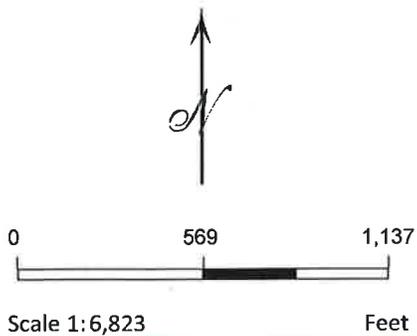
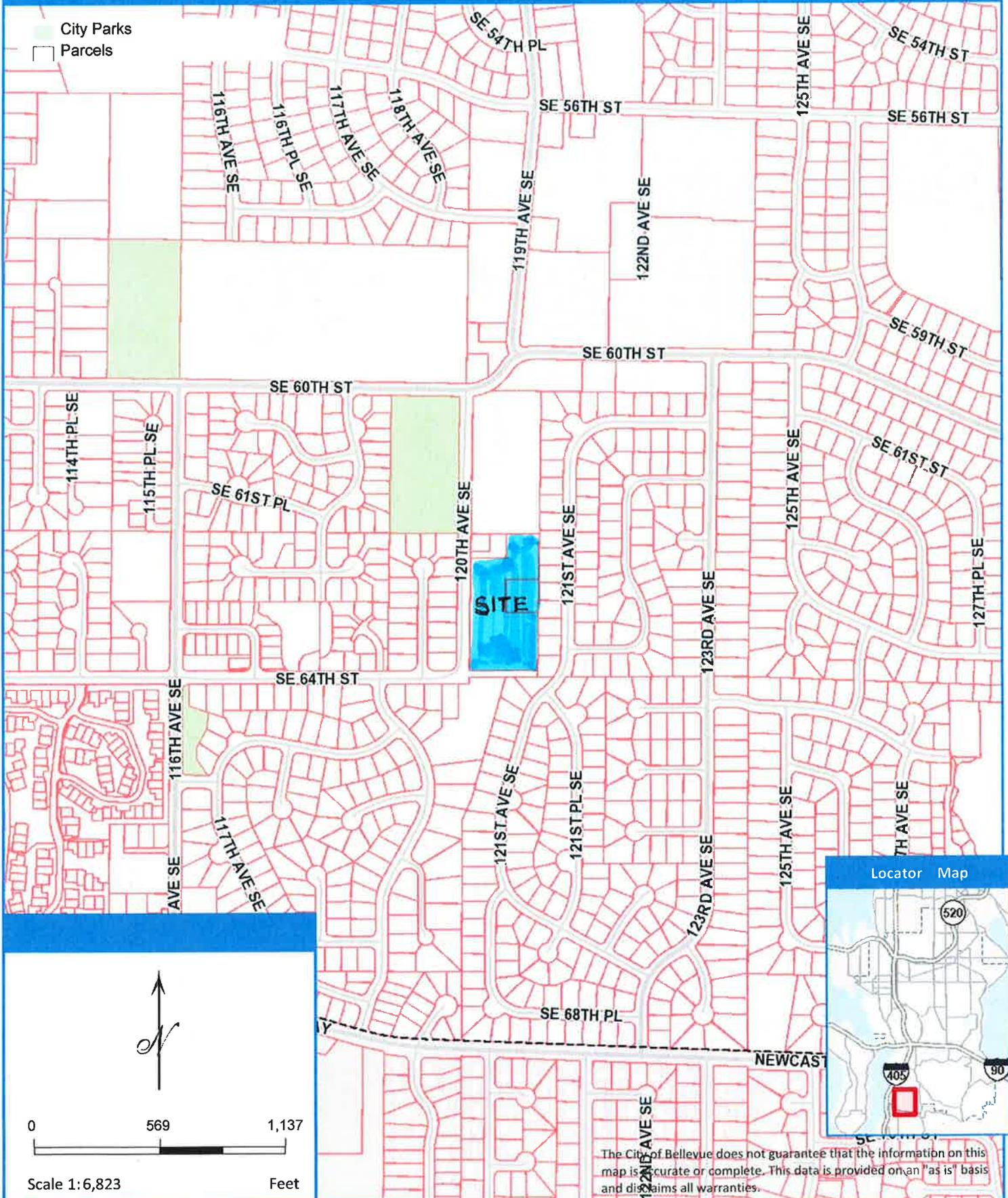


# Newport View Vicinity Map



- City Parks
- Parcels



The City of Bellevue does not guarantee that the information on this map is accurate or complete. This data is provided on an "as is" basis and disclaims all warranties.

**ENVIRONMENTAL CHECKLIST**

10/9/2009

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

**INTRODUCTION****Purpose of the Checklist:**

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

**Instructions for Applicants:**

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

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

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

**Use of a Checklist for Nonproject Proposals:** *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

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

**Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.**

**ENVIRONMENTAL CHECKLIST**

4/11/2013

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

**BACKGROUND INFORMATION**

Property Owner: **Triad-Fransen Development**

Proponent: **Triad-Fransen Development**

Contact Person: **Jeff Fransen**

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

Address: **2801 Alaskan Way, Pier 70 Suite 107, Seattle, WA 98121**

Phone: **(425) 344-8833**

Proposal Title: **Newport View Preliminary Plat**

Proposal Location: **NE Corner of the intersection of SE 64<sup>th</sup> Street and 120<sup>th</sup> Avenue SE. See attached legal description and vicinity map.**

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

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

1. General description: **The Newport View Preliminary Plat is a proposed 14 single-family lot conservation subdivision of 4.03 acres in the R-5 Zone of the City of Bellevue. The site is made up of two existing tax parcels; 3343301725 and 3343301726. Access to the site is proposed as a new private road intersecting 120<sup>th</sup> Avenue SE. The site is vacant, undeveloped land and is currently partially forested and heavily vegetated with scrub-shrubs / invasive species including Himalayan blackberry, Scot's broom and English ivy. The site slopes down from east to west approximately 10% to 30%, with some limited areas of steep slopes.**

2. Acreage of site: **4.03 acres.**

3. Number of dwelling units/buildings to be demolished: None. **The site is vacant / undeveloped land.**

4. Number of dwelling units/buildings to be constructed: **The proposal is for 14 single-family lots.**

5. Square footage of buildings to be demolished: **Not applicable as the site is vacant.**

6. Square footage of buildings to be constructed: **Homes will be built following final subdivision approval. The project anticipates homes will be in the 2,500 square foot to 4,000 square foot range.**

7. Quantity of earth movement (in cubic yards): **Approximately 13,500 cubic yards.**

8. Proposed land use: **Single-family residential.**

9. Design features, including building height, number of stories and proposed exterior materials: **The Applicant anticipates two story homes; maximum 30' height (flat roof), maximum 35' height (ridge**

**of pitched roof). Exterior building materials to be wood, manufactured wood product, metal, brick, stone and/or stucco.**

10. Other

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

**Construction of the project is proposed to begin in the spring / summer of 2016 with home construction following in 2016 and 2017.**

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

**No.**

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

**Revised Geotechnical and Critical Area Report, ABPB Consulting; October 20, 2015.  
Arborist Report, Creative Landscape Solutions; October 13, 2015.  
Wildlife Habitat Study, The Watershed Company; May 3, 2007.  
Habitat Assessment 2015 Update, The Watershed Company; November, 2015.  
Critical Areas Report, The Watershed Company; November 2015.  
Drainage Analysis and Preliminary Stormwater Control Plan, Goldsmith; Revised October, 2015.**

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.

**The applicant is not aware of any pending proposals that would affect the property.**

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

**City of Bellevue: Preliminary Plat; Utility Extension; Critical Areas Land Use Permit; Clearing and Grading; Final Plat.  
NPDES: General Permit To Discharge Stormwater, Washington State Department of Ecology.  
Puget Sound Energy: Electric and natural gas service.  
Other: Dry utilities.**

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)?

**Generally, site slopes vary from about ten percent to thirty percent. The steepest slope on the site is approximately +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.

**Most of the site is underlain by very dense, silty, gravelly sand (Glacial Till). See the Revised Geotechnical and Critical Area Report by ABPB Consulting, October 20, 2015.**

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

**There are no indications or history of unstable soils in the immediate vicinity.**

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

**Approximately 13,500 cubic yards of earthwork / grading is proposed at the time of site improvement construction, pursuant to the approved preliminary plat and construction plans. Grading is planned as on-site excavation and fill, and potentially imported structural fill if required. Excess cut will be utilized on site, exported soil, if any, will be disposed of at an approved location.**

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

**Erosion could occur as a result of clearing / grading and construction. However, site management during earth moving activities will include best management practices (BMP) through an approved temporary erosion and sedimentation control plan (TESCP), prepared and approved as part of the engineering review. Also, a NPDES Permit will be required by the Washington State Department of Ecology.**

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

**A maximum of approximately 50% of the total project site area would be covered with impervious surfaces including paved roads, concrete sidewalks, driveway, rooftops and stormwater vaults.**

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

**An approved TESCP Plan will be followed during construction activities. BMP's will be utilized to reduce or control erosion and other impacts to earth, including silt fencing, straw bales, mulching or plastic covering, construction entrance, check dams, hydroseed, etc. All construction activities, site improvements and building construction will be consistent with the geotechnical recommendations and City of Bellevue requirements.**

### 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.

**The primary source of air pollutants generated during infrastructure improvements and home construction would be attributable to vehicle emissions from construction equipment, dust from site grading operations, and trips to and from the project site by construction employees.**

**Emissions from the completed project would be those commonly associated with a single-family home residential development.**

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

**None known.**

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

**Emissions from construction equipment and trucks would be reduced by using well-maintained equipment. Avoiding prolonged periods of vehicle idling and engine-powered equipment would also reduce emissions. Dust abatement / dust control measures may be implemented during construction if necessary per the approved TESC plan. By implementing BMPs and following prescribed mitigation measures, on-site construction activities are not likely to substantially affect air quality in the project vicinity.**

### 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.

**There are no surface water bodies on, or in the immediate vicinity of, the site.**

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

**No.**

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

**No fill or dredge material will be placed in, or removed from, surface water or wetlands.**

(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.

**Not applicable.**

c. Water Runoff (Including storm water)

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

**Source of runoff is minor off-site flow and direct rainfall. Stormwater will be managed per City of Bellevue Surface Water Engineering Standards. Stormwater will be collected, treated and detained in the proposed on-site stormwater vaults. Stormwater will be discharged to the downstream system located within 120<sup>th</sup> Avenue SE.**

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

**No. Sediment laden water (silts) will be controlled by project BMPs, the approved TESC plan and approved General Permit to Discharge Stormwater.**

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

**The project will comply with City of Bellevue requirements including the City of Bellevue Surface Water Engineering Standards. See Goldsmith's Drainage Analysis and Preliminary Stormwater Control Plan submitted with the preliminary plat.**

4. Plants

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

- deciduous tree: alder, maple, aspen, other (Pacific madrona), Bitter Cherry, Cottonwood
- 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 (Himalayan blackberry, Scot's broom and English ivy)

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

**All vegetation will be removed from the proposed road right-of-way, stormwater tract, and home footprint areas. Vegetation will be retained and/or enhanced within the proposed critical area tracts per the Critical Area Mitigation and Enhancement Plan prepared by The Watershed Company. Non-native species will be removed, controlled, and areas replanted with native species as appropriate. Trees will be retained per the tree retention plan included in the preliminary plat.**

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

**No threatened or endangered species are known to be present on-site or in the immediate vicinity of the project site. See the Wildlife Habitat Study and Habitat Assessment Update prepared by The Watershed Company and included with the preliminary plat.**

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

**The project will retain trees per the tree retention plan. As discussed above, vegetation will be retained and/or enhanced within the proposed critical area tracts per the Critical Area Mitigation and Enhancement Plan prepared by The Watershed Company. Non-native species will be removed, controlled, and areas replanted with native species as appropriate. Street trees will be provided along 120<sup>th</sup> Avenue SE.**

## 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 (small mammals: i.e. Squirrels, Moles, etc.)

Fish: bass, salmon, trout, herring, shellfish, other:

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

**None known.**

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

**The entire region is part of the Pacific Flyway for migratory birds.**

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

**Critical area tracts will be enhanced per the Critical Area Mitigation and Enhancement Plan by The Watershed Company. These natural areas will include tree retention and native vegetation enhancement, and will provide improved habitat and critical area functions.**

## 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.

**Electric Power – power / heating and cooling.**

**Natural Gas – heating.**

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

**No. The site is sloped from the east, down to the west where it borders 120<sup>th</sup> Avenue SE. Due to the nature of the topography and adjacent right-of-way, adjacent properties will have the same solar access as the proposed properties. No adverse impact to potential use of solar power by adjacent property owners is anticipated.**

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

**Construction will comply with Federal, State and local energy requirements.**

## 7. Environmental Health

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

**No environmental health hazards are expected as a result of this proposal.**

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

**None.**

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

**Construction contractors will follow standard safety practices for site development and home construction.**

- b. Noise

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

**No known sources of noise exist in the area which would affect the project. Current noise at the project site is consistent with that associated with a residential neighborhood.**

- (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.

**Noise levels associated with site development (clearing and grading), and single family home construction would be expected for the short term. Noise levels associated with a single-family residential neighborhood would be expected for the long term. The City of Bellevue regulates noise associated with construction per the City Code.**

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

**Construction noise will adhere to the requirements of the City of Bellevue - City Code.**

## 8. Land and Shoreline Use

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

**The project site is currently undeveloped, vacant land. West of the site is existing 120<sup>th</sup> Avenue SE improved right-of-way. South of the site is SE 64<sup>th</sup> Street unimproved right-of-way. North of the site is vacant land as well as a large existing church site. East of the project are platted, developed, single family home-sites.**

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

**No.**

- c. Describe any structures on the site.

**There are no structures on the site.**

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

**No.**

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

**The current zoning is R-5.**

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

**SF-H. Single Family High Density – up to 5 units per acre.**

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

**Not Applicable.**

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

**Yes. There are limited areas of steep slopes on the property (slopes over 40%). A Revised Geotechnical and Critical Area Report has been prepared by ABPB Consulting (10/20/2015), and is included with the preliminary plat. As noted in the report, there are four limited areas of steep slope on the site. Steep slope area A is mostly located in an area of ‘cut’ associated with the existing logging road. Steep slope area B appears to be mostly naturally occurring. Steep slope area C is located in an area of ‘fill’ associated with the existing logging road. Steep slope area D appears to be a small, naturally occurring slope that might have had some fill placed on it 25 to 30 years ago. See geotechnical report and the attached Existing Conditions / Slope Categories plan sheet (Sheet 2) from the preliminary plat for the referenced steep slope areas.**

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

**Assuming 2.6 people per household, approximately 37 people would reside in the completed project.**

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

**None. The project site is vacant, undeveloped land.**

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

**None; not applicable.**

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

**The proposal is a single-family residential development which is compatible with existing and projected land uses and plans per the zoning and the Comprehensive Plan.**

## **9. Housing**

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

**Approximately 14 middle to high income housing units would be provided by the project.**

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

**No units would be eliminated; the project site is undeveloped, vacant land.**

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?

