



DEVELOPMENT SERVICES DEPARTMENT  
ENVIRONMENTAL COORDINATOR  
450 110<sup>th</sup> 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. 16-142376-LO

Project Name/Address: Sundaresan Shoreline Planting/ 2242 W Lake Sammamish Pkwy SE

Planner: Nick Whipple

Phone Number: 425-452-4578

**Minimum Comment Period:** November 3, 2016

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other: Critical Areas Report

**OTHERS TO RECEIVE THIS DOCUMENT:**

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

**ENVIRONMENTAL CHECKLIST**

7/8/16

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: **ANITA & SHARAD SUNDARESAN**

Proponent: **MacPherson Construction & Design**

Contact Person: **Robert H. Sorensen, Architect**

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **21626 S.E. 28<sup>th</sup> Street Sammamish, WA 98075**

Phone: **(425) 391-3333**

Proposal Title: **Sundaresan residence**

Proposal Location: **2242 West Lake Sammamish Parkway S.E.**

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

**See attached**

Please attach an 8 1/2" 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: **.45A**
3. Number of dwelling units/buildings to be demolished: **N/A**
4. Number of dwelling units/buildings to be constructed: **N/A**
5. Square footage of buildings to be demolished: **N/A**
6. Square footage of buildings to be constructed: **N/A**
7. Quantity of earth movement (in cubic yards): **<100 CY**
8. Proposed land use: **Single Family Residential**
9. Design features, including building height, number of stories and proposed exterior materials:  
**N/A**
10. Other

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

**Completion: Fall 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.

**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.

**Building & associated Permits 16-124877 BS submitted 2/23/16**

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 & associated Permits 16-124877 BS submitted 2/23/16**

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.**

- 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.

**Remove existing concrete retaining walls, regrade as necessary for uniform slope to beach area.**

- 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)?

**± 33%.**

- 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.**

## 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 Sammamish to the east.**

- (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, removal of concrete retaining walls within 200 foot 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.

**Removal of retaining structures & fill behind to be spread landward of OHNL.**

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

**No**

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

**Yes**

- (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:

**Existing stormwater system will be maintained and used.**

#### 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 and addition of any required mitigation trees.*

#### 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*

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.*

## 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.

*N/A.*

- 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:

*N/A.*

## 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.*

## 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.

**Existing SFR.**

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

**Yes – existing concrete retaining walls to be demolished**

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

**R3.5**

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.**

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

**N/A**

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:

**Normal Land Use Permit processes.**

## **9. Housing**

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

**N/A.**

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?

*N/A*

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

*No views will be obstructed.*

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

*N/A.*

## 11. Light and Glare

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

*N/A.*

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

*N/A.*

- 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:

*N/A.*

## 12. Recreation

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

*Neowna Beach 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*

### 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 West Lake Sammamish Parkway S.E.

- 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?

N/A.

- 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.

N/A.

- 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, septic system, other.

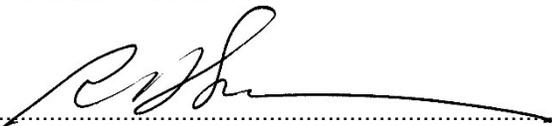
Cable TV

- 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.

