



DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 16-131522-LO

Project Name/Address: Miller Residence 2389 Killarney Way

Planner: David Wong

Phone Number: 425-452-4282

Minimum Comment Period: 07/14/2016

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other:

OTHERS TO RECEIVE THIS DOCUMENT:

- State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- Attorney General ecyolyef@atg.wa.gov
- Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

City of Bellevue Submittal Requirements	27a
ENVIRONMENTAL CHECKLIST	
5/3/16	
If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.	
BACKGROUND INFORMATION	
Property Owner: MacPherson Construction & Design	
Proponent: MacPherson Construction & Design	
Contact Person: Daniel Buchser (If different from the owner. All questions and correspondence will be directed to the individual listed.)	
Address: 21626 S.E. 28th Street Sammamish, WA 98075	
Phone: (425) 391-3333	
Proposal Title: Miller Residence	
Proposal Location: 2339 Killarney Way (Street address and nearest cross street or intersection) Provide a legal description if available. See attached	
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: New Single Family Residence	
2. Acreage of site: .34A	
3. Number of dwelling units/buildings to be demolished: N/A	
4. Number of dwelling units/buildings to be constructed: 1	
5. Square footage of buildings to be demolished: N/A	
6. Square footage of buildings to be constructed: 7,126	
7. Quantity of earth movement (in cubic yards): 750 CY	
8. Proposed land use: Single Family Residential	
9. Design features, including building height, number of stories and proposed exterior materials: New 3-story contemporary flat roof house stepping up the slope from waterfront. Exterior of stucco, metal, wood & glass.	
10. Other	

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

Completion: Spring/Summer 2017

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

No future plans

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

Critical Areas Report, Geotechnical Investigation Report; SEPA checklist

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.

None known

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.

Building & Land Use Permits

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
- 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)? **+/-40%**
- 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.

**See attached Geotechnical Investigation Report (GIR). Silty Sand
Qva Outwash Soils**

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

NO, no visible indications.

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

Excavation for foundation & construction for new SFR stepping up the steep slope. All attempts will be made for cut/fill materials to be balanced on-site. Any excess material will be removed to an approved site.

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

Erosion is always a possibility with clearing and excavating in the Pacific Northwest.

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

± 30%.

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

All normal measures will be taken to protect against erosion; TESC program will be in place and monitored. Erosion Control regulated by 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.

Normal emissions from construction equipment during construction; emissions from completed project will be normal for Single Family Residence.

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

None that we are aware of.

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

None other than use of low-emission equipment where applicable and available.

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.

Lake Washington to the west.

- (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.

Yes, new SFR will be built within the 200 ft Shoreline zone.

- (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.

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 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.

Storm water runoff will be collected into a tight-line system utilizing oil-water separator catch basins where appropriate; and discharged into the Lake.

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

Oil-water separator catch basins will be used where appropriate.

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

All stormwater will be collected and diverted away from the steep slope in order to reduce stability impacts to the slopes. The new Stormwater system will tie into the existing on-site storm line which outfalls at the lake.

4. Plants

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

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, 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?

Non-native invasive plants will be removed from affected Critical Areas.

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

None noted

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

Restoration of existing plantings – see Enhancement Plans by AOA.

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: 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 per the attached Habitat Assessment Report

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

Unknown

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

Critical Areas clean-up and restoration – see Enhancement Plans by AOA.

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.

Electricity & Natural Gas will be used for heating, lighting & energy needs.

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

No

- b. 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:

Washington State Energy Code (WSEC) compliance; use of low energy lighting, appliances & equipment where feasible.

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.

Unlikely, only as might occur on any construction site.

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

Only normal fire & rescue services in the event of an incident.

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

Construction site safety programs in place and aggressively administered.

- b. Noise

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

None

- (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.

Normal construction noises during construction. Contractors will abide by COB construction noise ordinances. No long term noise.

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

*Normal measures to control & limit noise during construction.
Noise regulated by BCC 9.18*

8. Land and Shoreline Use

- 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.

None

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

No

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

R1.8

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

Single Family, Low Density SF-L

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

N/A

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

Yes, steep slopes. See attached Survey. Shoreline to Lake Washington

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

4-6

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

None

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

N/A

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

Bellevue Land Use Permit processes.

9. Housing

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

One – high income house

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

None.

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

None

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?

40' max, stucco, metal, wood & glass

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

View from street to lake will be affected although not completely blocked. Adjacent houses will only be minimally affected.

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

Designed by local experienced architect who has done several waterfront homes.

11. Light and Glare

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

Normal residential lighting will be used during evening hours.

- 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 that we are aware of.

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

Use of shielded (dark-sky) fixtures where appropriate and applicable.

12. Recreation

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

Chisum Park (public park)

- 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

DW

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.

None

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

None necessary

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.

Existing driveway off Killarney Way

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

Unknown

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

4-6 new, none eliminated

- 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.

4-6, morning & evening

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

None

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.

N/A.

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

None

16. Utilities

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

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.

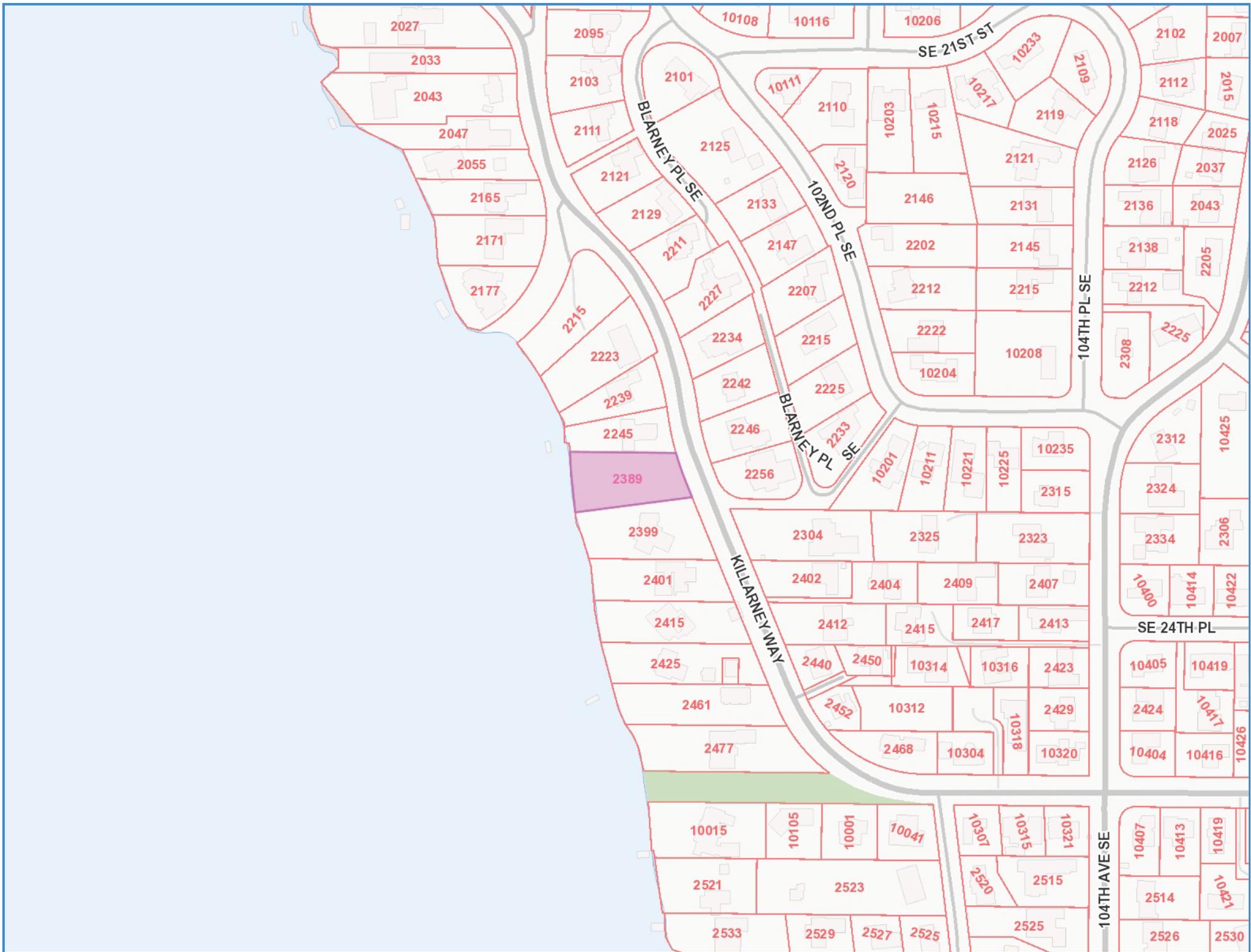
N/A.

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..... 05/03/16





FOR

Building on a Steep Slope,
Stabilization & Enhancement

Miller Residence

2389 Killarney Way
Bellevue, Washington 98004

February 20, 2015

Updated February 26, 2016

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PROPERTY IDENTIFICATION

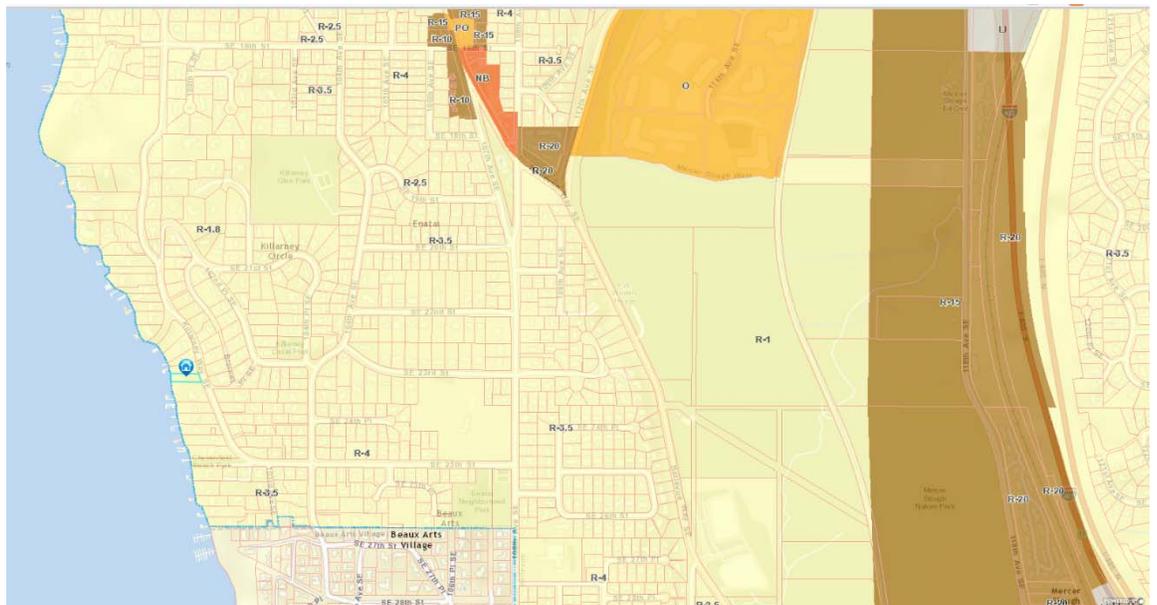
ADDRESS: 2389 Killarney Way

LEGAL DESCRIPTION:

