

**EDISON ENGINEERING**

**14952 Washington Street  
Anacortes WA 98221**

March 28, 2024

Jason and Joy Cory  
3354 Inverness Street  
Mound Vernon WA 98273

**Re: Fish & Wildlife and Geohazard Report**  
63254 High Ridge Drive  
Cascade River Park No 3, Lot 92  
Skagit County, Washington

Skagit County Property: **P63965**  
Skagit County Files: **PL24-0015**

Dear Mr. and Mrs. Cory;

Edison Engineering is pleased to present this report of our fish & wildlife and geohazard report for your property at the aforementioned lot at Cascade Park.

We appreciate the opportunity to be of service to you. Should you have any questions concerning this report or require further information, please contact Bob Bailey at (360) 202-4884.

Sincerely,

**EDISON ENGINEERING**



Robert P. Bailey, M.S.C.E., P.E.  
Biologist / Geotechnical Engineer

# **FISH & WILDLIFE AND GEOTECHNICAL REPORT**

**CORY PROPERTY**

63254 High Ridge Drive

Lot 92  
Cascade River Park No 3  
Skagit County, Washington

Skagit County Property:  
**P63965**

Skagit County File:  
**PL24-0215**

*Prepared for:*

Jason and Joy Cory  
3354 Inverness Street  
Mound Vernon WA 98273

*Prepared by:*

Edison Engineering  
14952 Washington Street  
Anacortes WA 98221

(360) 202-4884

File Number:  
**224006**

March 28, 2024

## TABLE OF CONTENTS

INTRODUCTION AND BACKGROUND INFORMATION .....	1
PURPOSE AND SCOPE OF SERVICES .....	1
LITERATURE REVIEW .....	1
REGULATORY ANALYSIS .....	2
SITE OBSERVATIONS .....	3
Geologically Hazardous Zones .....	3
Stream Buffer .....	3
Stream, Shore and Buffer Habitat .....	3
Wildlife Observations and Wildlife Indicators .....	4
Topography and Drainage .....	4
IMPACT ASSESSMENT .....	4
Impact Assessment for the Property .....	4
Recruitment of large organic debris .....	4
Shade .....	4
Bank stabilization .....	5
Runoff Filtration .....	5
Wildlife Habitat .....	5
Sequence of Mitigation .....	5
CONCLUSIONS AND RECOMMENDATIONS .....	6
Geologically Hazard .....	6
Fish and Wildlife Habitat .....	6
Proposed Mitigation .....	6
General Construction Recommendations .....	7
CLOSURE .....	8

## ATTACHMENTS

Topographic / Vicinity Map  
Geology Map  
Potential Landslides and Erosion Areas (2)  
Critical Area Site Plan

# **EDISON ENGINEERING**

**14952 Washington Street  
Anacortes WA 98221**

## **INTRODUCTION AND BACKGROUND INFORMATION**

This report provides the scope of services and findings for our fish & wildlife and geohazard report at the site. A 19 foot by 13 foot shed will be located at the property. The owners purchased the property with a driveway, partially smoothed and graveled lot, and a holding tank for septic.

The parcel is four sided, the road section is a curve of 64 plus 5 extra feet and the edges average 124 feet and the outer side is 93.4 feet. The property is within the northeast one-quarter of the northwest one-quarter of Section 15, Township 35N, and Range 11E of the Willamette Meridian.

A shed will be located at 63254 High Ridge Drive at the west end of the Cascade River Park. A creek divides the property, this creek is type F > 5 feet wide, and its buffer is 150 feet (Topographic / Vicinity Map, attached). The stream intersects the property lines. The bluff on the stream is a geohazard with a 30-foot buffer. It is more than 40 percent and it is greater than 10 feet high. In addition, the County has the potential for an alluvial fan in the stream.

## **PURPOSE AND SCOPE OF SERVICES**

The purpose of this fish and wildlife and geotechnical project is to review background information regarding protected and potentially endangered wildlife species in the area and to make fish, wildlife, and soil observations. This information was utilized to make recommendations for construction at the site in accordance with the Skagit County Critical Areas Ordinance (February 2009, Section 14.24). Specifically, our scope of services included the following:

1. Reviewed published maps regarding topographic and habitat conditions in the vicinity of the subject property, including:
  - USGS Topographic Map, Big Devil Quadrangle, Washington, United States Department of the Interior Geological Survey, 1989.
  - Geologic Map of the Mount Baker 30- by 60-Minute Quadrangle, Washington, by R.W. Tabor, et al, U.S. Department of the Interior, 2003.
  - Soil Survey of Skagit County Area, Washington, USDA Soil Conservation Service, 1989.
  - Skagit County Potential Landslide and Erosion Areas
  - Priority Habitat and Species Map (PHS), Washington Department of Fish and Wildlife (WDFW), (online).
2. Conducted a site visit to map the property, stream, and to observe fish and wildlife habitat.
3. Recorded the names of most of the plants on the property.
4. Prepared the Critical Area Site Plan and Topographic / Vicinity Map.
5. Prepared this report to describe the results of our investigation, and provide recommendations for site development.