**The maximum height for the project is 30' for a flat roof, and 35' to the ridge of a pitched roof. Exterior building materials to be wood, manufactured wood product, metal, brick, stone and/or stucco.**

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

**Portions of the development may be visible from surrounding properties, but no regional views will be impacted. The forested / vegetated hillside as seen from 120<sup>th</sup> Avenue SE will be revised to a landscaped, single family community with native growth protection areas. The property slopes up from the west, therefore views would not be obstructed or only partially obstructed as the site is lower than properties further to the east, and is currently forested/vegetated.**

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

**The project will retain trees as required, and will also provide critical area tracts as well as street landscaping / landscaping associated with a single-family residential neighborhood.**

## 11. Light and Glare

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

**The completed neighborhood would produce lighting from housing, and street lights in the evening and early morning 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?

**There are no known existing off-site sources of light or glare that would affect the proposal.**

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

**None.**

## 12. Recreation

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

**Newport Hills Park is located just north of the site on 120<sup>th</sup> Avenue SE, which has a turf soccer field, grass baseball field, as well as a play structure, park benches and restrooms.**

**Chinook Middle School is located across the street (SE 60<sup>th</sup> Street) from Newport Hills Park and includes a football/soccer field, track, tennis courts and baseball field.**

**There is an additional City of Bellevue park located west of / adjacent to Chinook Middle School.**

**Coal Creek Park and associated trails are located east of the project, approximately 1 mile from the site.**

**Lake Washington is located approximately 1 mile west of the site.**

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

**No.**

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

**There are no proposed measures to reduce or control impacts on recreation. The site did not provide recreational opportunities. There are recreational opportunities in the immediate vicinity as described above.**

### 13. Historic and Cultural Preservation

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

**No.**

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.

**Not applicable.**

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

**Not applicable.**

### 14. Transportation

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

**The project site fronts on 120<sup>th</sup> Avenue SE. The proposal is to serve the planned neighborhood with a new private road intersecting with 120<sup>th</sup> Avenue SE.**

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

**Public transit is available near the site. Bus stops are located at SE 60<sup>th</sup> Street and 119<sup>th</sup> Avenue SE (0.3 miles from the site), and also at SE 60<sup>th</sup> Street and 118<sup>th</sup> Avenue SE (0.3 miles from the site).**

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

**The project would provide a minimum of two parking spaces per unit, or 28 parking spaces. No parking spaces would be eliminated as the site is currently vacant land / undeveloped.**

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).

**The project will provide required road frontage improvements to 120<sup>th</sup> Avenue SE including road widening and sidewalk along the project frontage. The proposal includes a new private road intersecting with 120<sup>th</sup> Avenue SE in order to serve the proposed 14 lots. 120<sup>th</sup> Avenue SE is an existing public road.**

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.

**Assuming 11 trips per day, per household, the completed project will generate approximately 154 vehicle trips. Peak volumes would occur in the PM peak hours, approximately 4 to 6 PM.**

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

**Transportation impact fees will be paid to the City of Bellevue at the time of building permit for each of the proposed homes.**

#### 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.

**Yes. An additional need would result for those services associated with the construction / addition of 14 new single family homes.**

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

**Measures to reduce or control direct impacts on public services include paying increased property taxes, as well as transportation impact fees, utility connection charges, and general government fees.**

#### 16. Utilities

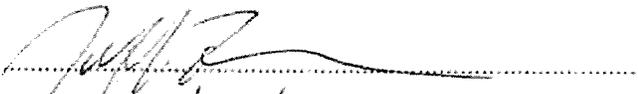
a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

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.

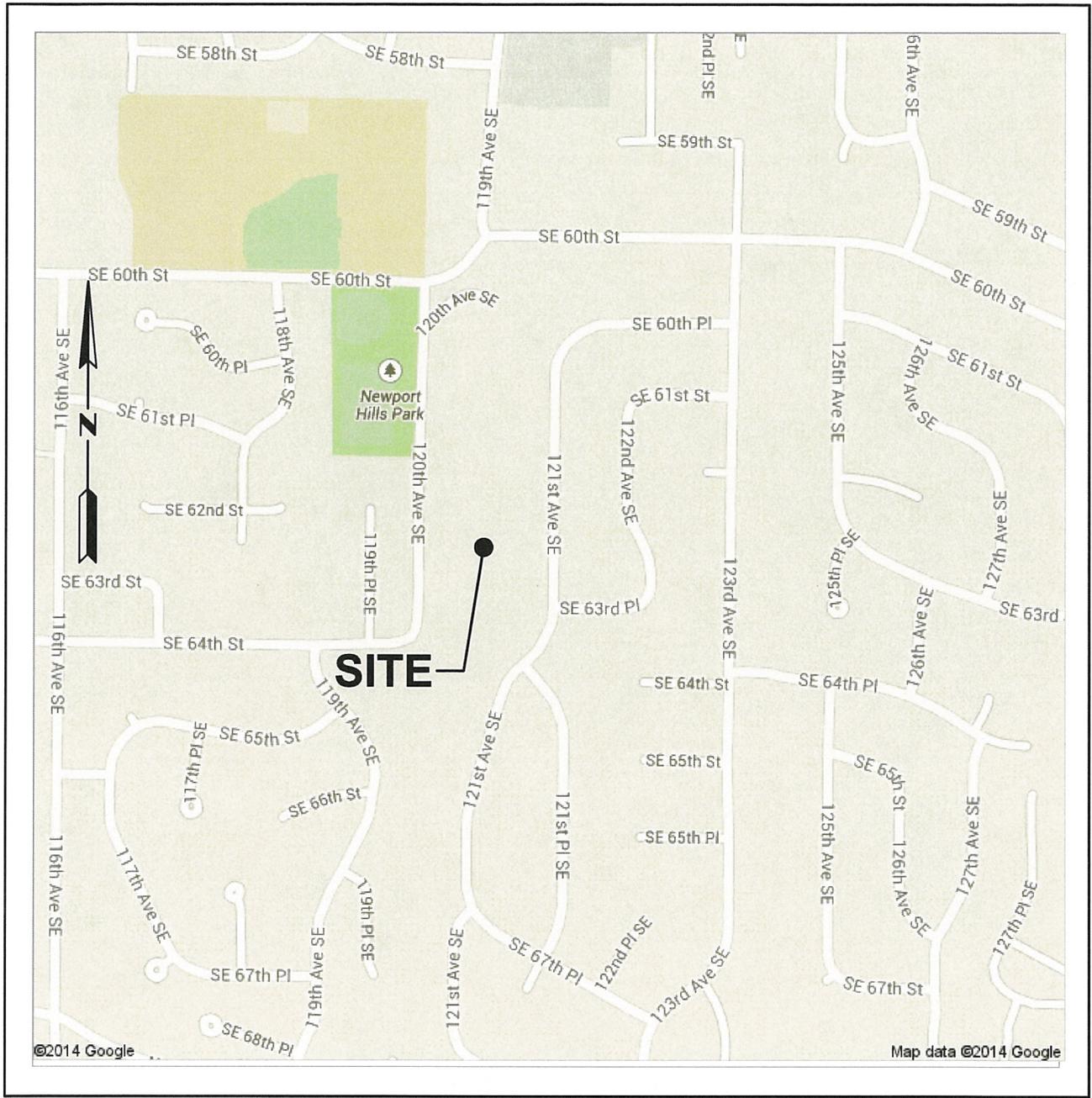
**New utility services will be constructed within the proposed right-of-way of the project. Water and sewer will be provided by the City of Bellevue. Electricity and Natural Gas will be provided by Puget Sound Energy. Cable will be provided by Comcast and/or Verizon. Telephone will be provided by Frontier and/or Comcast. Water, sanitary sewer and storm sewer connections are available within 120<sup>th</sup> Avenue SE. Water facilities will include an extension of the water system into the site from both 121st Avenue SE and 120th Avenue SE.**

#### 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.....10/26/15



**VICINITY MAP**  
N.T.S.

**FIGURE 1**



## LEGAL DESCRIPTION

### Parcel A:

That portion of Tract 305, C.D. HILLMAN'S LAKE WASHINGTON GARDEN OF EDEN ADDITION TO SEATTLE, DIVISION NO. 3, according to the plat thereof, recorded in Volume 11 of Plats, page 81, records of King County, Washington, described as follows:

Commencing at the Northeast corner of said Tract;  
THENCE South 1°48'52" West along the East line of said Tract 206.77 feet to the Point of Beginning;  
THENCE North 88°11'08" West 150.00 feet;  
THENCE South 1°48'52" West 150.00 feet;  
THENCE South 88°11'08" East 150.00 feet to the East line of said Tract;  
THENCE North 1°48'52" East 150.00 feet to the True Point of Beginning.

### Parcel B:

Tract 305, C.D. HILLMAN'S LAKE WASHINGTON GARDEN OF EDEN ADDITION TO SEATTLE, DIVISION NO. 3, according to the plat thereof, recorded in Volume 11 of Plats, page 81, records of King County, Washington;

EXCEPT the North 110.10 feet of the West 160 feet thereof;  
AND EXCEPT that portion thereof described as follows:

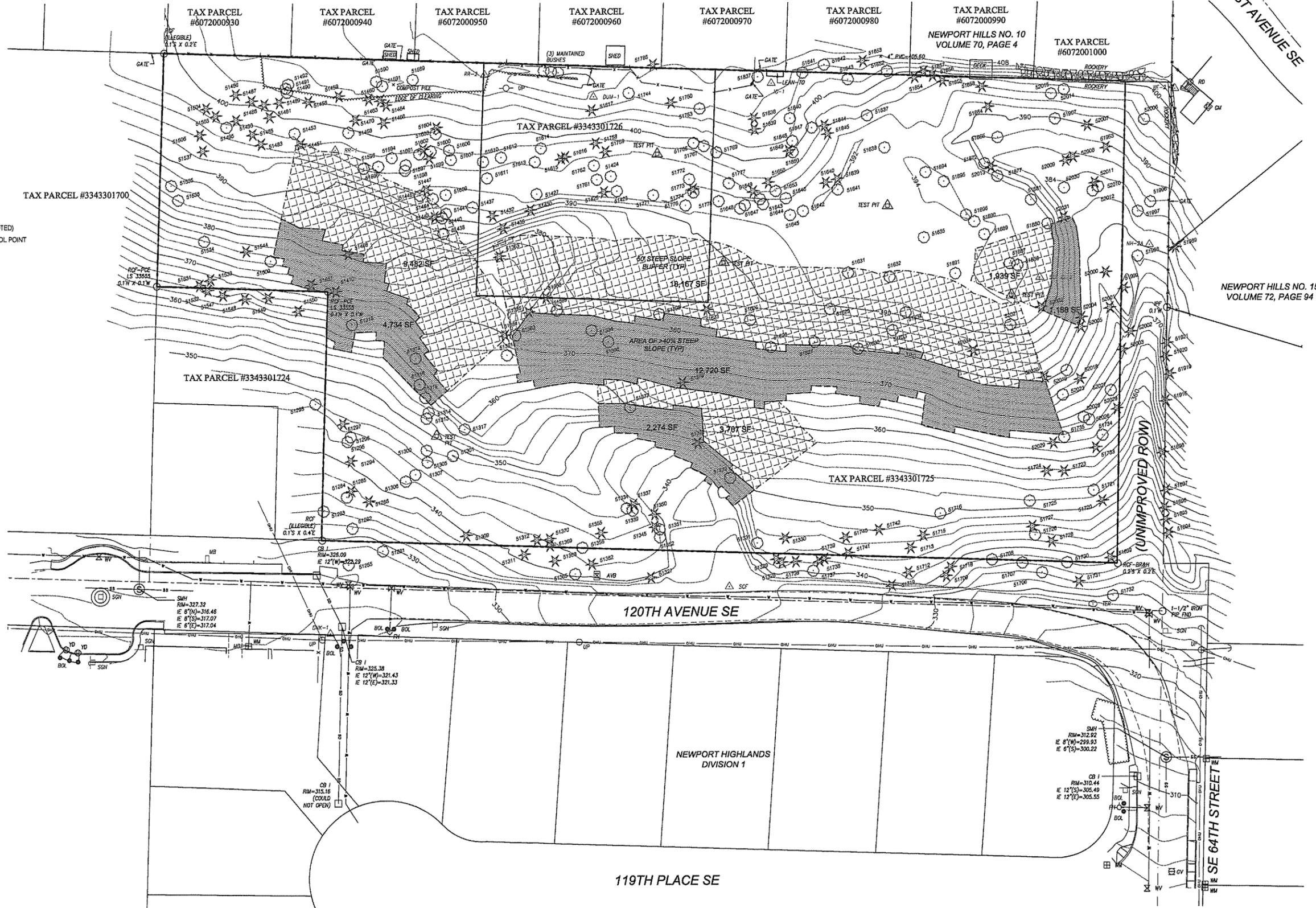
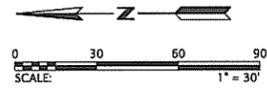
Commencing at the Northeast corner of said Tract;  
THENCE South 1°48'52" West along the East line of said Tract 206.77 feet to the True Point of Beginning;  
THENCE North 88°11'08" West 150.00 feet;  
THENCE South 1°48'52" West 150.00 feet;  
THENCE South 88°11'08" East 150.00 feet to the East line of said Tract;  
THENCE North 1°48'52" East 150.00 feet to the True Point of Beginning.

SITUATE in the County of King, State of Washington

**END OF EXHIBIT "A"**

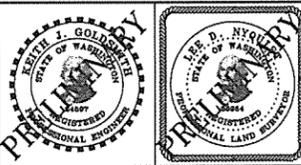
SE 1/4, SW 1/4 SECTION 21, TOWNSHIP 24 N, RANGE 5 E, W.M.  
CITY OF BELLEVUE, KING COUNTY, WASHINGTON

- LEGEND**
- AVB AIR-VAC BOX
  - BOL BOLLARD
  - CB1 CATCH BASIN TYPE 1
  - CONC CONCRETE
  - FH FIRE HYDRANT
  - FND FOUND
  - GM GAS METER
  - GV GAS VALVE
  - MB MAILBOX
  - MON MONUMENT
  - RCF REBAR & CAP FOUND (AS NOTED)
  - RR- GOLDSMITH SURVEY CONTROL POINT
  - SGN SIGN
  - SMH SANITARY SEWER MANHOLE
  - TER TELEPHONE RISER
  - UP UTILITY POLE
  - WM WATER METER
  - WV WATER VALVE
  - YD YARD DRAIN



REV. NO.	DATE	DESCRIPTION
1	10/16/2014	REVISED PER CITY OF BELLEVUE 1ST ROUND REVIEW COMMENTS
2	12/22/2014	UPDATED CONTOURS TO REFLECT ADDITIONAL FIELD DATA
3	10/27/2015	REVISED PER CITY OF BELLEVUE 2ND ROUND REVIEW COMMENTS

MADE BY	CHECKED BY	PLOTTED:	EMALM
EMALM	LNKYQUIST	2015/10/27 16:03	EMALM
EMALM	LNKYQUIST	DRAWN: EMALM	
EMALM	LNKYQUIST	DESIGNED:	
		APPROVED: LNKYQUIST	
		FIELD BOOK:	
		PAGE #:	



