream extent of the left (north) bank, utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between the rocks. The toe of the bank will be set back to the previously existing location. A row of rock will be placed at the toe of the stream and backfilled with native soil behind. Behind this row of rock two to three feet of spaces will be provided to plant native shrubs. Behind these plantings, a second row of rocks will be setback into the bank and backfilled with native soil behind. Behind this final row of rock, additional native plants will be installed.
- Installation of native shrubs between the rocks including potted plants (5 feet on center) and live stake cuttings (3 feet on center) extending from the edge of the channel and upward to the existing patio.
- Installation of live stake cuttings between existing rocks along the entire remaining left (north) bank at a minimum of 3 feet on center. As necessary, rocks will be repositioned or removed to facilitate installation of the live stake cuttings.
- Installation of native plants along the right (south) bank/ buffer on the Westad property in areas lacking woody vegetation and invasive ivy will be removed.
- Removal of the existing rock patio adjacent to the left (north) bank and installation of native vegetation up to the edge of the existing lawn. This area is adjacent to the segment of left bank that will be reconstructed and set back. Planting will include native shrubs, ferns, and live stake cuttings. Shrubs will be spaced 5 feet on center. Ferns and live stake cuttings will be spaced 3 feet on center.

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

A. Site Description

The property is located at 16721 SE 35th Street and is developed with a single-family residence. The property measures approximately 75 feet wide by 150 feet deep.

The property is generally flat with a gentle slope in the rear yard down to the bank of Vasa Creek, which flows east across the rear portion of the property.

Vasa Creek averages 4.5 feet wide and approximately 2.5 inches deep as it flows across the Westad property. The stream habitat consists of low-gradient riffle with a substrate of gravels, some sand and cobbles. According to Washington Department of Fish and Wildlife information reported in the *City of Bellevue Stream Typing Inventory*, "this area contains cutthroat trout and late-run kokanee, as well as coho and sockeye salmon.

The majority of the buffer to the north of the creek is established with a mixture of ornamental and native landscaping, including lawn, shrubs and small trees. The southern buffer area is undeveloped and has a forested overstory of black cottonwoods, with the exception of an 8-foot by 10-foot storage shed.



B. Zoning

The property is zoned R-5. The property is also within the Critical Areas Overlay District due to the presence of Vasa Creek and its 100-year floodplain.

C. Land Use Context

The 0.26-acre property is developed with a single-family residence. The property is located near the end of a dead end street in a neighborhood of similarly aged and sized single-family residences. The parcels surrounding the neighborhood are in the same land use zoning district, however they are much larger in size (1.5 to 4 acres) and have not yet undergone the subdivision process that would create a similarly-dense single-family neighborhood.

D. Critical Areas Functions and Values

i. Streams and Riparian Areas

A healthy aquatic environment relies on a dynamic interaction between the stream and the adjacent riparian area. Riparian vegetation in floodplains and along stream banks provides a buffer to help mitigate the impacts of urbanization. Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water.

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams. The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods. Upland and wetland areas can infiltrate floodflows, which in turn, are released to the stream as baseflow

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi- canopy structure, snags, and down logs provide habitat for the greatest range of wildlife species. Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated. Until the newly planted buffer is established the near term goals for buffer functions may not be attained.

ii. Floodplains

The value of floodplains can be described in terms of both the hydrologic and ecological functions that they provide. Flooding occurs when either runoff exceeds the capacity of rivers and streams to convey water within their banks, or when engineered stormwater systems become overwhelmed. Studies have linked urbanization with increased peak discharge and channel degradation. Floodplains diminish the effects of urbanization by temporarily storing water and mediating flow to downstream reaches. The capacity of a floodplain to buffer upstream fluctuations in discharge may vary according to valley confinement, gradient, local relief, and flow resistance provided by vegetation. Development within the floodplain can dramatically affect the storage capacity of a floodplain, impact the

hydrologic regime of a basin and present a risk to public health and safety and to property and infrastructure.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The site is located in the R-5 zoning district. No structural development is proposed, therefore, the general dimensional requirements for the zoning district do not apply.

B. Critical Areas Requirements LUC 20.25H:

i. Performance Standards for New or Expanded Uses or Development LUC 20.25H.055.C.2

New or expanded uses are allowed within critical areas or critical area buffers only where no technically feasible alternative exists.

The applicant's objective in installing a foot bridge is to provide access to his property on the south side of the stream. The bridge is the minimum necessary to allow a single person to walk across (approximately 33 inches wide). The bridge is oriented perpendicular to the stream to minimize the intrusion into the buffer. The footings of the bridge are placed landward and above the ordinary high water mark of the stream. The bottom elevation of the bridge will be greater than one foot above the ordinary high water mark elevation and will no impact on the base flood elevation.

The cost of avoiding the installation of bridge is disproportionate to the negligible impact associated with newly replaced bridge. The new bridge is at a higher elevation and is founded on the existing banks, above the ordinary high water mark.

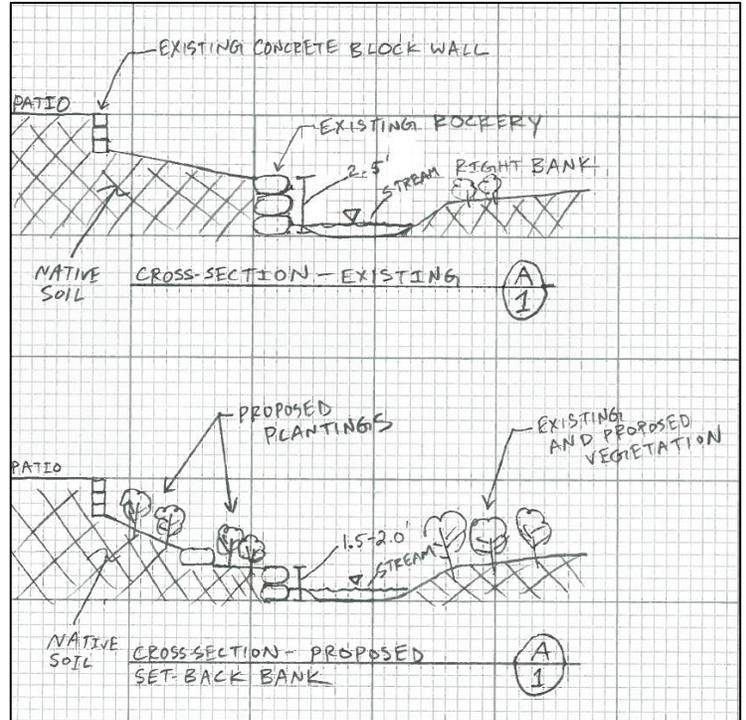
Permanent and temporary impacts associated with the bridge are being mitigated for through the restoration of the stream banks and stream buffer both upstream and downstream of the bridge.

ii. Performance Standards for New or Expanded Bridges and Culverts LUC 20.25H.055.C.3.e

The performance standards for new and expanded bridges and culverts do not apply because the project does not propose to install a new culvert. The proposed bridge will be entirely fish passable.

iii. Performance Standards for Stabilization Measures LUC 20.25H.055.C.3.m

The stream bank that existed prior to the unpermitted work was comprised of stacked creosote timbers (railroad ties). The applicant removed the timbers and replaced them with stacked rocks at approximately the same height. The applicant's consultant discovered that the stream banks had been stabilized by the property developer many years ago and the Westads were attempting to maintain this condition. This work was done without permission, and an enforcement action was initiated by the city. To resolve the enforcement action and ensure a long-term solution of stable banks, the applicant is proposing to soften the stream bank by stepping the bank back and then installing native plants between the rocks.



iv. Performance Standards for Streams LUC 20.25H.080.A

The performance standards for streams that apply to the proposal are those addressing the planting of dense vegetation to limit pet and human use and the use of pesticides and fertilizers. The area of the buffer to the south of the stream will be planted with dense native vegetation, except for a small foot path from the footbridge to the storage shed. The northern banks will be planted as well, but not as extensively because their condition is better with more vegetation already existing.

v. Performance Standards for Areas of Special Flood Hazards LUC 20.25H.180.C

The proposed location of the relocated footbridge is at a higher elevation than the previous elevation of the replaced bridge. The applicant's consultant determined, based on information received from Brian Ward with City of Bellevue Utilities, that the base flood elevation is at or near the top of bank of the stream, based on flood plain data collected on properties in the vicinity. The replaced and elevated footbridge be over foot above the top-of-bank and therefore above the base flood elevation. It is not expected to have any impact on the base flood elevation. The orientation of the footbridge will maintain the existing vegetation in the stream riparian area. The raised elevation of the footbridge will enhance habitat in the stream by allowing additional light to penetrate below the bridge. No specific elevation survey is required because there is no structure proposed for development in the area of special flood hazard.

