



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

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**Proposal Name:** Newcastle Golf Club Road Stabilization

**Proposal Address:** 15502 Newcastle Golf Club Road

**Proposal Description:** The applicant requests a Critical Areas Land Use Permit for a permanent rock buttress to stabilize and restore a steep slope critical area that was impacted by a landslide event.

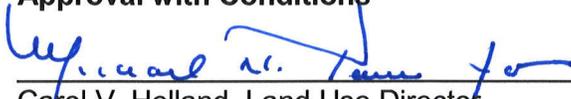
**File Number:** 12-108465-LO

**Applicant:** City of Newcastle, Washington

**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

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Application Date: March 16, 2012  
Notice of Application Publication Date: March 29, 2012  
Decision Publication Date: June 7, 2012  
Project/SEPA Appeal Deadline: June 21, 2012

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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  
 450 100<sup>th</sup> Ave NE., P.O. BOX 90012  
 BELLEVUE, WA 98009-9012

## DETERMINATION OF NON-SIGNIFICANCE

**PROPONENT:** City of Newcastle

**LOCATION OF PROPOSAL:** 15502 Newcastle Golf Club Road

**NAME & DESCRIPTION OF PROPOSAL:**

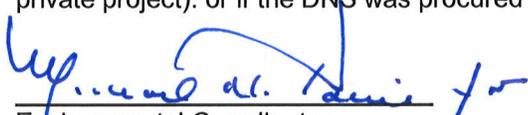
Coal Creek Natural Area – Applicant is proposing to construct a permanent rock buttress to stabilize and restore a steep slope critical area that was impacted by a landslide event.

**FILE NUMBER:** 12-108465-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 **June 21, 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

June 7, 2012  
 Date

- OTHERS TO RECEIVE THIS DOCUMENT:**
- State Department of Fish and Wildlife
  - State Department of Ecology,
  - Army Corps of Engineers
  - Attorney General
  - Muckleshoot Indian Tribe

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### **Attachments**

1. Environmental Checklist
2. Site Plan

## I. Proposal Description

The applicant is proposing to construct a permanent rock buttress to stabilize a portion of roadway embankment supporting Newcastle Golf Club Road that was impacted by a landslide event in December 2010.

The embankment is classified as a geologic hazard critical area per Land Use Code (LUC) section 20.25H.120. The proposal is characterized as a stabilization measure, which is an “allowed use” per LUC 20.25H.055, and is required to comply with applicable performance standards for stabilization measures in LUC 20.25H.055.C.3.m and for geologic hazard critical areas contained in LUC 20.25H.125. In addition, the proposal must also comply with Critical Areas Land Use Permit decision criteria contained in LUC 20.30P.140.

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

### A. Site Description

The addressed location of the landslide and proposed permanent rock buttress is 15502 Newcastle Golf Club Road. However, the majority of the work is to occur within Coal Creek Natural Area on the southern boundary of the City of Bellevue.



Figure 1: Site aerial (Google maps)

Newcastle Golf Club Road is owned and managed by the City of Newcastle and serves a vital motorized link between the City of Newcastle and the Lakemont and Cougar Mountain areas of the City of Bellevue. Under the roadway there are numerous public utilities, along with a high-pressure natural gas line, owned and operated by Puget Sound Energy.

Coal Creek Natural Areas is owned and managed by the City of Bellevue Parks & Community Services Department for passive recreation purposes. It contains 4.5 miles of nature trails.

Coal Creek flows east to west through the Coal Creek Natural Area approximately 800 feet north of the project area. The creek originates less than a mile upstream on the slopes of Cougar Mountain. It then flows over four sinuous miles into Lake Washington.

#### **B. Zoning**

The property is zoned R-1. The property is also within the Critical Areas Overlay District due to the presence of geologic hazard critical areas, including steep slope and coal mine hazards.

#### **C. Land Use Context**

The landslide stabilization area is a north facing slope that is surrounding by dense, native forest vegetation. The southern edge of the project area is the northern shoulder of Newcastle Golf Club Road. The eastern margin of the project area contains the edge of a gravel access road that leads down to a series of surface water management facilities operated by the Bellevue Utilities Department.

Newcastle Golf Club is a two-lane arterial connecting the residential neighborhoods of south-Bellevue to the city center of Newcastle. The roadway has a rural feel with slopes on the south side of road vegetated with a mix of alder, bigleaf maple and some conifers rising up to the lower edge of the Newcastle Golf Club. The north side of the road is the edge of Coal Creek Natural Area and it drops steeply through a collection of various ravines that are heavily vegetated with mature bigleaf maple, Douglas-fir and western red cedar.

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

##### **i. Geologic Hazard Areas**

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (WAC 365-190).

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and important linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provide a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing 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-1 zoning district. No structures are proposed. Therefore, the dimensional requirements for the district do not apply.

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

##### **i. Performance Standards for Stabilization Measures LUC 20.25H.055.C.3.m**

New stabilization measures shall be allowed only to protect existing primary structures and infrastructure, or in connection with uses and development allowed in LUC 20.25H.055. The proposed stabilization measure of a permanent rock buttress is allowed because it is being used to protect Newcastle Golf Club Road. The roadway profile also contains a 16-inch high-pressure gas main, as well as other utilities.