THAT PORTION OF THE NORTH 60 FEET OF THE SOUTH 210 FEET OF GOVERNMENT LOT 1, SECTION 5, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING WESTERLY OF A. S. BURROWS ROAD NO. 2, KING COUNTY ROAD NO. 2228 {100TH AVENUE SE):
TOGETHER WITH THE SHORE LANDS OF THE SECOND CLASS LYING IN FRONT OF, ADJACENT TO, OR ABUTTING UPON SAID PROPERTY:
SITUATE IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

AKA: LOT 2, CITY OF BELLEVUE BLA No. 14-147071 LW, STR 5-24-05

KING COUNTY PARCEL NO.: 052405-9085



PROJECT TEAM

TEAM LEAD, ARCHITECT & GENERAL CONTRACTOR:

MacPherson Construction & Design, LLC
21626 S.E. 28th. Street
Sammamish, WA 98075
(425) 391-3333
Contact: Robert Sorensen, Architect
bob@macphersonconstruction.com

GEOTECHNICAL ENGINEER:

Yonemitsu Geological Services
10321 S.E. 192nd. Street
Renton, WA 98055
(425) 814-3970
Contact: Robert Pride, P.E.
mpgeo@aol.com

ENVIRONMENTAL CONSULTANT & LANDSCAPE DESIGN:

Altmann Oliver Associates, LLC
P.O.Box 578
Carnation, WA 98014
(425) 333-4535
Contact: John Altmann, Ecologist
John@altoliver.com

INTRODUCTION AND SCOPE OF PROPOSAL

The work of this proposal is to allow for the development of a new single family residence on a steep slope site through careful planning, mitigation and enhancement of the steep slope areas. While much of the site has been maintained in the past as grass recreation and vehicle parking areas, the steepest portions of the site have become overgrown with blackberries and other invasive plants. This proposal will provide structural stabilization of the slope areas through carefully engineered and constructed foundations which will bear the weight of the new structure on more stable geologic materials, provide additional support for the upper sloped areas and reduce the loading on the lower sloped areas. The natural slope will be interrupted by the house, but beyond the house footprint the slope will essentially remain and be cleared of invasive plants and restored and enhanced with new indigenous plant materials. In addition, the slope enhancement will provide for more reasonable access around the new house for life safety and home maintenance. This proposal offers significant restoration and mitigation measures that will not only improve the local habitat but will also significantly improve stormwater runoff volume and quality.

The scope of the work is primarily the construction of a new Single Family Residence along with related landscaping and site improvements for access, vehicles and recreation. Driveway and walkways at the high side of the house will be concrete while all other pathways and terraces will be constructed of pervious materials. The primary recreation area will be the existing flat manicured lawn area adjacent to the shoreline. The vast majority of the existing steep slope areas will be cleared of invasive and unwanted plants and will be restored and planted with new native and select plantings. The disturbed areas will be mitigated for by the significant restoration effort.

CRITICAL AREAS AFFECTED

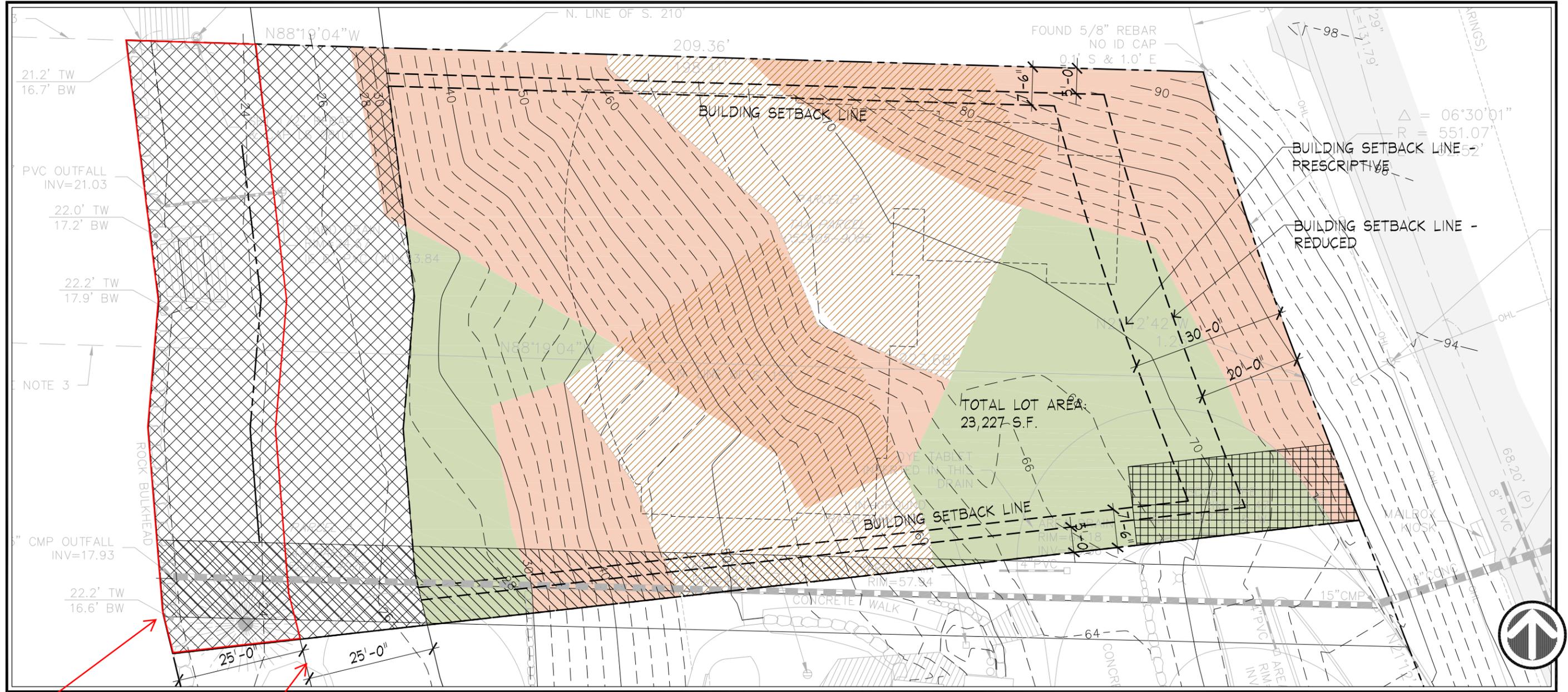
The critical areas affected by this proposal consist of a steep (40%+) slope area running westward from the street approximately 200 feet to Lake Washington, and extending to both north and south side property lines and beyond. The steep slope is interrupted about half way down the slope by a reasonably flat pad ± 40 feet wide and at the bottom by a flat area ± 50 feet wide adjacent to the shoreline, with a ± 5 foot high rock bulkhead at the water. Combined with top and bottom of slope buffers/setbacks, the site is nearly 80% encumbered. The critical areas are depicted on the **EXISTING SITE PLAN – STEEP SLOPES AND SITE ENCUMBERANCES**, Page 7. The northern and southern property boundaries abut other single family residences; the east boundary fronts on Killarney Way (100th Avenue SE) and on the west is Lake Washington shoreline. See the **Site Photographs of Existing Conditions** Appendix F.

RELEVANT CODE SECTIONS

Relevant code sections include:

- 20.25H.055** Uses and development allowed within Critical Areas – Performance standards
- 20.25H.120** Designation of critical areas and buffers
- 20.25H.125** Performance standards – Landslide hazards and steep slopes.
- 20.25H.135** Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes.
- 20.25H.140** Critical areas report – Additional provisions for landslide hazards and steep slopes.
- 20.25H.145** Critical areas report – Approval of modification.
- 20.25H.220** Mitigation and restoration plan requirements.
- 20.25H.250** Critical areas report – Submittal requirements.
- 20.25H.255** Critical areas report – Decision criteria.
- 20.30P.140** Decision criteria for a Critical Areas Land Use Permit.

The criteria and requirements of these sections has been addressed and justifications given in detail in the following section.



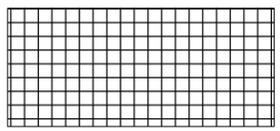
EXISTING SITE PLAN - STEEP SLOPES AND SITE ENCUMBERANCES

Scale: 1" = 20'-0"

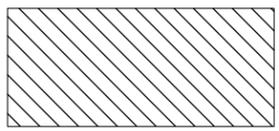
SITE PLAN LEGEND

Buffer Area

Setback Area



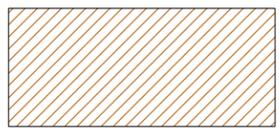
EGRESS/INGRESS EASEMENT: 650 S.F.



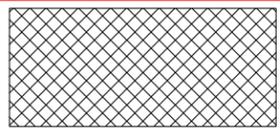
STORM SEWER EASEMENT: 1,655 S.F.



STEEP SLOPES: 7,250 S.F.



TOP OF STEEP SLOPE BUFFER: 3,550 S.F.



50' SHORELINE BUFFER: 5,881 S.F.



BUILDABLE AREA: 5,177 S.F.

MACPHERSON
CONSTRUCTION & DESIGN
21626 SE 28th ST. SAMMAMISH WA 98075-7125
PH. 425.391.3333 FAX. 425.557.2841

Killarney Property

2389 Killarney Way
Bellevue, Washington 98004
Parcel #: 052405-9085

EXISTING SITE PLAN

DATE	BY	DESCRIPTION
02/20/15	BOB	CRITICAL AREAS REPORT

Separate buffer and setback

DRAWING NUMBER:
Critical Areas Report page 7
OF DRAWINGS

JUSTIFICATIONS & CODE RESPONSE

AVOIDANCE: It does not appear that avoidance is viable option. The entire site is severely sloped, except a small area near the street and the area immediately adjacent to Lake Washington which is encumbered by Shoreline buffer. No development project would be able to completely avoid impacting the sloped areas.