IV. Public Notice and Comment

Application Date: March 6, 2012
Public Notice (500 feet): March 29, 2012
Minimum Comment Period: April 12, 2012

The Notice of Application for this project was published in the City of Bellevue weekly permit bulletin on March 29, 2012. It was mailed to property owners within 500 feet of the project site. No comments have been received from the public as of the writing of this staff report.

V. Summary of Technical Reviews

Clearing and Grading:

The Clearing and Grading Division of the Development Services Department has reviewed the proposed development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

A. Earth and Water

A clearing and grading permit will be required in order to complete the proposed modifications to the stream riparian zone to restore the impacted area. A temporary erosion and sedimentation control plan that restores the site to an improved condition over the current condition is required. The project plans shall also include erosion and sedimentation management practices to protect the stream. The applicant will also be required to submit information regarding the use of pesticides, insecticides, and fertilizers to avoid impacts to water resources. See Section X for a related condition of approval.

B. Animals

Vasa Creek is known to contain fish habitat for cutthroat, kokanee and coho and

sockeye salmon. The proposed stabilization of the bank and the raising of the footbridge are not anticipated to have any impact on the habitat of the stream. The installation of native plantings in the stream riparian zone is expected to have a positive impact on the stream and riparian zone by providing additional shade over the water and stabilizing the banks with native plant roots and shrub cover. The mature vegetation on the site could provide potential habitat to bald eagles and pileated woodpeckers in the vicinity, however no impacts are anticipated since no significant trees will be removed.

C. Plants

Mitigation for temporary and permanent disturbance will be approved pursuant to an approved re-vegetation and monitoring plan. See Section X for related conditions of approval.

D. Noise

The site is adjacent to single-family residences whose residents are most sensitive to disturbance from noise during evening, late night and weekend hours when they are likely to be at home. Construction noise will be limited by the City's Noise Ordinance (Chapter 9.18 BCC) which regulates construction hours and noise levels. See Section X for a related condition of approval.

VII. Changes to proposal as a result of City review

No changes were made to the proposal as a result of city review. The applicant had applied for pre-development guidance prior to applying in order to develop a proposal that met with the city's submittal requirements and complies with the applicable standards and criteria.

VIII. Decision Criteria

A. Critical Areas Land Use Permit Decision Criteria 20.30P

The Director may approve or approve with modifications an application for a critical areas land use permit if:

The proposal obtains all other permits required by the Land Use Code;

Finding: The applicant is required to obtain a clearing and grading permit before the planned restoration can be implemented.

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;

Finding: The proposal has been designed by a qualified environmental professional

from Herrera Environmental Consultants. The techniques are considered the best management practices for this type of activity and will result in the least impact to the critical areas and critical area buffer.

The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and;

Finding: As described in Section III of this report, the proposal incorporates all of the performance standards applicable to this type of project.

The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

Finding: The property is currently served by adequate public facilities. The proposal will not increase the need of public facilities at the property.

The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: The proposal includes a restoration plan that addresses restoration of the areas impacted by the unpermitted disturbance and replacement of the pre-existing footbridge. The plan includes provisions to stabilize the stream bank with native plants and rock and angle that increases the cross sectional area of the stream. The footbridge will be raised in elevation to ensure that it has no impact on the on-site critical areas. All of the native plantings will be monitored for a period of five years to ensure establishment.

The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section III and V of this report, the proposal complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the **Director of the Development Services Department does hereby approve with conditions** the proposal to restore the riparian zone, stabilize the stream bank and replace an existing footbridge within the Vasa Creek critical area and buffer at the 16721 SE 35th Street.

Note- Expiration of Approval: 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.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinance including but not limited to:

<u>Applicable Ordinances</u>	<u>Contact Person</u>
Land Use Code – BCC 20.25H	Kevin LeClair, 425-452-2928
Noise Code – BCC 9.18	Kevin LeClair, 425-452-2928
Clear and Grade Code – BCC 23.76	Savina Uzunow, 425-452-7860

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Clearing and Grading in Critical Areas Permit: In order to implement the proposed disturbance, bank stabilization and modify the existing footbridge, a clearing and grading permit in critical areas (GH) permit must be obtained. The clearing and grading permit submittal shall describe the erosion and sedimentation control best management practices to be employed that will protect the adjacent stream.

Authority: Land Use Code 20.30P.140
Reviewer: Kevin LeClair, Land Use

2. Rainy Season Restrictions: Due to the proximity to Vasa Creek, no clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the 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: Savina Uzunow, Clearing and Grading

3. Noise Control: Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

Authority: Bellevue City Code 9.18
Reviewer: Kevin LeClair, Land Use

4. Mitigation for Areas of New Permanent Disturbance: A final mitigation and restoration plan for all areas of permanent new disturbance is required to be submitted for review and approval by the City of Bellevue prior to issuance of the Clearing and Grading Permit. The plan shall describe the area to be mitigated and restored, including a detailed planting list. The plan shall also include a 5-year mitigation monitoring plan.

At a minimum the planting plan shall include:

Table 1. Plant Schedule.					
Stratum	Scientific Name	Common Name	Material Type	Spacing	Estimated Quantity
Tree	<i>Thuja plicata</i>	Western red cedar	Container	5'	2
Shrub	<i>Acer circinatum</i>	Vine maple	Container	5'	8
	<i>Cornus sericea</i>	Red osier dogwood	Container	5'	8
	<i>Cornus sericea</i>	Red osier dogwood	Live stake	3'	25
	<i>Lonicera involucrata</i>	Black twinberry	Container	5'	8
	<i>Rosa nutkana</i>	Nootka rose	Container	5'	8
	<i>Rubus spectabilis</i>	Salmonberry	Container	5'	5
	<i>Salix sitchensis</i>	Sitka willow	Live stake	3'	25
	<i>Symphoricarpos albus</i>	Snowberry	Container	5'	14
Groundcover	<i>Polystichum munitum</i>	Sword fern	Container	3'	34

At a minimum, the monitoring plan shall include:

The following success criteria will be monitored over a 5 year period and will apply to areas that are planted with native vegetation according to the site plan.

Year 1

- 100 percent survival of planted vegetation.
- 0 percent invasive plant cover within areas of planted vegetation.

Year 2

- Minimum 90 percent survival of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 3

- Minimum 85 percent survival of planted vegetation.
- Greater than 35 percent cover of native vegetation within areas of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 4

- Greater than 50 percent cover of native vegetation within areas of planted vegetation.
- Less than 15 percent invasive plant cover within areas of planted vegetation.

Year 5

- Greater than 70 percent cover of native vegetation within areas of planted

vegetation.

- Less than 15 percent invasive plant cover within areas of planted vegetation.

Authority: Land Use Code 20.25H.210

Reviewer: Kevin LeClair, Land Use

5. Pesticides, Insecticides, and Fertilizers: The applicant must submit as part of the required Clearing and Grading Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

Authority: Land Use Code 20.25H.220.H

Reviewer: Kevin LeClair, Land Use

6. Applicable State and Federal Permits: Before the required clearing and grading permit can be issued and work can proceed, all applicable state and federal permits must be submitted to the Development Services Department. Documentation shall verify receipt of both the Hydraulic Project Approval permit from Washington Department of Fish and Wildlife and Nationwide Permit from Army Corps of Engineers. If these agencies determine that no permit is required, this determination shall be documented in writing from the appropriate agency.

Authority: Land Use Code 20.25H.180.C.2

Reviewer: Kevin LeClair, Planning and Community Development Department

7. In-Water Work Window: To prevent damage or disturbance to threatened fish species, work in the active channel approved by the underlying clearing and grading permit must be completed during an in-water work window granted in writing by the Washington Department of Fish and Wildlife. The allowed work window shall be documented through submission of the approved Hydraulic Project Approval from the Washington Department of Fish and Wildlife.

Authority: Land Use Code 20.25H.160

Reviewer: Kevin LeClair, Land Use

ENVIRONMENTAL CHECKLIST

2/27/2012

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

BACKGROUND INFORMATION

Reviewed under Bellevue permit # 12-107982-LO.
Reviewed on 3-26-2012 by Kevin LeClair.