## **LITERATURE REVIEW**

The topographic map for the Big Devil Quadrangle (Topographic / Vicinity Map, attached) indicates that the property is located adjacent to a creek with no name but we have heard Nugget Creek. The land is just over 574 feet in elevation. Nugget Creek is flowing to the north it coalesces from two streams about 3,500 feet away and arises at 3,600 feet on the 5,464-foot mountain. Rattlesnake Peak is at a height of 6,559 and it is 4.3 miles to the southeast of the property.

The Geologic Map of the Mount Baker 30- by 60-Minute Quadrangle, Washington, by R.W. Tabor et al indicates that all of the ground in the property is mass-wastage deposits (Qmw Holocene and Pleistocene). It is a colluvium or landslide deposits with indistinct morphology. It is mapped where

sufficiently continuous and thick to obscure underlying material. The unit is gradational with landslide deposits (Ql, Holocene) and alluvial fan deposits (Qf, Holocene).

The Soil Survey of Skagit County, Washington (USDA Soil Conservation Service, 1989) maps Wiseman channery sandy loam on 0- to 8-percent slopes (Soil Type 159) to the bottom of the embankment and then Riverwash on the northwestern portion of this property (Soil Type 108).

Wiseman channery sandy loam is very deep and somewhat excessively drained soil. It is located on alluvial fans and it formed in alluvium derived from phyllite. Permeability of the Wiseman soil is very rapid. Runoff is slow and the hazard of water erosion is slight. Typically, the surface area, where mixed to a depth of seven inches, is very dark grayish brown channery sandy loam. The underlying material to a depth of 60 inches or more is dark olive gray extremely channery sand. Permeability of the soil is from 0-7 inches below ground, 0.6 to 2.0 inches per hour and between 7 and 60 inches it is >20.0 inches per hour.

Most Riverwash (Soil Type 108) areas are not vegetated but some areas do support shrubs, grasses, and small trees. Permeability is very rapid, availability of water capacity is very low, and runoff is slow. Typically, the areas with Riverwash consist of stratified gravel, pebbles, sand, and silt to a depth of 60 inches or more.

Skagit County Potential Landslide and Erosion Areas shows your creek has potential for an alluvial fan. An alluvial fan is a fan shaped mass of alluvium that is deposited as the creek decreases in velocity.

The WDFW's Priority Habitat and Species Map indicates Steelhead (*Oncorhynchus mykiss*) and the northern spotted owl (*strix occidentalis*). Steelhead is a Threatened species with the Federal government and a Candidate in Washington State. Northern spotted owl is an endangered species with the federal government and a threatened species with the state government.

## **REGULATORY ANALYSIS**

Skagit County regulates streams, geologically hazard areas, and their buffers. They may not be disturbed by clearing, grading, fill, or construction without filing a fish and wildlife habitat assessment and obtaining permission from the County.

The stream type is F >5 feet wide, meaning it has fish and it is over 5 feet wide. The protection standards indicate this property shall have a 150-foot area adjacent to the OHWM as the buffer.

Skagit County has indicators for geologically hazardous slopes. Erosion hazards are lands with gradients that are more than 30 percent, landslide hazards consists of land that is more than 40 percent with a vertical relief of more than 10 feet. The criteria make the land subject to the requirements of Skagit County Code and require a geologically hazard assessment. A minimum buffer width of 30-feet shall be established from the top, toe and all edges of all landslide and erosion hazard areas. For landslide and erosion hazard areas with a vertical relief greater than 50 feet, the minimum buffer shall be 50 feet.

No trees may be cut from the stream buffer unless a tree presents a hazard to a residence or an appurtenant structure or it is in the way of a road. The County Planning and Permit Center must be notified of, and grant permission for removal of any proposed hazard trees prior to removal. Hazard trees that are removed from the buffer must be replaced by appropriate species. Vegetation that is dead or diseased may be removed from the buffer to control fire or halt the spread of disease or insects.

Low impact uses and activities that are consistent with the purpose and function of the buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the habitat involved; provided, that such activity shall not result in a decrease in riparian functions and values and shall not prevent or inhibit the buffer's recovery to at least pre-altered condition or function. Examples of uses and activities that may be permitted in appropriate cases, as long as the activity does not retard the overall recovery of the buffer, include removal of noxious vegetation and pedestrian trails.