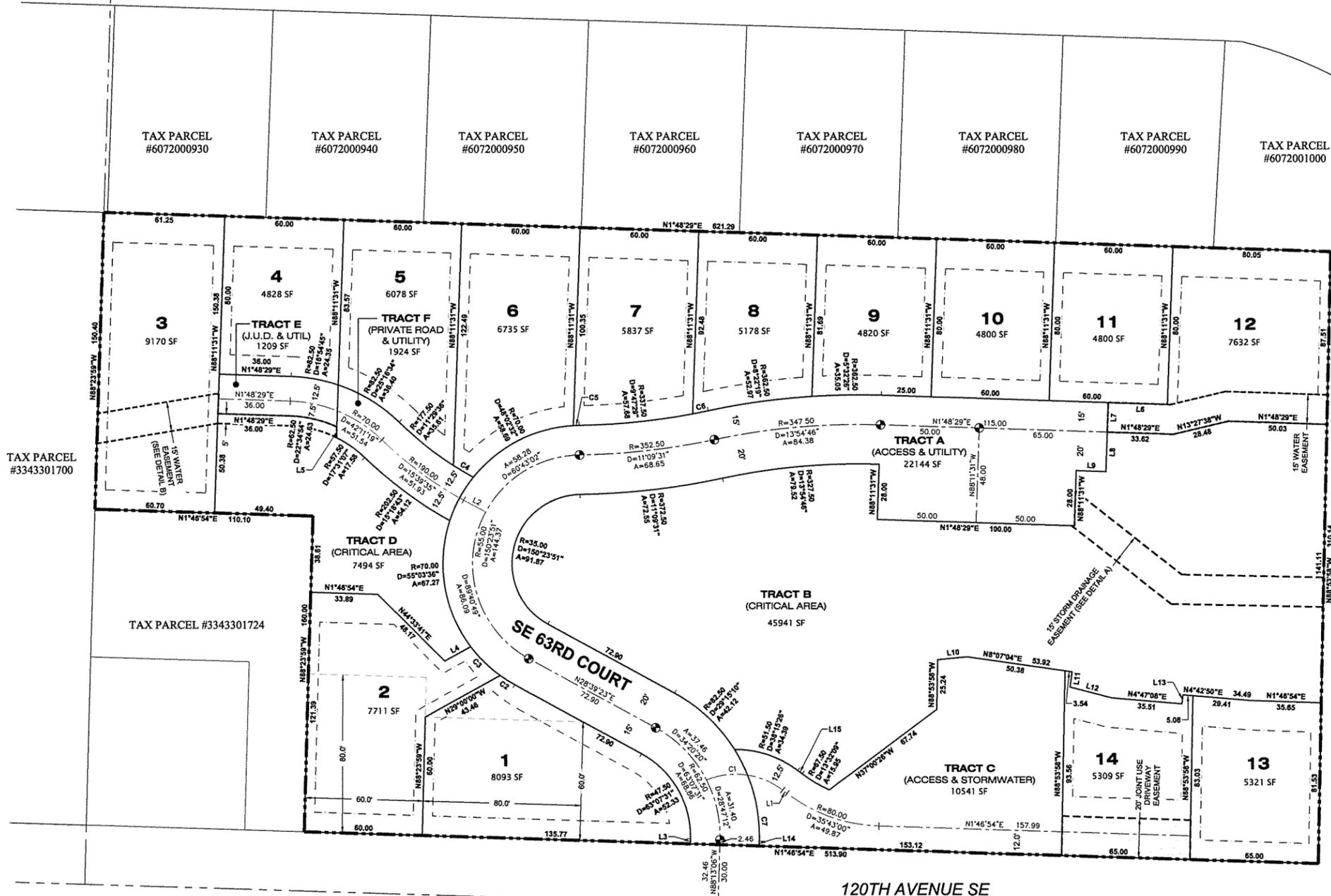
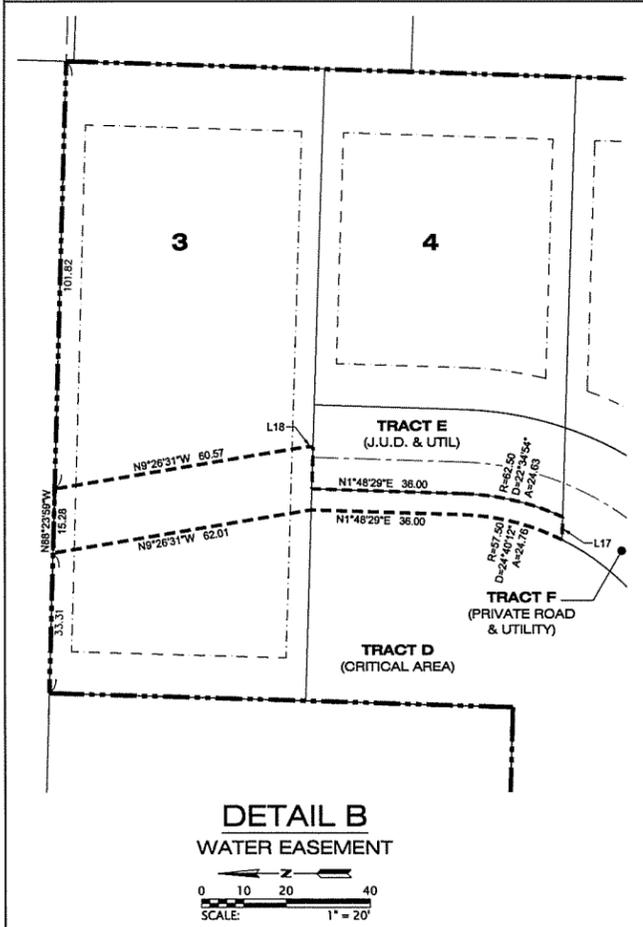
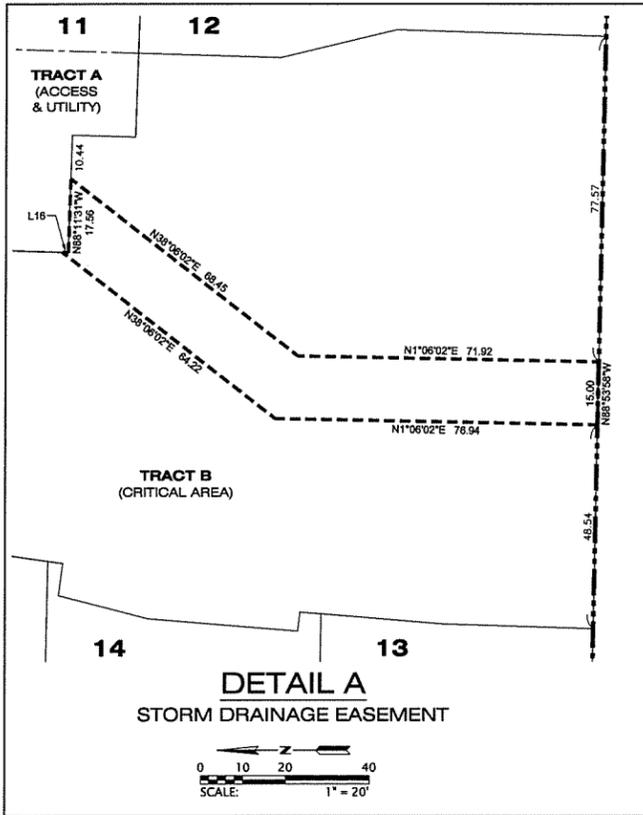
TRIAD - FRANSEN DEVELOPMENT  
EXISTING CONDITIONS  
FOR  
**NEWPORT VIEW PRELIMINARY PLAT**  
CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13122  
SHEET  
**2**

**GOLDSMITH**  
LAND DEVELOPMENT SERVICES  
1215 14th Ave SE, Bellevue, WA 98004 | PO Box 3563, Bellevue, WA 98009  
T 425.462.1090 F 425.462.7719 www.goldsmitthengineering.com

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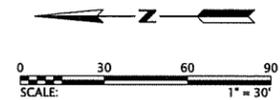
SE 1/4, SW 1/4 SECTION 21, TOWNSHIP 24 N, RANGE 5 E, W.M.  
CITY OF BELLEVUE, KING COUNTY, WASHINGTON



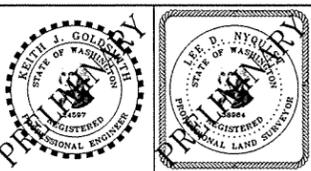
CURVE TABLE			
CURVE NO.	RADIUS	DELTA ANGLE	ARC LENGTH
C1	R=39.00	D=59°56'41"	40.80
C2	R=70.00	D=7°11'33"	8.79
C3	R=70.00	D=17°08'39"	20.95
C4	R=177.50	D=3°46'13"	11.68
C5	R=70.00	D=2°23'05"	2.91
C6	R=337.50	D=1°22'02"	8.05
C7	R=82.50	D=33°52'21"	48.77

LINE TABLE		
LINE NO.	BEARING	DISTANCE
L1	N37°29'55"E	2.76
L2	N28°20'12"E	12.65
L3	N88°13'06"W	2.46
L4	N29°00'00"W	15.05
L5	N88°11'31"W	5.46
L6	N1°48'29"E	30.00
L7	N88°11'31"W	15.00
L8	N88°11'31"W	20.00
L9	N1°48'29"E	15.00

LINE TABLE		
LINE NO.	BEARING	DISTANCE
L10	N5°38'41"W	15.05
L11	N82°35'36"W	7.74
L12	N14°34'06"E	21.97
L13	N83°03'29"W	4.57
L14	N88°13'06"W	2.46
L15	N37°29'55"E	2.76
L16	N1°48'29"E	1.43
L17	N88°11'31"W	5.46
L18	N1°48'29"E	1.48



REV. NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	PLOTTED:	DATE	EMALM
1	10/16/2014	REVISED PER CITY OF BELLEVUE 1ST ROUND REVIEW COMMENTS	EMALM	LNKYQUIST	2015/10/27 16:10		EMALM
2	10/27/2015	REVISED PER CITY OF BELLEVUE 2ND ROUND REVIEW COMMENTS	EMALM	LNKYQUIST			



TRIAD - FRANSEN DEVELOPMENT  
NEW LOTS & EASEMENTS  
FOR  
**NEWPORT VIEW PRELIMINARY PLAT**  
CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13122  
SHEET **3**



SE 1/4, SW 1/4 SECTION 21, TOWNSHIP 24 N, RANGE 5 E, W.M.  
CITY OF BELLEVUE, KING COUNTY, WASHINGTON



LEGEND

- AVB AIR-VAC BOX
- BOL BOLLARD
- CB1 CATCH BASIN TYPE 1
- CONC CONCRETE
- FH FIRE HYDRANT
- FND FOUND
- GM GAS METER
- GV GAS VALVE
- MB MAILBOX
- MON MONUMENT
- RCF REBAR & CAP FOUND (AS NOTED)
- RR- GOLDSMITH SURVEY CONTROL POINT
- SGN SIGN
- SMH SANITARY SEWER MANHOLE
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**GOLDSMITH**  
LAND DEVELOPMENT SERVICES  
1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009  
T 425.462.1080 F 425.462.7719 www.goldsmithengineering.com


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DRAWN: EMALM  
DESIGNED:  
APPROVED: LNYQUIST  
FIELD BOOK:  
PAGE #:



TRIAD - FRANSEN DEVELOPMENT  
**TOPOGRAPHIC SURVEY FOR NEWPORT VIEW**  
CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13122  
SHEET  
**2/2**

M:\ACAD\SURVEY\131\13122\13122X07.DWG

NOTES

- HORIZONTAL DATUM: NAD 83 (2011) WASHINGTON NORTH ZONE PER CITY OF BELLEVUE PUBLISHED SURVEY CONTROL COORDINATES.
- BASIS OF POSITION: HELD THE MONUMENTED SOUTH-WEST CORNER OF SECTION 21, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. ALSO KNOWN AS CITY OF BELLEVUE HORIZONTAL STATION 0168 (N 202.016.024, E 1.306.471.689 (GRID)). MONUMENT IS A 4"x4" CONCRETE MONUMENT WITH A 2 1/2" BRASS DISK WITH AN "X" IN CASE, DOWN 0.6 FEET. MONUMENT IS LOCATED AT THE INTERSECTION OF SE 64TH STREET AND 116TH AVENUE SE.
- BASIS OF BEARING: HELD THE BEARING BETWEEN THE ABOVE NOTED BASIS OF POSITION AND THE FOUND CITY OF BELLEVUE HORIZONTAL STATION 0940 (N 203.346.532, E 1.306.510.916 (GRID)) AT THE WEST QUARTER CORNER OF SECTION 21 TO BE N 1°41'19" E. MONUMENT IS A CONCRETE MONUMENT WITH TACK IN LEAD IN CASE, DOWN 1.0 FEET. MONUMENT IS LOCATED AT THE INTERSECTION OF SE 60TH STREET AND 116TH AVENUE SE.
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED IN DECEMBER 2013 AND IS CURRENT TO THAT DATE ONLY.
- VERTICAL DATUM: NAVD 1988 PER CITY OF BELLEVUE PUBLISHED BENCHMARK ELEVATIONS.
- MASTER BENCHMARK: CITY OF BELLEVUE BENCHMARK NO. 124 - FOUND 4"x4" CONCRETE MONUMENT WITH A 2 1/2" BRASS DISK WITH AN "X" IN CASE, DOWN 0.6 FEET. MONUMENT IS LOCATED AT THE INTERSECTION OF SE 64TH STREET AND 116TH AVENUE SE (ALSO KNOWN AS HORIZONTAL STATION 0168). ELEVATION = 286.038 FEET
- UNDERGROUND UTILITIES SHOWN HEREON ARE PER A COMBINATION OF FIELD LOCATED SURFACE FEATURES AND RECORDS PROVIDED BY THE CITY OF BELLEVUE. ALL LOCATIONS SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.
- THE OVERALL SITE CONTAINS 175,567 SQUARE FEET OR 4.030 ACRES.
- ALL SIGNIFICANT TREES, DEFINED AS A TREE EIGHT INCHES IN DIAMETER OR GREATER, MEASURED FOUR FEET ABOVE EXISTING GRADE ARE SHOWN HEREON. TREE DIAMETER AND DRIP LINES SHOWN HEREON WERE MEASURED IN THE FIELD BY CREATIVE LANDSCAPE SOLUTIONS.

LEGAL

(TAX PARCEL NOS. 3343301725 AND 3343301726)

THAT PORTION OF TRACT 305, C.D. HILLMANS LAKE WASHINGTON GARDEN OF EDEN ADDITION TO SEATTLE, DIVISION NO. 3, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 11 OF PLATS, PAGE 81, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT; THENCE S 01°48'52" W ALONG THE EAST LINE OF SAID TRACT 206.77 FEET TO THE POINT OF BEGINNING;  
 THENCE NORTH N 88°11'08" W 150.00 FEET;  
 THENCE S 01°48'52" W 150.00 FEET;  
 THENCE S 88°11'08" E 150.00 FEET TO THE EAST LINE OF SAID TRACT;  
 THENCE N 01°48'52" E 150.00 FEET TO THE TRUE POINT OF BEGINNING.