Property Owner: Warren and Robin Westad

Proponent: Warren and Robin Westad

Contact Person: Kris Lepine, Herrera Environmental Consultants
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 2200 Sixth Avenue, Suite 1100, Seattle, Washington, 98121

Phone: (206) 787-8267

Proposal Title: Westad Residence Enforcement Action #11-120985-EA

Proposal Location: 16721 SE 35th Street, Bellevue, WA 98008

(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description: The project involves resolving an enforcement action issued by the City of Bellevue Development Services Department for work that was conducted in the riparian corridor of Vasa Creek without obtaining necessary permits. Proposed corrective mitigation measures include:

- Adjust the footings of a foot bridge over the stream so that it is an additional 5.5 inches higher in elevation from the streambed.
- At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between rocks. The toe of the bank will be set back to the previous location.
- Install live stake cuttings between existing rocks along the entire remaining extents of left bank.
- Revegetate the right (south) bank and adjacent buffer; and remove invasive ivy between the stream channel and west property boundary in areas lacking woody vegetation.

2. Acreage of site: 0.26 acres

3. Number of dwelling units/buildings to be demolished: None

4. Number of dwelling units/buildings to be constructed: None

5. Square footage of buildings to be demolished: N/A

6. Square footage of buildings to be constructed: N/A

7. Quantity of earth movement (in cubic yards): Less than one cubic yard of soil will be removed where the

bank is proposed to be set back.

8. Proposed land use: No change from current use

9. Design features, including building height, number of stories and proposed exterior materials:

No buildings are being constructed.

10. Other

Estimated date of completion of the proposal or timing of phasing:

Work involving setting back the bank and raising the elevation of the bridge will be implemented during the work window prescribed by the Washington Department of Fish and Wildlife (WDFW) when fish species are least likely to occur in Vasa Creek, which is anticipated to extend from July 1 to August 31. All planting will occur during the fall-winter dormant season (October through February). Most of the proposed work will occur during 2012, with the possibility of planting extending through February 2013.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Narrative Description and Mitigation Plan, February 2012.

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

There are no known applications pending approval that would directly affect the property covered by this proposal.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

- City of Bellevue Critical Areas Land Use
- City of Bellevue Clearing and Grading
- Washington Department of Fish and Wildlife, Hydraulic Project Approval

Please provide one or more of the following exhibits, if applicable to your proposal. (Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone) Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development
Preliminary plat map
- Clearing & Grading Permit
Plan of existing and proposed grading
Development plans
- Building Permit (or Design Review)
Site plan
Clearing & grading plan

REVIEWED

By Kevin LeClair at 8:43 am, Mar 26, 2012

**Shoreline Management Permit
Site plan**

A. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: Flat Rolling Hilly Steep slopes Mountains Other

b. What is the steepest slope on the site (approximate percent slope)? 33%

The stream bank is this steep.
The rest of the property is flat.

c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Gravelly sandy loam.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no surface indications or a history of unstable soils in the immediate project vicinity.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Soil will be removed and graded in support of laying back an 18-foot long section of bank. Approximately one cubic yard of soil will be temporarily removed and stockpiled on-site. Less than one cubic yard of soil will be backfilled and graded on the bank. Only native soils from onsite will be used.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No erosion is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The project does not involve creating new impervious surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Proposed planting of containerized shrubs and live stake cuttings are intended to reduce and control erosion along the bank of the stream in the future.

A construction stormwater pollution prevention plan is required for the clearing and grading permit per BCC 23.76.

2. AIR

a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No emissions to the air will occur. All work will be done with hand tools.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odors that may affect this proposed project.

c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

Not applicable.

3. WATER

a. Surface

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Vasa Creek is on the site, which is a Type F Water. Vasa Creek flows year-round on the property. Vasa Creek flows into Lake Sammamish.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

No work will be required in the stream. The following work will occur on the banks of the stream and within the buffer:

- Adjust the footings of a foot bridge over the stream so that it is an additional 5.5 inches higher in elevation from the streambed.
- At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between rocks. The toe of the bank will be set back to the previous location.
- Install live stake cuttings between existing rocks along the entire remaining extents of left bank.
- Revegetate the right (south) bank and adjacent buffer; and remove invasive ivy between the stream channel and west property boundary in areas lacking woody vegetation.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Not applicable.

Any work below the top of bank is considered within the stream per LUC 20.25H. The water shall be protected from turbidity during the proposed work.

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. See attached flood insurance rate map.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground

(1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Not applicable.

c. Water Runoff (Including storm water)

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If

so, describe.

Not applicable.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

Not applicable.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Not applicable.

4. Plants

a. Check or circle types of vegetation found on the site:

deciduous tree: black cottonwood

evergreen tree: Douglas fir, Western red cedar, weeping willow

shrubs

grass

pasture

crop or grain

wet soil plants: buttercup

water plants: water lily, eelgrass, milfoil, other

other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Ivy will be removed from within the buffer onsite.

c. List threatened or endangered species known to be on or near the site.

Not applicable.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The right (south) bank and adjacent buffer will be enhanced by removing invasive ivy and planting native shrubs and trees. The left (north) bank will be enhanced by planting native shrubs.

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: great blue heron, hawk, eagle, and songbirds

Mammals: deer, coyote

Fish: cutthroat trout (observed), late run kokanee, coho salmon, and sockeye salmon

Salmon are not known to use this stream, however it does flow into Lake Sammamish which is known to support salmon and kokanee.

b. List any threatened or endangered species known to be on or near the site.

Not applicable.

c. Is the site part of a migration route? If so, explain.

The stream serves as a migration route for fish.

d. Proposed measures to preserve or enhance wildlife, if any:

The right (south) bank and adjacent buffer will be enhanced by removing invasive ivy and planting native shrubs and trees.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.

No energy will be needed for the completed project.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

This proposal will not affect the use of solar energy.

c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

Not applicable.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No.

(1) Describe special emergency services that might be required.

None.

(2) Proposed measures to reduce or control environmental health hazards, if any.

Not applicable.

b. Noise

(1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?

No noise will affect the project.

(2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

No significant noise will be generated by the project. All project work will be conducted by hand.

(3) Proposed measures to reduce or control noise impacts, if any:

Not applicable.

8. Land and Shoreline Use

REVIEWED

By Kevin LeClair at 8:56 am, Mar 26, 2012

a. What is the current use of the site and adjacent properties?

Single-family residential.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Structures include a house, hot tub, and storage shed.

d. Will any structures be demolished? If so, what?

No structures are being demolished under this proposal.

e. What is the current zoning classification of the site?

Single-family.

f. What is the current comprehensive plan designation of the site?

Single family – high density.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.

Identified environmentally sensitive areas include streams and stream buffers.

i. Approximately how many people would reside or work in the completed project?

Not applicable.

j. Approximately how many people would the completed project displace?

Not applicable.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Not applicable.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Not applicable.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable.

b. What views in the immediate vicinity would be altered or obstructed?

Not applicable.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Not applicable.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Not applicable.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Not applicable.

c. What existing off-site sources of light or glare may affect your proposal?

Not applicable.

d. Proposed measures to reduce or control light or glare impacts, if any:

Not applicable.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Vasa Creek park is located west of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance

known to be on or next to the site.

Not applicable.

c. Proposed measures to reduce or control impacts, if any:

Not applicable.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

SE 35th Street.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would be completed project have? How many would the project eliminate?

Not applicable.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Not applicable.

g. Proposed measures to reduce or control transportation impacts, if any:

Not applicable.

15. Public Services

a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Electricity, natural gas, water, refuse service, telephone, sanitary sewer.

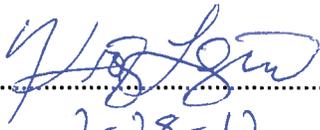
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general

construction activities on the site or in the immediate vicinity which might be needed.

None.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature..... .....
Date Submitted..... 2-28-12.....