Open view corridors within the shoreline vegetation by windowing views without cutting or topping trees, but by cutting intervening branches on the trees without removing more than 30 percent of the foliage. Dead standing and dead fallen materials may not be removed from the buffer unless they present a threat of fire or insect damage to surrounding vegetation or structures.

The Critical Area Site Plan (CASP) needs filing with the County Auditor following acceptance by the Planning and Permit Center. The Critical Area Site Plan indicates the proposed project and critical areas that exist within 200 feet of the project area at the time of our investigation. The Critical Area Site Plan that is at the back of this document will suffice for the County Auditor. One should file the CASP with the auditor, otherwise if they change the critical areas ordinance one will not be vested.

### **SITE OBSERVATIONS**

A representative from Edison Engineering conducted a site visit on February 13, 2024. We mapped the property, bluff, stream, and the shed. We also made a list of the plants and traveled downstream to see whether the stream had any inclines that were too much for fish to pass. There was none.

#### **Geologically Hazardous Zones**

There is bluff above the creek that is 10.6 feet high, and the buffer is 30 feet. The bluff extends across the property line at 70.4 feet on the southwest and 72.4 feet on the northwest sides.

The geologic map warns of an alluvial fan hazard. This creek starts at elevation 3,600 feet and the grade is over 85 percent. When it gets to 800 feet, the gradient of the stream is 20.8 percent, it is traveling to the north-northwest, and it has sides on it meaning the load cannot escape. The stream turns 35 degrees to the right and no longer has sides on it so the load can escape. Traveling to the north-northeast over a very straight distance of 1,080 feet the grade has lowered to 10.8 percent. It looks like the creek was made to flow in a very straight line by a bulldozer. The stream is wide from the where it makes the turn until crosses South Cascade Road, a ford. We feel the debris would be let go as the stream turns right but there are floodwaters. The flood would pass the site, because the sides on which your property sits is more than 10 feet high, much higher than the other side. We feel that the stream would pass to the north because it is continually lower.

#### **Stream Buffer**

The stream is type F>5 feet wide or it has fish and the stream is over 5 feet wide. The buffer is 150 feet and it goes to 68 feet landward of your southeastern property mark and the 100 foot buffer is off of the off your property by 18 feet. The shed can go on your property if you cut the buffer to 50 feet or two-thirds.

#### **Stream, Shore and Buffer Habitat**

The stream bank full condition was just above the location of the Ordinary High Water Mark (OHWM). The upland plants above the OHWM were trailing blackberry (*Rubus ursinus*, FACU), herb-Robert (*Geranium robertianum*), and sword fern (*Polystichum munitum*, FACU). The plants below the OHWM were common horsetail (*Equisetum arvense*, FAC), salmonberry (*Rubus spectabilis*, FAC), piggyback plant (*Tolmiea menziesii*, FAC), and hairy willow herb (*Epilobium ciliatum*, FACW-), it was mostly unvegetated below.

The trees in the buffer were western red cedar (*Thuja plicata*), big-leaf maple (*Acer macrophyllum*), Pacific silver fir (*Abies amabilis*), black cottonwood (*Populus balsamifera*), and red alder (*Alnus rubra*). Shrubs are vine maple (*Acer circinatum*), red blueberry (*Vaccinium parvifolium*), snowberry (*Symphoricarpos albus*), and salmonberry. Common herbivorous vegetation and vines were sword fern, cat's ear (*Hypochaeris radicata*), horsetail, piggyback plant, trailing blackberry, and herb-Robert.

### **Wildlife Observations and Wildlife Indicators**

We observed songbirds near the site and observed sign of deer near the site. We would expect to see river otter, chickaree, and coyotes on the property.

### **Topography and Drainage**

The lot is flat up to the bluff and then it is 10.6 feet down and it comes up perhaps 4 feet on the other bank. The building is 247 square feet so not much drainage is necessary. If you excavate only 7 inches, the permeability of the soil is 20 inches per hour.

## **IMPACT ASSESSMENT**

### **Impact Assessment for the Property**

The stream is type F>5 feet wide or it has fish and the stream is over 5 feet wide. The buffer is 150 feet and it goes to 68 feet landward of your southeastern property mark. The stream bluff is northwest of the road line of the lot by 87.3 feet on the southwest side and 84.9 feet on the northwest side.