MINIMIZATION: This proposal represents the minimal amount of work necessary to allow development of a new single family residence consistent with the neighboring developments and in keeping with the value of the area, both fiscal and lifestyle. Originally the lot was just too small to develop at all, but with a recent Boundary Line Adjustment with the property to the south we now have a lot which will allow for reasonable new development while still maintaining and protecting much of the valued natural characteristics of the site. Other added benefits of this proposal are that the slope restoration and enhancement will continue to slow the stormwater runoff, allowing the water to infiltrate naturally into the now stabilized slope, and it will provide incentive for additional, substantial habitat restoration on the remaining portions of the steep slope.

MITIGATION: This proposal offers a substantial program of restoration and mitigation in exchange for permission to build on and stabilize the existing steep slopes. This restoration and mitigation will significantly improve the natural habitat and habitat functions, will improve both the quality and volume of stormwater runoff, will provide for ease of monitoring and maintenance, and will allow the human occupants to observe and enjoy nature in this newly improved environment.

Further discussion and justifications for each of the applicable code sections is provided in interlineated format below:

20.25H.055 Uses and development allowed within Critical Areas – Performance standards

C.3.m. Stabilization Measures. See LUC 20.25E.080.E for standards regulating shoreline stabilization measures. Proposed stabilization measures within a critical area or critical area buffer to protect against streambank erosion or steep slopes or landslide hazards may be approved in accordance with this subsection.

- i. When Allowed. New or enlarged stabilization measures shall be allowed only to protect existing primary structures and infrastructure, or in connection with uses and development allowed pursuant to subsection B of this section. Stabilization measures shall be allowed only where avoidance measures are not technically feasible.

The work of this proposal is needed to protect the residential development and environmental infrastructure from slope failure which, in extreme case, over time, could compromise the primary residence structure, but, in any event, would certainly be harmful to the environment. As noted previously, it is not possible to develop this lot to any degree and still avoid any impact to the steep slopes.

- ii. Type of Stabilization Measure Used. Where a stabilization measure is allowed, soft stabilization measures shall be used, unless the applicant demonstrates that soft stabilization measures are not technically feasible. An applicant asserting that soft stabilization measures are not technically feasible shall provide the information relating to each of the factors set forth in subsection C.3.m.iii.(D) of this section for a determination of technical feasibility by the Director. Only after a determination that soft stabilization measures are not technically feasible shall hard stabilization measures be permitted.

See below:

- iii. Definitions.
 - a. Hard Stabilization Measures. As used in this part, "hard stabilization measures" include: rock revetments, gabions, concrete groins, retaining walls, bulkheads and similar measures which present a vertical or nearly vertical interface with the water.
 - b. Soft Stabilization Measures. As used in this part, "soft stabilization measures" include: biotechnical measures, bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to provide stabilization while mimicking or preserving the functions and values of the critical area.
 - c. Avoidance Measures. As used in this part, "avoidance measures" refer to techniques used to minimize or prevent erosion or slope collapse that do not involve modification of the bank or slope. "Avoidance measures" include vegetation enhancement, upland drainage control, and protective walls or embankments placed outside of the critical area and critical area buffer.
 - d. Technically Feasible. The determination of whether a technique or stabilization measure is "technically feasible" shall be made by the Director as part of the decision on the underlying permit after consideration of a report prepared by a qualified professional addressing the following factors:

- (1) Site conditions, including topography and the location of the primary structure in relation to the critical area;

The natural topography is unavoidable and the primary structure will be located within the steep slope area, utilizing the existing flatter areas to the greatest extent possible.

- (2) The location of existing infrastructure necessary to support the proposed measure or technique;

The restoration and mitigation work of this proposal will be done during the construction of the new primary residence. All public infrastructure is located in the street at the top of the slope and will be trenched to the new structure. Due to the severity of the steep slope, much of the restoration work will be done by hand or with small power equipment thereby further respecting the environment.

- (3) The level of risk to the primary structure or infrastructure presented by erosion or slope failure and ability of the proposed measure to mitigate that risk;

While the primary structures foundation will reach deeply into stable material, any surface slippage would be detrimental to having reasonable access around the structure for maintenance and life safety activities and would be detrimental to the environment. By stabilizing the slope, several goals are achieved:

- *Continued access around the house for fire & life safety will be assured.*
- *Any surficial slippage will be stemmed thereby providing for a stable and safe environment.*
- *Stormwater runoff will be controlled to prevent contaminated water & materials from making their way into sensitive waterways.*
- *The restoration & mitigation measures will provide a far superior environment for native species than currently exists.*
- *Ready access to the stabilized slope will allow maintenance and monitoring for any future failures.*

- (4) Whether the cost of avoiding disturbance of the critical area or critical area buffer is substantially disproportionate as compared to the environmental impact of proposed disturbance, including any continued impacts on functions and values over time; and

The work of this proposal is needed to protect the residential development and environmental infrastructure from slope failure which, in extreme case, could jeopardize the primary residence structure, but, in any event, would be harmful to the environment. To avoid doing anything more at this time would certainly be detrimental to the natural environment below the slope.

On the other hand, as noted above, the proposed restoration & mitigation measures will provide a far superior environment for native species than currently exists and will greatly enhance the local water quality.

- (5) The ability of both permanent and temporary disturbance to be mitigated.

*As noted above and throughout this report, we are proposing substantial mitigation work in exchange for being granted permission to construct on and stabilize this slope. In addition, full temporary erosion & sedimentation control (TESC) measures will be in place during the work of this proposal. See **Critical Areas Evaluation, Enhancement & Mitigation Plans**, Appendix E.*

20.25H.125 Performance standards – Landslide hazards and steep slopes.

In addition to generally applicable performance standards set forth in LUC 20.25H.055 and 20.25H.065, development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

- A. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

This proposal is for a tiered structure on 6 levels which step down the slope thereby minimizing the disruption to the existing slope outside of the building footprint.

- B. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

The site is pretty uniform in its natural landforms and vegetation except within the shoreline buffer area. We are utilizing the existing flatter areas near the top of the slope for the driveway and vehicle access and we are keeping the new structure well back (nearly 100 feet) from the shoreline environment.

- C. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

This proposal will actually strengthen the sloped areas adjacent to the neighboring properties with a firmly engineered structure bearing on stable subgrade materials.

- D. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;

Retaining walls where feasible will be used to minimize disturbance to the existing steep slope areas.

- E. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;

We will try to minimize the impervious areas to the extent possible, however, introducing water into a steep slope environment can be detrimental to the slope stability. All drainage systems will be designed and engineered to protect both the environment and the stability of the slope by tracking, monitoring and directing runoff flows to the lake.

- F. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;

This proposal is to maintain the existing grade around the building to the maximum extent feasible. No additional yard areas are proposed, just using the existing pathway to access the existing flat lawn area along the shoreline.

- G. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;

The retaining of the steep slope will be solely by the proposed structures foundation. No additional retaining devices are proposed.

- H. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

The proposed structure is tiered to run with the slope and minimize grade changes outside the building footprint. The decks on the downhill side of the structure are supported on columns to minimize any further disruption to the slope.

- I. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

Not applicable.

- J. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210. (Ord. 5680, 6-26-06, § 3)

Mitigation for the steep slope disturbances include enhanced planting, habitat restoration and shoreline modifications for habitat enhancement.

20.25H.135 Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes.

In addition to the general mitigation and restoration plan requirements of LUC 20.25H.210, each mitigation or restoration plan for geologic hazard critical areas shall include:

A. Erosion and Sediment Control Plan.

The erosion and sediment control plan shall be prepared in compliance with requirements set forth in Chapter 23.76 BCC, now or as hereafter amended. Such plans shall also include, if not otherwise addressed in Chapter 23.76 BCC, the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability;

The permit submittal package will include a full Temporary Erosion and Sedimentation Control (TESC) plan.

B. Drainage Plan.

The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with applicable City codes and standards. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;

The permit submittal package will include an engineered drainage plan which addresses all necessary drainage and control criteria.

C. Monitoring Surface Waters.

If the Director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site. (Ord. 5680, 6-26-06, § 3)

The permit submittal package will include an engineered drainage plan which addresses all necessary drainage and control criteria including the metering of runoff water into the lake.

20.25H.140 Critical areas report – Additional provisions for landslide hazards and steep slopes.

In addition to the provisions of LUC 20.25H.230, any proposal to modify a landslide hazard or steep slope or associated critical area buffer through a critical areas report shall comply with the requirements of this section.

A. Limitation on Modification.

The provisions for coal mine hazard areas in LUC 20.25H.130 may not be modified through a critical areas report.

Not applicable

B. Area Addressed in Critical Area Report.

In addition to the general requirements of LUC 20.25H.230, the following areas shall be addressed in a critical areas report for geologically hazardous areas:

1. Site and Construction Plans. The report shall include a copy of the site plans for the proposal and a topographic survey;

See the Critical Areas Evaluation, Enhancement & Mitigation Plans, Appendix E & the Topographic Survey, Appendix H.

2. Assessment of Geological Characteristics. The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region;

See the Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C & the Geotechnical Investigation & Slope Reconnaissance Report, Appendix D.

3. Analysis of Proposal. The report shall contain a hazards analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties; and

See the Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.

4. Minimum Critical Area Buffer and Building Setback. The report shall make a recommendation for a minimum geologic hazard critical area buffer, if any, and minimum building setback, if any, from any geologic hazard based upon the geotechnical analysis.

Since we are proposing to build within the steep slope areas, setbacks do not apply. The new structure will be founded per the recommendations of the Geotechnical Investigation & Slope Reconnaissance Report, Appendix D.

20.25H.145 Critical areas report – Approval of modification.

Modifications to geologic hazard critical areas and critical area buffers shall only be approved if the Director determines that the modification:

- iv. Will not increase the threat of the geological hazard to adjacent properties over conditions that would exist if the provisions of this part were not modified;
*This proposal will basically be stabilizing the existing slope thereby minimizing the potential hazards to adjacent properties. Reference the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D.***
- v. Will not adversely impact other critical areas;
*By working within the Building Setback lines and keeping cuts & retaining structures low, we expect no adverse impacts to other critical areas. In addition, the restoration/mitigation of the environment will have a positive impact on the adjacent properties. Reference the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D, the Critical Areas Evaluation, Enhancement & Mitigation Plans, Appendix E, and the Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***
- vi. Is designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than would exist if the provisions of this part were not modified;
*By stabilizing this slope we will be minimizing the potential hazards to, or caused by this project. Reference the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D.***
- vii. Is certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington;
*See the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D and Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***
- viii. The applicant provides a geotechnical report prepared by a qualified professional demonstrating that modification of the critical area or critical area buffer will have no adverse impacts on stability of any adjacent slopes, and will not impact stability of any existing structures. Geotechnical reporting standards shall comply with requirements developed by the Director in City of Bellevue Submittal Requirements Sheet 25, Geotechnical Report and Stability Analysis Requirements, now or as hereafter amended;
*See the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D and Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***
- ix. Any modification complies with recommendations of the geotechnical support with respect to best management practices, construction techniques or other recommendations; and
*All construction will be done in strict adherence with the recommendations, practices and techniques outlined in the **Geotechnical Investigation & Slope Reconnaissance Report, Appendix D and subsequent communication with the Geotechnical Engineer. The Geotechnical Engineer will monitor the construction work in progress.***

- x. The proposed modification to the critical area or critical area buffer with any associated mitigation does not significantly impact habitat associated with species of local importance, or such habitat that could reasonably be expected to exist during the anticipated life of the development proposal if the area were regulated under this part.