REVIEWED
By Kevin LeClair at 8:57 am, Mar 26, 2012



Map of:
16721 SE 35th St
Bellevue, WA 98008-5800

Notes

Westad Residence Vicinity Map



©2011 MapQuest, Inc. Use of directions and maps is subject to the MapQuest Terms of Use. We make no guarantee of the accuracy of their content, road conditions or route usability. You assume all risk of use. [View Terms of Use](#)

NARRATIVE DESCRIPTION AND MITIGATION PLAN

Westad Residence Enforcement Action #11-120985-EA

Prepared for
City of Bellevue
Development Services Department
PO Box 900012
Bellevue, Washington 98009-9012

Prepared by
Herrera Environmental Consultants, Inc.
2200 Sixth Avenue, Suite 1100
Seattle, Washington 98121
Telephone: 206/441-9080

July 15, 2012

CONTENTS

Introduction	1
Project Site.....	1
Vasa Creek	1
Vasa Creek Buffer	2
2011 Work Conducted	2
2012 Proposed Corrective Mitigation	3
Bellevue Allowed Uses and Performance Standards	4
Existing Landscape Maintenance	4
Stabilization Measures.....	4
New or Expanded Bridges	5
Critical Areas Land Use Permit Decision Criteria	6
Mitigation Plan.....	7
Mitigation Sequencing	7
Goals and Objectives	8
Success Criteria	8
Site Plan.....	9
Timing of Work	10
Monitoring and Contingency Plan	11
References	11
Appendix A Site Plan	
Appendix B Flood Insurance Rate Map	
Appendix C City Email Correspondence	

TABLES

Table 1. Plant Schedule..... 10

Introduction

This Narrative Description and Mitigation Plan is in support of a Critical Areas Land Use Permit, which is required to resolve the enforcement action that applies to the riparian corridor of Vasa Creek on the Westad residence property at 16721 SE 35th Street in the City of Bellevue. During 2011, the Westads had work done to their property within a portion of Vasa Creek and the stream bank without first obtaining necessary permits. The work involved replacing a foot bridge and stabilizing portions of the left (north) bank of the stream with new rock. A Critical Areas Land Use Permit from the City of Bellevue is necessary to authorize work that was previously conducted without a permit as well as corrective mitigation actions that are proposed for implementation during 2012.

The following sections describe project site conditions including previous work that resulted in the enforcement action, proposed corrective mitigation measures, and compliance with the Bellevue Land Use Code (LUC).

Project Site

The following sections describe current conditions of the project site including critical areas, landscape conditions, and previous development.

Vasa Creek

Vasa Creek flows through the southern portion of the Westad property in the easterly direction. Vasa Creek flows into Lake Sammamish approximately 1,300 feet downstream of the Westad property. Vasa Creek is a critical area regulated as a Type F Water by the City of Bellevue because it contains fish and fish habitat. In addition, the 100-year floodplain associated with Vasa Creek is also a critical area classified as an Area of Special Flood Hazard.

The segment of Vasa Creek on the property is perennial and based on previous surveys, potentially supports cutthroat trout (observed on February 26, 2012), late run kokanee, coho salmon, and sockeye salmon (Bellevue 2009). Based on existing information, Vasa Creek does not support fish species listed as threatened or endangered under the Endangered Species Act.

A high flow bypass was installed near the Interstate 90 crossing upstream of the Westad property, which removes much of the peak flows from the open stream and conveys them directly to Lake Sammamish in a piped system.



2011 project site work without permit included foot bridge replacement (top) and landscaping maintenance/bank stabilization with rock (bottom).

On the Westad property, the average width of Vasa Creek is 4.7 feet, as measured between ordinary high water marks on September 24, 2011 -- at this time, the stream channel had moderate flow with an average wetted depth of 0.2 feet (2.4 inches). Ordinary high water flows are primarily contained within the active channel and do not appear to exceed 0.5 feet (6 inches) in height above the streambed substrate based on field indicators (e.g., scour, flattened vegetation). Dominant stream habitat on the Westad property is low-gradient riffle. Dominant substrate consists of gravels with subdominant sand and cobbles.

Vasa Creek Buffer

The regulated buffer width for Vasa Creek is 100 feet measured from the top of bank, which corresponds to a Type F Water. The south side of the stream on the property has low-lying banks and the buffer is in a forested condition. The north side of the stream on the property has a steeper bank that slopes away from the stream up toward the house. According to the City of Bellevue's definitions (LUC 20.50.048 T), the top of bank is located at the grass lawn at the back of the Westad residence where the slope of the land flattens out to less than 3:1. A large portion of the property is located within regulated buffers on the north side of the stream including most of the previous development associated with the residence including house, patio, driveway, hot tub, lawns, and ornamental landscaping. Housing development on the property took place prior to implementation of the critical areas ordinance by the City of Bellevue.

Vegetation growing on the banks and within the buffer of Vasa Creek on the Westad property includes a mix of mown lawn, native shrubs and trees, and ornamental shrubs. Plants observed include black cottonwood (*Populus balsamifera*), red alder (*Alnus rubra*), salmonberry (*Rubus spectabilis*), sword fern (*Polystichum munitum*), lady fern (*Athyrium filix-femina*), trailing blackberry, (*Rubus ursinus*), stinging nettle (*Urtica dioica*), creeping buttercup (*Ranunculus repens*), European holly (*Ilex aquifolium*), weeping willow (*Salix babylonica*), laurel (*Laurus spp.*), rhododendron (*Rhododendron ssp.*), and Japanese maple (*Acer palmatum*). Just west of the Westad property, additional trees species include Douglas fir (*Pseudotsuga menziesii*) and Western red cedar (*Thuja plicata*).

2011 Work Conducted

During 2011, the Westads had work done to their property within a portion of Vasa Creek and the stream bank without first obtaining necessary permits. The work involved replacing a foot bridge and stabilizing the left (north) bank of the stream with new rock. A low-lying foot bridge approximately 6 inches higher than the streambed made of wood timbers was replaced in the same location with a new, longer foot bridge that was installed at a higher elevation to prevent contact with ordinarily high stream flows. The new foot bridge is 12.1 feet long and constructed of five, 6x6 (5.5" x 5.5" true dimension) cedar posts that are bolted together for a total foot bridge width of 2.3 feet. The bottom of the foot bridge is approximately 1.5 to 1.7 feet higher than the streambed.

An approximate 8-foot long segment of low-lying retaining wall constructed of creosote-treated timbers (railroad ties) was replaced with an approximate 2.5-foot high rock retaining wall constructed of 2-man sized boulders. The creosote timbers were installed when the left (north) bank of the stream was originally landscaped when the house was built. It is presumed

that the timbers were installed to stabilize the bank and support landscaping features on the bank including a bench and patio. The section of replaced retaining wall is east of the foot bridge along the left bank at the downstream extents of the property. Approximately the last 3 linear feet of the new wall at the downstream extents appears to protrude approximately 6 inches further into the stream channel than the previous extent of the wall.

Other portions of the rock wall along the left bank of the stream on the Westad property were pre-existing; however, during 2011 this wall was supplemented in a few places by adding some 2-man rocks on top of the previous wall including both sides of the replaced foot bridge and upstream of the bridge.

2012 Proposed Corrective Mitigation

The following additional work is proposed within the riparian corridor of Vasa Creek on the Westad property during 2012 to correct and mitigate for the work conducted in 2011 (see Appendix A):

- Adjust the footings of the replaced foot bridge so that it is an additional 0.5 feet (6 inches) higher in elevation from the streambed such that the bottom of the bridge is high enough to allow unobstructed flows during high water events. The proposed bridge elevation is greater than one foot above the observed ordinary high water mark elevation and higher than the anticipated base flood elevation (BFE).
- At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between the rocks. The toe of the bank will be set back to the previous location.
- Install live stake cuttings between existing rocks along the entire remaining extents of the left bank.
- Remove invasive ivy and revegetate the right (south) bank and adjacent buffer between the stream channel and west property boundary in areas lacking woody vegetation.
- Remove the existing rock patio adjacent to the left (north) bank and plant native vegetation up to the edge of the existing lawn. This area is adjacent to the segment of left bank that will be reconstructed and set back.

The objectives of these corrective mitigation measures are to:

- Provide additional clearance underneath the foot bridge to convey 100-year flood flows.
- Incorporate soft stabilization measures by setting back a portion of the left (north) bank and improving vegetation conditions by planting native plants.
- Enhance and restore habitat conditions for fish, wildlife, and insects by planting native vegetation capable of providing cover and shading over the stream channel; and

providing input of nutrients (e.g., leaf litter) and food sources (e.g., insects) to the stream system.

Bellevue Allowed Uses and Performance Standards

Work conducted by the Westads within the riparian corridor of Vasa Creek is allowed according to LUC 20.25H.055 under three classifications including *Existing Landscape Maintenance*, *Stabilization Measures*, and *New or Expanded Bridges*.