TOGETHER WITH TRACT 305, C.D. HILLMANS LAKE WASHINGTON GARDEN OF EDEN ADDITION TO SEATTLE, DIVISION NO. 3, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 11 OF PLATS, PAGE 81, RECORDS OF KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 110.10 FEET OF THE WEST 160 FEET THEREOF;  
 AND EXCEPT THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

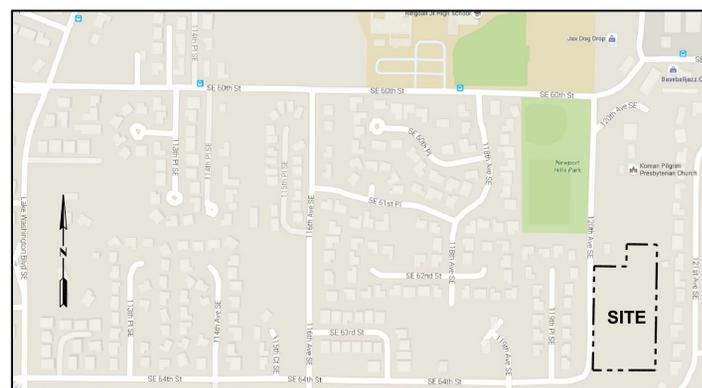
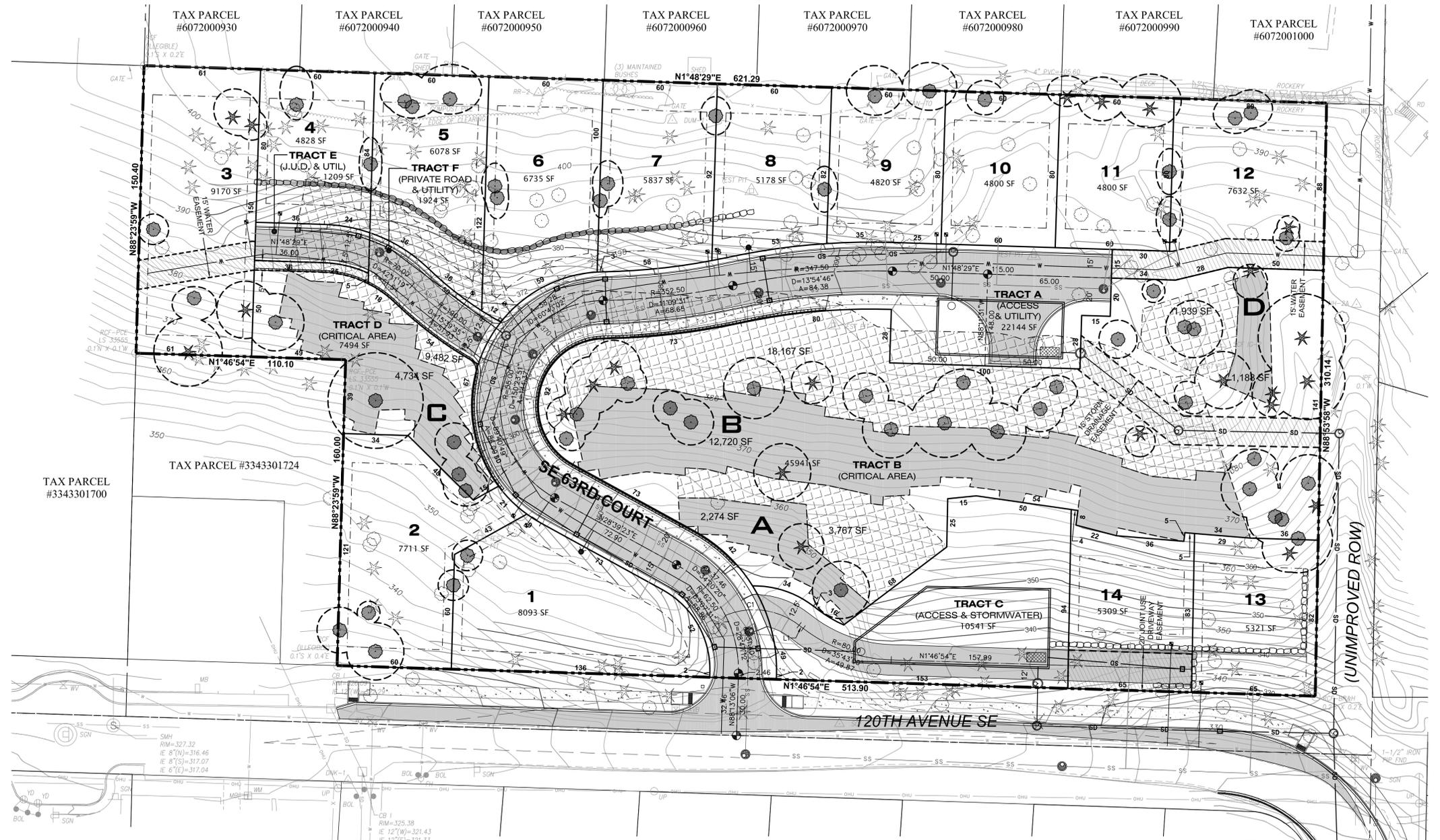
COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT;  
 THENCE S 01°48'52" W ALONG THE EAST LINE OF SAID TRACT 206.77 FEET TO THE TRUE POINT OF BEGINNING;  
 THENCE N 88°11'08" W 150.00 FEET;  
 THENCE S 01°48'52" W 150.00 FEET;  
 THENCE S 88°11'08" E 150.00 FEET TO THE EAST LINE OF SAID TRACT;  
 THENCE N 01°48'52" E 150.00 FEET TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

STATISTICAL INFORMATION

1. LAND USE ZONE	R-5
2. SITE AREA (SQUARE FEET / ACRES)	175,558 SF / 4.03
3. SITE DATA SUMMARY	REQUIRED/ ALLOWED PROPOSED
A. NUMBER OF DWELLING UNITS PER ACRE	5 3.5
B. TOTAL NUMBER OF DWELLING UNITS	18 14
C. AREA OF EACH PROPOSED STRUCTURE	NET N/A N/A NET LEASABLE (FOR SHOPPING CENTER) N/A N/A GROSS N/A N/A
D. FLOOR AREA RATIO (F.A.R.)	N/A N/A
E. AREA OF PROPOSED BUILDING BY USE	NET N/A N/A GROSS N/A N/A
4. PERCENTAGE OF LOT COVERAGE	40% 54% (APPROX)
5. AMOUNT OF IMPERVIOUS AREA	55% 50% (SITE)
6. CUT/FILL (CUBIC YARDS)	N/A 20,495 CY
7. BUILDING HEIGHT: MEASURED FROM AVG. EXISTING GRADE IN SHORELINE & TRANSITION AREAS; MEASURED FROM AVERAGE FINISHED GRADE FOR ALL OTHER AREAS.	30/35 30/35
8. PARKING:	
TOTAL # OF SPACES FOR THE PROJECT.	28 28
A. # OF SPACES BY EACH PROPOSED USE	2 2
B. THE PERCENTAGE OF COMPACT STALLS	N/A N/A
C. THE PERCENTAGE OF HANDICAPPED STALLS	N/A N/A
9. AREA OF PROPOSED LANDSCAPING OR MITIGATION	
A. ADJACENT TO RIGHT-OF-WAY	0 SF 340 SF
B. NATIVE GROWTH PROTECTION	10,405 SF 10,405 SF
C. WITHIN THE PARKING AREA	N/A N/A
D. SIGNIFICANT TREES TO BE RETAINED	1,065.5 IN 1,070 IN

SE 1/4, SW 1/4 SECTION 21, TOWNSHIP 24 N, RANGE 5 E, W.M.  
CITY OF BELLEVUE, KING COUNTY, WASHINGTON



VICINITY MAP  
N.T.S.

EXISTING CONDITIONS LEGEND

- AVB AIR-VAC BOX
- BOL BOLLARD
- CB I CATCH BASIN TYPE 1
- CONC CONCRETE
- FH FIRE HYDRANT
- FND FOUND
- GM GAS METER
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- TER TELEPHONE RISER
- UP UTILITY POLE
- WM WATER METER
- WV WATER VALVE
- YD YARD DRAIN

ENGINEERING DESIGN LEGEND

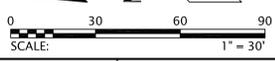
- SD PROPOSED STORM DRAIN
- SS PROPOSED SANITARY SEWER
- W-W PROPOSED WATER MAIN
- PROPOSED WATER METER
- PROPOSED FIRE HYDRANT
- 390 PROPOSED MAJOR CONTOUR
- 388 PROPOSED MINOR CONTOUR
- ROCKERY WALL
- CONCRETE RETENTION WALL
- PROPOSED PAVEMENT

CONSTRAINTS LEGEND

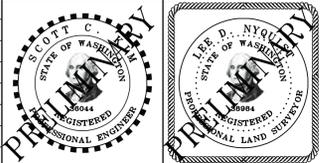
- STEEP SLOPE AREA (>40%)
- STEEP SLOPE BUFFER AREA
- BUILDING SETBACK LINE
- PROPOSED RETAINED TREE

LINE NO.	BEARING	DISTANCE
L1	N37° 29' 55"E	2.76
L2	N28° 20' 12"E	12.65

CURVE NO.	RADIUS	DELTA ANGLE	ARC LENGTH
C1	R=39.00	D=59°56'41"	40.80
C2	R=70.00	D=7°11'33"	8.79



REV NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	PLOTTED:	EMALM
1	10/16/2014	REVISED PER CITY OF BELLEVUE 1ST ROUND REVIEW COMMENTS	EMALM	LNQUIST	2015/10/27 16:07	EMALM
2	10/27/2015	REVISED PER CITY OF BELLEVUE 2ND ROUND REVIEW COMMENTS	EMALM	LNQUIST		



TRIAD - FRANSEN DEVELOPMENT

SITE PLAN B  
FOR  
NEWPORT VIEW PRELIMINARY PLAT

CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13122  
SHEET 1/1



# **ABPB CONSULTING**

## **GEOTECHNICAL/EARTH SCIENCES**

12525 Willows Road, Suite 80  
Kirkland, WA 98034  
Phone: 425-820-2544  
Fax: 206-418-6448

**PAUL BONIFACI, P.E.G.**  
**ANIL BUTAIL, P.E.**

October 20, 2015  
Project No. 1372

Mr. Jeff Fransen  
T/F Newport View LLC  
2801 Alaskan Way, Suite 107  
Seattle, Washington 98121

Subject: Revised Geotechnical and Critical Area Report  
Proposed Newport View Plat  
120<sup>th</sup> Avenue SE and SE 64<sup>th</sup> Street  
Bellevue, Washington

Dear Mr. Fransen:

As requested, we have conducted a geotechnical engineering study for the proposed Newport View residential plat in Bellevue, Washington. This revised report presents our findings and recommendations for the geotechnical aspects of project design and development for the most recent project layout, along with a Geologic Hazards and Critical Area Evaluation. The Critical Areas section includes an assessment of the fill steep slopes as well as some limited natural steeper slopes on the site and discusses proposed improvements and appropriate mitigation measures for development and construction on or adjacent to these areas of the property.

As part of our study, we reviewed an earlier geotechnical report for the project property prepared by Geotech Consultants dated November 22, 2006. The locations of their exploratory test pits are included in this report.

## **SUMMARY**

Our field exploration indicates that the site is generally underlain by medium dense to very dense native glacially deposited soils with variable amounts of gravel and silt. Two moderate sized older fill areas were encountered in the central part of the site. The approximate limits of these fill areas are shown on the site plan included with this report. We anticipate that smaller localized fill areas may exist elsewhere on the sloping site from old grading operations and construction of a logging road up through the property.

No significant groundwater or seepage was encountered during the test pit excavation operation. We anticipate that a minor perched water will develop in the wet winter months over the lower permeability glacial deposits under the site.

Based on our study, it is our opinion that from a geotechnical standpoint, the site can be developed as planned. Virtually no modifications are planned to the steep slope critical areas on the site. Some modifications are proposed to the steep slope critical area buffers on the site. These modifications include regrading by removal of old uncontrolled structural fills, excavations, placement of new structural fills and construction of retaining walls. We understand that site grading will be limited primarily to that required for construction of utilities and access roadway construction.

Native glacial till soils on the site and structural fills are suitable for supporting the proposed homes, detention vault, lot walls, and utilities provided the recommendations presented in this report are incorporated into project design and construction. The site soils are very moisture-sensitive and are not typically suitable for use as structural fill unless grading occurs in the dry summer months.

The presence of the existing old fills will need to be taken into consideration during the design and grading work on the project. Detailed recommendations for all site grading, and on dealing with the existing fills, are discussed later in this report.

## **CRITICAL AREA SLOPES**

The delineated Critical Area slopes (+40% and at least 10 feet high) on the site topography are shown on the project topographic survey prepared by Goldsmith Land Development Services, were created many years ago. Some of these features most likely resulted from past grading for the old logging road which exists on the site. As indicated earlier, the steeper fill slopes are generally delineated on the site plan.

There are four steep slope areas on the property. These are designated A through D and are shown as such on Goldsmith's Steep Slope Exhibit and on Figure 2 attached to this report.

**Steep Slope A** is located in the lower west section of the project and is relatively small. This slope has been mostly created by previous excavation for the existing logging access road. The primary access road to the project will be constructed along the west side of this steep slope critical area. The access road has been laid out such that it skirts the steep slope area and does not disturb it, except for a minor intrusion (4 sq ft) along the access road alignment. Some disturbance will occur to the steep slope buffers along the west side adjacent to the planned access roadway. Some minor excavation will possibly be made into the toe below and outside the steep slope area, to facilitate construction of the roadway and the sidewalk. The excavation might be supported by an engineered retaining wall. As indicated above, this steep slope area will remain undisturbed.

**Steep Slope B** is the largest steep slope on the property and stretches north-south through the central site area just below the planned road and cul-de-sac. Most of this steep slope appears to be naturally occurring. The project layout shows that this steep slope critical area will also be left in an undisturbed condition, except for a very minor intrusion (4 sq ft) along the access road alignment. Some disturbance will occur to the steep slope buffers primarily along the east side adjacent to the planned access roadway. The disturbance will be for the purpose of constructing the access roadway and utilities. As indicated above, the steep slope critical area will remain undisturbed. This critical steep slope area will become the planned Tract B.

**Steep Slope C** is located on the downhill side of the proposed access roadway slightly north of the curve and Steep Slope B. This slope appears to have been created by the placement of fill years ago in grading the original access road through the parcel. The project layout shows that this steep slope critical area will also be left in an undisturbed condition. Some disturbance will occur to the steep slope buffers primarily along the east side adjacent to the planned access roadway. The disturbance will be for the purpose of constructing the access roadway and utilities. As part of this construction of the access and utilities in this area, a portion of the buffer which extends into Lots 4 and 5 will also be disturbed. As indicated above, this steep slope critical area will remain undisturbed.

**Steep Slope Area D** is located in the southern part of the project at the end of the access roadway alignment. This slope is limited in area and lies west of the proposed Lot 12. The project layout shows that this steep slope critical area will be left in an undisturbed condition. Some disturbance will occur to the steep slope buffer for the purpose of access roadway construction and utility improvements. As indicated above, this steep slope critical area will remain undisturbed.

With exception of Steep Slope Area B, all the other areas are relatively small and barely above the City's threshold height of 10 feet and/or area of 1000 square feet.

Mr. Jeff Fransen  
October 20, 2015

As indicated above, the critical steep slope areas will remain essentially undisturbed, with a total impact of only 8 square feet. Goldsmith's Mitigation Exhibit shows that the disturbed buffer areas will be mitigated by creation of a new NGPE area along the east side of the project.

### **PROJECT DESCRIPTION**

The site is located in southeast Bellevue, Washington just north of the Newcastle city limits. The approximate site location is shown on the Vicinity Map, Figure 1.

The site is planned to be developed with 14 lots along a new access cul-de-sac roadway which winds up the sloping property from the mid-point of the site on 120<sup>th</sup> Avenue SE.

The alignment of the new access road will generally be along the existing overgrown logging road. This plan is shown on an exhibit prepared by Goldsmith Land Development Services and is the base drawing for the Exploration location plan, Figure 2.

The current plan shows 14 lots will be developed on the site. We understand that grading on the property will be minimized as much as possible to that required for access road and utility construction.