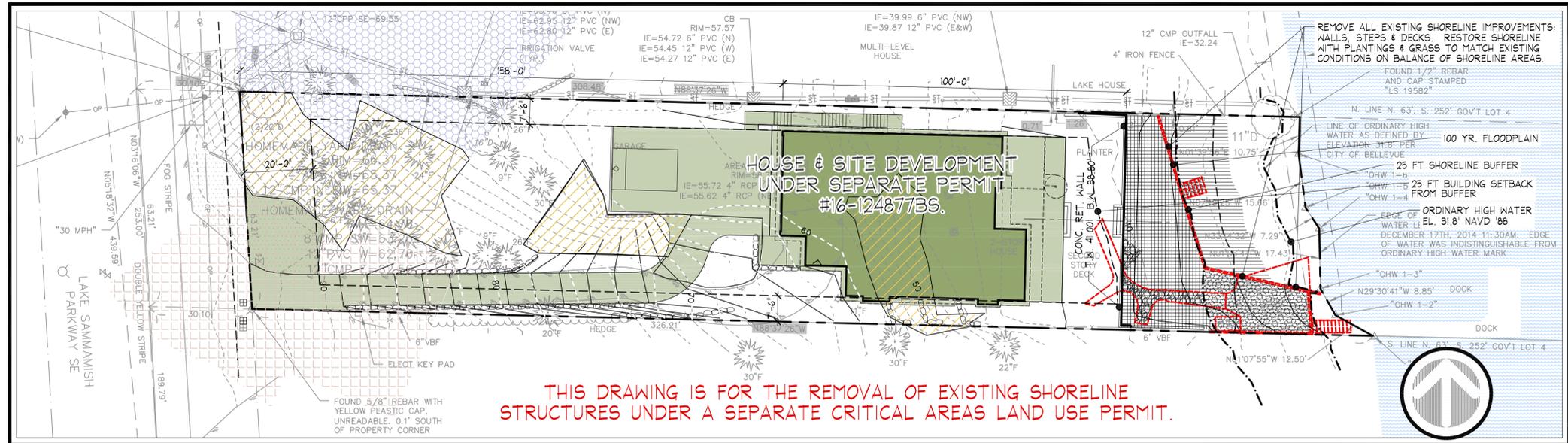
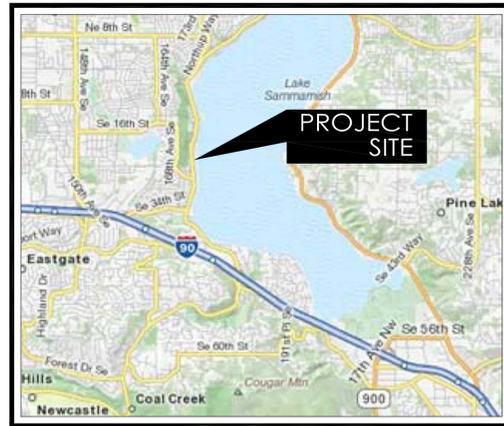
N/A.

**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..... 07 July, 2016.....



## SITE PLAN

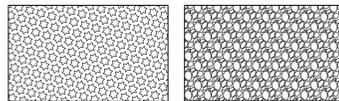
Scale: 1" = 20'-0"

### DEMOLITION NOTES:

- DISCONNECT AND CAP ALL EXISTING UTILITIES AS REQUIRED BY THE SERVING UTILITY AND CITY. THE SIDE SEWER MUST BE CAPPED AT THE SEWER STUB PRIOR TO DEMOLITION OF THE HOME. CONTACT DAVE DICKSON (425) 452-4359 A MINIMUM OF 48 HOURS PRIOR TO DEMOLITION FOR THE REQUIRED INSPECTION.
- COMPLETE RODENT CONTROL PROGRAM.
- COMPLETE ASBESTOS ABATEMENT PROGRAM.
- DEMOLISH EXISTING SINGLE FAMILY DWELLING COMPLETELY.
- REMOVE ALL LANDSCAPE STRUCTURES TO THE EXTENT POSSIBLE WHILE PROTECTING THE SIGNIFICANT TREES TO REMAIN.
- REMOVE ALL DEBRIS FROM THE SITE AND DISPOSE OFF-SITE IN A LEGAL MANNER.
- SEE DRAWINGS A0.0 & A0.1 FOR ADDITIONAL INFORMATION REGARDING DRAINAGE AND TESC MEASURES.

### SHORELINE WORK:

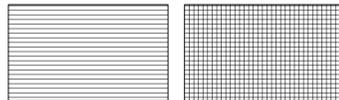
#### REMOVED STRUCTURES:



WITHIN BUFFER:  
515 S.F.

BEYOND BUFFER:  
146 S.F.

#### RE-GRADING:



WITHIN BUFFER:  
1,186 S.F.

BEYOND BUFFER:  
1,213 S.F.

### BUILDING CODE DATA:

|  |   |
|--|---|
| <b>BUILDING CODE:</b>                      | 2012 International Residential Code (IRC) including mechanical requirements |
| <b>PLUMBING CODE:</b>                      | 2012 Uniform Plumbing Code (UPC)  |
| <b>ENVIRONMENTAL CODE:</b>                 | 2012 Washington State Energy Code (WSEC)                                    |
| <b>SEISMIC DESIGN CATEGORY:</b>            | D2  |
| <b>BASIC WIND SPEED:</b>                   | 85 MPH  |
| <b>MINIMUM SNOW LOAD:</b>                  | 25 LB./S.F.   |
| <b>MAX. ASSUMED SOIL BEARING CAPACITY:</b> | 1,500 PSF   |

### GEOTECHNICAL REPORT:

SEE GEOTECHNICAL RECOMMENDATIONS BY YONNEMITSU GEOLOGICAL SERVICES (YGS) DATED MAY 15, 2015.