The type of stabilization that is used shall demonstrate first that soft stabilization is not technically feasible before proposing that hard stabilization is necessary. The applicant has supplied a geotechnical engineering report that described the site topography, the surface and subsurface conditions and evaluated the risk posed by avoiding the proposed stabilization. The geotechnical report presented seven alternatives that ranged from complete avoidance to the construction of a structural retaining wall.

The alternatives were evaluated for their ability to reduce the risk to the existing infrastructure, the relative cost to construct the proposed measures, and the ability for the impacted area to be restored following construction.

The geotechnical report recommended the construction of a permanent rock buttress consisting of quarry spall rock fill to establish a stable slope to support the roadway. The rock fill would then be supported by an engineered "key" at the toe of the rock fill to support and stabilize the fill. The rock fill will then be overlaid with topsoil and planted with native plants. In addition to the rock buttress and native plantings, a series of improvements to the surface water drainage system are also recommended.

**ii. Performance Standards for Steep Slope Critical Areas LUC 20.25H.125**

The following discussion describes how the development within steep slope critical areas incorporates the applicable performance standards of this subsection.

The proposed improvement minimized alteration of the pre-existing contour of the slope, the greatest degree practical. The area was impacted by a landslide event in December 2010. The immediate actions following the landslide were to stabilize the failed slope with a temporary rock buttress. The proposed stabilization measure will be similar in angle and aspect to the slope that was impacted by the landslide.

The proposed improvement protects the surrounding topography and vegetated slopes by not requiring additional disturbance around the project area to construct a more-structural solution to stabilization the roadway or by relocating the roadway altogether.

The proposed stabilization measure is designed to support the existing infrastructure and does not create the need for additional restrictive buffers from the top of the slope.

The entire stabilization measure is pervious.

The entire area of disturbance associated with the stabilization measure will be restored pursuant to a restoration plan. A conceptual restoration plan was submitted. The plan meets the requirements for a mitigation and restoration plan contained in LUC 20.25H.210.

**iii. Performance Standards for Coal Mine Hazard Areas LUC 20.25H.130**

The proposed stabilization measure is within Coal Mine Subsidence Zone 1, which means that it is an area where there is a potential for future trough subsidence or sinkhole development due to the collapse of abandoned coal mines.

The applicant's geotechnical engineer has reviewed the applicable performance standards and conducted a site-specific evaluation of the potential for trough subsidence. The geotechnical engineer concluded that the proposed rock buttress poses little to no risk of trough subsidence.

#### **IV. Public Notice and Comment**

Application Date:	March 16, 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. Two comments have been received from the public as of the writing of this staff report.

The first is from Puget Sound Energy, which wrote in support of the proposed stabilization measure as posing the least risk to the 16-inch underground high-pressure gas line in Newcastle Golf Club Road. The other comment was received from the Bellevue Parks & Community Services Department. Their comments covered several topics. The first dealt with the need to obtain a permanent easement to construct and maintain the slope stabilization. The next was related to compliance with Section 4(f) of the Department of Transportation Act of 1966. The next was associated with compliance with the Land Transfer Agreement between the City of Bellevue and King County related to Coal Creek Park. The final comments dealt with the proposed sequence of vegetative restoration following the completion of the stabilization measures.

#### **V. Summary of Technical Reviews**

##### **i. 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.

A subsequent Clearing and Grading Permit is required to be reviewed and approved prior to commencement of construction on the proposed stabilization measure.

##### **ii. Utilities**

The Utilities Department's Development Review Division has reviewed the proposed development for compliance with Bellevue Utilities' codes and standards. The Utilities Development Review 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 Construction Stormwater Pollution Prevention Plan (CSWPPP) is required to be submitted for review and approval with the required clearing and grading permit. The CSWPPP will specify the applicable erosion and sediment control best management practices necessary to prevent migration of soils from the project area. 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**

The project site is part of a larger natural area that contains quality habitat for birds and mammals. The proposed rock buttress is designed restore the vegetated slope impacted by the landslide. The restoration of the slope included a variety of native shrubs and ground covers that will eventually grow together and provide cover for small mammals, birds, amphibians and some larger animals. Several trees along the western margin of the permanent rock buttress are proposed for removal. The removal of these trees will be mitigated through the installation of native shrubs over the rock buttress and an additional 5 native conifers. See Section X for related conditions of approval.

### **C. Plants**

Mitigation for temporary and permanent disturbance will be approved pursuant to an approved vegetation restoration and monitoring plan. The removal of these trees will be mitigated through the installation of native shrubs over the rock buttress and an additional 5 native conifers. See Section X for related conditions of approval.

### **D. Noise**

The site is not adjacent to any developed areas. The closest development is the Newcastle Golf Club clubhouse, which is approximately 250 feet higher in elevation and 1,400 feet away horizontally. 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.

## **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:

#### **1. The proposal obtains all other permits required by the Land Use Code;**

**Finding:** The proposal is required to obtain a Clearing and Grading permit prior to commencement of the proposed stabilization measures.