Existing Landscape Maintenance

According to LUC 20.25H.055, maintenance to the preexisting creosote timber retaining wall at the left (north) bank of the stream represents an allowed use within critical areas under the classification of *Existing Landscape Maintenance* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to existing landscape maintenance on the stream bank are achieved.

Performance Standard for Existing Landscape Maintenance

According to LUC 20.25H.055.C.3.h., work conducted by the Westads involving replacement of rotting creosote timbers with a boulder wall classifies as existing landscape maintenance. Maintenance conducted in 2011 and proposed mitigation in 2012 complies with this performance standard because the work is being carried out by hand, no trees are being removed, and work does not involve use of fertilizers, insecticides, or pesticides.

Performance Standards for Streams

Performance standards for streams (LUC 20.25H.080.A.) largely do not apply to the recent replacement of the foot bridge and proposed modifications because construction nor operation of the bridge involves lighting, noise generation, toxic runoff, discharge of treated water, or use of pesticides, insecticides, and fertilizers. Compliance with LUC 20.25H.080.A.5. requiring planting of the outer buffer is not feasible because the outer buffer is either occupied by the residence or is located beyond the property limits. However, proposed mitigation involves dense planting along both sides of the stream on the banks and inner buffer.

Stabilization Measures

According to LUC 20.25H.055, modifications to the stream bank represent an allowed use within critical areas under the classification of *Stabilization Measures* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to the stream bank stabilization are achieved. Applicable performance standards for streams are discussed above.

Performance Standards for Stabilization Measures

In accordance with LUC 20.25H.055.C.3.m., stabilization measures are allowed in connection with other uses and development allowed pursuant to LUC 20.25H.055.B, which includes *Existing Landscape Maintenance* (see above). Furthermore, in compliance with performance standards, proposed corrective mitigation involves reconstructing the 8-foot long segment of rock wall at the downstream extents of the left (north) bank utilizing a soft stabilization

approach by stepping back the rock within the bank and planting native shrubs in soil between the rocks.

Performance Standards for Areas of Special Flood Hazards

In accordance with LUC 20.25H.180.C.1., proposed corrective mitigation measures involving stepping back the rock within the bank will not involve further intrusion into the Area of Special Flood Hazard along the left (north) bank.

Other components of LUC 20.25H.180.C. do not apply to the proposed corrective mitigation measures.

New or Expanded Bridges

According to LUC 20.25H.055, due to the expanded size of the replaced foot bridge, previous installation and proposed modification of the bridge represents an allowed use within critical areas under the classification of *New or Expanded Bridges or Culverts* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to the foot bridge are achieved. Applicable performance standards for streams are discussed above.

New or Expanded Uses or Development

According to LUC 20.25H.055.C.2., expanded facilities are allowed within a critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists, which is demonstrated by the following:

- The objective of the foot bridge is to provide landowner access to property on the south side of Vasa Creek. The width of the foot bridge is the minimum necessary for an individual to safely cross the stream. In addition, the foot bridge design minimizes impact because it is orientated perpendicular to the stream and approximately within the same footprint as the previous bridge.
- Within property limits, the location of the foot bridge represents the least impact on the stream and buffer because it is located within the same alignment of the previous bridge where previously established trails lead to the bridge from both sides of the stream. By raising and lengthening the foot bridge, only pre-existing gravel/lawn trails are affected. Moving the foot bridge of similar size to a different location would result in more disturbances to the stream banks and buffer including grading and vegetation clearing impacts.
- The cost of avoiding disturbance is substantially disproportionate from the recently replaced and proposed modification of the foot bridge because it would require a substantially longer bridge to span the stream buffer or stream banks.
- Permanent and temporary impacts will be mitigated by improving fish and wildlife habitat conditions upstream and downstream of the foot bridge by means of revegetation with native plants. A mitigation and restoration plan is provided within this narrative description.

- The recently replaced foot bridge and proposed modifications involve placing the footings of the bridge on the left (north) bank and on top of the right (south) bank landward of the ordinary high water marks, thereby avoiding impact to fish habitat.
- Proposed modifications to the foot bridge will additionally raise the elevation of the bridge to provide greater assurance that the bridge will not interfere with conveyance of 100-year peak flows.

New or Expanded Bridges and Culverts

The performance standard for new or expanded bridges and culverts in accordance with LUC 20.25H.055 C 3.e. is not applicable to the project because the project does not propose new or expanded culverts.

Performance Standards for Areas of Special Flood Hazards

In accordance with LUC 20.25H.180.C.1., the foot bridge will not alter the Area of Special Flood Hazard because the proposed modification to the foot bridge will raise the elevation of the bridge such that the elevation of the bottom of the bridge is above the base flood elevation (BFE). By raising the bottom of the footbridge, 100-year flood flows should not come in contact with the bridge, thereby avoiding any potential rise in BFE in accordance with LUC 20.25H.180. The Westad property contains 100-year floodplain mapped by the Federal Emergency Management Agency (FEMA) within close proximity to the stream (Appendix B); however, there is no corresponding elevation at this time on the Westad property. According to City, a parcel-specific flow calculation is not required to determine the BFE because the foot bridge does not represent an insurable structure (see December 12, 2011 email from Brian Ward of the City, Appendix C). Instead, according to the City, the top of bank can be used to approximate the elevation of the BFE, which is substantiated by observations on nearby properties where flow calculations have been conducted (see December 12, 2011 email from Brian Ward of the City, Appendix C). The top of the bank corresponding to the BFE is generally contained within the top of the rocks along the north side of the stream (see February 14, 2012 email from Kevin LeClair, Appendix C). The proposed modification to the foot bridge will raise the elevation of the bridge such that the bottom of the bridge is above the top elevation of the adjacent rocks along the bank.

Furthermore, in accordance with LUC 20.25H.180.C.1., orientation of the foot bridge within the preexisting alignment will maintain existing vegetation conditions. The raised bridge will allow more light to penetrate underneath promoting additional vegetation growth. In addition, proposed mitigation will result in an increase in vegetated conditions.

Other components of LUC 20.25H.180.C do not apply to construction and operation of a foot bridge.

Critical Areas Land Use Permit Decision Criteria

In accordance with LUC 20.30P.140., application for a Critical Areas Land Use Permit is subject to applicable decision criteria as justified below.

- The proposal to permit previous work conducted by the Westads and proposed corrective mitigation measures will involve obtaining all permits required by the Land Use Code.
- As demonstrated within the Narrative Description above and Mitigation Plan below, the proposal involves techniques and measures that result in the least impact on the stream and buffer utilizing best available construction, design, and development techniques.
- As demonstrated above within the Narrative Description, the proposal incorporates performance standards of Part 20.25H LUC to the maximum extent applicable.
- As provided below, the proposal includes a Mitigation Plan consistent with the requirements of LUC 20.25H.210.

Mitigation Plan

This section presents a mitigation plan in accordance with LUC 20.25H.210 that includes details on implementing and monitoring proposed corrective mitigation actions as outlined above.

Mitigation Sequencing

In accordance with LUC 20.25H.215, proposed corrective mitigation actions comply with mitigation sequencing requirements as outlined below.

- Implementation of stream bank corrective actions will result in temporary impacts to the stream bank. Previous work associated with installing a replaced foot bridge and corrective actions associated with raising the elevation of the bridge result in minor permanent impacts to the stream bank where the bridge footings are located. Complete **avoidance** of temporary and permanent impacts are not possible due to the requirement to implement corrective mitigation measures.
- Proposed corrective mitigation measures are designed in a manner that **minimize** impacts to the stream banks and buffer. The location of the foot bridge minimizes impact because it is located within the same alignment of the previous bridge where previously established trails lead to the bridge from both sides of the stream. By raising the bridge, only pre-existing gravel/lawn trails are affected. Work involving setting back the bank and installation of the foot bridge will be implemented during work windows prescribed by the Washington Department of Fish and Wildlife (WDFW) when fish species are least likely to occur in Vasa Creek. Best management practices (BMPs) including placement of sand bags at the toe of the stream will be implemented to ensure that sediment is not released into the stream resulting in turbid conditions.
- Proposed corrective mitigation measures aim to **rectify** impacts caused by previous work in the riparian corridor of Vasa Creek on the Westad property by repairing the left (north) stream bank using soft stabilization techniques. In addition, previous work will be rectified by restoring banks and buffers with native vegetation.

- Proposed corrective mitigation measures will **reduce and eliminate the impact** caused by previous work by preserving the existing riparian corridor in a vegetated condition, which will be monitored and maintained as necessary for a minimum of 5 years.
- Proposed corrective mitigation measures will **compensate** for installation of a longer foot bridge by enhancing stream bank and buffer conditions with native vegetation.