### SITE DRAINAGE:

- CONNECT ALL FOOTING DRAINS AND TIGHTLINE DIRECT TO SITE DRAINAGE SYSTEM. CONNECT TO SYSTEM A MIN. OF 1 FOOT BELOW LOWEST FOOTING DRAIN INVERT.
- CONNECT ALL ROOF DRAINS (SEPARATE FROM FOOTING DRAINS) AND TIGHTLINE DIRECT TO EXISTING STORM DRAIN OUTFALL TO LAKE.
- CONNECT ALL CATCH BASINS AND TIGHTLINE THROUGH THE OIL/WATER SEPARATOR INTO THE ROOF DRAIN SYSTEM.
- PAVED DRIVEWAY TO SHEET DRAIN TO NORTH SIDE OF DRIVE WHERE APPROPRIATE OR INTO STRIP DRAIN WHERE SHOWN.
- SEE S.W.I.P.P. PLAN, SHEET A0.2.

### GENERAL NOTES:

- ALL ROOF DRAINS AND FOOTING DRAINS SHALL BE SEPARATED. TIGHTLINE EACH TO STORM DRAINAGE SYSTEM AS REQUIRED. SEE NOTES ABOVE.
- ALL EXCAVATED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND HAULED TO AN APPROVED DUMP SITE.
- SEE DRAWINGS A0.0 & A0.1 FOR ADDITIONAL INFORMATION REGARDING DRAINAGE AND TESC MEASURES.
- DISCONNECT AND PROTECT EXISTING SANITARY SEWER STUB. RECONNECT TO EXISTING STUB.
- DISCONNECT ALL OTHER UTILITIES. PROTECT FROM DAMAGE DURING CONSTRUCTION. RECONNECT TO EXISTING UTILITIES.
- ALL ROCK RETAINING WALLS OVER 4 FEET IN HEIGHT SHALL BE ENGINEERED BY THE INSTALLER IN ACCORDANCE WITH LOCAL CODES.
- ALL SITE AND FOUNDATION WORK SHALL BE REVIEWED AND MONITORED BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPLIANCE WITH THE DESIGN CRITERIA.

### STEEP SLOPES & BUFFERS:



AREAS OF 40% SLOPE

TOP OF SLOPE 50' SETBACK

BOTTOM OF SLOPE 75' SETBACK

### LOT COVERAGE:

|                      |            |
|----------------------|------------|
| GROSS LOT AREA:      | 19,530 SF  |
| LESS CRITICAL AREAS: |            |
| 100 YEAR FLOOD PLAIN | <2,017 SF> |
| STEEP SLOPES         | <1,895 SF> |

**NET LOT AREA: 15,620 SF**

ALLOWABLE LOT COVERAGE @ 35% OF NET LOT AREA: 5,467 SF

### PROPOSED IMPROVEMENTS

|   |                         |
|---|-------------------------|
| FOOTPRINT OF NEW RESIDENCE: (INCL. COVERED PORCHES & DECKS) | 3,742 SF                |
| TOTAL PROPOSED LOT COVERAGE:                                | 3,742 SF                |
| LESS THAN 5,467   | OK                      |
|   | 3,742 / 15,620 = 23.96% |

### IMPERVIOUS SURFACE:

ALLOWED IMPERVIOUS AREA @ 50% OF GROSS LOT AREA: 9,765 SF

### PROPOSED IMPROVEMENTS

|   |          |
|---|----------|
| FOOTPRINT OF NEW RESIDENCE: (ROOF DRIPLINE, INCLUDING IMPERVIOUS PORCHES & DECKS) | 3,353 SF |
| IMPERVIOUS DECKS & WALKWAYS:  | 805 SF   |
| DRIVEWAY:   | 3,235 SF |

PROPOSED IMPERVIOUS SURFACES: (INCLUDES BUILDING ROOFLINE, DRIVEWAY, WALKWAYS & DECKS)