The previous owners developed the lot they cut down trees, smoothed and graveled areas of the lot (2,890 square feet), built a stairway to the river, and put in a holding tank for septic. The owners want to put in a 19-foot by 13-foot shed. Mitigation of the shed (247 square feet) will be placing two trees or ten shrubs. The owners want to remove 1,885 square feet of gravel and place some trees.

The analysis of the buffer function indicates there will be some disturbance in the five buffer functions (recruitment of large woody debris, shade, bank integrity, runoff filtration, and wildlife habitat). The following sections provide a discussion of potential disturbances to the buffer functions that may occur because of the project.

### **Recruitment of large organic debris**

Recruitment of large organic debris, such as limbs, butts, and trunks of trees may provide structure for the stream. They are typically recruited from one tree height of the stream except those from very steep slopes or trees carried by mass wasting. Pieces of the trees that are dead will fall and it would contribute to being pieces of large organic debris. However, this is a stream, it flows across South Cascade Road, though some lots on its way to the Cascade River, and we are sure the road manager will remove it. There are no large trees on the creek side of High Ridge Drive from pictures (iMap) since the 1998, looks like it was harvested along with the forest cut on the northwest side of the creek. The lot was cut in 2019, long before the Cory family owned it.

Fine organic litter is provided as leaves, needles, and debris that is transported into the stream on air currents or flows in with surface flows from surrounding land. Litter from evergreens is typically provided from trees less than one tree height from the stream, but litter that drops from deciduous trees may be carried further. There is some loss of fine organic debris since the property was cut in 2019 but there will be more fine litter when trees or shrubs are planted.

### **Shade**

Trees and shrubs whose limbs overhang the stream or block the path of sunlight to the stream provide stream shading. The property is southwest of the stream but the rate that the creek flows, water would be in

there for only a few moments and then it would be continue in the shade. We would plant the trees by the bluff edge and there will be no trees removed.

### **Bank stabilization**

Bank stabilization is provided by root structure of vegetation alongside the stream. Root structure, stems, and branches increase the roughness of the side of the stream and reduce velocity and energy of flood events. This is not endangered as the shed to be build will be 50 feet from the stream.

### **Runoff Filtration**

The ability of the buffers to control sediments and erosion depends on several site characteristics including the size of the buffer, soil permeability, presence of vegetation, organic litter, slope, soil type, size of the driveway, and drainage characteristics. Removal of nutrients and dissolved material occurs by action of plants, bacteria, fungi, and adsorption onto soil particles. The water and nutrients tend to be absorbed within properly sized buffers before reaching the stream, unless the flow is channelized or the buffer too narrow.

Your property has greater than a 50 foot buffer in the 30 feet behind the bluff it has excellent permeability. It is greater than 20 inches per hour at 7 inches beneath the ground. The road and driveway, where heavy metals and petroleum products are released from cars is 75 to 100 feet away.

### **Wildlife Habitat**

The fish and wildlife buffer is 150 feet but will be reduced to 50. We will mitigate for the shed (19' x 13') or 247 square feet (Critical Area Site Plan). Mitigation of 247 square feet will require 2 trees (100 square foot per tree) or 10 shrubs (25 square foot per shrub).

### **Sequence of Mitigation**

All proposed alterations to critical areas or associated buffers shall require mitigation sufficient to provide for and maintain the functions and values of the critical area or to prevent risk from a critical areas hazard and shall give adequate consideration to the reasonable and economically viable use of the property.

#### **(i) Avoid the impact altogether by not taking a certain action or parts of an action.**

Before they hired their original consultant, Jason and Joy Cory wanted to put up 20-foot-by-20-foot shed. They hired him and were told that the stream has a 50-foot setback on the top of the bluff. They abandoned their plans for a 20-foot by 20-foot shed and put in a design for 13-foot by 19-foot shed and moved toward the road so it would fit on to the property.

#### **(ii) Minimize the impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.**

We constructed a smaller shed moved it away from the stream. They will remove gravel and install plants.

#### **(iii) Rectify the impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project or activity.**

They will remove the gravel that gets to the edge of the bluff and only keep a pathway to the area of the stairs, want to remove the stairway down the river bluff, and will plant at least 2 trees or 10 shrubs.

#### **(iv) Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.**

They will reduce impacts by the reclaiming the much of what is covered in gravel and eliminating the stairway down the bluff. By getting rid of the gravel paving they will have a small path that goes to the stair area, they will reduce their walking area and have it be more of a buffer. They will plant other trees and shrubs besides what is for mitigation.

**(v) Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.**

We will compensate for the shed by getting rid of the gravel paving, and installing extra trees or shrubs besides the mitigation.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Geologically Hazard**

There is bluff above the creek that is 10.6 feet high, and the buffer is 30 feet wide. The bluff is northwest of the road line of the lot by 88 feet on the southwest side and 86 feet on the northwest side. The bluff will be mitigated by a buffer that it 30 feet wide.