#### **2. 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 proposed stabilization measure was designed and evaluated by a professional engineer and an engineering geologist. The proposal for stabilization of the roadway embankment is preferred because it requires little to no disturbance of the roadway and underlying high-pressure gas mains, while minimizing disturbance within the forested, Coal Creek Natural Area.

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

**Finding:** As discussed in Section III of this report, the proposal incorporated and complies with the applicable performance standards in LUC Part 20.25H.

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

**Finding:** The site is currently served by adequate public facilities. The proposal will not increase the need for public facilities at the site.

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

**Finding:** The proposal contains a restoration plan that intends to establish native shrubs and groundcovers on the rock buttress as stabilization of the top and to replace a portion of the vegetative structure that was lost in the landslide.

**6. 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 construct a permanent rock buttress within the steep slope critical area at 15502 Newcastle Golf Club Road in Coal Creek Natural Area.

**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 Ordinances including but not limited to:

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

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

**1. Mitigation for New Permanent Disturbance:** A mitigation 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 required development permit. The plan shall document the total area of permanent disturbance and area of new critical area buffer to satisfy a replacement ratio of one to one. In order to ensure the mitigation plan successfully establishes, the mitigation shall meet the following performance standards for a period of five years following installation:

- Year 1: 100% survival of all installed plants & 0% invasive coverage
- Year 2: 90% survival of all installed plants & <10% invasive coverage
- Year 3: 85% survival of all installed plants, >35% native coverage & <10% invasive coverage.
- Year 4: >50% native coverage & <15% invasive coverage
- Year 5: >70% native coverage & <15% invasive coverage

A monitoring report meeting the minimum monitoring and reporting standards established by the director shall be submitted annually to verify success.

Authority: Land Use Code 20.25H.220  
Reviewer: Kevin LeClair, Land Use

**2. Access and Right-of-Entry:** In order to construct the proposed stabilization measure, the applicant is required to work within Coal Creek Natural Area, which is owned and managed by the City of Bellevue. The applicant must provide the city with a copy of a valid construction easement or right of entry before the required clearing and grading permit can be issued.

Authority: Bellevue City Code 23.76.040.C  
Reviewer: Kevin LeClair, Land Use

**3. Rainy Season restrictions:** Due to the proximity to steep slope critical areas, 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

**4. 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

**5. 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

**WAC 197-11-960 Environmental Checklist.**

ENVIRONMENTAL CHECKLIST

Reviewed under Bellevue permit  
# 12-108465-LO. Reviewed on  
3-26-2012 by Kevin LeClair.

*Purpose of checklist:*

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

*Instructions for applicants:*

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

*Use of checklist for nonproject proposals:*

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

**A. BACKGROUND**

1. Name of proposed project, if applicable: **Newcastle Golf Club Road Landslide Stabilization**
2. Name of applicant: **Mark Rigos and Laura Frolich, City of Newcastle**
3. Address and phone number of applicant and contact person: **12835 Newcastle Way, Suite 200  
Newcastle, WA 98056, (425) 649-4444**
4. Date checklist prepared: **March 6, 2012**
5. Agency requesting checklist: **City of Bellevue (Bellevue)**
6. Proposed timing or schedule (including phasing, if applicable): **Construction Summer 2012.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **No.**

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

**Geotechnical Engineering Report on Alternatives (9/2011)**

**Geotechnical Engineering Report for Design on 2 Alternatives (3/2012)**

**Grading, TESC and /or Storm Drainage Plan (forthcoming)**

**Landscape Restoration Plan (forthcoming)**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **None are currently pending.**

10. List any government approvals or permits that will be needed for your proposal, if known.

**First, FHWA – WSDOT Local Programs approval is needed for partial funding reimbursement.**

**Second, Bellevue City Council approval is needed to grant a permanent slope easement.**

**Third, a Critical Areas Land Use Permit from the City of Bellevue (Bellevue) is needed.**

**Fourth, a Grading Permit from Bellevue is needed.**

**Fifth, a Right-Of-Way Use Permit from Newcastle is needed.**

**Sixth, approval from King County and Bellevue Parks Departments are needed for the conversion of Parks property to a permanent slope easement.**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

**There are two proposed construction alternatives being considered by the City of Newcastle to permanently stabilize a landslide affected area adjacent to Newcastle Golf Club Road. The first alternative is to construct a permanent rock buttress. In this alternative, the existing plastic and quarry spalls on the failed slope would be removed. The slope would be properly keyed-in, shaped, compacted and stabilized to allow for the permanent rock buttress. The existing temporary rock buttress was constructed in an emergency situation and is not deemed stable long-term.**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

- **47 degrees 32' 20.00" N 122 degrees 08' 28.62" W**
- **SW 1/4 of NW 1/4 of S26 T24N R5E**
- **Located on north side of Newcastle Golf Club Road west of 155<sup>th</sup> Ave SE.**

## **B. ENVIRONMENTAL ELEMENTS**

### **1. Earth**

a. General description of the site (circle one): Flat, rolling, hilly, **steep slopes**, mountainous, other . . . . .