*See the **Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***

20.25H.220 Mitigation and restoration plan requirements.

The applicant shall submit a mitigation or restoration plan for approval as part of the review of the underlying proposal. Where standard restoration requirements or templates have been approved by the Director for the proposal in question, those requirements or templates may be followed without need for submission of an individual mitigation or restoration plan. These general requirements shall be modified for areas of temporary disturbance included as part of an approved Critical Areas Land Use Permit or use or development allowed under LUC [20.25H.055](#), so long as the requirements of subsection H of this section are met.

A. Plan Phases.

Where an applicant is seeking modifications to this part or Part [20.25E](#) LUC through a critical areas report pursuant to LUC [20.25H.230](#), the mitigation plan required for the proposal may be submitted in phases. A conceptual plan shall be submitted as part of the critical areas report and approved with the land use approval for the proposal. A detailed plan shall be approved prior to or with approval of the first permit or other approval required to perform work associated with the proposal.

The work of this proposal will be phased only to the extent of normal construction phasing of work.

B. Restoration and Mitigation Project Details.

The plan shall be prepared by a qualified professional and shall at minimum include the content identified in this section. Additional requirements may be found for specific critical areas in LUC [20.25H.085](#) (streams); [20.25H.105](#) (wetlands); and [20.25H.135](#) (geologic hazard areas). Additional detail about the contents of restoration and mitigation plans may be developed by the Director in submittal requirements. The Director may waive any of the plan requirements where, in the Director's discretion, the information is not necessary to develop a mitigation or restoration plan that addresses the impacts of the proposed action.

1. A written report identifying environmental goals and objectives of the restoration or compensation proposed, based on replacing or restoring the critical area and critical area buffer functions and values impacted by the proposal;

This report is for that purpose.

2. Measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation or restoration project have been successfully attained and whether or not the requirements of this part have been met; and

Included within this report.

3. Written specifications and descriptions of the restoration or mitigation proposed.

Included within the body of this report.

- a. When the mitigation plan is submitted as a single-phase, or for the detailed plan phase when submitted in two phases, these written specifications shall be accompanied by detailed site diagrams, scaled cross sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.
- b. When the mitigation plan is submitted in phases pursuant to subsection A of this section, the written specifications may be general in nature for the conceptual phase, including general identification of areas for work, planting species, size and number. The more precise details may be provided in the detailed plan phase.

C. Timing of Work.

Unless a different time period is established in another section of this part, or is established by the Director in the approval for a specific project, all work required in a mitigation or restoration plan shall be completed prior to final inspection or issuance of a temporary certificate of occupancy or certificate of occupancy, as applicable, for the development.

This is consistent with our proposal.

D. Monitoring Program.

The plan shall include a program for monitoring construction of the mitigation project and for assessing a completed project. The mitigation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five years. The required monitoring period for a plan involving restoration only shall be reduced to a period of not less than three years.

*A monitoring program will be implemented in accordance with the **Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***

E. Contingency Plan.

The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met and such failure would result in significant impact on the critical area or buffer. A plan involving restoration only is not required to include a contingency plan.

*A mitigation plan will be implemented in accordance with the **Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***

F. Assurance Devices.

The Director may require assurance devices in compliance with LUC [20.40.490](#) to ensure that the approved mitigation, monitoring program, contingency plan and any conditions of approval are fully implemented.

Assurance devices will be provided as required.

G. Mitigation for City Park Projects.

Through a critical areas report, impacts of City park projects on critical areas and critical area buffers may be mitigated through restoration or enhancement of critical areas on other City park sites. Such restoration or enhancement may include restoration or enhancement projects completed prior to the proposal for which mitigation is required, so long as the restoration or enhancement project was not performed as mitigation for any other public or private project. The critical areas report shall demonstrate that the proposed mitigation restores the impacted critical area functions and values at least as well as mitigation performed on-site and in-kind associated with the development proposal. The Director may require an NGPE or NGPA be recorded for the mitigation area to ensure that it is maintained in perpetuity.

No impacts to City Parks will be created by the work of this project.

H. Restoration for Areas of Temporary Disturbance.

The Director may impose conditions for the restoration of areas of temporary disturbance included as part of an approved Critical Areas Land Use Permit or use or development allowed under LUC 20.25H.055, without requiring the restoration plan and other measures described in this section, so long as the following requirements are satisfied:

1. All areas of temporary disturbance shall be identified in the plans approved with the Critical Areas Land Use Permit or allowed use or development and shall be the minimum necessary to allow the completion of the approved use or development. For uses and development involving the repair or renovation of existing structures that can be accessed from non-critical area or critical area buffer, the minimum necessary area of temporary disturbance shall be no greater than 10 feet around the perimeter of the existing structure. Proposals involving areas of greater disturbance shall require a full restoration plan under this section. The Director may impose conditions requiring areas of temporary disturbance to be marked in the field through the use of markers, fencing, or other means;
2. The condition of the areas of temporary disturbance existing prior to undertaking any development activity shall be documented with the proposal. The Director may require photographic evidence, site plans showing the size, location and type of existing vegetation, or other materials to document existing conditions;
3. The Director shall impose a condition that the area be restored to existing conditions prior to final approval of the work performed, or within 30 days following completion of the work if no final approval is required; and
4. The Director shall impose a condition requiring monitoring of the restored area and additional restoration to achieve existing conditions, consistent with subsection D of this section; provided, that the Director may reduce the monitoring period to not less than one year from completion of the original restoration. (Ord. 5680, 6-26-06, § 3)

All temporary disturbances will be restored or mitigated as required.

20.25H.225 Innovative mitigation.

The Director may encourage, facilitate, and approve innovative mitigation projects that are based on the best available science. (Ord. 5680, 6-26-06, § 3)

We are mindful of the desire for innovative mitigation and restoration methods and procedures and will strive to incorporate these where and as appropriate.

20.25H.250 Critical areas report – Submittal requirements.

A. Specific Proposal Required.

A critical areas report must be submitted as part of an application for a specific development proposal. In addition to the requirements of this section, additional information may be required for the permit applicable to the development proposal.

This report is provided to satisfy this and all submittal requirement.

B. Minimum Report Requirements.

The critical areas report shall be prepared by a qualified professional and shall at minimum include the content identified in this section. The Director may waive any of the report requirements where, in the Director's discretion, the information is not necessary to assess the impacts of the proposal and the level of protection of critical area function and value accomplished. At a minimum, the report shall contain the following:

1. Identification and classification of all critical areas and critical area buffers on the site;
2. Identification and characterization of all critical areas and critical area buffers on those properties immediately adjacent to the site;
3. Identification of each regulation or standard of this code proposed to be modified;
3. A habitat assessment consistent with the requirements of LUC [20.25H.165](#);
4. An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;
5. An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:
 - a. A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;
 - b. A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and
 - c. A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development;
6. A discussion of the performance standards applicable to the critical area and proposed activity pursuant to LUC [20.25H.160](#), and recommendation for additional or modified performance standards, if any;
7. A discussion of the mitigation requirements applicable to the proposal pursuant to LUC [20.25H.210](#), and a recommendation for additional or modified mitigation, if any; and
8. Any additional information required for the specific critical area as specified in the sections of this part addressing that critical area.

C. Additional Report Submittal Requirements.

1. Unless otherwise provided, a critical areas report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Director.

2. Where a project requires a critical areas report and a mitigation or restoration plan, the mitigation or restoration plan may be included with the critical areas report, and may be considered in determining compliance with the applicable decision criteria, except as set forth in subsection C.4 of this section.
3. The applicant may consult with the Director prior to or during preparation of the critical areas report to obtain approval of modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.
4. Proposals to obtain reductions in regulated critical area buffers below the buffers required by this part shall include the following information in addition to the minimum critical areas report contents described in subsection B of this section. The restoration proposed to improve existing function included in the proposal must be separate from any impact mitigation proposal:
 - a. The specific restoration actions proposed and the specific regulated buffer dimensions proposed.
 - b. The functions that will be enhanced by the restoration actions, addressing at minimum habitat, hydrology, water quality and (where applicable) stream process functions.
 - c. Functions that will be provided outside of the reduced regulated buffer dimension proposed by the project, if any (for example, stormwater quality and quantity controls or low impact development features).
 - d. The relative importance of the enhanced functions to the ecosystem in which they exist.
 - e. A description of the net gain in functions by the restoration actions in the reduced regulated buffer area and the proposal, compared to the functions that would be preserved under standard buffer provisions of the CAO without restoration.

D. Incorporation of Previous Study.

Where a valid critical areas report or report for another agency with jurisdiction over the proposal has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be incorporated into the required critical areas report. The applicant shall submit an assessment detailing any changed environmental conditions associated with the site. (Ord. 5680, 6-26-06, § 3)
Not applicable.

20.25H.255 Critical areas report – Decision criteria.

B. Decision Criteria – Proposals to Reduce Regulated Critical Area Buffer.

The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;

*See the **Critical Areas Evaluation, Enhancement & Mitigation Plans, Appendix E & Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***

2. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;

*See the **Critical Areas Evaluation, Enhancement & Mitigation Plans, Appendix E & Habitat Assessment & Slope Reconstruction & Enhancement Report, Appendix C.***

3. The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;

This proposal will restore and stabilize the existing slope resulting in a slowing of the stormwater runoff, allowing time for natural infiltration into a now stable slope. In addition, by stabilizing the slope we are preventing uncontrolled runoff and erosion debris from affecting the adjacent Lake and shoreline.

4. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;

Bonding and/or assurances for completion and maintenance of the work will be provided as required.

5. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

The work of this proposal will enhance the functions and values of the critical areas and critical area buffers on and off site. By stabilizing the slope we will prevent further erosion, land slippage and continued degradation of the critical areas. The construction activities will be carefully monitored to avoid collateral damage and any disturbed areas will be restored in order to maintain or improve the natural functions and values of the critical areas and associated buffers.

6. The resulting development is compatible with other uses and development in the same land use district.

The work of this proposal will serve to enhance the existing natural conditions and features of this residential neighborhood.