The new roadway will generally follow the alignment of the existing old logging road. Some cuts will be made along the alignment to create a uniform road gradient of no more than 15 percent as the road winds up the slope. Some fills will be placed at the end of the access roadway. As part of this planned roadway grading, maximum cuts of about 10 feet will be required in the northern part of the proposed roadway alignment. A maximum fill thickness of about 10 to 12 feet will be placed along the west side of the roadway to facilitate its construction. Cut and fill slopes will be constructed at inclinations of 2:1 (H:V) or flatter. Retaining walls may be constructed at selected locations to optimize the roadway construction.

We expect that new houses constructed on the project will be two-story wood frame construction and that the ground floor level will be established at or near the existing grades. Considering the existing site topography, it is likely that many of the residences will have daylight basement levels. Detailed building plans for the residences have not been prepared. However, we expect the new residences will have conventional spread footing foundations and concrete slab-on-grade garage floors and basement level floor slabs. House building loads are expected to be light, on the order of one to two kips along walls and 20 kips at columns.

We understand that the project will convey stormwater to two detention vaults to be constructed along the southwest edge of the property (Tract C) and at the private road

turn-around. Previous plans indicate that the walls of the vaults will have a maximum height of about 15 to 20 feet. The vault on Tract C will also have a wall extending up about 16 feet to provide support to the hillside east of the vault.

The recommendations contained in the following sections of this report are based on our general understanding of design concepts provided to us. These should be reviewed by us and modified, if necessary after final project plans have been completed and submitted to us for review.

### **SCOPE OF WORK**

Our field exploration was carried out by excavating a series of test pits on the property with a trackhoe. The location of the new test pits were determined after locating and plotting the locations of the 2006 test pits by Geotech Consultants.

Using the information obtained from the subsurface exploration, we conducted analyses to develop geotechnical recommendations for project design and construction.

Specifically, this report addresses the following:

- Soil and groundwater conditions
- Site preparation and grading
- Foundation design
- Slabs-on-grade
- Drainage
- Rockeries
- Retaining Walls / Reinforced Walls
- Stability Analysis
- Geologically Hazardous Areas
- Critical Area Report/Mitigation Measures

### **FIELD EXPLORATION AND LABORATORY TESTING**

On November 26, 2013, we conducted our site exploration by observing the excavation of eight test pits dug with a medium sized trackhoe. The test pits extended to a maximum depth of 11 feet below the existing ground surface.

Mr. Jeff Fransen  
October 20, 2015

The approximate test pit locations are shown on the Exploration Location Plan, Figure 2. The previous test pit locations are also shown on this plan. The pit locations were approximately determined by pacing measurements from known landmarks. The individual test pit logs describing the soil conditions in detail are presented on Figures 3 through 10. In addition, the logs for the previous test pits by Geotech Consultants are included with this report in Appendix A.

An engineering geologist maintained a log of each test pit as they were excavated, classified the soil conditions encountered, and obtained representative soil samples. All soil samples were visually classified in accordance with the Unified Soil Classification System.

Representative soil samples obtained from the test pits were placed in sealed plastic bags and returned to a laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the individual Test Pit Logs.

## **SITE CONDITIONS**

### **Surface**

The generally rectangular property is located off the northeast corner of SE 64<sup>th</sup> Street and 120<sup>th</sup> Avenue SE in south Bellevue, Washington, just north of the Newcastle city limits. The site covers about 4.0 acres of land over two tax parcels (#3343301725 and 3343301726). Most of the sloping property is covered with brush with scattered woods in the far northern, eastern and southern portions. We understand that the site was partially cleared and logged about 25 years ago. A logging road was created up through the center of the site using cuts and fills to result in the existing road grade. These cuts and fills have modified the pre-existing topography significantly in many areas. A swale ascends the slope along the south margin and the undeveloped SE 64<sup>th</sup> Street right-of-way.

The site covers about 80 feet of total topographic relief over four acres. The property slopes up the hill from a low point of Elevation 330 feet in the northwest corner up to Elevation 408 along the east property line with an existing residential plat located on the ridgeline east of the property. Generally, slopes vary from about 10 to 30 percent over most areas with several benches located in the upper southeast quadrant of the site as well as some somewhat steeper slopes (+40 percent) in generally old graded areas of the site. Detailed topographic plans of the slopes, steep 40+ percent slopes, and other features are shown on the topographic survey prepared by Goldsmith Land Development Services.

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Figure 2 shows the site topography and the areas of four Steep Critical Slope areas designated A through D. These are discussed later in this report.

Additional residential areas consisting of scattered homes and residential plats are located surrounding the site in all directions. No springs or subsurface flows were noted on the site during our recent work.

As indicated previously, the site has previously been graded. The approximate outline of the major fill areas created by this grading are shown on the Exploration Location Plan, Figure 2. It should be noted that other smaller areas of fill may exist on the site since some parts of the site were modified many years ago.

### **Subsurface**

As discussed earlier, some grading of the property occurred in the past and those areas have now been overgrown.

It appears that most of the site is underlain by native soils deposited by the last glaciation across the Puget Sound area about 12,000 to 15,000 years ago. In natural undisturbed areas with no grading, the test pits generally indicate that 8 to 10 inches of topsoil and sod underlie the site. The deeper soils consist of loose silty sands with scattered gravel and roots to a depth of about three feet. This loose to medium dense zone is underlain by the basal layer of very dense silty gravelly Sand (Glacial Till). This mix of silt-sand-gravel was deposited directly by the glacial ice and was subsequently consolidated. Where grading has occurred, the upper loose layer is missing and the pits encountered till essentially at the surface (see Test Pits 1, 4, and 6). Several areas were underlain by medium dense to dense glacial outwash (Test Pit 3 and 8) intermixed or underlain by the consolidated glacial till soils.

The glacial till represents the soil deposit from the last glacial advance over the Puget Sound area about 12,000 to 15,000 years ago. An Ice Age glacier advanced out of Canada and deposited the till at the toe of the advancing ice or under the advancing front of ice. Subsequently, up to 4,000 feet of ice overrode the till and heavy consolidated it to its present dense state. Some more gravelly lenses exist within the till as interbeds. Localized areas of glacial outwash noted around the site were deposited by outwash streams depositing sand and gravel over the denser lower glacial till layer.

The fill soils observed in several areas (shown on the Exploration Plan, Fig. 2) are the result of previous grading on the site. The silty soils, mostly glacial till, were graded along the planned roadway ramp up the slope and onto the southeastern flatter bench areas of the site.

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The fills are generally silty sand materials with varying gravel content. Some organics and woody pieces were noted within the fill unit (refer to Test Pit 2, as well as Geotech Consultants Test Pit 7). The soils encountered in the test pits excavated by the 2006 study are consistent with our findings in most areas. The fill soil appears to be in a loose to medium dense condition. The naturally occurring topsoil on the site was probably not removed prior to grading the old fills over the landscape.

The dense silty sand noted under the area is mapped on the City of Bellevue geologic map as well as the Soil Survey of King County (US Soil Conservation Service) as glacial till. The U. S. Soil Conservation Map indicates that most of the site is underlain by the Alderwood soil group (Till). The higher ridge top area to the east is mapped as the Alderwood Arents soil group. No peaty or organic soils of any depth were noted on the site during our study. Although no bedrock was encountered in any of the test pits, the possibility exists that rock underlies the till deposits at some unknown depth and forms the backbone of the north-south elongated ridge on which the site lies.

## **GROUNDWATER**

During our field work, we did not observe any significant seepage in any of the test pits across the planned development area. In addition, the 2006 test pits also did not encounter seepage or springs. This is probably due to the site's position on the west side of an elongated ridge top. We anticipate that during the wetter winter period, some minor perched seepage will occur over the cemented till soil and flow downslope, following the top of till contour. No specific water bearing sandy layers were noted in any of the test pits. Minor fluctuations in the perched seepage water levels at the site can also be expected following periods of heavy precipitation. We anticipate that most of the site soils will dry out during the warm summer months.

## **GEOLOGIC HAZARDS REPORT**

### **Erosion Hazard**

The site slopes down to the east at a gentle to moderate gradient. There are no steep slopes in most areas. Most slopes are underlain by the Alderwood Soil Group. These soils are in the high erosion category in slope areas where slopes gradients are not excessive.

In our opinion, special mitigation measures beyond standard erosion and sedimentation prevention and use of Best Management Practices (BMPs), required by the City of Bellevue, are not required. From a geotechnical perspective, no buffer will be needed for grading from the moderate site slopes based on their erosion potential.

### **Seismic Hazard**

High Seismic Hazard classifications areas exist where land is subject to severe risk of ground shaking, subsidence, or liquefaction due to certain combinations of soil and groundwater conditions. Areas susceptible to severe ground shaking might include the following:

- Soft or loose saturated alluvial deposits
- Soils with shallow, fully saturated and high groundwater conditions
- River valley deposits

Based on our study, the dense granular soils that underlie the site slopes are not considered High Seismic Hazards areas. No special mitigation measures will be needed for site development to reduce the seismic hazard other than to design all structures under all applicable current earthquake and seismic codes.

Based on the soil conditions encountered and the local geology, per Chapter 16 of the 2012 International Building Code (IBC), Site Class "D" should be used in structural design. The following parameters should be used in computing seismic forces:

#### ***Seismic Design Parameters (IBC 2012)***

Spectral Response acceleration ( Short Period), Ss	1.423
Spectral Response acceleration ( 1 - Second Period), S1	0.543
Site Coefficient, Fa	1.00
Site Coefficient, Fv	1.50
Five percent damped .2 second period, Sds	0.949
Five percent damped 1.0 second, Sd1	0.543

Liquefaction is a phenomenon where there is a reduction or complete loss of soil strength due to an increase in water pressure induced by vibrations. Liquefaction mainly affects geologically recent deposits of fine-grained sands that are below the groundwater table. Soils of this nature derive their strength from intergranular friction. The generated water pressure or pore pressure essentially separates the soil grains and eliminates this intergranular friction; thus, eliminating the soil's strength.

Due to the dense and silty nature of the soils underlying the site, it is our opinion that there is little or no risk for liquefaction to occur at this site affecting building construction during an earthquake.

## **Landslide Hazard**

The native soil types under the property are glacially derived and are quite stable and not prone to sliding in the 10 to 50 percent slope range of the site. For the most part, glacial till (Alderwood Soil Group) underlies the site with some clean outwash in some locations. More recent fills placed during the logging road grading about 25 years ago, are scattered along the old road. This ground modification also includes some cutting along the uphill side of the road (Lots 6 and 7 areas) which has created a minor non-natural slope having a non-threshold height for Critical Slope areas. Observations of these fill and cut slopes, indicate that no movements have occurred over the last 25 years or so. As part of the development plan, some of these non-naturally occurring steep slopes will be modified with localized excavation and the placement of controlled structural fill material.

Based on the soil conditions underlying the site, the existing site topography and our onsite observations, it is our opinion that there are no Landslide Hazard Areas on the site.

## **Critical Area Delineation – Steep Slope and Impacts**

As indicated earlier, there are four steep slope areas on the property. These are designated A through D and are shown as such on Figure 2.

The delineated Critical Area slopes (+40% and at least 10 feet high) on the site topography are shown on the topographic survey prepared by Goldsmith Land Development Services, were created many years ago. Some of these features most likely resulted from past grading for the old logging road which exists on the site. As discussed earlier, some of these steep (critical area) slopes are not naturally occurring. As also indicated earlier, the steeper fill slopes are generally delineated on the site plan.

Steep Slope A is located near the entrance to the project, immediately uphill of the access roadway entrance. This slope has been partially created by previous excavation for the existing logging access road. The primary access road to the project will be constructed along the west side of this steep slope critical area. Virtually no disturbance (about 4 sq ft will be disturbed) is planned to this steep slope critical area. Some excavation may be made into in the buffer area adjacent to the steep slope to facilitate construction of the roadway and the sidewalk. The excavation will generally be supported by an engineered retaining wall. The vast majority of the steep slope area will remain undisturbed. Any needed excavation and retaining wall construction will be performed in a manner such that the slope stability of the area is not impacted.

Steep Slope B is located in the middle of the project and is the largest of the four steep slope areas. This steep slope critical area lies to the west of the proposed primary access road to the project. It extends in a narrow band in a north-south direction.

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Virtually no disturbance will occur to this steep slope critical area. Some disturbance will occur in the steep slope buffers due to access roadway and utility construction. There will be no impact to the slope stability in this area.

Steep Slope C is located north of the curve of the project's access roadway. This is a steep slope which has been created by placement of fill during past road grading for the old logging road. No disturbance will occur to this steep slope critical area. Some disturbance will occur in the steep slope buffers due to access roadway and utility construction. There will be no impact to the slope stability in this area.

Steep Slope Area D is a small area located in the southern part of the project, south of the end of the access road, west of the proposed Lot 12. This appears to be a small naturally occurring slope that might have had some fill placed on it 25 to 30 years ago. No disturbance will occur to this steep slope critical area. Some disturbance will occur in the steep slope buffers due to access roadway and utility construction. There will be no impact to the slope stability in this area.

With exception of Steep Slope Area B, all the other areas are relatively small and barely above the City's threshold height of 10 feet and/or area of 1000 square feet.

The City of Bellevue Critical Area Ordinance, Section 20.25H.125 provides requirements for "development within a landslide hazard or steep slope critical area". These are incorporated as Items A through H in this referenced section. We reviewed each of these items as they relate to the geotechnical aspects of site development consisting of access roadway and utility construction. A separate narrative is provided, as required, with the Critical Areas Land Use Application, which includes a discussion of land use related issues affecting the development of the Critical Steep Slope areas.

As indicated earlier, there will be virtually no disturbance to the steep slope critical areas on the property. However, some disturbance will occur to portions of adjoining buffer areas. The various relevant items are discussed below. Items not discussed below relate to construction on individual lots and should be addressed at the time of each lot development once the development details for the lot have been developed:

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

All the critical areas are a significant distance away from the adjacent properties and will not be disturbed. Buffers may be disturbed in a manner such that this disturbance will not have any impact on these adjacent properties.

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*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 walls.*

The most significant of the critical steep slope areas is Area B. A small portion of this may have been created by placement of fill soils for the old access road construction. Virtually no disturbance (about 4 sq ft will be disturbed) is proposed to this critical area. Proposed site development on the project will affect portions of the adjoining buffer area as cuts and fills are placed for roadway construction. Structural fills will be placed in this area and will be supported by structural retaining walls where the thickness is significant. The structural fill placement and wall construction will not affect the existing slope stability.

Area A is a relatively small area located immediately above the access driveway entrance to the project. Most of this critical steep slope area was artificially created by excavation for the existing access roadway. Virtually no disturbance (about 4 sq ft will be disturbed) is planned to this steep slope critical area. However, a small excavation may be required in the adjoining buffer area along the uphill side of the access roadway to allow construction of a sidewalk. It is proposed to construct a retaining wall to support this excavation and leave the existing slope above in its existing condition. The excavation and wall construction will not affect the existing slope stability.

In Area C, the critical steep slope area has been created by placement of uncontrolled fill soils which have a potential for instability. It is planned to leave this critical area in an undisturbed condition. Proposed site development on the project will affect portions of the adjoining buffer area as cuts and fills are placed for roadway construction. The earthwork construction will not affect the existing slope stability.

In Area D, at the south end of the access roadway, there is no planned disturbance as part of the site development. Proposed site development on the project will affect portions of the adjoining buffer area as cuts and fills are placed for roadway construction. The earthwork construction will not affect the existing slope stability.