b. What is the steepest slope on the site (approximate percent slope)? **50%**

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

**BeD: Beausite gravelley sandy loam 15-30% slopes**

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

**Yes, a landslide occurred here after a large storm event in December 2010.**

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

**The purpose of the fill will to be constructing a permanent rock buttress. The type of material will be properly graded rock as specified in the geotechnical engineering report. The approx. quantity of excavation will be approx. 750 cubic yards and approx. 1,500 cubic yards of fill. It is unknown how much of the excavation material can be re-used for the permanent rock buttress. More accurate quantities will be determined during completion of the construction drawings (not yet completed). Source of fill not yet determined.**

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

**Minimal erosion would occur because most of the loose soil already eroded during the landslide.**

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

**Less than 5%**

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

**All necessary temporary erosion and sediment control measures will be installed.**

**A construction stormwater pollution prevention plan will be required per BCC 23.76. Turbidity monitoring will occur during construction.**

## **2. Air**

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

**There will be construction machinery including possibly a crane, large track hoe and dump trucks. Emissions would be typical of a small project lasting approx. 45 days.**

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

**No**

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

**None**

## **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.

**Coal Creek is located 600 – 1,000 feet north of the project site. Coal Creek flows into Lake Washington approx. five miles west of the site.**

- 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.**

- 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.

**None**

- 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.

**No**

- 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, purpose, and approximate quantities if known.

**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.

**None**

c. Water runoff (including stormwater):

- 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.

**Stormwater will continue to be conveyed through the site in a tightline system. This stormwater will discharge slightly downstream of the existing discharge. The new outfall will be located just upstream of the non-erodible sandstone drainage segment.**

**Turbidity monitoring will be required during construction per BCC 23.76.**

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

**No**

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

**The side slope will be replanted with vegetation to decrease the likelihood of future landslides and provide hillside permanent stability.**

**4. Plants**

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

X \_\_\_\_\_ deciduous tree: **alder, maple**, aspen, other

X \_\_\_\_\_ evergreen tree: **fir, cedar**, pine, other

- X \_\_\_\_\_ shrubs
- \_\_\_\_\_ grass
- \_\_\_\_\_ pasture
- \_\_\_\_\_ crop or grain
- \_\_\_\_\_ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- \_\_\_\_\_ water plants: water lily, eelgrass, milfoil, other
- \_\_\_\_\_ other types of vegetation

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

**Very little, the landslide removed existing vegetation. A few small trees and shrubs might be impacted along the edge of the repair zone.**

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

**None**

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

**Yes, a slope restoration plan has been designed to attempt to restore the area to the original vegetated / forested condition.**

### 5. Animals

a. 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: hawk, heron, eagle, **songbirds**, other:
- mammals: **deer, bear**, elk, beaver, other:
- fish: bass, salmon, trout, herring, shellfish, other:

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

**None known.**

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

**Not to our knowledge.**

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

**None**

### 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 needs? Describe whether it will be used for heating, manufacturing, etc.

**Does not apply.**

b. Would your project affect the potential use of solar energy by adjacent properties?

If so, generally describe.

**No**

c. What kinds of energy conservation features are included in the plans of this proposal?

List other proposed measures to reduce or control energy impacts, if any:

**None**

**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:

**None**

b. Noise

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

**There is some traffic noise associated with Newcastle Golf Club Road, but it will not impact the project, because the proposal does not involve dwelling units or commercial space.**

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

**On a short term basis, there will be noise associated with construction machinery such as an excavator and compactor.**

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

**Construction will progress in an expedient and orderly manner.**

**8. Land and shoreline use**

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

**The current use of the site is a temporarily, but not permanently, stabilized landslide zone. The current use of adjacent properties is forested open space.**

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

**No**

c. Describe any structures on the site.

**None**

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

**No**

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

**Open space**

**Zoning is R-1  
Comprehensive plan designation is Single-family low-density. Park and open space is permitted as a defacto conditional use as it was legally established prior to annexation into City of Bellevue.**

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

**Open space**

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

**Does not apply.**

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

**Yes, steep slopes, landslide hazard area and erosion hazard area.**

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

**Does not apply**

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

**Does not apply**

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

**Does not apply**

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

**Undergoing SEPA, Critical Area Land Use Permit (CALUP) and Grading Permit with the City of Bellevue Parks Department.**

### **9. Housing**

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

**Does not apply**

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

**Does not apply.**

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

**Does not apply**

### **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?

**No structures are proposed.**

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

**None**

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

**None**

### **11. Light and glare**

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

**None**

b. Could light or glare from the finished project be a safety hazard or interfere with views? **No**

c. What existing off-site sources of light or glare may affect your proposal? **None**

d. Proposed measures to reduce or control light and glare impacts, if any: **Does not apply.**

### **12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?  
**There is a regional hiking trail (Coal Creek Trail) several hundred feet north of the site, but the actual site is too steep for any hiking or other recreational opportunities.**

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:  
**None**

### 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, archaeological, scientific, or cultural importance known to be on or next to the site.  
**None**

c. Proposed measures to reduce or control impacts, if any:  
**None**

### 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.  
**Newcastle Golf Club Road is just south of the site.**

**The road may need to be temporarily closed during construction, but only for brief work periods.**

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?  
**No, but approximately one mile west of the site is a transit stop.**

c. How many parking spaces would the completed project have? How many would the project eliminate?  
**Currently, the shoulder of a utility access road adjacent to the site has room for approx. three vehicles. No spaces will be added or removed.**

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 new roads are required. The embankment along the north side of the Newcastle Golf Club Road corridor will be strengthened.**

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.  
**No vehicular trips once construction is completed.**

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

**15. Public services**

a. Would the project result in an increased need for 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.