7,393 SF  
LESS THAN 9,765 OK  
7,393 / 19,530 = 37.85%

### LEGAL DESCRIPTION:

THE NORTH 63 FEET OF THE SOUTH 252 FEET OF GOVERNMENT LOT 4, SECTION 1, TOWNSHIP 24 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON; EXCEPT THE WEST 715 FEET OF SAID GOVERNMENT LOT 4; AND EXCEPT THAT PORTION THEREOF LYING WESTERLY OF THE EASTERLY RIGHT OF WAY MARGIN FOR WEST LAKE SAMMAMISH BOULEVARD SOUTHEAST AS ESTABLISHED BY INSTRUMENTS RECORDED UNDER RECORDING NUMBERS 163396, 1633462 AND 2193697;

TOGETHER WITH SHORELANDS OF THE SECOND CLASS IN FRONT OF AND ABUTTING THEREON;

### PROJECT DATA:

|                        |  |
|------------------------|--|
| <b>PARCEL #:</b>       | 925390-0408  |
| <b>SITE ADDRESS:</b>   | 2242 West Lake Sammamish Parkway SE, Bellevue, WA 98008  |
| <b>PROPERTY OWNER:</b> | ANITA & SHARAD SUNDAREGAN  |
| <b>ARCHITECT:</b>      | Sorensen/Architecture<br>Robert H. Sorensen, Architect LLC<br>22609 N.E. Second Street<br>Sammamish WA 98074<br>Ph: (206) 399-8265 |
| <b>ENGINEER:</b>       | b2 structural engineers<br>Basri Basri, P.E., S.E.<br>7516 N.E. 153rd Place<br>Kirkland, WA 98028<br>Ph: (425) 296-2993            |

### BUILDING DATA:

|                                     |          |
|-------------------------------------|----------|
| <b>TWO STORY HOUSE W/ BASEMENT:</b> |          |
| BASEMENT HEATED AREA:               | 1,521 SF |
| MAIN FLOOR HEATED AREA:             | 2,051 SF |
| UPPER FLOOR HEATED AREA:            | 1,978 SF |
| TOTAL HEATED AREA:                  | 5,550 SF |
| UNFINISHED BASEMENT AREA:           | 196 SF   |
| GARAGE AREA:                        | 897 SF   |
| TOTAL ENCLOSED BUILDING AREA:       | 6,583 SF |
| PORCHES, COVERED PATIOS & DECKS:    | 1,493 SF |

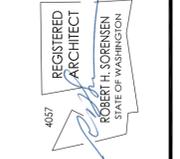
### LOT ZONING:

|                                 |   |
|---------------------------------|---|
| <b>LOT ZONING:</b>              | R 3.5   |
| <b>LOT SIZE:</b>                | 19,608 S.F. (.45 Acre)  |
| <b>LOT SLOPE:</b>               | 20.13%  |
| <b>ALLOWED LOT COVERAGE:</b>    | 35% MAX.  |
| <b>ALLOWED IMPERVIOUS AREA:</b> | 50% MAX.  |
| <b>BASE BUILDING HEIGHT:</b>    | 35 FEET FROM AVERAGE EXISTING GRADE, 30 FEET FROM AVERAGE FINISH GRADE TO MID-POINT OF SLOPE. (LUC 20.50.012 B)                           |
| <b>SETBACK - FRONT YARD:</b>    | 20 FEET   |
| <b>SETBACK - REAR YARD:</b>     | (SHORELINE SETBACK) 50 FEET FROM OHWM (LUC 20.25E.080.0)  |
| <b>SETBACK - SIDE YARDS:</b>    | 5 FEET MIN., TOTAL BOTH SIDES OF 15 FEET MIN. (LUC 20.20.010) EXCEPT FOR MINOR BUILDING ELEMENTS, EAVES, ETC. UP TO 18" (LUC 20.20.025.C) |

### JURISDICTIONAL DATA:

|                     |  |
|---------------------|--|
| <b>LEAD AGENCY:</b> | City of Bellevue<br>Department of Planning & Community Development<br>450 110th Avenue N.E. Bellevue, Washington<br>P.O. Box 90012 Bellevue, Washington 98009-9012<br>Ph: (425) 452-6864 Fax: (425) 452-5225 |
|---------------------|--|

**Sundaresan Residence**  
2242 West Lake Sammamish Parkway S.E.  
Bellevue, Washington 98008  
Parcel #: 925390-0408



DRAWING NUMBER:  
**A1.0e**  
OF DRAWINGS

| DATE     | BY  | DESCRIPTION                                       |
|----------|-----|---|
| 09/08/16 | BOB | PERMIT SUBMITTAL - CRITICAL AREAS LAND USE PERMIT |