20.30P.140 Decision criteria.

The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

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

Permits for the construction of the house and site improvements will be obtained as required.

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

We are proposing to stabilize the slope with the substantial foundation system of the proposed house and with restoration and enhancement plantings on the balance of the slope.

C. The proposal incorporates the performance standards of Part [20.25H](#) LUC to the maximum extent applicable; and

See responses below.

A. *Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;*

Only the minimum work necessary to protect the slope is being proposed. The bulk of the work is limited to the building foundations.

B. *Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;*

We are limiting the major disturbances to the area of the new house.

C. *The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;*

The proposed development will reduce risk to neighboring properties by stabilizing an otherwise potentially dangerous slope condition.

D. *The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;*

We propose the use of very few low retaining structures to maintain the existing natural slope to the greatest extent possible.

E. *Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;*

This proposal utilizes only pervious paving materials for areas intended for foot traffic. No vehicle traffic will occur in these pedestrian areas.

F. *Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;*

All grading within the steep slope areas will occur within the house footprint.

G. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;

The house structure and foundation will provide the vast majority of the slope stabilization. We have opted to use some low retaining structures near the driveway areas for as natural a look and feel as possible.

H. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

While the house will be supported on full concrete foundations, the downslope deck areas will be supported above the grade on posts thereby minimizing topographic modification.

I. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

Not applicable in this case.

J. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

All disturbed areas will be cleaned and restored according to the proposed restoration plan.

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

Streets, utilities and public services already exist in the area.

E. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC [20.25H.210](#); except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC [20.25H.055.C.3.i](#) shall not require a mitigation or restoration plan; and

*See the **Critical Areas Evaluation, Enhancement & Mitigation Plans, Appendix E.***

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

We have addressed all other code related requirements to assure full compliance.

REFERENCE APPENDICIES

A Pre-Application Meeting Correspondence

From Michael Paine, dated October 15, 2014

B Proposed Site Plan & Site Sections

By MacPherson Construction & Design, LLC, dated February 26, 2016

C Habitat Assessment & Slope Reconstruction & Enhancement Report

By Altmann Oliver Associates, LLC, dated March 9, 2015

D Geotechnical Investigation & Slope Reconnaissance Report

By Yonemitsu Geological Services, dated January 10, 2015

E Critical Areas Evaluation, Enhancement & Mitigation Plans

By Altmann Oliver Associates, LLC, dated 02-29-16

F Site Photographs of Existing Conditions

G Environmental Checklist

By MacPherson Construction & Design, LLC, dated 02/26/16

H Topographic Survey*

By Concept Engineering, INC, dated 12/19/14

I Proposed New House Plans*

By MacPherson Construction & Design, LLC, dated 2/12/16

* FULL SIZE PLANS SUBMITTED SEPARATELY

Appendix A

Pre-Application Meeting Correspondence

From Michael Paine, dated October 15, 2014



Bob Sorensen

From: MPaine@bellevuewa.gov
Sent: Wednesday, October 15, 2014 3:35 PM
To: Bob Sorensen
Cc: Roger MacPherson
Subject: RE: Kilarney property

Bob:

Provided you were able to claim more than 3,000 square feet of contiguous developable area on the lot once the boundary line is adjusted, and the existing structures meet the dimensional requirements, your calculations and approach seem something we should be able to accept.

Of course, we cannot approve a particular building location in critical areas in advance of a reviewing a complete application with the necessary components of a critical area application, including a critical area report. One thing to keep in mind is that the critical area report process may only be used when: (a) the buffer or slope is degraded; or, (b) when the proposal provides unique and extraordinary functional lift to offset the impacts. It is my feeling that this proposal can meet at least one or both of those tests.

Note also that to use the critical area report process you must first reduce other dimensional setbacks as outline at 20.25H.040.B.

With respect to your questions, the structure could move forward on the slope provided you have complied with 20.25H.040.B and the critical area report meet the criteria outlined in 20.25.255 and LUC 20.30P. Pay special attention to the requirement to employ techniques with the least impact to critical areas. To put it frankly, to move into the slope is possible in direct proportion to the quality of the mitigation package because to do so the City must successfully balance the loss of critical area function on the slope with the increase in function elsewhere on the site.

I should be around tomorrow but should I not be fill free to call on my cell.

Michael Paine

Environmental Planning Manager
City of Bellevue
(425)-452-2739 (w)
(425)-765-7974 (m)

From: Bob Sorensen [mailto:bob@macphersonconstruction.com]
Sent: Wednesday, October 15, 2014 3:04 PM
To: Paine, Michael
Cc: Roger MacPherson
Subject: Kilarney property
Importance: High

Michael, as our due-diligence period on this property runs out tomorrow, I am hoping that you will take a look at the attached exhibit as to its ability to pass muster with the development restrictions on this property. We have

placed a generic building footprint and possible driveway and patio configuration for your review. The building site and critical area calculations are on the drawing. As we understand the site restrictions:

Total site area:	24,580 S.F.
Shoreline Buffer:	- 5549 S.F.
Steep slopes:	- 8,502 S.F.
<u>Step slope buffer:</u>	<u>-4,142 S.F.</u>
Buildable area:	6,387 S.F.

Lot coverage--

Total site area:	24,580 S.F.
<u>Steep slopes:</u>	<u>- 8,502 S.F.</u>
Total allow. Cover:	16,078 S.F. x .35 = 5,627 S.F.

Impervious –

<u>Total site area:</u>	<u>24,580 S.F.</u>
Total allow. Imperv.	24,580 S.F. x .50 = 12,290 S.F.

The white line is the stringline setback between the houses either side of this property. We understand that this scheme will require a Critical Areas Report to allow building on the Steep Slope. The structure is set behind the stringline, the patio is in front of this line.

Questions: Can the structure move forward on the steep slope? Can raised decks encroach beyond this line?

Can we set a time tomorrow (Thursday) morning when we could touch base via telephone for about 5 minutes regarding this property?

Thanks for all your help on this project, looking forward to talking tomorrow.

Bob Sorensen

Architect

Cell: (206)-399-8265

Office: (425) 391-3333



21626 SE 28th Street Sammamish, WA 98075-7125 | 425-391-3333

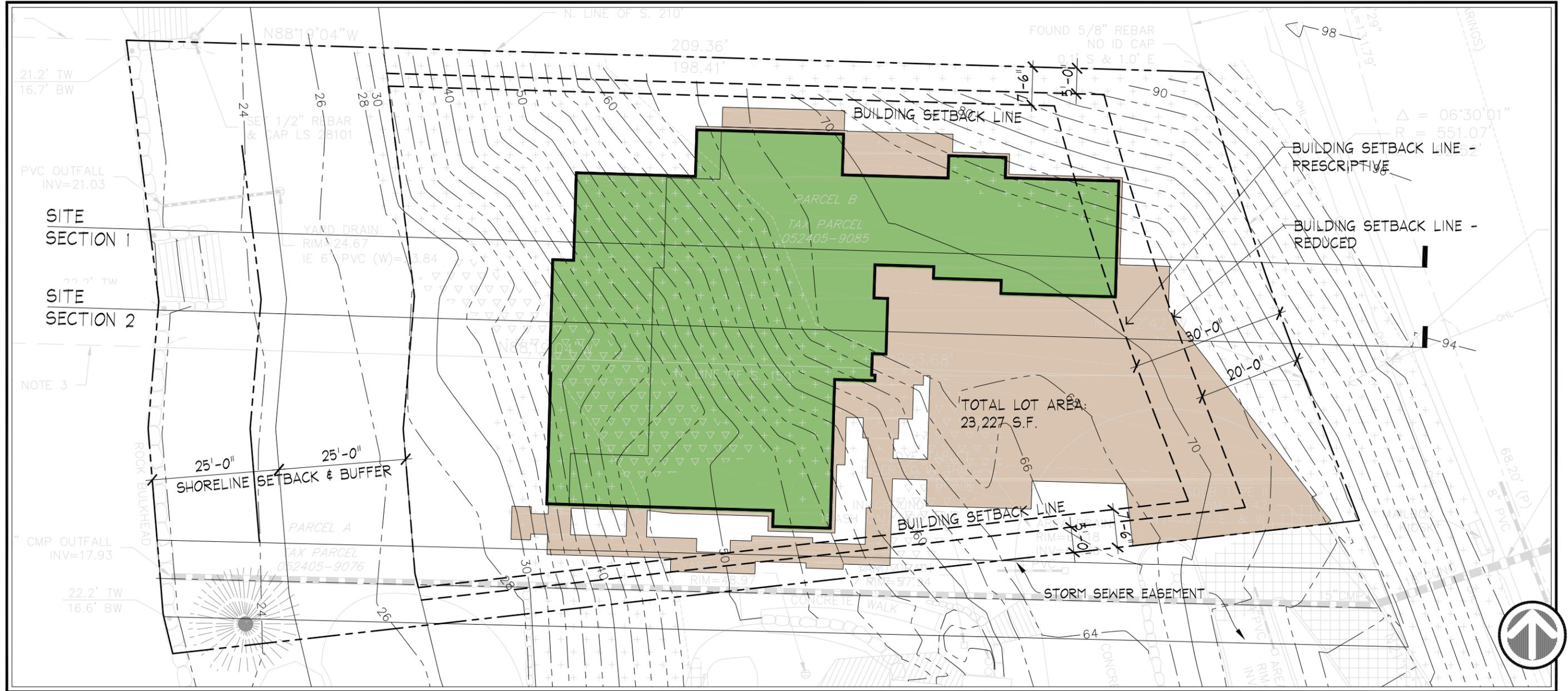
bob@macphersonconstruction.com | www.macphersonconstruction.com

Appendix B

Proposed Site Plan & Site Sections

By MacPherson Construction & Design, LLC, dated 02/26/16





PROPOSED SITE PLAN

Scale: 1" = 20'-0"

SITE AREA CALCULATIONS

TOTAL SITE AREA: 23,277 SF
 LESS CRITICAL AREAS:
 STEEP SLOPES <7,250 SF>
NET LOT AREA: 16,027 SF
 ALLOWABLE LOT COVERAGE @ 35% 5,609 SF
 OF NET LOT AREA (14,658 SF)
 ALLOWED IMPERVIOUS AREA @ 50% 11,638 SF
 OF TOTAL LOT AREA (23,277 SF)

PROPOSED IMPROVEMENTS



LOT COVERAGE:
5,432 S.F.



IMPERVIOUS AREA:
8,658 S.F.