**Does not apply**

**16. Utilities**

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

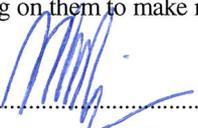
**Gas, telephone and electricity are available to the site.**

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.

**No utilities are proposed for the project. Puget Sound Energy will be periodically monitoring their gas main adjacent to the site. One of the overhead power lines may need to be temporarily relocated. This would be coordinated with Puget Sound Energy as well.**

**C. 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: ..... *3/14/2012* .....

**REVIEWED**  
*By Kevin LeClair at 9:32 am, Mar 26, 2012*

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

This page is not applicable, as the proposal is a project action.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

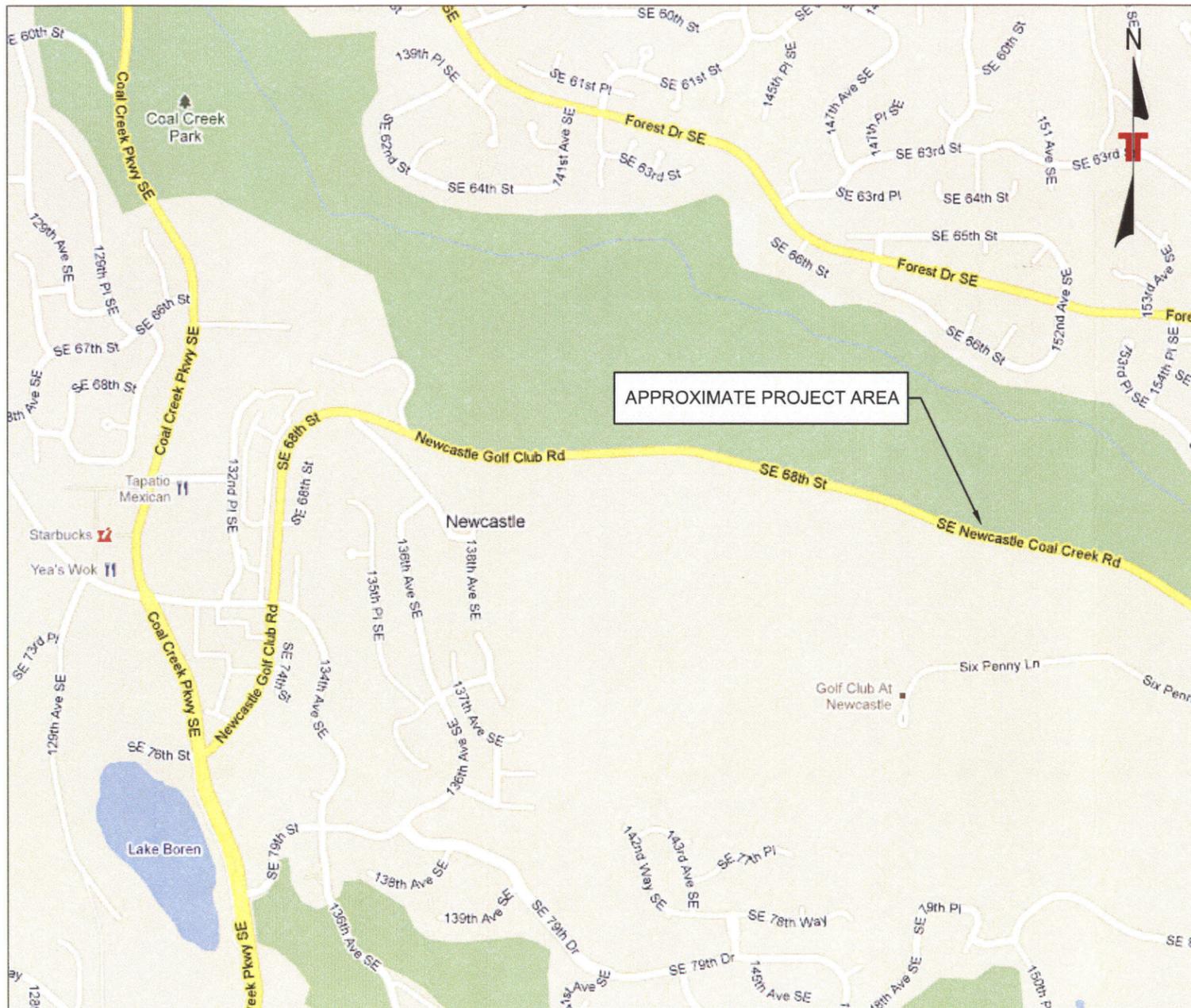
5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

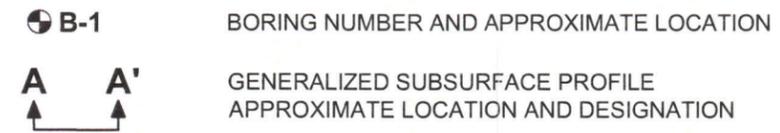
Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