**CRITICAL AREAS REPORT  
VEGETATION MANAGEMENT AND MONITORING PLAN**

**SUNDARESAN RESIDENCE  
SHORELINE RESTORATION**

**2242 West Lake Sammamish Parkway SE  
Bellevue Washington 98008  
(Parcel #925390-0408)**

*Prepared by:*

**Cedarock Consultants, Inc.**  
19609 244th Avenue NE  
Woodinville, Washington 98077

*Prepared for:*

**MacPherson Construction & Design**  
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**TABLE OF CONTENTS**

|   | <u>Page</u> |
|---|-------------|
| <b>1.0 INTRODUCTION .....</b>                     | <b>1</b>    |
| 1.1 Project Description.....                      | 1           |
| 1.2 Purpose of this Report .....                  | 1           |
| 1.3 Report Author .....                           | 1           |
| <b>2.0 EXISTING CONDITIONS .....</b>              | <b>2</b>    |
| 2.1 Lake Sammamish.....                           | 2           |
| 2.2 Streams .....                                 | 3           |
| 2.3 Wetlands .....                                | 3           |
| 2.4 Geologic Hazard Areas .....                   | 3           |
| 2.5 Species of Local Importance .....             | 3           |
| 2.6 Flood Hazard Areas .....                      | 4           |
| <b>3.0 PROJECT EFFECTS ON CRITICAL AREAS.....</b> | <b>4</b>    |
| 3.1 Streams .....                                 | 4           |
| 3.2 Wetlands .....                                | 4           |
| 3.3 Shorelines.....                               | 4           |
| 3.4 Geologic Hazard Areas .....                   | 5           |
| 3.5 Species of Local Importance .....             | 5           |
| 3.6 Flood Hazard Areas .....                      | 5           |
| 3.7 Critical Areas Effects Summary .....          | 5           |
| <b>4.0 MITIGATION.....</b>                        | <b>6</b>    |
| 4.1 Impact Avoidance.....                         | 6           |
| 4.2 Impact Minimization .....                     | 6           |
| 4.3 Compensatory Mitigation .....                 | 6           |
| <b>5.0 VEGETATION MANAGEMENT PLAN .....</b>       | <b>7</b>    |
| <b>6.0 VEGETATION MAINTENANCE.....</b>            | <b>8</b>    |
| <b>7.0 VEGETATION MONITORING.....</b>             | <b>8</b>    |

**LIST OF FIGURES**

**Figure 1.** Sundaresan property on Lake Sammamish.....1  
**Figure 2.** General habitat conditions .....2

**LIST OF TABLES**

**Table 1.** Critical Area Impacts..... 6

**APPENDIX**

Proposed action (Detail provided by Sorensen/Architecture)

## 1.0 INTRODUCTION

### 1.1 Project Description

Existing appurtenances to a single family residence that were built decades ago within the Lake Sammamish shoreline buffer and setback will be removed. The area will be regraded to a more natural condition, and then revegetated and stabilized with grass. No natural habitat or native vegetation will be disturbed, and no work below ordinary high water (OHW) is proposed.

Proposed work includes removal of about 95 linear feet of 4 to 5 foot high concrete bulkhead and 661 sq.ft. of wooden decking and other structure within the shoreline buffer and setback. An area of approximately 2,209 sf of area within the floodplain will be restored. The area which currently consists of hardscape, lawn, non-native landscaping shrubs, and invasive species such as bamboo and Himalayan blackberry will be regraded to eliminate the vertical drop and more closely match natural grades found on adjacent properties to the north and south. The shoreline will then be replanted with lawn.

### 1.2 Purpose of this Report

This report was prepared to evaluate environmental effects of the proposed project on critical areas. Mitigation is proposed.

### 1.3 Report Author

This report was prepared by Carl Hadley, a professional biologist with over 25 years of experience in western Washington. Geotechnical evaluation was provided by Robert Pride, Principal Geotechnical Engineer with Yonemitsu Geological Services.



**Figure 1.** Sundaresan property on Lake Sammamish.

## 2.0 EXISTING CONDITIONS

This section provides a description of critical areas on and within 100-feet of the proposed redevelopment area under existing conditions. Critical areas within 100-feet of the work area include the Lake Sammamish Shoreline Management Area, a steep slope, and habitat associated with species of local, state, and federal importance (Figure 1). Adjoining properties include similar critical areas.