An alluvial fan will lose its load as it turns 35 degrees to the right and no longer has sides on it that are of any impact. The fan hazard is gone but there would be water. Water would travel to the north-northeast over a very straight distance of 1,080 feet. It would pass the property because the site is more than 10 feet higher than the stream and to the north is continually lower.

### **Fish and Wildlife Habitat**

The subject property contains the fish and wildlife buffer for the stream. The stream is type F>5 feet wide, it could have fish and the stream is over 5 feet wide. The buffer is 150 feet and it goes to 68 feet landward of your southeastern property mark. We need to have the buffer reduced to 50 feet or the 13-foot by 19-foot shed will not fit on the property. The mitigation is 247 square feet and that space is 2 trees (100 square foot per tree) or 10 shrubs (25 square foot per shrub).

### **Proposed Mitigation**

The mitigation should be within 50 feet of the stream but the owners should say where the plants would go to mitigate the fish and wildlife buffer. There are no trees to be removed in the buffered area. We believe that the entire width of the bluff at least 5 feet wide, with the exception where the trail is going to it would benefit from snowberry plants it is a very at erosion control and provides excellent ground cover quality and it is low and survives pruning.

To plant 247 square feet of mitigation area, plant three trees, or eleven shrubs, or any combination that equals 247 square feet. As you place the plants, they will look good in small clumps.

The recommended criteria for successful buffer enhancement efforts is survival of 85 percent of all plantings within the enhanced area over the 5 year period and survival of 100 percent of the species through the first year. Percent survivorship shall be calculated through a direct count of all living specimens. If some of the plants fail, the method of failure will be determined (i.e., soil conditions, predation, moisture conditions, etc.) and recommendations will be made to rectify the problems, and either that specie or another specie shall be planted. Plant additional trees and shrubs for insurance against their loss during the first year.

### **TREES**

big-leaf maple (*Acer macrophyllum*) sunny, dry,  
cascara (*Rhamnus purshiana*), dappled shade to sunny, damp,  
choke cherry (*Prunus virginiana*), sunny, dry,

Douglas maple (*Acer glabrum*), shade to sunny, dry,  
Douglas-fir (*Pseudotsuga menziesii*), sunny and dry,  
grand fir (*Abies grandis*), dappled shade to sun, damp,  
paper birch (*Betula papyrifera*), dappled shade to sunny, any condition,  
Pacific silver fir (*Abies amabilis*), shade to sunny, dry,  
Puget cherry (*Prunus pugetensis*), dappled shade to sunny, dry,  
shore pine (*Pinus contorta*), sunny, moist,  
western hemlock (*Tsuga heterophylla*), shade to sunny, dry,  
western red cedar (*Thuja plicata*), sunny, moist (must be shaded for 4 years), and  
western white pine (*Pinus monticola*), shade to sunny, dry.

#### SHRUBS

black twinberry (*Lonicera involucrata*), sun, near OHWM,  
creeping juniper (*Juniperus communis*), sunny, anywhere,  
dull Oregon grape (*Mahonia nervosa*), shade, dry to moist,  
Fool's-Huckleberry (*Menziesia ferruginea*), shade, near OHWM,  
high-bush cranberry (*Viburnum edule*), dappled shade, moist, near OHWM,  
Indian plum (*Oemleria cerasiformis*), dappled shade, dry,  
Nootka rose (*Rosa nutkana*), shady or sunny, anywhere,  
Pacific ninebark (*Physocarpus capitatus*), sun, near OHWM,  
red blueberry (*Vaccinium parvifolium*), shade, wet or dry,  
red currant (*Ribes sanguineum*), dappled shade to sunny, dry,  
red elderberry (*Sambucus racemosa*), sun, or dappled shade, any dryness condition,  
red-osier dogwood (*Cornus stolonifera*), sunny, near OHWM,  
salal (*Gaultheria shallon*), dappled shade, any dryness condition,  
snowberry (*Symphoricarpos albus*), shade, wet or dry,  
thimbleberry (*Rubus parviflorus*), sun, dry to moist,  
vine maple (*Acer circinatum*), shady to dappled shade, moist,  
western red huckleberry (*Vaccinium parvifolium*), shady, dry, and  
wood rose (*Rosa gymnocarpa*), dappled shade, dry.

We recommend Plants of the Pacific Northwest Coast (Pojar & MacKinnon, Lone Pine Press, 1994) as a guide to identification and habitats for any native species to be planted at the site. We also recommend Gardening with Native Plants of the Pacific Northwest (Arthur R. Kruckeberg, University of Washington Press, 1996) to provide planting ideas for site development.