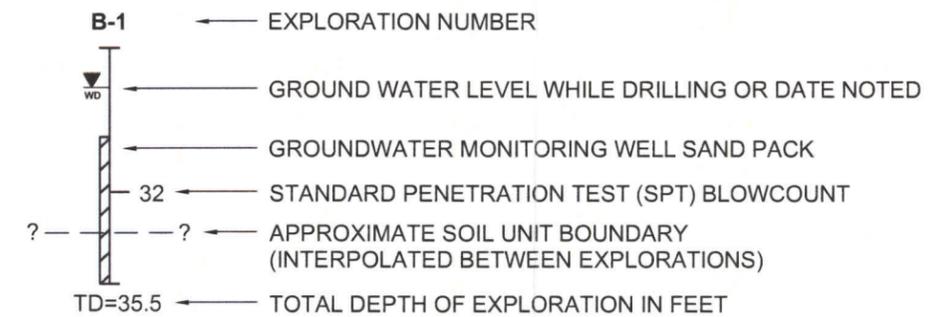


**VICINITY MAP**  
NOT TO SCALE

**BORING LOCATION DIAGRAM : EXHIBIT A-2**



**GENERALIZED SUBSURFACE PROFILE LEGEND : EXHIBITS A-3 AND A-4**



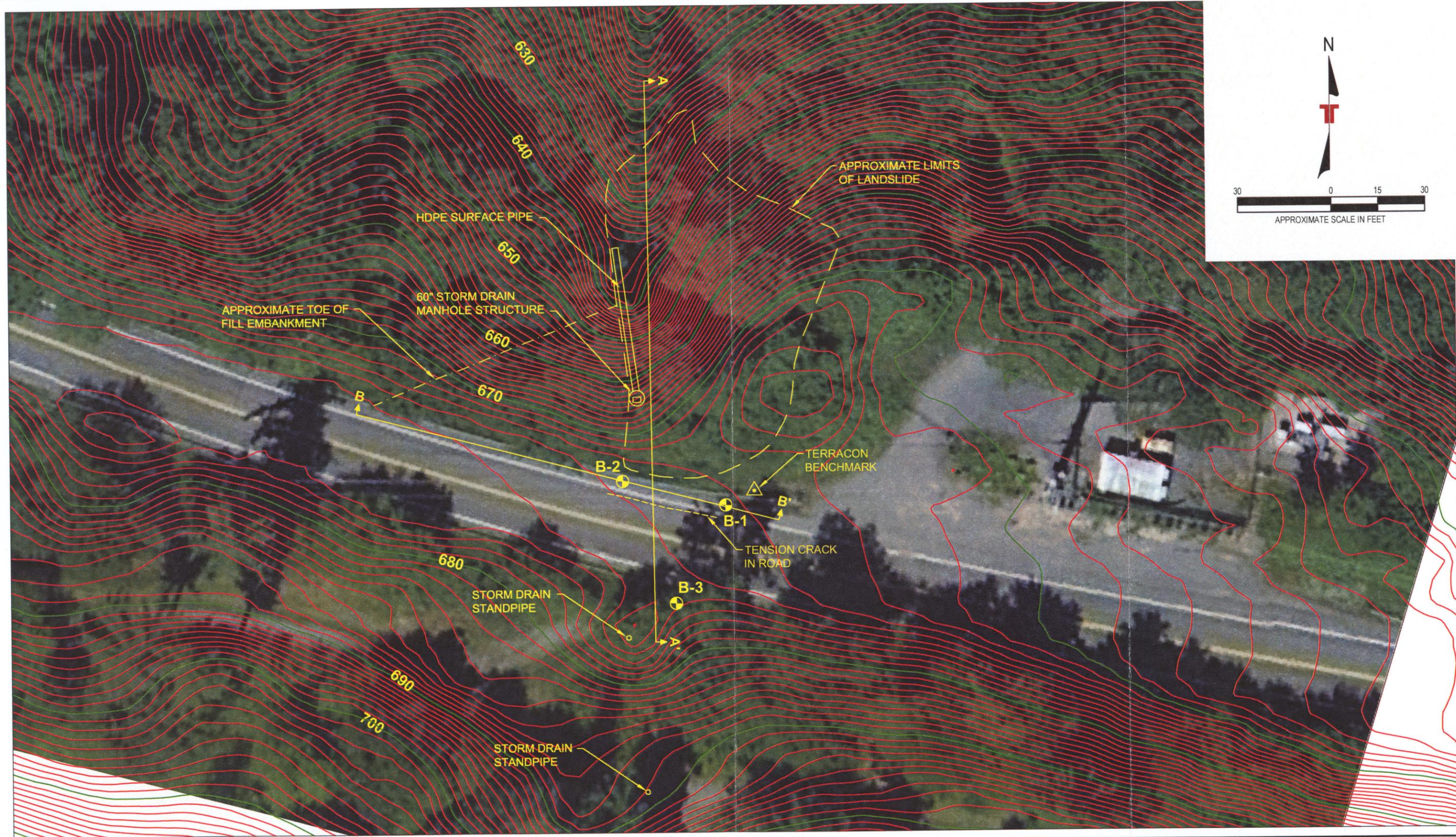
**GENERAL NOTES FOR EXHIBITS A-2 THROUGH A-4**