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

Other than sidewalk construction, no new impervious areas will be created by work in the buffer areas.

*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.*

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A mitigation and restoration plan will be prepared by the project Civil Engineer and The Watershed Company and reviewed by us once final grading plans for the project have been approved. The Critical Areas Land Use Permit Narrative Description includes a discussion of land use related issues affecting the development of the Critical Steep Slope areas.

The slopes on the site are in a stable condition and the proposed improvements will not reduce the slope stability, but will enhance it at several locations. It is planned to leave the steep slope buffer areas in their existing condition with virtually no disturbance (Slopes A and B will have a total of 8 square feet of disturbance). With these conditions, in our opinion, from a geotechnical standpoint, setbacks or buffers are not required. However, disturbance to buffers has been addressed and mitigation measures provided as shown on the Mitigation Plans and Report prepared by The Watershed Company.

## **GEOTECHNICAL DISCUSSION AND RECOMMENDATIONS**

### **General**

Based on our study, the site is suitable for the proposed development. The planned access road and utility construction for site development can be constructed in a manner such as to minimize potential disturbance to the site and impact to the limited critical steep slope areas on the site.

New homes and facilities can be supported on conventional spread footings bearing on competent native soils below the topsoil or on suitably compacted structural fill materials as needed. If required, spread footings can also be supported on quarry rock fill placed and compacted over the competent native soils. Concrete slabs for garages and basement floors can be similarly supported on the thoroughly recompacted subgrade soils present at the site or on new compacted structural fills.

Our analysis indicates that the site is in a stable condition for development of the planned plat. Most of the soils are glacially consolidated and are very dense. The looser soil areas, consisting of the existing old fills, will generally be removed and replaced during plat grading and development. The critical steep slope areas under Code will remain undisturbed as discussed earlier in this report.

### **Site Preparation and Grading**

To prepare the site for construction grading, any vegetation, organic surface soils, and other deleterious materials should be removed from below home pads, new structural fill and pavement areas. Soils containing organic material will not be suitable for use as structural fill, but may be used in non-structural areas or for landscaping purposes.

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The on-site soils generally appear suitable for use as structural fill in the dry summer months only. These soils are very moisture sensitive and cannot be used as structural fill when they are over the optimum moisture content. Typically the till-like soils are used as fill in the late spring or summer months. All areas should be compacted at the subgrade level prior to placement of new fills or slabs. Any softened areas should be overexcavated and replaced with drier materials to achieve a stable, non-yielding surface. Most of the near-surface soils are silty and will be difficult to compact as structural fill when too wet. The ability to use these silty sands from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions at the time of construction.

The old logging road fills will need to be removed and re-compacted as structural fill in all areas of the new road prism. Any of these old fills within structural lot areas will also require over-excavation and removal prior to the placement of new structural fills or clean rock for the road and homes.

All new structural fills should be placed in maximum one foot thick layers and densified with a vibratory roller to a minimum of 95 percent of the soils maximum dry density under ASTM D-1557 (Modified Proctor).

Soils may need to be brought to within two percentage points of the optimum moisture to compact properly. This may include the use of water trucks during hot summertime grading operations. If overly wet, the soil layers will need to be aerated to near the optimum moisture for proper compaction. Field density testing should be performed during the compaction process to assess whether adequate compaction is being achieved.

Where any new fills are to be placed on existing slopes steeper than 20 percent, it will be required to prepare the subgrade prior to filling. Horizontal benches at least five feet wide will be needed to be cut into the native slope. These benches can be stepped up the slope every four feet in height. Structural fill will then be placed and fully compacted on each of the benches as the toe of slope, and the final slope grade is constructed. If the finished slope is greater than 20 feet in height, minimum five foot wide back-sloped benches should be created on the slopes to capture rainfall runoff and divert the flow laterally away from the face.

Based on the anticipated site grading plan, some embankments of structural fill will be built along the new roadway (primarily at the western edge of the cul-de-sac) and possibly in some of the lot areas as needed. All new structural fill slopes should have a final maximum slope inclination of 2:1 (H:V). The final face of the fill should be densified as the slope height is raised. The final graded crest of the slope fills should utilize a small berm or v-ditch at the crest to prevent surface flow from going down the slope in an uncontrolled manner and eroding the slope.

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If grading activities must take place during wet weather or on a wet subgrade, the owner should be prepared to use wet weather structural fill. Import fills should be predominantly granular with a maximum size of three inches and no more than five percent fines passing the No. 200 sieve.

Temporary cuts made in shallow native soils in trenches and other excavations can be made vertically to a depth of four feet. Deeper excavations can be made at a 1:1 (H:V) inclination down to the till. Deeper cuts in the dense till can be made at a 0.5:1 (H:V) inclination. The lower three feet of deeper excavations, such as for the vault, can be made vertically. The contractor should use appropriate local and state standards for excavation work to maintain a safe work environment.

Prior to use, ABPB Consulting, Inc. should examine on-site or imported materials proposed for use as structural fill. Alternatively, railroad ballast or small quarry spalls may be used over wet subgrades as structural fill material.

We anticipate that the initial rough grading of the property may uncover other isolated old fill areas. These undocumented fills dating back to the original logging grading should be removed from beneath new structural areas and replaced by new structural fill. Several of the moderate sized old fill areas noted on the site plan will require over-excavation and replacement if these materials are within the envelope of new roads or houses. New home foundation grades can be raised as needed using clean gravel/rock, or by the placement of new structural fill under the specific house pad. Details should be established at the time of individual lot development.

All permanent exposed slopes should be planted with suitable species of vegetation to minimize the potential for erosion.

## **Foundations**

New houses and other structures, such as the detention vaults, may be supported on conventional spread footings bearing on competent dense native soils, on compacted structural fill, or on quarry rock placed above competent native soils. Foundation subgrades should be prepared as recommended in the Site Preparation and Grading section. Perimeter foundations should extend at least 1.5 feet below final exterior grades for frost protection. Interior foundations can be constructed at any convenient depth. We recommend designing house foundations for a net allowable bearing capacity of 2500 pounds per square foot (psf). All foundations should have a minimum width of 15 inches.

For the vault foundations which will probably be based at depths of four to ten feet beneath the current grade, an allowable bearing capacity of 5000 pounds per square foot may be used.

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For short-term loads, such as wind and seismic, a 1/3 increase in the above allowable bearing capacities can be used.

For designing foundations to resist lateral loads, a friction coefficient of 0.4 can be used. Passive earth pressures acting on the sides of the footings and buried portions of the foundation stem walls can also be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 350 pounds per cubic foot (pcf).

We recommend not including the upper 12 inches of soil in this computation because they can be affected by weather or disturbed by future grading activity. This value assumes the foundations will be constructed neat against competent soil or backfilled with structural fill as described in the Site Preparation and Grading section. The values recommended include a safety factor of 1.5.

Since most of the site is sloping, some of the homes may be built into the natural slope and some special foundation placement recommendations are warranted. To protect future footings from slope creep potential, we recommend that any slope-side house footings be firmly embedded in natural soils or dense structural fill a minimum of 10 feet horizontally from slope faces. Some of the outside foundations for structures may require deepening to meet this criteria.

Some of the houses may be located above existing fill soils that are not suitable for providing foundation support. These may include houses on Lots 2, 10 and 11. On these lots, the fills may be overexcavated to their full depth within the house envelope and replaced by structural fill or clean broken crushed rock which may then be used for conventional foundation support. Alternately, the houses may be supported on drilled or driven pile foundations extending down to competent native soils below the fills. Details should be developed once the final house details are known.

### **Retaining Walls and Reinforced Slope Walls**

We recommend that a retaining wall be used to support the excavation made for construction of the access roadway and sidewalk below Critical steep slope area A. The maximum height of this wall may be on the order of 10 feet.

Some of the new homes may have lower level basement retaining walls.

The magnitude of earth pressures developing on any proposed full or partial retaining wall will depend on the quality of backfill. Planned walls or retaining structures for the plat will also include the retaining walls for the detention vault. The vault walls may be up to 20 feet high. We recommend the use of concrete retaining walls as retaining structures on this project. Any walls built on structural fill slopes should be embedded at least 2 feet beneath the grade at the lower base level of the wall on the slope.

All backfill for the retaining walls should be placed and compacted as structural fill. With wall backfill placed and compacted as recommended and drainage properly installed, we recommend designing unrestrained walls for an active earth pressure equivalent to a fluid weighing 35 pcf. For restrained walls, an additional uniform lateral pressure of 100 psf should be added. For a sloping backfill behind the walls, a uniform pressure of 50 psf should be added. For seismic conditions, a uniform pressure of  $8H$  psf should be added, where  $H$  is the height of the wall.

All walls should be provided with a drain layer of clean gravel for the full height of the wall or with a manufactured drainage membrane or board. This drainage layer should be tied in with the lower drain at the footing level.

### **Stability Analysis**

As indicted earlier, there will be no disturbance to Steep Slope Critical Areas on the project. Some modifications to the existing slopes may occur in the adjacent buffer areas however, the modifications will be minimized to those required for access road and utility construction which forms the initial site development.

Provided all earthwork construction is performed in accordance with the recommendations presented in this report, the resulting safety factor for any modified slopes will be greater than 1.5.

### **Settlements**

We anticipate that the total settlements for footings based on the competent native soils or on compacted structural fill will be less than one-half inch. The majority of the settlements should occur during construction.

### **Slab-on-Grade Floors**

We anticipate that most of the houses constructed on the site will have slab-on-grade garage slabs. In addition, daylight basement homes cut into the slope will also have slab-on-grade lower floor levels. These slabs may be supported on the subgrade prepared as recommended in the Site Preparation and Grading section.

The slabs can be constructed on the densely recompacted existing subgrade, or on new compacted structural fill materials placed after compaction of the subgrade. Where moisture is undesirable, we recommend placing a four-inch thick capillary break layer of clean, free-draining pea gravel that has less than three percent fines passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

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Where moisture by vapor transmission is undesirable, a durable plastic membrane should be placed below the slab above the capillary break. This membrane is commonly covered with one to two inches of clean, moistened sand to protect damage during construction and to aid in curing of the concrete. Other methods are available for preventing or reducing water vapor transmission through the slab. We recommend consulting with a building envelope specialist for additional assistance regarding this issue.

## **Drainage**

### ***Surface***

Final exterior grades should promote free and positive drainage away from the new homes and slope areas at all times. Water must not be allowed to pond or collect adjacent to foundations or flow over any slope crest or walls. We recommend providing a gradient of at least three percent for a minimum distance of ten feet from the house perimeters, except in paved locations. In paved locations, a minimum gradient of one percent should be provided, unless provisions are included for collection and disposal of surface water adjacent the structures.

### ***Subsurface***

We recommend installing continuous drains along the outside lower edge of the perimeter footings for the homes, vault and any wall foundations. The foundation drains and roof downspouts should be tightlined separately to approved discharge facilities. Subsurface drains must be laid with a gradient sufficient to promote positive flow to a controlled point of approved discharge.

All surface and subsurface drains should be provided with cleanouts at easily accessible locations. The cleanouts should be serviced regularly.

## **Rockeries**

Since the final grading plan has not been developed, we do not know if rockeries will be utilized on this site. Rockeries should not be used as retaining structures. Rockeries may be used as landscaping features to face native soils cut areas up to four feet in height. We anticipate that the soils in these cuts will be primarily dense silty sands and sandy silts.

All rockeries should be provided with filter stone backfill and be provided with a toe drain. All wall drain pipes should be connected to the site drainage system or to a suitable discharge point that will not result in erosive flows on the slopes.

We recommend that all rockeries be constructed in general accordance with the Association of Rockery Contractors (ARC) standard guidelines. These standard guidelines

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delineate the stone size, quality, and placement of rockeries built in this area. All rockery base areas should be embedded at least one foot below the face subgrade in dense native soils at flat locations. Any rockeries on slopes should be embedded to a minimum depth of two feet.

### **Pavements**

Pavements should be constructed on stable subgrades prepared as described in the Site Preparation and Grading section. The subgrade should be proofrolled with heavy construction equipment to verify this condition. If needed, subgrade improvement may also be achieved by use of soil additives such as cement or cement kiln dust.

The appropriate pavement section depends upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected. We expect that traffic will mainly consist of light passenger and commercial vehicles with occasional heavy traffic in the form of trash removal and some house construction vehicles.

Based on this information, with a stable subgrade prepared as recommended, we recommend the following pavement sections for light automobile traffic:

- Two inches of asphalt concrete (AC) over six inches of crushed rock base (CRB)
- Two inches of AC over 4.5 inches of asphalt treated base (ATB)

If any part of the pavement will be subjected to heavy truck traffic, the following sections are recommended:

- Three inches of AC over six inches of CRB
- Three inches of AC over 4.5 inches of ATB

The paving materials used should conform to the Washington State Department of Transportation (WSDOT) specifications for Class B asphalt concrete, ATB, and CRB.

Long-term pavement performance will depend on surface drainage. A poorly-drained pavement section will be subject to premature failure as a result of surface water infiltrating into the subgrade soils and reducing their supporting capability. To improve pavement performance, surface drainage gradients of no less than two percent are recommended. Also, some longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks when they occur.

## **ADDITIONAL SERVICES**

The analyses and recommendations presented in this report are based upon data obtained from the test pits excavated on-site. Variations in soil and groundwater conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, ABPB Consulting should be requested to reevaluate the recommendations in this report prior to proceeding with construction.

We also recommend that ABPB Consulting be retained to provide geotechnical review services once more complete project grading plans are prepared. We should also provide observation services during construction. This is to observe compliance with the design concepts, specifications and recommendations. It will also allow expedient design changes in the event subsurface conditions are encountered that differ from those anticipated. It is requested that we be given two working days' notice to provide any of the above services.

The following figures are included and complete this report:

Figure 1	Vicinity Map
Figure 2	Exploration Location Plan
Figures 3 through 10	Test Pit Logs
Appendix A	Test Pit Logs, 2006, Geotech Consultants

We prepared this report in accordance with generally accepted geotechnical engineering practices. This report is the property of ABPB Consulting and is intended for specific application to the Newport View plat project in Bellevue, Washington. This report is for the exclusive use of Mr. Jeff Fransen and his authorized representatives. No other warranty, expressed or implied, is made.

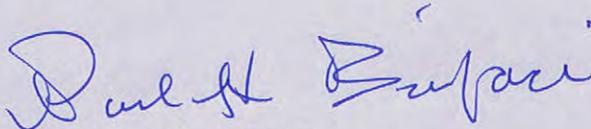
We appreciate the opportunity to be of service during this phase of the subject project and look forward to working with you during the construction phases.

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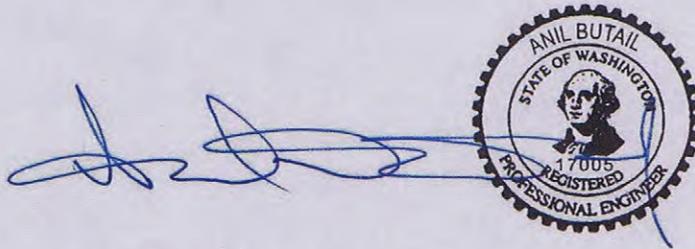
We trust the information presented in this report is sufficient for your current needs. If you have any questions or need additional information, please call.