#### General Construction Recommendations

- Place the silt fence about five feet away from shed on the two-downsloping sides. When you make the gravel area smaller, put silt fence at the edge nearest the stream, and have the four foot ends trap the silt by making it go toward the road. The silt fence will set construction limits and minimize transport of particulate matter, including concrete, out of the building area.
- Erect the silt fence with the skirt on the upgradient side of the support posts. The skirt should be put into a trench, a slit cut into the topsoil, or the skirt may be held down to bedrock or soil scalped free of vegetation by covering it with a sand or pea-gravel berm to press the skirt to the ground surface.
- Within the dry season construct the shed, if you cannot construct during dry season, you must put polyethylene on the stockpiles.
- No construction or waste materials should be stored or placed waterward of the silt fence.
- Seed disturbed areas of the site with native grass immediately upon completion of construction and remove silt fence once site vegetation is established.

March 28, 2024

**Report: Fish & Wildlife and Geohazard Report (Jason and Joy Cory)**

- Cover all concrete footings, slabs and all outdoor brickwork with polyethylene sheeting if rain is likely to occur within 3 days of concrete work. Neutralize concrete spills or runoff by the application of sodium bicarbonate (baking soda) to lower the pH and neutralize toxics.

**CLOSURE**

This report is intended for use by Jason and Joy Cory and their representatives for the project described in this report. It is not to be used by other parties at or away from the project site without the specific consent of Edison Engineering.

The scope of our site investigation was to observe and report on fish, wildlife, and habitat conditions. This report is intended to reduce uncertainty regarding the biological conditions at the site. Primary evidence regarding priority habitat and species were obtained from state maps, which may have incorrectly assessed habitat or missed sightings of priority species. The conclusions and recommendations contained in this report are based on conditions observed during our site visits. If, during site development, different conditions from those described in this report are observed or appear to be present, we must be advised promptly so that we can review these conditions and reconsider and/or modify our conclusions and recommendations where necessary.

We appreciate the opportunity to be of service to you. Should you have any questions concerning this report or require further information, please contact Bob Bailey at (360) 202-4884.