### 2.1 Lake Sammamish

Lake Sammamish is a shoreline of the state (classified as a Type S water under the Bellevue land use code LUC 20.25H.075.B.1). The Sundaresan property abuts Lake Sammamish. No work is proposed below the OHW of Lake Sammamish. Restoration activities including removal of concrete bulkhead and wooden decking are proposed within the regulated buffer. Some grading will also take place to restore more natural contours to the area. The grading will alter 1,186 sq.ft. of area currently managed as lawn and a wooden deck (Figure 2). Work is also proposed within the shoreline setback area. Additional concrete bulkhead, wooden decking, and a small wood shed will be removed. Old fill material behind the bulkhead will be regraded to match the shoreline buffer area and more natural grades on neighboring properties to the north and south. An area of 1,213 sq.ft. that currently consists of structure, lawn, non-native landscaping shrubs, and invasive species will be altered.



**Figure 2.** General habitat conditions in November 2015 looking west from Lake Sammamish at the bulkhead and deck to be removed.

## 2.2 Streams

No watercourses are mapped on any City of Bellevue<sup>1</sup>, County, or state databases within more than 200-feet from the proposed work area. Phantom Creek is the nearest creek and is located approximately 1,000-feet to the south. Phantom Creek is a fish-bearing stream with known use by coho salmon and resident trout.

## 2.3 Wetlands

A cursory examination of the property and a review of public records found no evidence of wetlands on the site. No seeps or wetland plants were noted. Geotechnical exploration found no evidence of shallow groundwater under the site<sup>2</sup>. The relatively permeable soils were deemed unlikely to support surface water.

## 2.4 Geologic Hazard Areas

The property contains slopes in excess of 40 percent under the existing house to the west of the proposed work area, but none are located where the proposed action will take place. Potential geologic hazards on and near the site were examined and evaluated by a licensed geotechnical engineer<sup>2</sup>. They found no evidence of landslide hazard areas as defined under LUC 20.25H.120A(1). Native silty sands, and sands with gravel were encountered below the thin topsoil layer extending to the depth of borings at 7.5 feet. No groundwater was encountered in these test borings and there was no caving of the granular soils during drilling. Previously drilled borings on the adjacent property to the north encountered similar subsoil conditions.

## 2.5 Species of Local Importance

The wildlife habitat review consisted of a site-specific survey and consultation with the Washington Department of Fish and Wildlife database<sup>3</sup>. The site and surrounding lands have been developed mostly as moderate-density single-unit residential housing (Figure 1). Some suitable wildlife habitat for terrestrial and avian species is found in the area, in particular a number of large (9 to 36-inch) fir trees, and various small patches of shrubbery on the slopes to the west. However, overall wildlife habitat quality has been significantly modified by past clearing, fragmentation, and introduction of non-native landscaping species (e.g. English ivy, English holly, Himalayan blackberry, and turf grasses).

It is the larger trees that provide the majority of wildlife habitat in the area. None of these trees are within more than 150 feet of the proposed work area. The area proposed for disturbance contains no trees, and only young non-native and invasive shrubs and grasses.

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<sup>1</sup> City of Bellevue Critical Areas, South Sammamish Basin. July 2009.

<sup>2</sup> Yonemitsu Geological Services. 2015. Geotechnical recommendations. Proposed Lunenschloss Residence, 2242 W Lake Sammamish Pkwy SE. May 15, 2015.

<sup>3</sup> Washington Department of Fish and Wildlife. 2015. Priority habitat and species map.

Species that may be expected to be found intermittently within 100 feet of the work area are deer, coyote, Douglas and eastern grey squirrels, other assorted rodent species, and song birds.

Chinook and coho salmon, sockeye, steelhead, cutthroat, and bull trout are found in Lake Sammamish.

## 2.6 Flood Hazard Areas

Land subject to a one-hundred-year flood is present on the property below 36.6 feet in elevation. The deck and much of the bulkhead were constructed within the floodplain. The area behind the bulkhead was filled to create new upland.