Sincerely yours,

**ABPB CONSULTING**



Paul K. Bonifaci, RPG  
Project Engineering Geologist



Anil Butail, P.E.  
Principal Engineer



NTS

Ref: Google Maps Satellite Photo

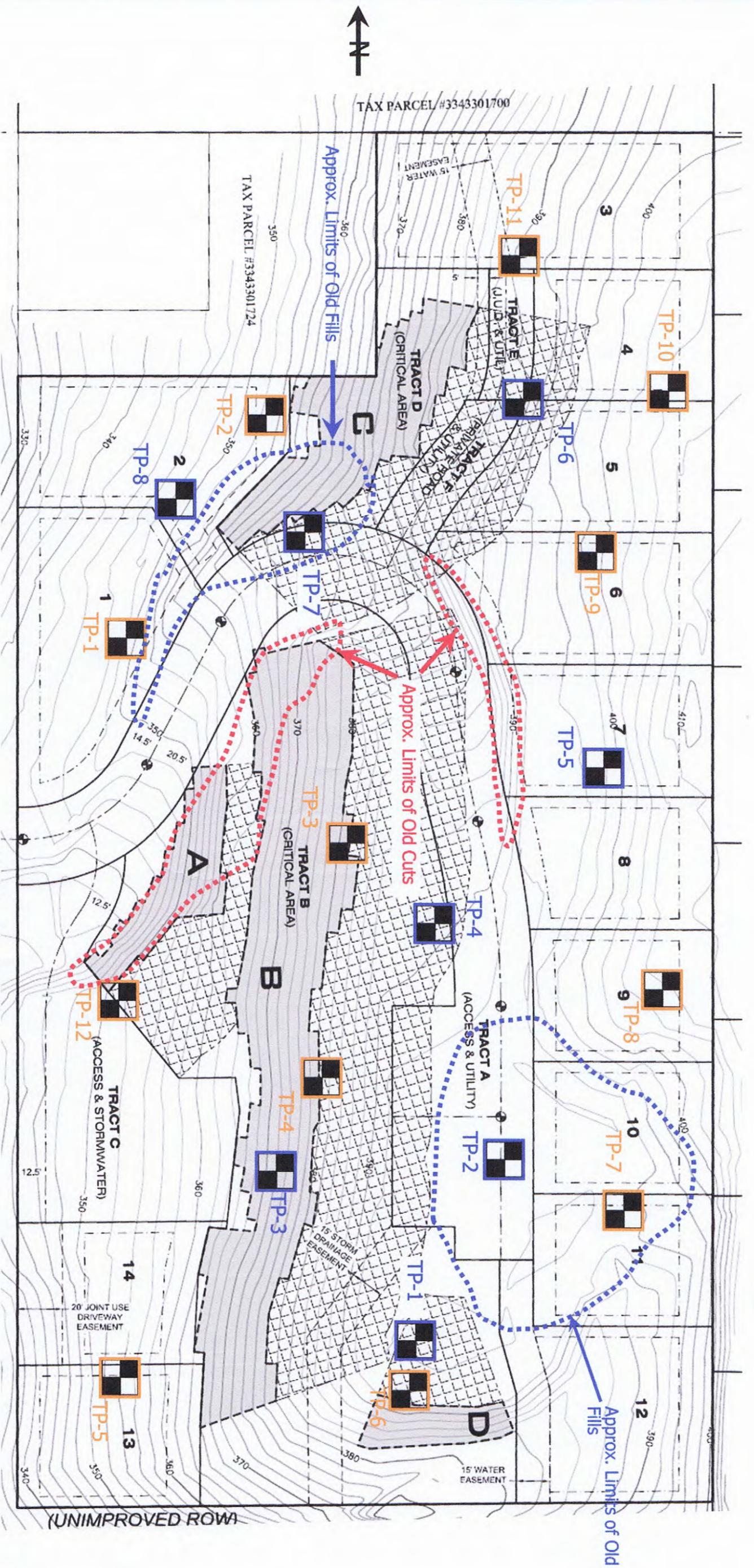
**ABPB Consulting**  
 Geotechnical Consultants  
 Kirkland, Wash.

Vicinity Map  
 Newport View  
 Bellevue, Washington

Proj. No. 1372

Date : 12-13

Figure 1



**LEGEND**

-  TP-1 Approx. Location of test pits excavated by ABPB Consulting
-  TP-1-1 Approx. Location of test pits excavated by Geotech Cnslt. (2006)
-  A Critical Steep Slope Area per City of Bellevue Code



Ref: Steep Slope Exhibit, Newport View, by Goldsmith Land Devel, 9-22-15

**ABPB Consulting**

Exploration Location Plan  
Newport View  
Bellevue, Washington

Proj. No. 1372

Date : October 2015

Figure 2

<b>Project :</b> Newport View		<b>Test Pit TP - 1</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 392 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		Moisture Content
0	[Hatched Pattern]	Silty Sand: (12 inches Sod/Topsoil) Tan to grey, silty gravelly SAND, occasional cobbles, moist, very dense (Glacial Till) Old cut area.					
-1							
-2			No groundwater seepage observed.				
-3						SM	
-4							
-5					[Sample]		
-6							
-7							
-8							
-9							
-10							7.7%

**ABPB Consulting  
Geotechnical Consultants**

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<b>Project :</b> Newport View		<b>Test Pit TP - 2</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 392 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE		Field Strength Tests	Laboratory Results
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample		USCS
0		Fill: Tan grey, mottled, mixed silty Sand and silty gravelly Sand FILL, occasional small pieces of wood and organics, medium dense, moist (FILL)			SM	9.8%
-1						
-2						
-3		Silty Sand: Red tan, silty gravelly Sand with roots, moist, medium dense (native soil)			SM	9.8%
-4						
-5						
-6		Silty Sand: Grey tan, cemented silty gravelly SAND, dense to very dense, moist (Glacial Till)			SM	9.8%
-7						
-8						
-9	No groundwater encountered.					
-10						
-11						

**ABPB Consulting**  
**Geotechnical Consultants**

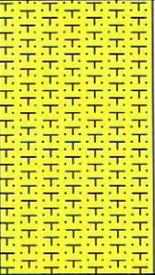
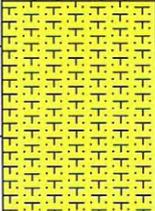
12525 Willows Road, Suite 80, Kirkland, Washington (425) 820-2544

Date : Dec. 2013

Project Name : Newport View

Figure 4

<b>Project :</b> Newport View		<b>Test Pit TP - 3</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 368 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		Moisture Content
0		Silty Sand: (12 inches of sod and topsoil) Red tan, silty gravelly SAND, occasional cobbles, moist medium dense (native soil)					3.6%
-1							
-2						SM	
-3		Gravel: Grey, clean to slightly silty sandy GRAVEL, medium dense, moist (Glacial Outwash)					
-4							
-5					GP		
-6							
-7		Silty Sand: Grey, slightly silty to silty gravelly SAND, moist, dense to very dense, (Glacial Till)					
-8		No groundwater seepage observed				SM	

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**Geotechnical Consultants**

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<b>Project :</b> Newport View		<b>Test Pit TP - 4</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 390 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results	
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		Moisture Content	
0	[Hatched Pattern]	Silty Sand: (4 inches of sod and topsoil) Tan grey, silty gravelly SAND, occasional cobbles, dense to very dense (Glacial Till) Old cut area					7.5%	
-1								
-2			No groundwater seepage					
-3					[Blue Hatched Sample]	SM		
-4								
-5								
-6								
-7								

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**Geotechnical Consultants**

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<b>Project :</b> Newport View		<b>Test Pit TP - 5</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 398 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results Moisture Content
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		
0	[Hatched Pattern]	Silty Sand: (14 inches of sod, and old fill) Red tan, silty gravelly SAND, occasional roots, medium dense, moist					
-1							
-2					SM		
-3							
-4							
-5		Silty Sand: Grey, cemented, gravelly silty SAND, dense to very dense, moist (Glacial Till)					
-6		No seepage encountered			SM		
-7							
-8							
-9							

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Geotechnical Consultants**

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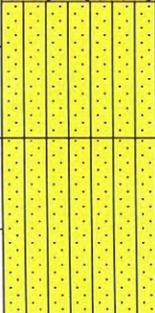
<b>Project : Newport View</b>		<b>Test Pit TP - 6</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 392 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		Moisture Content
0		Silty Sand: (12 inches of sod, and old fill) Grey tan, cemented, silty gravelly SAND, dense to very dense, moist (Glacial Till), old cut area					
-1							
-2		No groundwater seepage encountered					
-3					SM		
-4							
-5							
-6							
-7							

**ABPB Consulting  
Geotechnical Consultants**

12525 Willows Road, Suite 80, Kirkland, Washington (425) 820-2544

<b>Project :</b> Newport View		<b>Test Pit TP - 7</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 366 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results Moisture Content
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		
0		Fill: (4 inches of sod, and old fill) Mottled tan and brown grey, mixed silty Sand and silty Gravelly Sand Fill, occasional wood pieces, medium dense, moist (Fill - Road Fill)					
-1							
-2							
-3						SM	
-4							
-5							
-6							
-7		Silty Sand: Brown, silty Sand with Topsoil and organics, loose, moist				OL	
-8							
-9		Silty Sand: Red tan grading to grey, loose silty gravelly SAND, grading to grey silty gravelly SAND, cemented, dense, moist (Weathered Till to Glacial Till)				SM	
-10		No groundwater seepage encountered					
-11							

**ABPB Consulting  
Geotechnical Consultants**

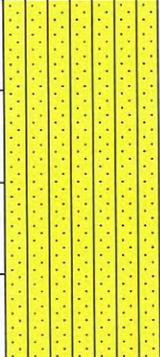
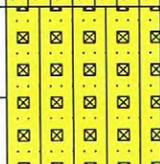
12525 Willows Road, Suite 80, Kirkland, Washington (425) 820-2544

Date : Dec. 2013

Project Name : Newport View

Figure 9

<b>Project :</b> Newport View		<b>Test Pit TP - 8</b>	
<b>Project No.</b> 1372	<b>Date :</b> 11-26-13		
<b>Client :</b> Fransen	<b>Elevation</b> 346 feet		
<b>Location:</b> S. Bellevue	<b>Logged By:</b> PKB		

SUBSURFACE PROFILE			SAMPLE			Field Strength Tests	Laboratory Results Moisture Content
Depth (ft)	Soil Lithology	Soil Description	Water Level	Sample	USCS		
0		Silty Sand: (20 inches of sod and old fill) Mottled tan and red tan, silty gravelly Sand , occasional small roots, medium dense, moist					5.3%
-1							
-2					SM		
-3							
-4		Silty Gravel: Grey tan, interbeds of silty sandy GRAVEL to slightly silty and clean, sandy GRAVEL, dense to very dense, moist (Outwash/Glacial Till)					
-5					GM		
-6					GP		
-7		No groundwater seepage observed					
-8							
-9							
-10							
-11							

**ABPB Consulting  
Geotechnical Consultants**

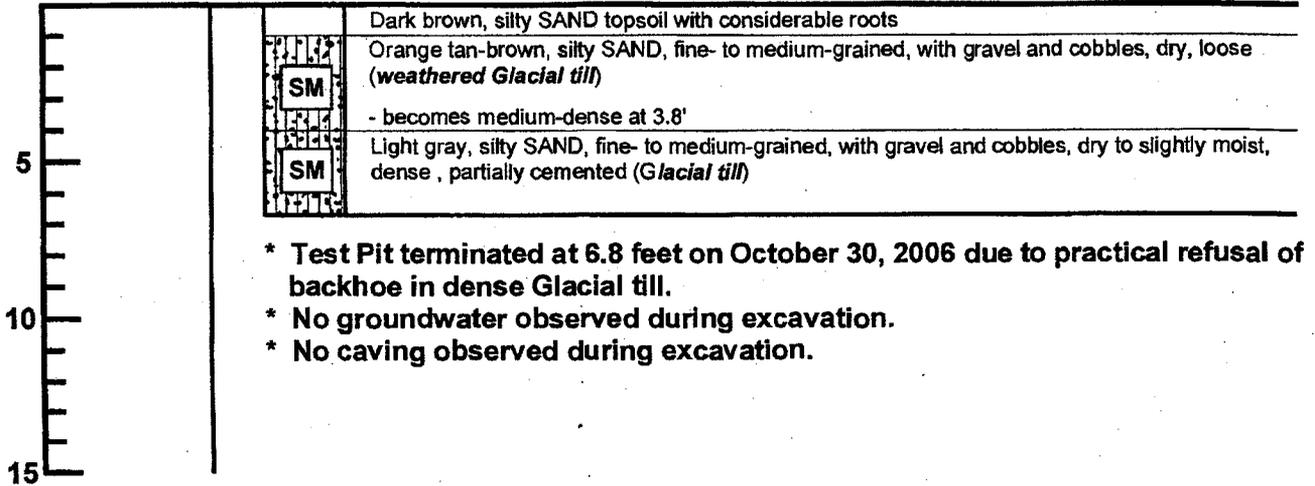
12525 Willows Road, Suite 80, Kirkland, Washington (425) 820-2544

**APPENDIX A**  
**TEST PIT LOGS, 2006**  
**GEOTECH CONSULTANTS**

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

## TEST PIT 1

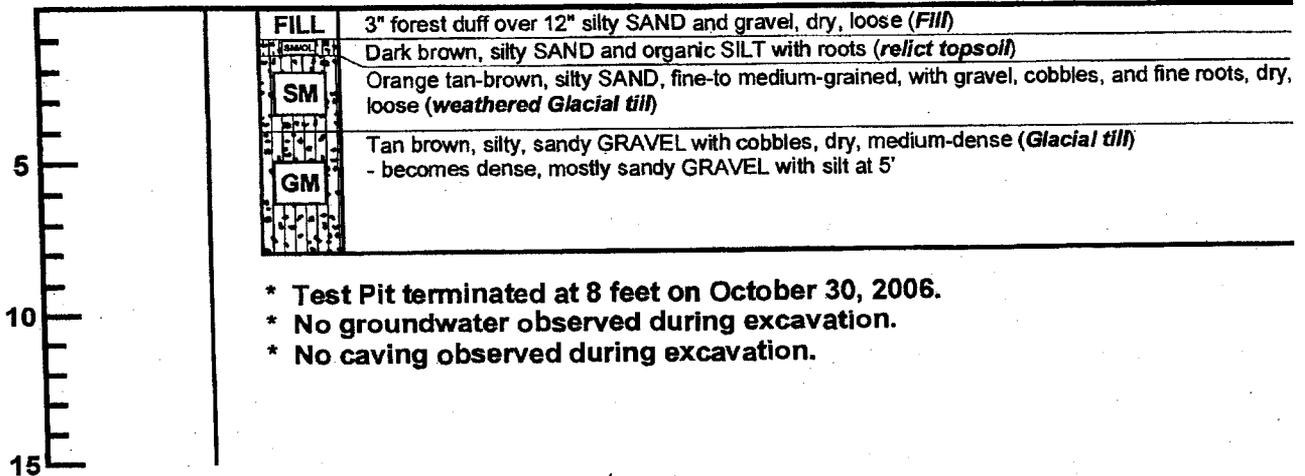
Description



Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

## TEST PIT 2

Description



### TEST PIT LOG

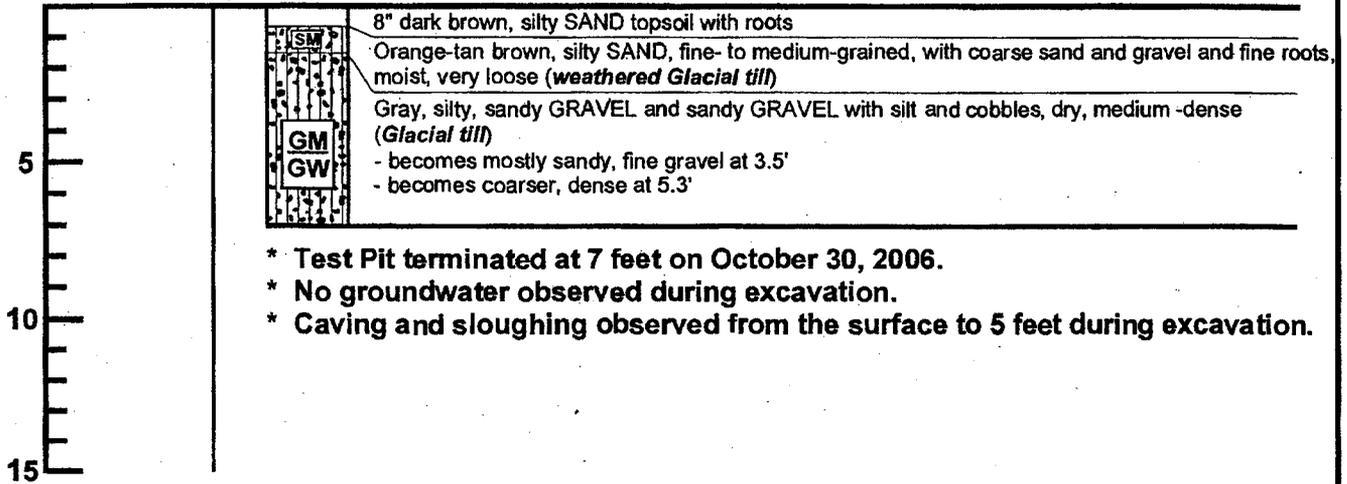
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