DATE	BY	DESCRIPTION
03/30/15	BOB	CRITICAL AREAS REPORT
02/26/16	BOB	REVISE TO CURRENT HOUSE PLANS

Appendix C

Habitat Assessment & Slope Reconstruction & Enhancement Report

By Altmann Oliver Associates, LLC, dated March 9, 2015





March 9, 2015

AOA-4787

Bob Sorensen
MacPherson Construction & Design, LLC
21626 SE 28th Street
Sammamish, WA 98075

**SUBJECT: Habitat Assessment for Killarney Residence
2310 – 100th Ave. SE, Bellevue, WA
Parcel 052405-9076**

Dear Bob:

This report is the result of a wildlife habitat assessment on the approximately 0.53-acre subject property located on Lake Washington in the City of Bellevue, Washington. The site is the location of a proposed single-family residence.

The primary purpose of this report is to: 1) describe the wildlife habitat on the property 2) identify any potential impacts to the 23 species of local importance as designated in LUC 20.25H.150, and 3) describe the proposed enhancement measures that would be implemented to increase the habitat value of the site.

1.0 GENERAL PROPERTY DESCRIPTION AND LAND USE

The undeveloped project site consists of Tax Parcel 052405-9076 located at 2310 – 100th Ave. SE in the City of Bellevue. The site is located adjacent to Lake Washington and slopes moderately to steeply down from east to west. Vegetation on the flatter portions of the site consists of mowed lawn, with the steeper slopes dominated by dense Himalayan blackberry (*Rubus armeniacus*). Smaller patches of sword fern (*Polystichum munitum*), hazelnut (*Corylus cornuta*), and big-leaf maple (*Acer macrophyllum*) saplings were also observed. In addition, several widely scattered trees are located along the perimeter of the site.

The shoreline adjacent Lake Washington consists of a rock bulkhead, with existing concrete steps currently providing access.

Surrounding land use includes single-family residential to the north, east, and west.

2.0 METHODOLOGY

A habitat assessment was conducted on February 4, 2015. During this site visit an on-site analysis of vegetation structure and composition was conducted.

Prior to conducting the habitat assessment, the Washington Department of Fish and Wildlife Priority Habitats and Species database (PHS) was reviewed. Additional background review included available King County sensitive area information (iMAP) and City of Bellevue mapping.

3.0 WILDLIFE HABITAT ASSESSMENT

Based on the habitat classifications outlined in *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil, 2001) the study area would be classified as Urban and Mixed Environs – Medium Density Zone. No wetlands, streams, or priority habitats were mapped on the PHS database and no critical areas other than the steep slope and shoreline were observed on the property.

Wildlife Species of Local Importance

Twenty three (23) species have been designated by the City of Bellevue as species of local importance (LUC 20.25H.150). The potential of site utilization by each species is briefly described below:

- Bald eagle (*Haliaeetus leucocephalus*): site not located within Bald Eagle Buffer Management Zone per PHS data and no nest sites observed. Some potential occasional perching opportunity within larger on-site trees possible. Primary Association: no.
- Peregrine falcon (*Falco peregrinus*): generally associated with coastal cliffs and shorelines, but also use large buildings in city center. Use of project site unlikely. Primary Association: no.
- Common Loon (*Gavia immer*): highly aquatic species associated with large water bodies – potential presence within Lake Washington but use of site unlikely. Primary Association: no.
- Pileated woodpecker (*Dryocopus pileatus*): Pileated woodpeckers generally inhabit mature and old-growth forests, and second-growth forests with large snags and fallen trees. No pileated woodpecker nests or evidence of foraging was observed on the site during the field investigation. The lack of a significant concentration of conifers, large snags or fallen trees limits the potential of this species to utilize the site. Primary Association: no.
- Vaux's swift (*Chaetura vauxi*): Vaux's swifts are strongly associated with old growth and mature forests throughout the state and are highly dependent on large hollow trees and snags for breeding and roosting. Although some limited potential for foraging, unlikely nesting or primary association on the

- site due to lack of large conifers or snag concentrations. Primary Association: no.
- Merlin (*Falco columbarius*): unlikely presence – generally require coastal or high elevation forests. Primary Association: no.
 - Purple martin (*Progne subis*): unlikely presence – generally require cavities near or over permanent water for nesting. No cavities observed. Primary Association: no.
 - Western grebe (*Aechmophorus occidentalis*): highly aquatic species associated with large water bodies – potential utilization of lake but unlikely to utilize site. Primary Association: no.
 - Great blue heron (*Ardea herodias*): potential presence - some limited potential foraging along shoreline, but no roosts observed on or adjacent site. Primary Association: no.
 - Osprey (*Pandion haliaetus*): potential occasional perching opportunity within larger on-site trees possible, but no nest site observed. Primary Association: no.
 - Green heron (*Butorides striatus*): some limited potential foraging possible along shoreline. Primary Association: no.
 - Red-tailed hawk (*Buteo jamaicensis*): potential utilization of site for occasional perching, although no nests observed and not near significant open expanse. Primary Association: no.
 - Western big-eared bat (*Plecotus townsendii*): potential presence, but no known nearby hibernacula, caves, or significant concentration of cavities so not considered a habitat of primary association. Primary Association: no.
 - Keen's myotis (*Myotis keenii*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.
 - Long-legged myotis (*Myotis volans*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.
 - Long-eared myotis (*Myotis evotis*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.

- Oregon spotted frog (*Rana pretiosa*): unlikely presence - believed to be extirpated from nearly all of western Washington and lakeshore consists of rock bulkhead with no wetlands. Primary Association: no.
- Western toad (*Bufo boreas*): unlikely presence - lakeshore consists of rock bulkhead with no wetlands. Primary Association: no.
- Western pond turtle (*Clemmys marmorata*): unlikely presence - no known nearby populations and lakeshore consists of rock bulkhead with no wetlands. Primary Association: no.
- Chinook (*Oncorhynchus tshawytscha*): presence in Lake Washington – but limited shoreline habitat. Primary Association: yes.
- Bull trout (*Salvelinus confluentus*): very limited presence in Lake Washington. Primary Association: no.
- Coho salmon (*Oncorhynchus kisutch*): presence – known to occur within Lake Washington. Primary Association: yes.
- River lamprey (*Lampetra ayresii*): presence –known to occur within Lake Washington. Primary Association: yes.

Of the 23 species of local importance listed by the City of Bellevue, Chinook, Coho salmon, and river lamprey are known to occur within Lake Washington and are assumed to have a primary association with the shoreline. No other species of local importance are anticipated to utilize the site on a regular basis.

4.0 PROPOSED PROJECT

The proposed project consists of the development of a single-family residence in the eastern portion of the property. Construction of this residence will require impacting 3,686 s.f. of steep slope and 5,057 s.f. of steep slope buffer area. Nearly all of the slope and buffer areas to be impacted consist of lawn or are dominated by invasive species, primarily Himalayan blackberry.

Mitigation for the modification to the steep slope and steep slope buffer would occur through the enhancement of 4,407 s.f. of steep slope and 1,713 s.f. of steep slope buffer. In addition, a portion of the rock bulkhead along the shoreline would be removed and replaced with a gravel beach. Native plantings are also proposed within 2,228 s.f. of the Lake Washington shoreline. No other work (except for implementation of the critical area enhancement plan) would occur within the 25-foot shoreline buffer or 25-shoreline structure setback. It is our understanding that a proposed dock would be submitted under a separate permit and is not a part of this permit application.

4.1 Impacts to Wildlife Species of Local Importance from Proposed Project

There are no anticipated negative impacts to any wildlife species of local importance from the proposed development since: 1) the only work that would occur along the shoreline as part of this project consists of removal of a portion of the rock bulkhead and replacement with a gravel beach and 2) proposed native plantings will increase the plant species and structural diversity over current conditions. In addition, no significant trees are proposed for removal as part of the project.

Implementation of the proposed buffer enhancement plan should provide a net benefit to salmonids located within Lake Washington. Native plantings will provide increased shade and would also create habitat for benthic invertebrates, while contributing detritus and other desirable allochthonous inputs into the aquatic environment.

5.0 VEGETATION MANAGEMENT PLAN

Critical area enhancement will consist of removing invasive species and planting with a variety of native species to increase the plant species and structural diversity of the slope and shoreline. This invasive species removal and planting should increase the habitat value of the site over current conditions.

5.1 Goal, Objectives, and Performance Standards for Mitigation Areas

The primary goal of the mitigation plan is to increase the habitat functions of the selected shoreline buffer and slope areas. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the mitigation area.

Performance Standard: *There will be 100% survival of all woody planted species throughout the mitigation area at the end of the first year of planting. For Years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants.*

Objective B: Limit the amount of invasive and exotic species within the mitigation area.

Performance Standard: *After construction and following every monitoring event for a period of five years, exotic and invasive plant species will be maintained at levels below 10% total cover in the designated mitigation areas. Invasive species include, but are not limited to, Himalayan and evergreen blackberry, Japanese knotweed, and English ivy.*

5.2 Construction Management

Prior to commencement of any work in the mitigation areas, the clearing limits will be staked and any existing vegetation to be saved will be clearly marked. A pre-construction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and the owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the mitigation plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the consultant prior to their implementation.

5.3 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City. Vegetation monitoring will include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the mitigation area. Review of the photos over time will provide a visual representation of success of the mitigation plan.

5.4 Maintenance Plan

Maintenance will be conducted on a routine, year round basis. Additional maintenance needs will be identified and addressed following periodic maintenance reviews. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner.

5.5 Weed Control

Routine removal and control of non-native and other invasive plants within the designated mitigation areas shall be performed by manual means. Undesirable and weedy exotic plant species shall be maintained at levels below 10% total cover within all mitigation areas during the monitoring period.

5.6 General Maintenance Items

Routine maintenance of planted trees and shrubs shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses and other competitive weeds shall be weeded at the base of plants to prevent engulfment. Weed control should be performed by hand removal.

5.7 Contingency Plan

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the mitigation plan. Plant material shall meet the same specifications as originally-installed material. Replanting will not occur until

Bob Sorensen
March 9, 2015
Page 7

after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Bellevue, or the owner.

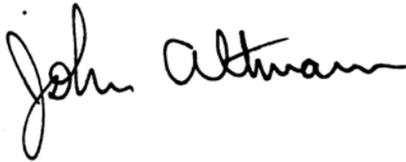
5.8 As-Built Plan

Following completion of construction activities, an as-built plan for the mitigation area will be provided to the City of Bellevue. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions regarding the habitat assessment or vegetation management plan, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

John Altmann
Ecologist

Appendix D

Geotechnical Investigation & Slope Reconnaissance Report

By Yonemitsu Geological Services, dated January 10, 2015





Yonemitsu Geological Services
10321 SE 192nd Street Renton, Washington 98055
206-390-0635

January 10, 2015

Mr. Robert Sorenson
MacPherson Design and Construction
21626 SE 28th Street
Sammamish, WA 98075-7125

Re: **Geotechnical Recommendations**
Proposed Residence
2389 Killarney Way
Bellevue, Washington

Dear Mr. Sorenson,

This report presents the results of our geologic site evaluation and investigation of the residential property located on the westerly side of Killarney Way. It is understood that a new residence will be constructed on this property that has been recently subdivided from the adjacent property to the south.