1. THE TOPOGRAPHIC BASE MAP PRESENTED ON EXHIBIT A-2 IS DERIVED FROM 6 FOOT RASTER RESOLUTION LIDAR BARE EARTH DEM DATA OBTAINED FROM THE PUGET SOUND LIDAR CONSORTIUM. THE DATA PROJECTION IS PLANE STATE COORDINATE SYSTEM. THE VERTICAL DATUM IS NAD83(HARM). THE LIDAR DATA WAS COLLECTED BY THE PUGET SOUND LIDAR CONSORTIUM BETWEEN 2000 AND 2005 AND MAY NOT REPRESENT CURRENT TOPOGRAPHIC CONDITIONS, PARTICULARLY WITHIN THE LANDSLIDE AREA.
2. THE AIR PHOTO OVERLAY PRESENTED ON EXHIBIT A-2 WAS OBTAINED FROM GOOGLE EARTH'S 2010 DATABASE.
3. THE LOCATION AND ELEVATION OF THE BORINGS AND EXISTING SITE FEATURES SUCH AS DRAINAGE STRUCTURES, ROADWAY TENSION CRACKS, AND LANDSLIDE FEATURES SHOWN ON EXHIBITS A-2 THROUGH A-4 ARE BASED ON FIELD MEASUREMENTS TAKEN WITH A TRANSIT, HAND LEVEL, FIBERGLASS TAPE MEASURE, AND LASER RANGE FINDER RELATIVE TO EXISTING SITE FEATURES VISIBLE ON THE AIR PHOTO OVERLAY, AND SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE MEASUREMENT METHODS.
4. THE SUBSURFACE CONDITIONS SHOWN ON THE GENERALIZED SUBSURFACE PROFILES ARE BASED UPON INTERPOLATION BETWEEN EXPLORATIONS AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS. SIMPLIFIED NAMES ARE SHOWN FOR SOIL DEPOSITS, BASED ON GENERALIZATIONS OF SOIL DESCRIPTIONS. SEE EXPLORATION LOGS AND REPORT TEXT FOR MORE DETAILED SOIL AND GROUNDWATER DESCRIPTIONS.

Project Mng:	DCW	Project No:	81105116
Drawn By:	JPG	Scale:	AS SHOWN
Checked By:	JPG	File No:	81105116.dwg
Approved By:	DCW	Date:	SEPTEMBER 2011

**Terracon**  
Consulting Engineers and Scientists  
21905 64th Avenue W, Ste 100 Mountlake Terrace, WA 98043  
PH. (425) 771-3304 FAX. (425) 771-3549