Goals and Objectives

The goal of the mitigation plan is to enhance the riparian corridor of Vasa Creek on the Westad property. Objectives include the following.

- Provide additional clearance underneath the foot bridge to convey 100-year flood flows
- Incorporate soft stabilization measures by setting back a portion of the left (north) bank and improving vegetation conditions by planting native plants.
- Enhance and restore habitat conditions for fish, wildlife, and insects by planting native vegetation capable of providing cover and shading over the stream channel; and providing input of nutrients (e.g., leaf litter) and food sources (e.g., insects) to the stream system.

Success Criteria

The following success criteria will be monitored over a 5 year period and will apply to areas that are planted with native vegetation according to the site plan (Appendix A).

Year 1

- 100 percent survival of planted vegetation.
- 0 percent invasive plant cover within areas of planted vegetation.

Year 2

- Minimum 90 percent survival of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 3

- Minimum 85 percent survival of planted vegetation.
- Greater than 35 percent cover of native vegetation within areas of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 4

- Greater than 50 percent cover of native vegetation within areas of planted vegetation.
- Less than 15 percent invasive plant cover within areas of planted vegetation.

Year 5

- Greater than 70 percent cover of native vegetation within areas of planted vegetation.
- Less than 15 percent invasive plant cover within areas of planted vegetation.

Site Plan

A site plan for corrective mitigation measures is provided in Appendix A which shows how the existing bridge will be raised in elevation on modified footings, how the left (north) bank will be set back, and areas of native planting along the stream banks and buffers. The site plan includes the following components. See Table 1 for the proposed plant schedule, which presents a list of suitable native plants for site. Substitutions or modifications to this schedule will be approved by a qualified ecologist.

- The footings of the replaced foot bridge will be adjusted so that it is an additional 6 inches (0.5 feet) higher in elevation from the streambed. This will involve placing pre-fabricated, concrete retaining wall blocks at the footings.
- An 88-foot long segment of rock wall (installed in 2011) along the downstream extents of the left (north) bank will be reconstructed utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between the rocks. The toe of the bank will be set back to the previous location. A row of rock will be placed at the toe of the stream and backfilled with native soil behind. Behind this row of rock enough room will be provided to plant native shrubs. Behind these plantings, a second row of rocks will be setback into the bank and backfilled with native soil behind. Behind this final row of rock, additional native plants will be installed.
- Approximately one cubic yard of soil will be temporarily removed from the bank and stockpiled onsite. Less than one cubic yard of soil will be backfilled on the bank.
- Native shrubs will be planted in soil between the rocks including potted plants (5 feet on center) and live stake cuttings (3 feet on center) extending from the edge of the channel and upward to the existing patio.
- Live stake cuttings will be installed between existing rocks along the entire remaining extents of the left (north) bank at a minimum of 3 feet on center. As necessary, rocks will be repositioned or removed to facilitate installation of the live stake cuttings.



Area proposed for vegetation enhancement south of Vasa Creek.

- The right (south) bank/ buffer on the Westad property will be planted with natives in areas lacking woody vegetation (see photo on prior page) and invasive ivy will be removed.
- The existing rock patio adjacent to the left (north) bank will be removed and this area will be planted with native vegetation up to the edge of the existing lawn (see photo on this page). This area is adjacent to the segment of left bank that will be reconstructed and set back.
- Revegetation measures will involve planting native shrubs, ferns, and live stake cuttings. Shrubs will be spaced 5 feet on center. Ferns and live stake cuttings will be spaced 3 feet on center.



Rock patio area proposed for vegetation enhancement north of Vasa Creek.

Table 1. Plant Schedule.

Stratum	Scientific Name	Common Name	Material Type	Spacing	Estimated Quantity
Tree	<i>Thuja plicata</i>	Western red cedar	Container	5'	2
Shrub	<i>Acer circinatum</i>	Vine maple	Container	5'	8
	<i>Cornus sericea</i>	Red osier dogwood	Container	5'	8
	<i>Cornus sericea</i>	Red osier dogwood	Live stake	3'	25
	<i>Lonicera involucrata</i>	Black twinberry	Container	5'	8
	<i>Rosa nutkana</i>	Nootka rose	Container	5'	8
	<i>Rubus spectabilis</i>	Salmonberry	Container	5'	5
	<i>Salix sitchensis</i>	Sitka willow	Live stake	3'	25
	<i>Symphoricarpos albus</i>	Snowberry	Container	5'	14
Groundcover	<i>Polystichum munitum</i>	Sword fern	Container	3'	34

Timing of Work

Work involving setting back the bank and raising the elevation of the bridge will be implemented during the work window prescribed by WDFW when fish species are least likely to occur in Vasa Creek, which is anticipated to extend from July 1 to August 31. All planting will occur during the fall-winter dormant season (October through February) Most of the

proposed work will occur during 2012, with the possibility of planting extending through February of 2013.

Monitoring and Contingency Plan

All planting areas will be monitored to evaluate success criteria. During construction, a qualified ecologist will monitor the site to ensure that BMPs are implemented such that there are no unanticipated impacts on the stream or buffers.

The Westads will arrange to have the planting areas monitored by a qualified ecologist for a minimum of 5 years. Monitoring visits to the site will begin during the first growing season after plants have been installed. During the first year, two visits will take place including one visit in April to assess leaf emergence and shoot growth of the installed plants; and then again at the end of the growing season (September-October). In subsequent years, monitoring will take place between September and October.

During each monitoring site visit, representative photographs will be taken from established photo points. In addition, plant survival and plant cover will be measured. Upon completion of the late growing season monitoring visits, a report presenting the results of the site inspection will be submitted to the City of Bellevue Development Services Department.

Within the monitoring report, the ecologist responsible for monitoring will present detailed monitoring methods, results, and make recommendations for annual maintenance of the planting areas such as replanting, watering, and weeding. If plants are not succeeding, the biologist will make recommendations for contingency actions, which could include suitable plant substitutions based on site conditions.

References

Bellevue. 2009. Fish Use of Stream Drainage Basins in the City of Bellevue. Prepared by the City of Bellevue. April 2009.