A review of the geologic mapping by Booth along with recent subsurface exploration indicates the site is underlain by dense silty and gravelly sand deposits (Qva) that will provide adequate support for the proposed residential structure.

Subsurface Exploration

Three test pits were excavated in the area of the proposed structure to confirm the presence of the dense native soils and the location of existing fill that had been placed at the top of the slope when the upper flat area was graded. This fill is shown in the cross sections on Drawing No. 2, and the test pit logs identify the depths of this fill as summarized below:

TP-1 Located at the NW corner of the proposed residence – Elev 62 feet
0.0 to 6.5ft FILL – Silty Sand; brown, moist, loose to med dense;
6.5 to 8.5ft Silty Sand with gravel; grey brown, moist, medium dense to dense; no groundwater encountered;

TP-2 Located at the SE corner of the proposed residence – Elev 57 feet
0.0 to 3.5ft Fill and Topsoil – Silty Sand; brown, moist, medium dense;
3.5 to 6.5ft Silty Sand; light brown, moist, medium dense to dense; no groundwater encountered;

- TP-3 Located at the west end of the proposed residence – Elev 43 feet
- | | |
|--------------|---|
| 0.0 to 2.5ft | Fill and Topsoil – Silty Sand and topsoil; brown, moist, medium dense; |
| 2.5 to 6.5ft | Silty Sand; grey brown, moist, medium dense to dense; no groundwater encountered; |

The results of our field exploration confirmed the presence of competent advance outwash soils that will provide satisfactory support for the new residence foundations. Field observations showed that the existing slope area below the proposed residence building pad has no evidence of downslope movement or landslide failures that would require stabilization with retaining walls.

Geotechnical Recommendations

The proposed house foundations will be supported on the medium dense to dense native soils using an allowable bearing value of 2000 psf. Anticipated depths to bearing soils will vary from 3 to 12 feet depending on the depths to the proposed basement levels. A majority of the house foundations will extend below the existing fill and bear on the medium dense to dense native soils. On the west side of the residence the foundations will be located over existing loose fill and topsoil that will require installation of driven pipe piles for support of the west foundation wall and the deck footings.

It is recommended that either 3 or 4 inch diameter pipe piles be used for support of the westerly side of the residence foundations that are located within ten feet of the existing slope face. Design of these piles should be based on 20 kips for 4 inch piles and 12 kips for 3 inch diameter piles. All piles must be driven with an appropriate pneumatic hammer to refusal to achieve the recommended design loads.

Temporary slope excavations will require slope gradients of 1H:1V in the upper fill and topsoil deposits and $\frac{3}{4}$ H:1V in the medium dense to dense native silty sands. Eco-block or Ultra-block shoring will also be required along the north side of the residence due to the height of the near vertical excavations. All temporary cut slopes should remain covered with plastic sheeting for rainfall protection.

Retaining walls extending around the lower daylight basement should be designed for an active earth pressure of 35 pcf and a passive pressure of 250 pcf. A friction value of 0.4 may be used for footings in direct contact with the native soils. Foundation subdrains will be required and they must be placed in drain gravel and covered with geofilter cloth for protection of soil infiltration.

The lower concrete floor slab in the daylight basement level should be reinforced and structurally tied into the perimeter foundation walls. Existing fill under this slab should be removed and replaced as a compacted fill (90% of maximum density per ASTM D1557) for proper slab support. A crushed gravel base covered with 10 mil plastic sheeting should be placed under this floor slab.

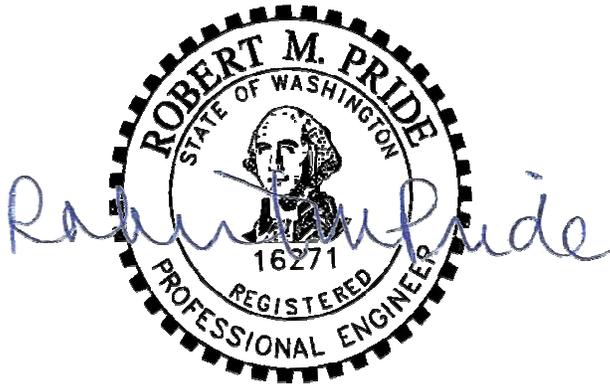
Summary

Field inspections should be performed during excavation for the proposed building pad and temporary slope cuts, as well as installation of foundation subdrains and exterior compacted fill placement. Field memos will be provided for submittal to the City of Bellevue.

Our findings and recommendations provided in this report were prepared in accordance with generally accepted principles of engineering geology and geotechnical engineering as practiced in the Puget Sound area at the time this report was submitted. We make no other warranty, either express or implied.

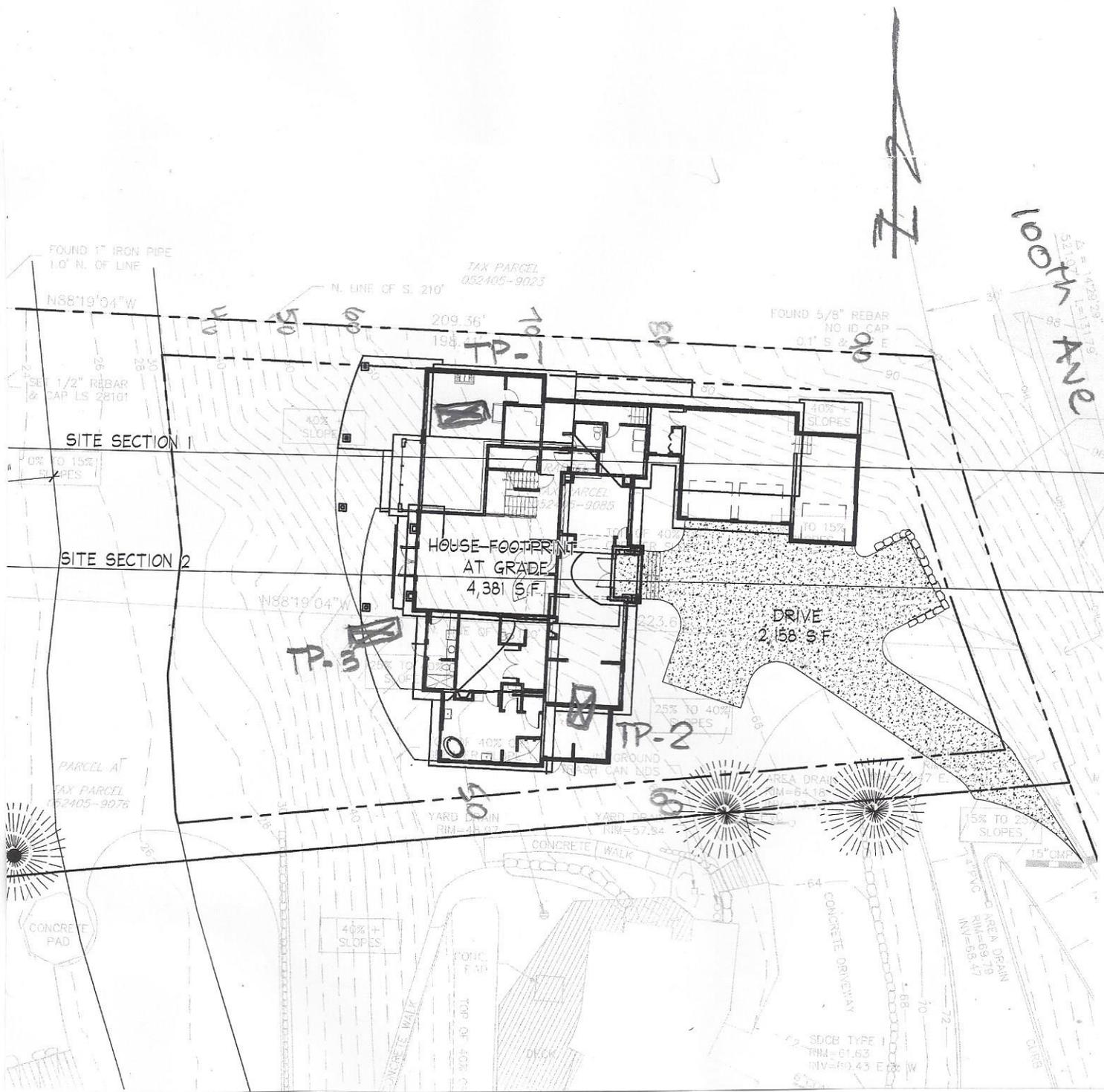
Please call me if there are any questions.

Respectfully,



Robert M. Pride, P. E.
Principal Geotechnical Engineer

David A. Yonemitsu
Principal Engineering Geologist



SITE PLAN

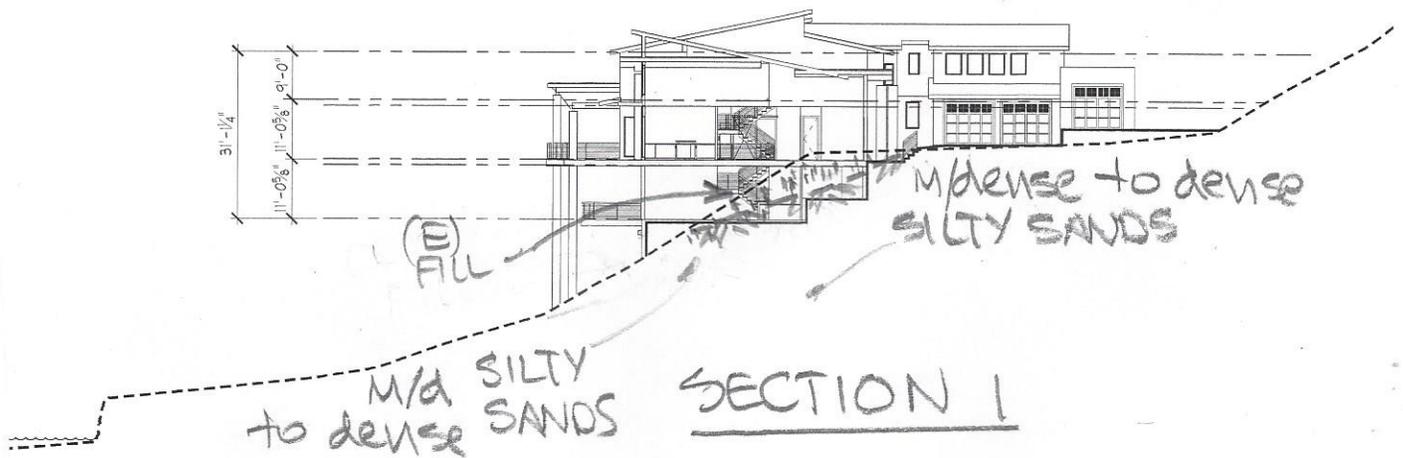
Proposed Residence
 2310 100th Avenue
 Bellevue, Washington

Project No.