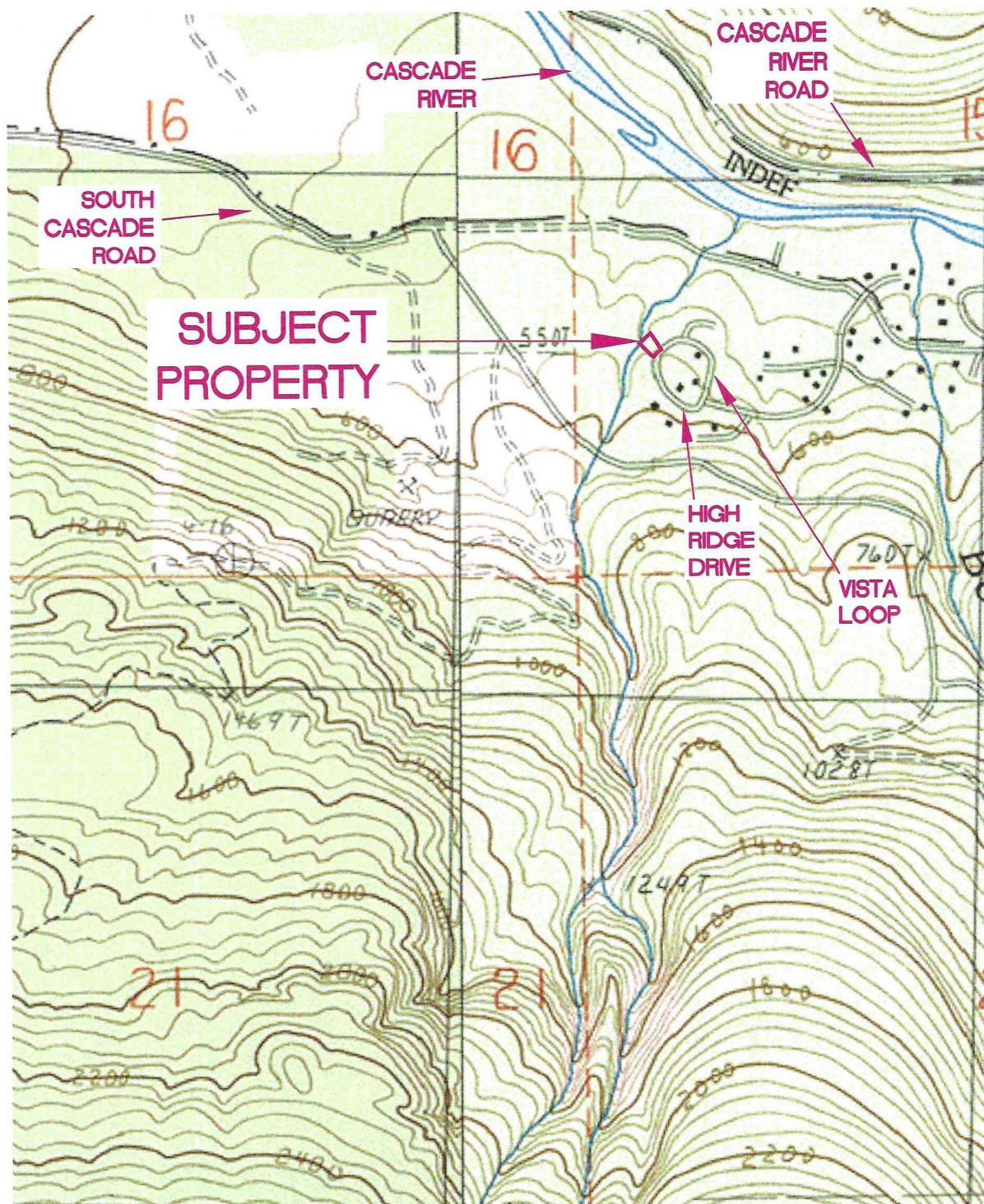
Sincerely,

**EDISON ENGINEERING**

*Robert P Bailey*

Robert P. Bailey, M.S.C.E., P.E.  
Biologist / Geotechnical Engineer





SECTION 15, TOWNSHIP 35N, RANGE 11E  
 LATITUDE: 48°30'56.04", LONGITUDE: -121°22'16.37"



REFERENCE: USGS 7.5-MIN TOPOGRAPHIC MAP  
 BIG DEVIL PEAK QUADRANGLE  
 CREATED 1989.

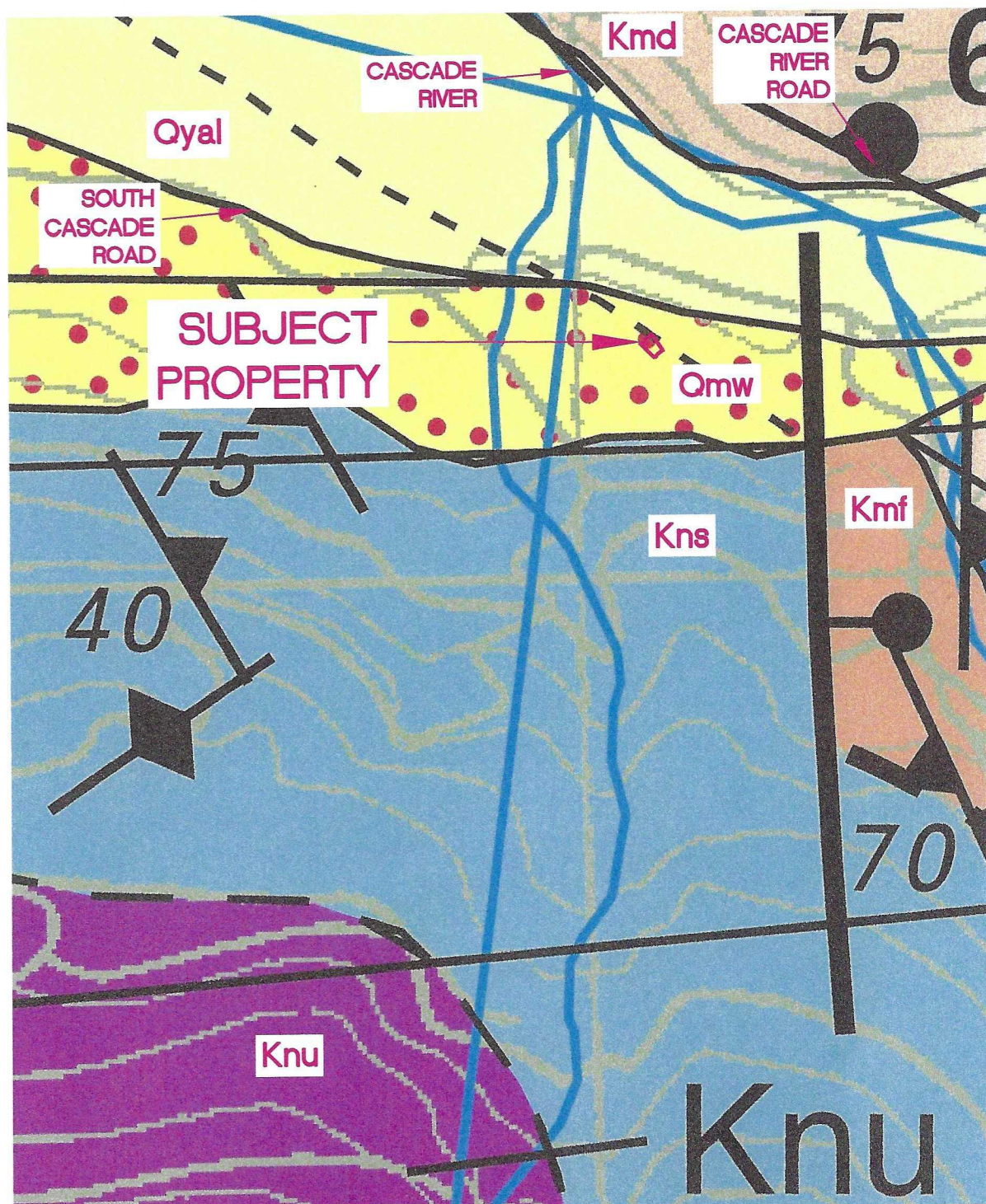
JOB NO.: 224006  
 DESIGNED BY: rpb  
 DRAWN BY: rpb  
 CHECKED BY: rpb