APPENDIX A

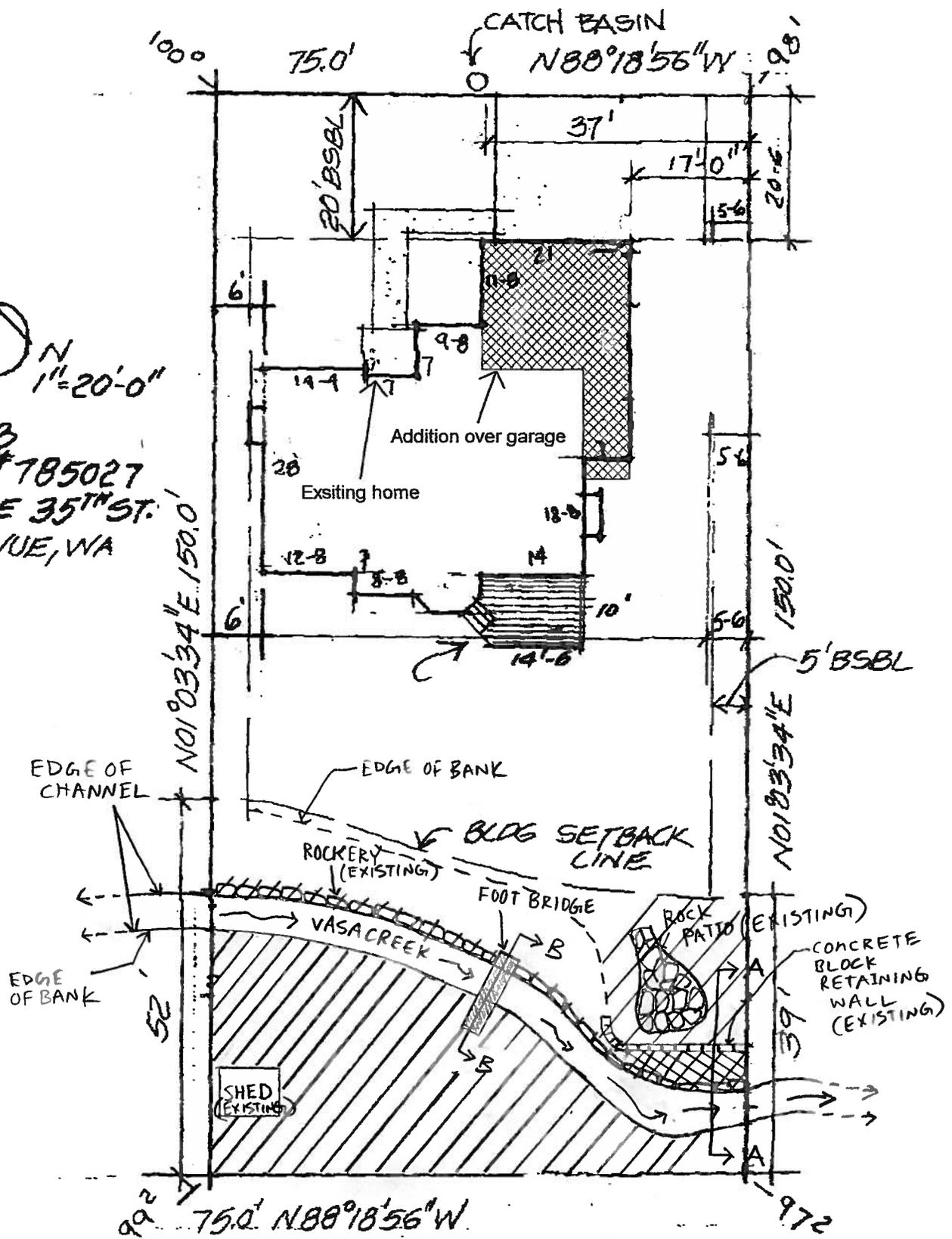
Site Plan

E SE 35TH ST.

SITE PLAN / DETAIL

Robin and Warren Westad

 N
 1"=20'-0"
 JT 3
 SP# 785027
 - SE 35TH ST.
 ELLEVUE, WA



-  PROPOSED VEGETATION ENHANCEMENT AREA
-  PROPOSED BANK SETBACK AND VEGETATION ENHANCEMENT



PROJECT: WESTAD RESIDENCE ENFORCEMENT ACTION

CALCULATED BY: KL DATE: 7/15/12

CLIENT: WESTAD, WARREN AND ROBIN

CHECKED BY: DATE:

SUBJECT: SET-BANK BANK PROPOSED

PAGE OF

NOTES:

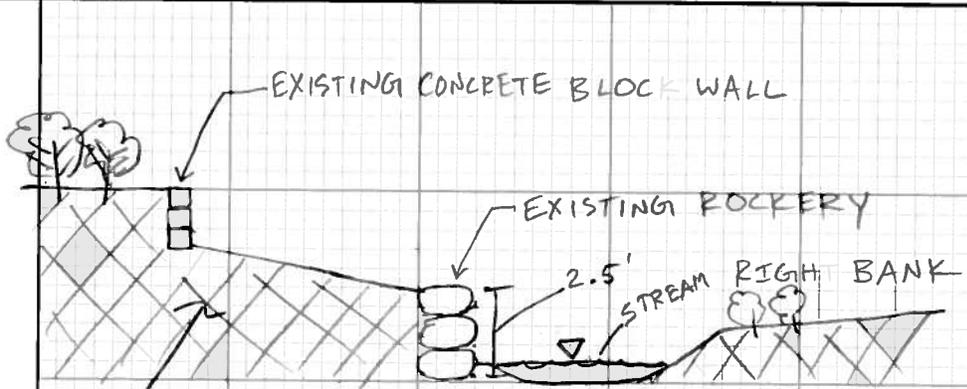
PROJECT NO.

TASK NO.

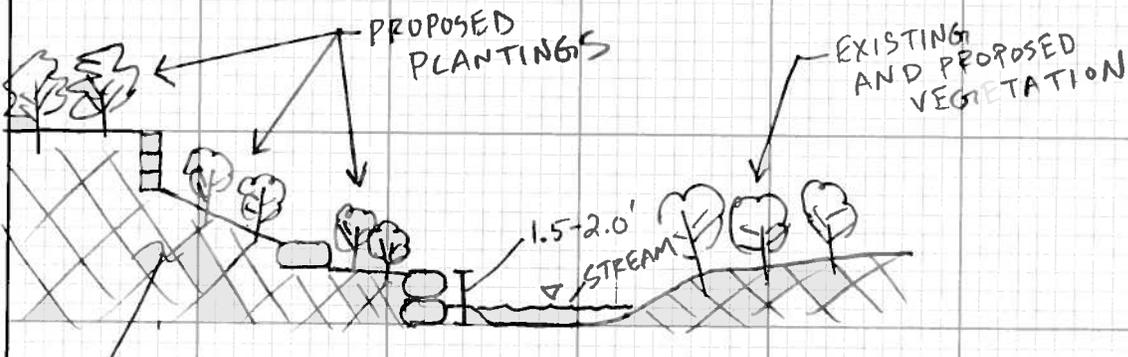
www.herrerainc.com

IN THIS SPACE

DO NOT WRITE



CROSS-SECTION - EXISTING
1" = 4' (A 1)



CROSS-SECTION - PROPOSED
SET BACK BANK
1" = 4' (A 1)





PROJECT: WESTAD RESIDENCE ENFORCEMENT ACTION

CALCULATED BY: KL DATE: 2/28/12

CLIENT: WESTAD, WARREN AND ROBIN

CHECKED BY: DATE:

SUBJECT: FOOT BRIDGE MODIFICATION PROPOSED

PAGE OF

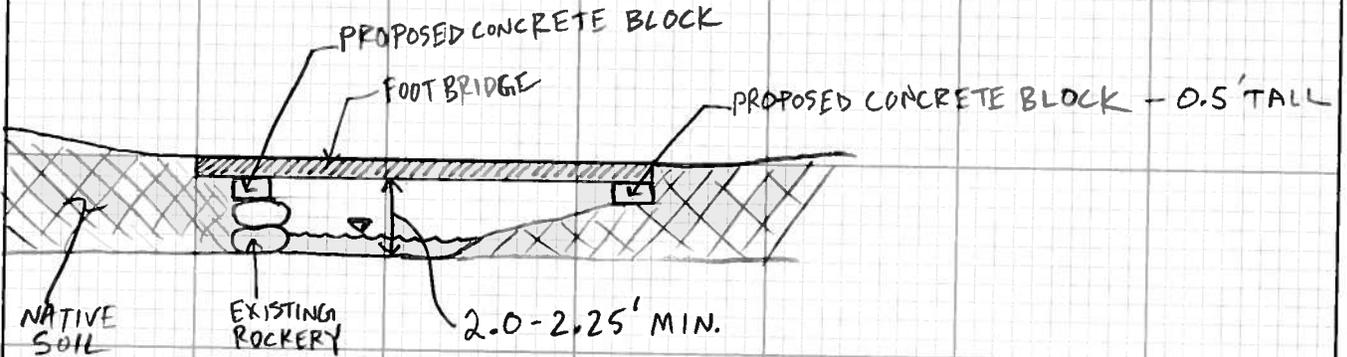
NOTES:

PROJECT NO.

TASK NO.

www.herrerainc.com

IN THIS SPACE



CROSS-SECTION - PROPOSED
FOOTBRIDGE MODIFICATION (B)
(1)

NOTE: FOOTBRIDGE WILL BE RAISED 0.5'

1" = 4'

DO NOT WRITE



APPENDIX B

Flood Insurance Rate Map



APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
FLOOD INSURANCE RATE MAP
KING COUNTY, AND
WASHINGTON AND
INCORPORATED AREAS**