Robert M. Pride, LLC

Drawing No. **1**

Consulting Geotechnical Engineer



CROSS SECTIONS

Proposed Residence
 2310 10th Avenue
 Bellevue, Washington

Project No.

Drawing No. **2**

Robert M. Pride, LLC

Consulting Geotechnical Engineer



Yonemitsu Geological Services
10321 SE 192nd Street Renton, Washington 98055
206-390-0635

April 11, 2015

Mr. Robert Sorenson
MacPherson Design and Construction
21626 SE 28th Street
Sammamish, WA 98075-7125

Re: **Geotechnical Recommendations**
Proposed Miller Residence
2389 Killarney Way
Bellevue, Washington

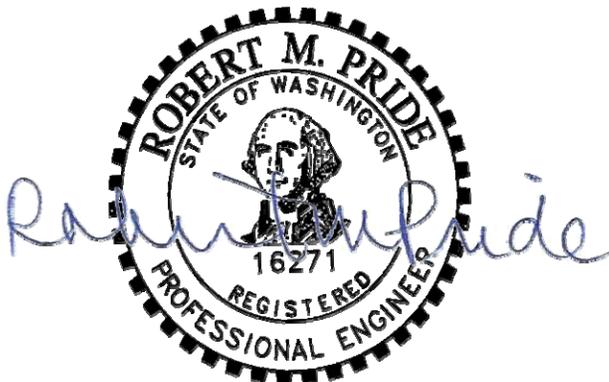
Dear Mr. Sorenson,

This report summarizes the results of our evaluation of the proposed erosion mitigation plan for the rockery slope protection adjacent to the west shoreline side of this property. It is understood that the existing rockery bulkhead wall that extends along the entire shoreline will be removed, and the new slope protection will include rock placement extending up to the new curved rock wall as shown on Sheet 2/2 prepared by Altmann Oliver Associates (AOA).

Geotechnical Recommendations

The proposed new rocks will be placed over a relatively flat slope covered with geofilter cloth that extends back from the edge of the lake up to the base of the low rockery wall at the top of this flat slope. It was recommended that intermediate sized rocks ranging from 3 to 6 inches in size be placed under the larger rocks and in the void spaces to maintain stability of this flat slope and to protect this area from wave erosion. In our opinion this will provide the necessary protection to this flat slope area from future wave erosion from heavy storm activity.

Respectfully,



Robert M. Pride, P. E.
Principal Geotechnical Engineer

David A. Yonemitsu
Principal Engineering Geologist



Yonemitsu Geological Services
10321 SE 192nd Street Renton, Washington 98055
206-390-0635

November 16, 2015

Mr. Roger MacPherson
MacPherson Design and Construction
21626 SE 28th Street
Sammamish, WA 98075-7125

Re: **Geotechnical Recommendations**
Proposed Miller Residence
2389 Killarney Way
Bellevue, Washington

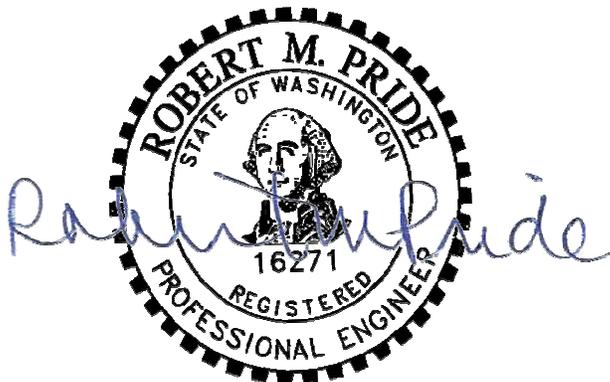
Dear Mr. MacPherson,

This report confirms that I have reviewed the final site and foundation plans for this new residence on 2389 Killarney Way in Bellevue. The residence has been relocated to the west several feet with a good portion extending out over the existing slope area. Deep excavations will be required to reach the lower building pad levels and most of these footings will be supported on dense native soils.

Portions of the residence that is within the existing fill and soft soils on this steep slope will still require pipe piles for foundation support. The extent of the pipe pile system and conventional footings will be established at the time the excavation is made for each building pad area.

Based on my plan review they are in conformance with our geotechnical recommendations and are approved for the proposed construction. Field inspections will be performed during site development and foundation installations to confirm adequacy of the site excavations and foundation installations.

Respectfully,



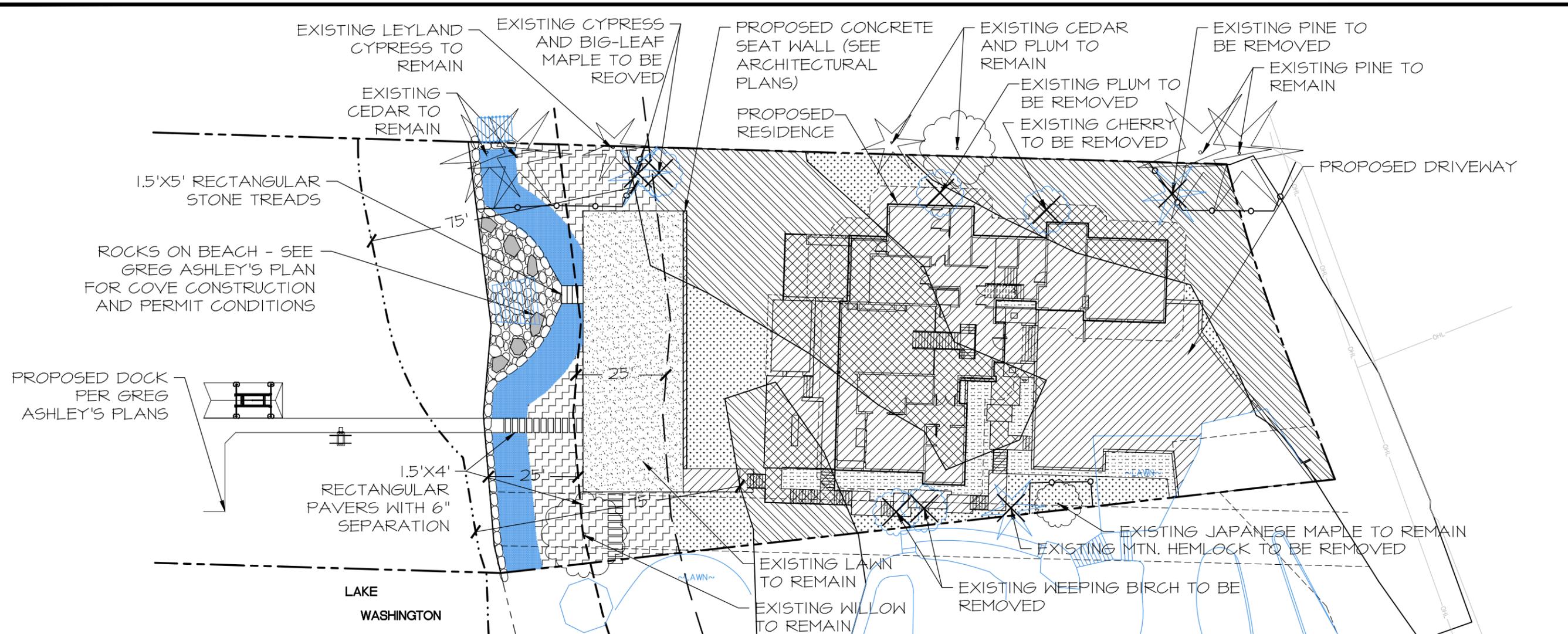
Robert M. Pride, P. E.
Principal Geotechnical Engineer

David A. Yonemitsu
Principal Engineering Geologist

Appendix E

Critical Areas Evaluation, Enhancement & Mitigation Plans By Altmann Oliver Associates, LLC, dated 03-11-16





PLAN LEGEND

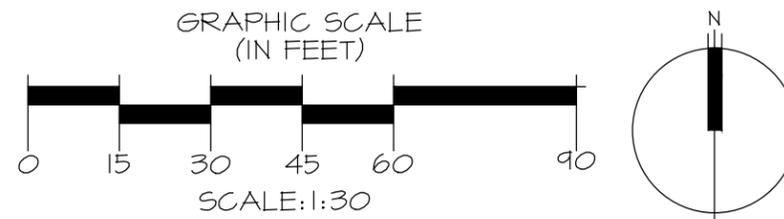
	EXISTING LAWN TO REMAIN	2,195 SF
	LANDSCAPE AREA	2,086 SF

IMPACT LEGEND

	STEEP SLOPE IMPACTS	3,491 SF
	STEEP SLOPE BUFFER IMPACTS	5,566 SF
	TOTAL IMPACTS - MINUS THE 140 SF OF EXISTING STEPS REMOVAL IN THE SHORELINE SETBACK (SEE FIGURE 1)	8,917 SF

MITIGATION LEGEND

	STEEP SLOPE ENHANCEMENT	4,500 SF
	STEEP SLOPE BUFFER ENHANCEMENT	2,086 SF
	SHORELINE ENHANCEMENT	1,792 SF
	BEACH GRAVELS	539 SF
	TOTAL MITIGATION (DOES NOT INCLUDE ENHANCEMENT FOR DOCK INSTALLATION)	8,917 SF
	10' SHORELINE ENHANCEMENT FOR DOCK INSTALLATION - SEE MACPHERSON PIER AT KILLARNEY PLANTING PLAN	1,195 SF



NOTES

- BASE INFORMATION PROVIDED BY MACPHERSON CONSTRUCTION & DESIGN, 21626 SE 28TH STREET, SAMMAMISH, WA 98075 (425) 391-3333.

PROJECT	4787
DRAWN	SO
SCALE	AS NOTED
DATE	06-24-15
REVISED	3-11-16

FIGURE 2: IMPACTS AND MITIGATION CONCEPT PLAN
 MILLER PROPERTY
 2389 KILLARNEY WAY SE
 BELLEVUE, WA 98004
 PARCEL #052405-9076

Altmann Oliver Associates, LLC
 Environmental Planning & Landscape Architecture
 PO Box 578 Camanville, WA 98014
 Office (425) 333-4533 Fax (425) 333-4509