**EDISON  
 ENGINEERING**

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**TOPOGRAPHIC / VICINITY MAP**  
 CORY: 63254 HIGH RIDGE DRIVE  
 SKAGIT COUNTY, WASHINGTON

DATE: 2/12/2024 SCALE: 1"=1000 N: n/a



SECTION 15, TOWNSHIP 35N, RANGE 11E  
 LATITUDE: 48°30'56.04", LONGITUDE: -121°22'16.37"

GRAPHIC SCALE



( IN FEET )

1 inch = 1000 ft.

REFERENCE:

GEOLOGIC MAP OF THE MOUNT BAKER 30- by 60-MINUTE  
 QUADRANGLE, WASHINGTON, R.W. TABOR ET AL, WASHINGTON  
 STATE DEPARTMENT OF NATURAL RESOURCES, DIVISION OF  
 GEOLOGY AND EARTH RESOURCES, SERIES I-2660, 2003.

JOB NO.: 224006

DESIGNED BY: rpb

DRAWN BY: rpb

CHECKED BY: rpb

**EDISON  
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**GEOLOGIC MAP**  
 CORY: 63254 HIGH RIDGE DRIVE  
 SKAGIT COUNTY, WASHINGTON

DATE: 2/12/2024

SCALE: 1"=1000

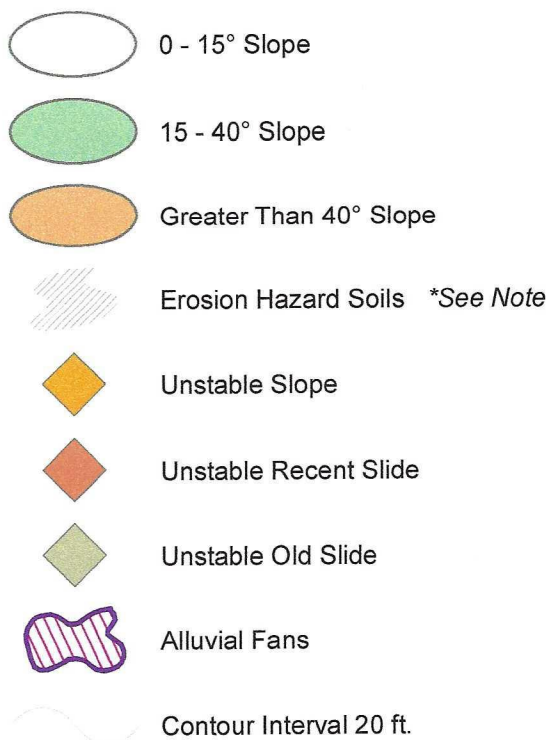
v n/a

# SKAGIT COUNTY

## Potential Landslide and Erosion Areas

June 6, 2012

### Legend



\*Soil types are identified on the  
Soil Survey of Skagit County as Soil units-

#1 Andic Cryochrepts  
#3 & #4 Andic Xerochrepts  
#13 Birdsvie  
#47 & #48 Dystric Xerochrepts  
#50 & #51 Dystric Xerothents  
#63 & #65 Guemes  
#69 Hoogdal  
#90 Lithic Haploxerolls  
#91 Marblemount  
#99 Mundt  
#150 & #151 Typic Cryorthods