PANEL 680 OF 1725

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:
COMMUNITY

NUMBER PANEL SUFFIX

BELLEVUE CITY OF 530074 0680 F

UNINCORPORATED AREAS 530071 0680 F

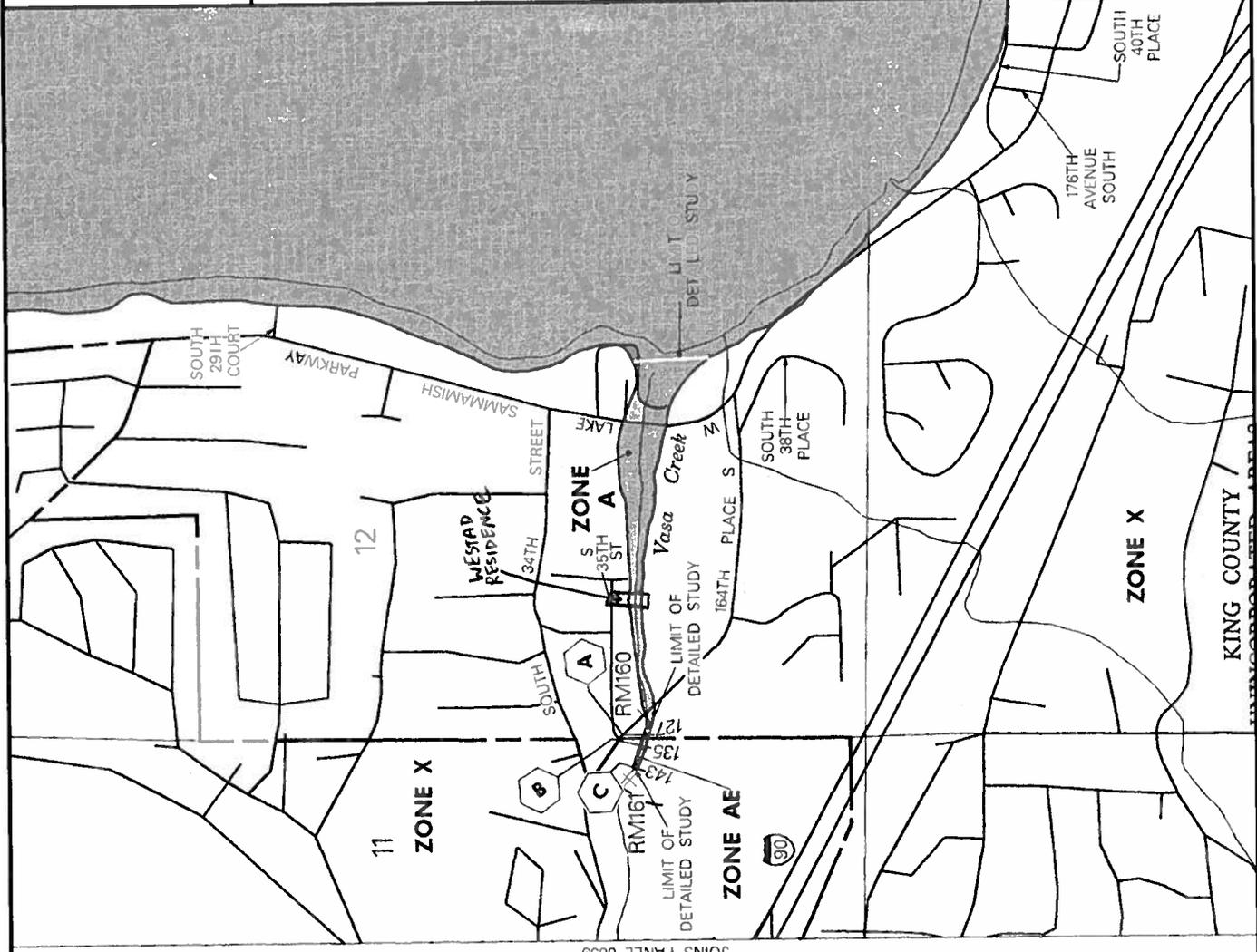
**MAP NUMBER
53033C0680 F**

**MAP REVISED:
MAY 16, 1995**



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



JOINS PANEL 0659

APPENDIX C

City Email Correspondence

Kris Lepine

From: KLeClair@bellevuewa.gov
Sent: Tuesday, February 14, 2012 4:39 PM
To: Kris Lepine
Cc: KPaulsen@bellevuewa.gov; BWard@bellevuewa.gov; EKrzyminski@bellevuewa.gov
Subject: RE: Westad enforcement action #11-120985-EA

Kris,
You have correctly interpreted the definition of the top-of-bank from the land use code, and the topography on the site would place this location much further to the north than the bridge is currently located. Fortunately, there is no strict specification that the footing of the bridge be located above the top of bank, although that would be ideal in some situations. Rather, we will be looking at how the proposed structure meets the performance standards for new or expanded uses in LUC 20.25H.055.C.2. The test here is that of technically feasible alternatives that have less impact on the critical area or critical area buffer.

One standard we will be looking for is the freeboard of the bridge being at least one foot above the ordinary high water mark, which is to ensure regular high flows with possible debris can safely pass under the bridge.

We also want to ensure that the bridge is one foot above the 100-year floodplain elevation. According to Brian Ward, based on flood flow analyses on neighboring properties, the flood plain elevation is contained within the banks shown in the photo, which is generally the top of the rocks on the north side and the same horizontal elevation on the south side. By staying out of the flood plain, the Westads can avoid the need for a Habitat Assessment or an elevation certificate that is currently required for development in the floodplain.

My recommendation would be to propose the establishment of new bridge footings with top elevations approximately even with the top elevation of the existing bridge span. Then the new spanning timbers could be anchored to the top of these footings. This would result in a slight higher and longer span, but it would get above the ordinary high water mark with an allowable freeboard and it would get the structure out of the floodplain.

Of course, all of this would have to be mitigated through some habitat restoration in the immediate vicinity.

Hope that helps. Let me know if you have any other questions.

Kevin LeClair
Senior Environmental/Land Use Planner
City of Bellevue
Development Services Department
450 110th Ave NE
Bellevue, WA 98004

(425) 452-2928

kleclair@bellevuewa.gov

www.bellevuewa.gov

Before you print this email, please consider the environment.

From: Kris Lepine [<mailto:klepine@herrerainc.com>]
Sent: Tuesday, February 14, 2012 10:57 AM
To: Ward, Brian
Cc: Paulsen, Kit; LeClair, Kevin
Subject: RE: Westad enforcement action #11-120985-EA

Brian,

Can you take a look at the attached photo of the bridge? The bottom of the bridge deck (bottom of beam) is 1.5 to 1.7 feet higher than the streambed substrate. When the photo was taken (9/24/11), the water depth at the bridge was 0.15' (1.8").

We have a situation where according to the City code, the top of bank on the north side of the stream is much higher in elevation than the south side of the stream. The south end of the bridge (right side of bridge) is on top of the bank. The north end of the bridge sits on top of a low bank benched into the hillside; however, according to City code the top of bank on the north side of the stream would be much further away from the stream (beyond photo limits). Per Bellevue LUC 20.50.048, top of bank is where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 for minimum distance of 50 feet.

Based on your guidance of placing the bridge ends on top of bank, do you see any need to raise the elevation of the existing bridge on either side of the stream?

I am planning on making a visit to the site later this week. Let me know if you need any additional information.

Thanks,

Kris

From: BWard@bellevuewa.gov [<mailto:BWard@bellevuewa.gov>]
Sent: Monday, December 12, 2011 11:22 AM
To: KLeClair@bellevuewa.gov
Cc: Kris Lepine; KPaulsen@bellevuewa.gov
Subject: RE: Westad enforcement action #11-120985-EA

Kevin-

It looks like this property is just downstream from the Hobb's property where we just finished working with their engineer to perform the open channel flow calcs. I propose that we use the top of bank as the approximate ASFH line for this enforcement action. I don't think we need to have them do a parcel-specific flow calculation since an insurable structure isn't proposed.

Ideally, the City performs a reach-scale analysis of this reach so that we can apply the code uniformly, but until that is done, we have to address each parcel one at a time. Let me know if you concur with my proposal.

Brian

From: Kris Lepine [<mailto:klepine@herrerainc.com>]
Sent: Monday, December 12, 2011 10:47 AM
To: Ward, Brian
Cc: LeClair, Kevin; Warren And Robin Westad (warren_westad@ad-west.com)
Subject: Westad enforcement action #11-120985-EA

Hi Brian,

I am working on the Westad enforcement action (#11-120985-EA) on lower Vasa Creek. The property contains FEMA-mapped 100-year floodplain; however, there is no mapped elevation on the subject property (see attached). The nearest mapped elevation (127 feet) is approximately 1, 100 feet upstream near 164th PL SE.

Kevin's pre-application guidance letter indicates that you may have more detailed information relative to mapped floodplain elevations that can aid in determining the floodplain elevation on the Westad residence.

Can you please forward me any information that you have?

Thanks,



KRIS LEPINE, PWS

Associate Ecologist

direct 206.787.8267 | cell 206.999.2090 | main 206.441.9080

This electronic transmission may contain privileged and/or confidential information intended only for the recipient(s) named. If you have received this message in error, please delete it from your system without copying it, and please notify me by reply electronic mail. Thank you.