## 3.0 PROJECT EFFECTS ON CRITICAL AREAS

Critical areas are defined in the City of Bellevue under BCC LUC 20.25H.025. They include streams, wetlands, shorelines, geologic hazards, habitat and species of local importance, flood hazard areas, and buffers. Existing conditions of each critical area on or near the site are described in Section 2.0 of this report. This section describes any actions that will be taken within or near the critical area and any proposed changes to the functions or values that will occur. Critical Area functions and values for fish and wildlife species are based on WDFW guidelines<sup>4</sup> and other best available science<sup>5</sup>.

### 3.1 Streams

There are no streams within more than 200-feet of the proposed area of disturbance. The area does not drain via surface channels to any stream. The project will not affect any streams.

### 3.2 Wetlands

No wetlands, seeps or springs were noted on the site or reported in sensitive areas portfolios. No groundwater was reported during geotechnical analysis of underlying soils. The project is not expected to have any adverse effect on wetlands.

### 3.3 Shorelines

Lake Sammamish is a shoreline of the state. The proposed work will not directly affect the lake but will alter the buffer and the building setback area. No vegetation with more than minimal functional value will be removed from his area, and some of the vegetation to be removed is considered invasive and noxious (e.g. Himalayan blackberry, bamboo, yellow loosestrife). The current mix of lawn, non-native shrubs and weedy vegetation will be replaced with grass. Removal of the bulkhead currently located at OHW in some locations, and replacement with a

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<sup>4</sup> Ibid.

<sup>5</sup> For example, see Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas. 2002. Washington State Office of Community Development, Olympia, WA. and City of Bellevue's 2005 Best Available Science (BAS) Review (Herrera 2005).

gradually sloped shoreline consistent with that found on neighboring properties will help reduce reflected wave energy. The project is expected to have a minor beneficial effect on shoreline functions and values.

### **3.4 Geologic Hazard Areas**

Project geotechnical engineers have reviewed the site and proposed action, and provided recommendations for work near the steep slopes to help avoid adverse effects on slope stability and erosion. With implementation of these measures, they concluded that the project could be safely completed without risk to steep slopes.

### **3.5 Species of Local Importance**

No trees or native vegetation will be disturbed. No new human activities will be introduced to the area. The proposed action will eliminate some structure from the immediate shoreline and will replace structure, non-native species, and lawn with more lawn. There will be some short term disturbance, but the small project is expected to have no significant long term adverse effects on upland wildlife habitat.

Sensitive fish species are found in Lake Sammamish. No work below the OHW is proposed. The project will eliminate some bulkhead at OHW and will eliminate all structure located immediately adjacent to the lake. This will have benefits on natural shoreline processes associated with wave action and sediment movement. There will be no change in the quantity or quality of water being delivered to the lake, and no effect on the functions and values of riparian buffers near the waterbody. The project will have a minor beneficial effect on fisheries resources.

### **3.6 Flood Hazard Areas**

Work is proposed within the flood hazard area. The current deck and bulkhead within the floodplain will be removed and approximately 2,209 sf of area regraded. Calculations show that a net 51 cy of material will be removed from the floodplain. Virtually all of this is fill placed when the bulkhead was installed. The project will have a beneficial effect on flood storage volume of Lake Sammamish by removing old fill material.

### **3.7 Critical Areas Effects Summary**

The proposed action will take place within a highly disturbed area that contains little functional habitat value. There are no streams, wetlands, geologic hazards, significant trees, or their regulated buffers within more than 100-feet of the proposed disturbance. No trees or native vegetation will be disturbed. Mitigation includes bulkhead, fill, and invasive species removal from the shoreline buffer, and a net gain in floodplain storage area. Short term disturbance will occur during construction but no significant long term adverse effects on upland wildlife habitat, and no adverse effects on any other critical areas are expected.

**Table 1. Critical Area Impacts**

| Location of Impact     | Area of Permanent Disturbance |        |                  |
|------------------------|-------------------------------|--------|------------------|
|                        | Existing                      | Future | Change           |
| Streams                | 0                             | 0      | 0                |
| Stream Buffers         | 0                             | 0      | 0                |
| Wetland                | 0                             | 0      | 0                |
| Wetland Buffer         | 0                             | 0      | 0                |
| Lake Sammamish Buffer  | 515 sf                        | 0      | -515 sf          |
| Lake Sammamish Setback | 146 sf                        | 0      | -146 sf          |
| Steep Slope            | 0 sf                          | 0      | 0                |
| Steep Slope Setback    | 0                             | 0      | 0                |
| Flood Hazard Area      | 2,209 sf                      | 0      | -2,209           |
| Total CA Impacts       | 2,209 sf <sup>a</sup>         | sf     | <b>-2,209 sf</b> |

<sup>a</sup> There is overlap with most of the structure located within the historic floodplain. So the numbers do not add up.