**VICINITY MAP AND LEGEND**  
Newcastle Golf Club Road Landslide Evaluation  
Newcastle, Washington

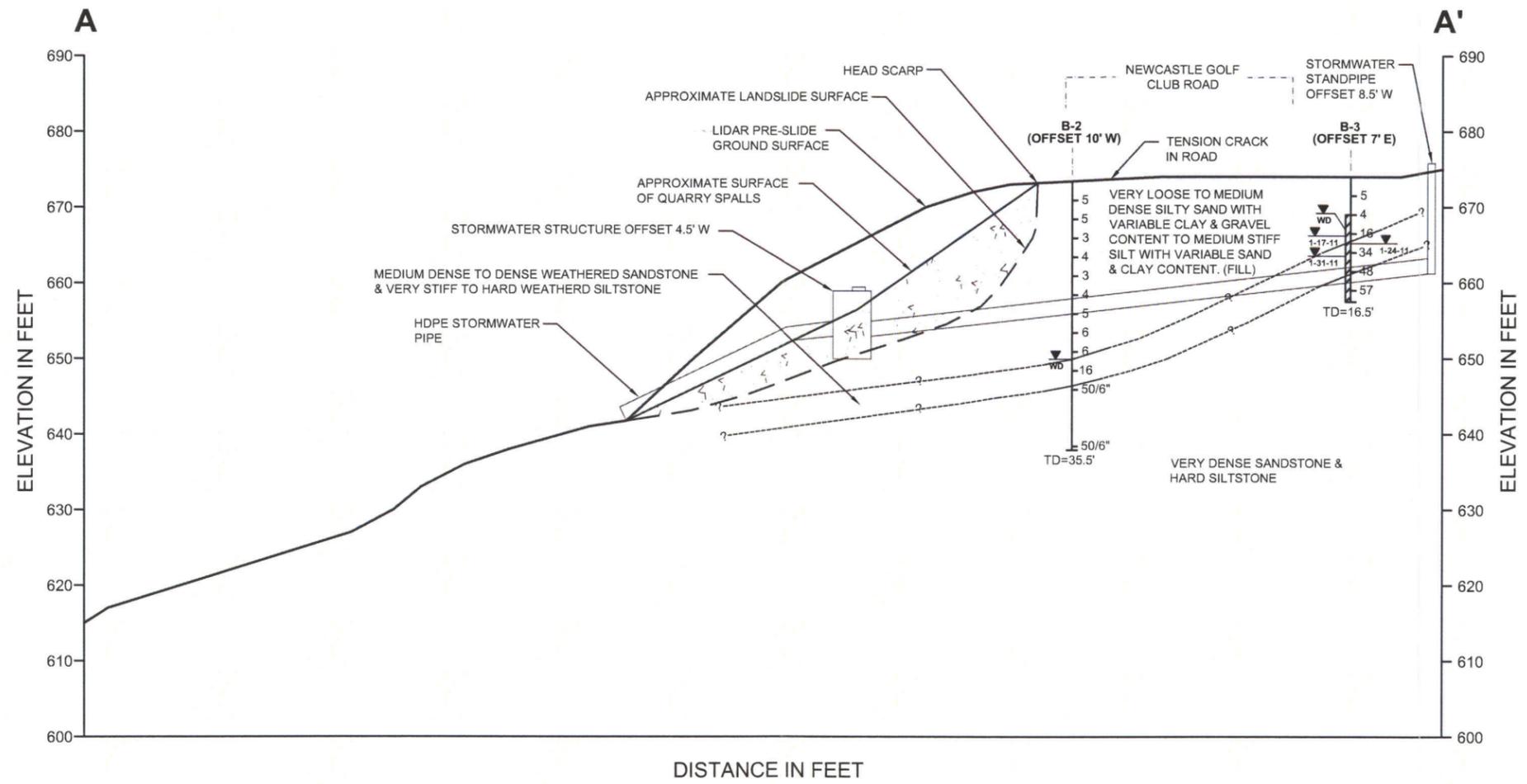


REFERENCE: TOPOGRAPHY DEVELOPED USING LIDAR BARE EARTH DEM DATA OBTAINED FROM THE PUGET SOUND LIRAR CONSORTIUM. AIR PHOTO OVERLAY OBTAINED FROM GOOGLE EARTH 2010.

Project Mng:	DCW	Project No.	81105116
Drawn By:	JPG	Scale:	AS SHOWN
Checked By:	JPG	File No.	81105116.dwg
Approved By:	DCW	Date:	SEPTEMBER 2011

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**BORING LOCATION DIAGRAM**  
 Newcastle Golf Club Road Landslide Evaluation  
 Newcastle, Washington



Project Mng:	DCW	Project No.	81105116
Drawn By:	JPG	Scale:	AS SHOWN
Checked By:	JPG	File No.	81105116.dwg
Approved By:	DCW	Date:	SEPTEMBER 2011

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**GENERALIZED SUBSURFACE PROFILE A TO A'**  
 Newcastle Golf Club Road Landslide Evaluation  
 Newcastle, Washington



# Site Plan B

Prepared By: MJR

DATED: MARCH 16, 2012

- No wetlands in stabilization Area
- No floodplain in stabilization Area
- No streams in stabilization Area
- Structure setbacks not shown due to nature of project.

EXISTING HDPE STORM WATER TIGHTLINE TO BE EXTENDED THROUGH PERMANENT BUTTRESS TO SUITABLE DISCHARGE LOCATION



STEEP SLOPE  
LANDSLIDE  
HAZARD  
EROSION  
HAZARD

EXISTING STORM WATER  
STRUCTURE TO BE REMOVED

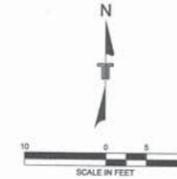
SEVERAL TREES  
NEAR ROCK BUTTRESS  
WILL NEED TO BE  
REMOVED.

EXISTING QUARRY SPALLS PLACED FOR  
TEMPORARY LANDSLIDE REPAIR

STEEP SLOPE  
LANDSLIDE HAZARD  
EROSION HAZARD

PERMANENT ROCK BUTTRESS

SITE DISTURBANCE SHALL BE LIMITED TO  
5 FEET BEYOND PERMANENT ROCK BUTTRESS



RIGHT-OF-WAY

GENERALIZED ROCK BUTTRESS  
CROSS SECTION A - A'.  
SEE SHEET RB2, DEAL 1.

EXISTING GAS LINES  
TO BE RELOCATED PRIOR  
TO BUTTRESS CONSTRUCTION

## NEWCASTLE GOLF CLUB RD

RIGHT-OF-WAY

N:\PROJECTS\2010\8110516\Working Files\Diagrams-Drawings-Figures\TCC\_Rock\_Buttress\_Design\_RB2.dwg DATE: 3/16/12 10:51 AM BY: jrgregor

REV	DATE	BY	DESCRIPTION

**Terracon**  
Consulting Engineers and Scientists

21905 64th Avenue West, Suite 100      Mountlake Terrace, WA 98043  
PH. (425) 771-3304      FAX. (425) 771-3549

**PLAN VIEW**      **PRELIMINARY**

ROCK BUTTRESS  
NEWCASTLE GOLF CLUB ROAD LANDSLIDE REPAIR  
NEWCASTLE, WA

RB1	
DESIGNED BY:	JPG
DRAWN BY:	JPG
APPVD BY:	JEZ
SCALE:	AS SHOWN
DATE:	XX/XX/XX
JOB NO.:	81105116A
ACAD NO.:	001
SHEET NO.:	1 OF 2