## 4.0 MITIGATION

The primary means of mitigation for restoring the shoreline has been avoidance of critical areas to the greatest extent possible. Because the proposed action consists entirely of restoring the lake buffer and setback to the pre-disturbance condition, the project itself is self-mitigating.

### 4.1 Impact Avoidance

The following actions are proposed to avoid impacts to critical areas:

- No disturbance is proposed below the OHW of Lake Sammamish, or in a stream, wetland, or geologic hazard area.
- No trees or native vegetation will be disturbed.

### 4.2 Impact Minimization

The following actions are proposed to minimize impacts:

- Work within the shoreline buffer and setback area will be protected with TESC that meets all City of Bellevue requirements.

### 4.3 Compensatory Mitigation

The following actions are proposed to mitigate for impacts:

- Approximately 95 lf of concrete bulkhead and 661 sf of decking will be removed from the shoreline buffer and setback area.
- All fill material (approximately 51 cy) will be removed from the shoreline buffer and setback area, and 2,209 sf of the site regraded to match more natural slopes found on adjacent properties.

- Where the existing bulkhead to be removed abuts the OHW (see Figure 2), beach gravel will be imported to restore the area so slopes and material are consistent with the adjacent shoreline.
- All invasive plant species currently located within the shoreline buffer and setback area will be removed.

## 5.0 VEGETATION MANAGEMENT PLAN

A Vegetation Management Plan (VMP) as described in LUC 20.25H.055.C.3.i. is provided to allow the applicant to remove vegetation (grass and weeds) from the Lake Sammamish buffer. VMP Requirements are listed below along with a description of how the plan complies with the requirements.

- (1) A description of existing site conditions, including existing critical area functions and values: Existing site conditions, critical area functions, and values are discussed in Section 2 of this report.
- (2) A site history: The site has been in continuous use as a residence for at least several decades.
- (3) A discussion of the plan objectives: This Vegetation Management Plan is designed to allow restoration of the shoreline buffer and setback area to a more natural condition. Under the proposed action, all manmade structures and fill will be removed from this area and the upland site above OHW revegetated with grass to protect against erosion.
- (4) A description of all sensitive features: Sensitive habitat features are discussed in Section 2 of this report. The most sensitive feature in the work area is Lake Sammamish (Section 2.1). No work is proposed below the OHW of the lake and the lake will be protected with suitable TESC.
- (5) Identification of soils, existing vegetation, and habitat associated with species of local importance present on the site: The discussion of soils (Section 2.4), existing vegetation (Sections 2.1 and 2.5), and habitat associated with species of local importance (Section 2.5) are found above.
- (6) Allowed work windows: Grading will follow all requirements of the City of Bellevue grading permit. No inwater work is proposed so the fish work windows do not apply. No tree cutting is proposed so nest disturbance will not be an issue.
- (7) A clear delineation of the area within which clearing and other vegetation management practices are allowed under the plan: All work will take place between the existing house and the OHW of Lake Sammamish.
- (8) Short- and long-term management prescriptions, including restoration and revegetation requirements: Restoration will include removal of up to 60 cy of old fill material, and placement of up to 9 cy of topsoil and beach gravel for a net change of -51 cy. Once grading is complete the area will be seeded with grass for erosion control and maintained that way in perpetuity.

## **6.0 VEGETATION MAINTENANCE**

Re-establishing groundcover for erosion protection and prevention of non-native and invasive species is the goal of the maintenance plan.

- New grass shall be planted within 2 days of the completion of ground disturbance within the shoreline buffer and setback area.
- The grass shall be periodically watered from May through mid-October as needed to keep it alive. A potable water source is available for this use.
- Due to the aggressively invasive habit of non-native species such as Himalayan blackberry, yellow loosestrife, and bamboo, the homeowner shall be responsible for removal on an annual basis.

## **7.0 VEGETATION MONITORING**

Due to the small size and uncomplicated nature of the proposed project the grass shall be self-maintained and self-monitored by the homeowner and no formal monitoring or reporting is proposed.

### APPENDIX

Proposed action (Detail provided by Sorensen/Architecture)