Job	Date:	Logged by:	Plate:
06387	Nov. 2006	GB	3

## TEST PIT 3

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*

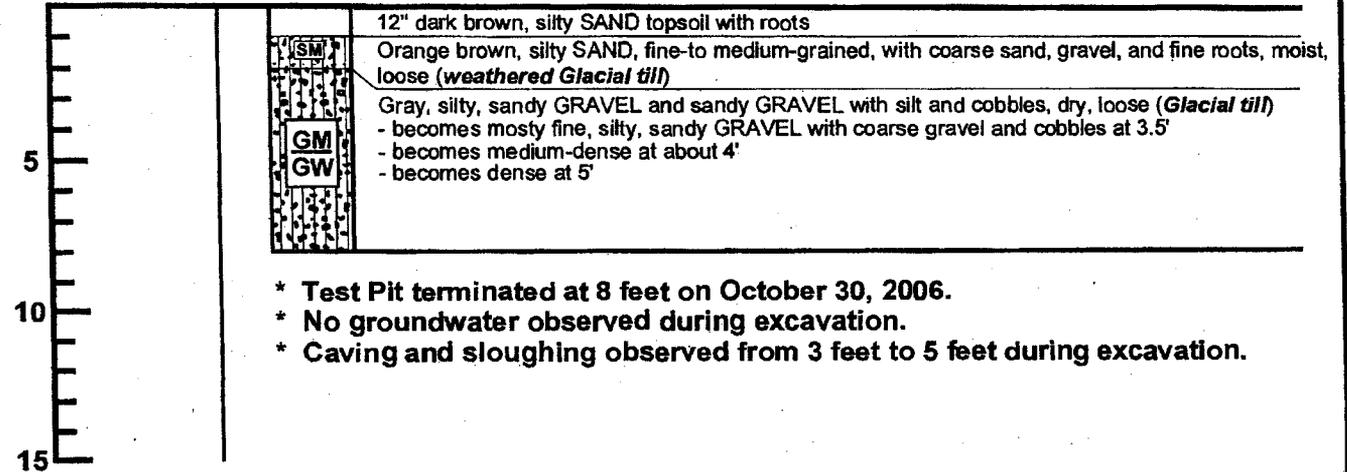


- \* Test Pit terminated at 7 feet on October 30, 2006.
- \* No groundwater observed during excavation.
- \* Caving and sloughing observed from the surface to 5 feet during excavation.

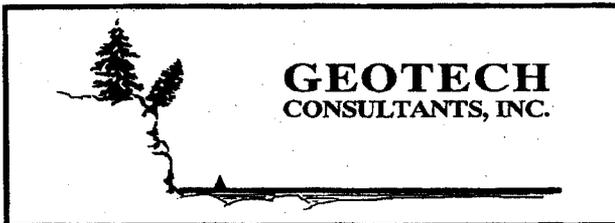
## TEST PIT 4

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*



- \* Test Pit terminated at 8 feet on October 30, 2006.
- \* No groundwater observed during excavation.
- \* Caving and sloughing observed from 3 feet to 5 feet during excavation.



**TEST PIT LOG**  
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

Job	Date:	Logged by:	Plate:
06387	Nov. 2006	GB	4

## TEST PIT 5

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*



SM	6" dark brown, silty SAND topsoil with roots
SM	Orange tan-brown, silty SAND, fine- to medium-grained, with gravel and roots, moist, loose ( <i>weathered Glacial till</i> )
SM	Light tan gray, silty SAND, fine- to medium-grained, with gravel and cobbles, dry, dense, cemented ( <i>Glacial till</i> ) - becomes dense at 4'

- \* Test Pit terminated at 5 feet on October 30, 2006.
- \* No groundwater observed during excavation.
- \* No caving observed during excavation.

## TEST PIT 6

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*



FILL	Dark brown, silty SAND, fine- to medium-grained, with gravel and roots, moist, loose ( <i>Fill</i> )
SM	Dark brown, silty SAND and organic SILT with roots ( <i>relict topsoil</i> )
SM	Orange brown, silty SAND, fine- to medium-grained, with gravel, cobbles, and few roots, moist, loose ( <i>weathered Glacial till</i> )
SM	Light tan-gray, silty, SAND, fine- to medium-grained, with gravel and cobbles, dry, dense, cemented ( <i>Glacial till</i> ) - becomes very dense at 5'

- \* Test Pit terminated at 5.5 feet on October 30, 2006 due to practical refusal of backhoe in dense Glacial till.
- \* No groundwater observed during excavation.
- \* No caving observed during excavation.



**TEST PIT LOG**  
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

<b>Job</b> 06387	<b>Date:</b> Nov. 2006	<b>Logged by:</b> GB	<b>Plate:</b> 5
---------------------	---------------------------	-------------------------	--------------------

## TEST PIT 7

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*

5		<b>FILL</b>	Dark gray brown, silty SAND, fine- to medium-grained, with gravel, cobbles, wood debris, moist, medium-dense ( <i>Fill</i> )  - rusty chain at 3.5' - becomes loose, dry about 4'  - saw-cut limbs in fill about 6-7'
10		<b>SM/OL</b> <b>SM</b>	Dark brown, silty SAND and organic SILT, moist, loose ( <i>relict topsoil</i> ) Orange brown, silty SAND, fine- to medium-grained, with gravel and cobbles, moist, loose ( <i>weathered glacial till</i> )

15

- \* Test Pit terminated at 11 feet on October 30, 2006 due to maximum limit of backhoe depth.
- \* No groundwater observed during excavation.
- \* No caving observed during excavation.

## TEST PIT 8

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*

5		<b>SM</b> <b>SM</b>	6" dark brown, silty SAND topsoil with roots Orange brown, silty SAND, fine- to medium-grained, with fine roots, gravel and cobbles, dry, loose ( <i>weathered Glacial till</i> )  Light tan-gray, silty SAND, fine- to medium-grained, with gravel and cobbles, dry, dense, cemented ( <i>Glacial till</i> )
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15

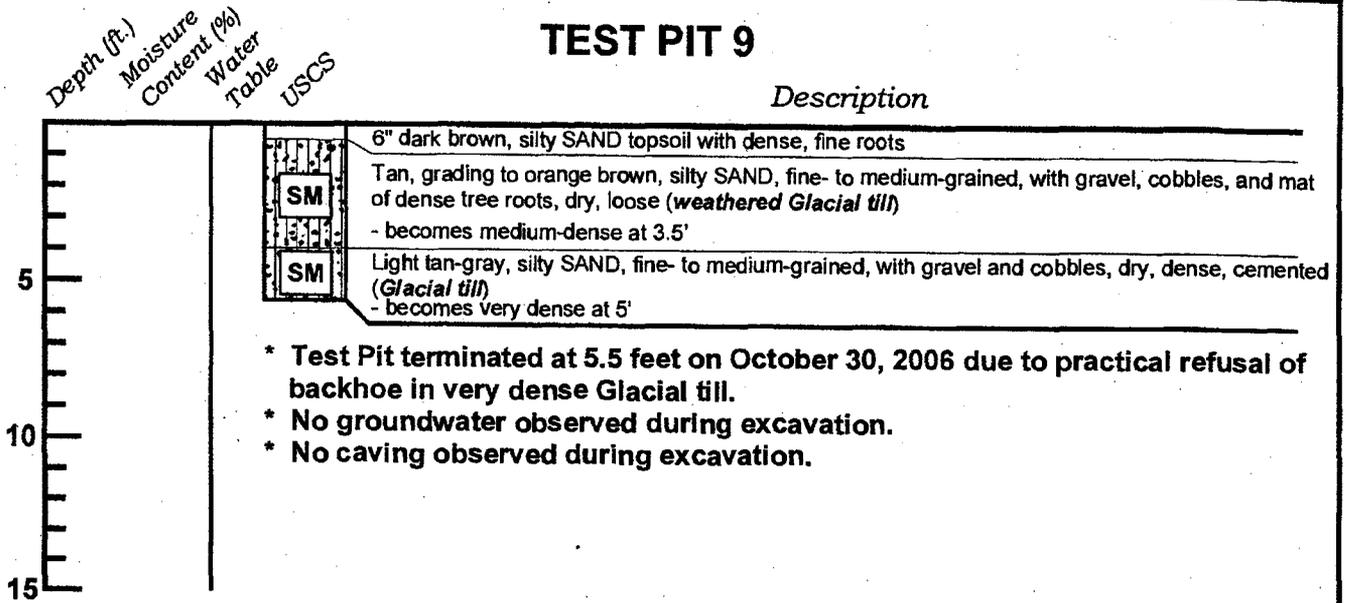
- \* Test Pit terminated at 5.5 feet on October 30, 2006 due to practical refusal of backhoe in dense Glacial till.
- \* No groundwater observed during excavation.
- \* No caving observed during excavation.



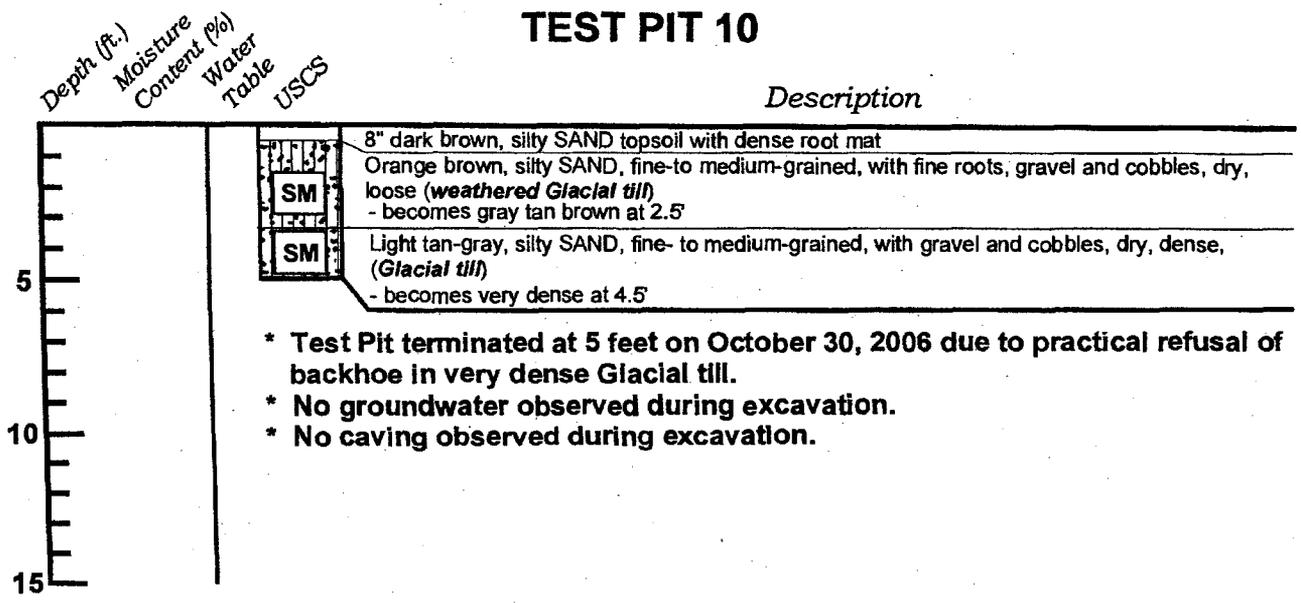
**TEST PIT LOG**  
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

<b>Job</b> 06387	<b>Date:</b> Nov. 2006	<b>Logged by:</b> GB	<b>Plate:</b> 6
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## TEST PIT 9



## TEST PIT 10



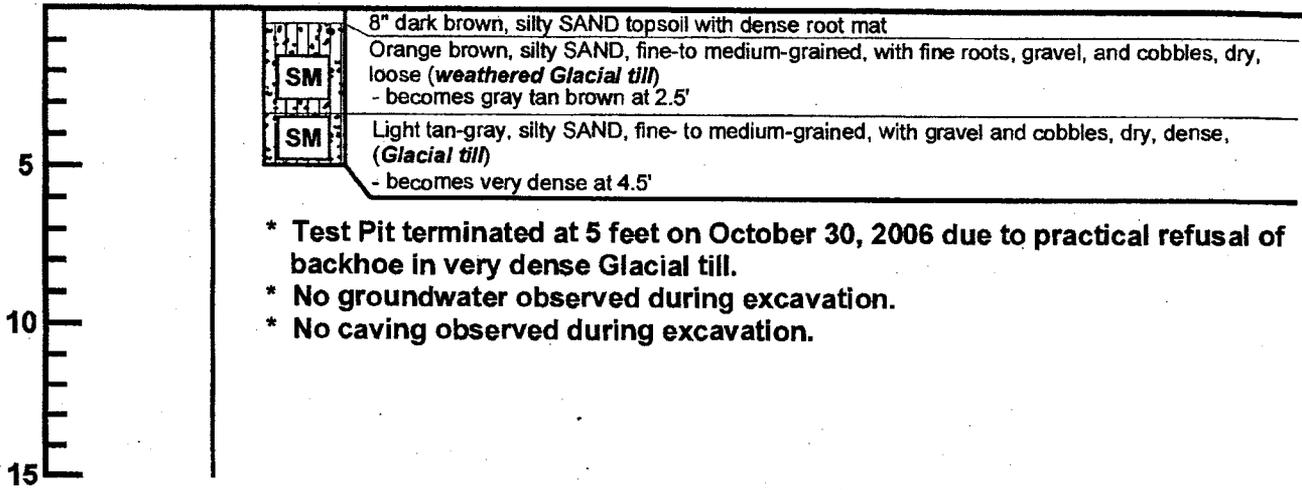
**TEST PIT LOG**  
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

Job	Date:	Logged by:	Plate:
06387	Nov. 2006	GB	7

## TEST PIT 11

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

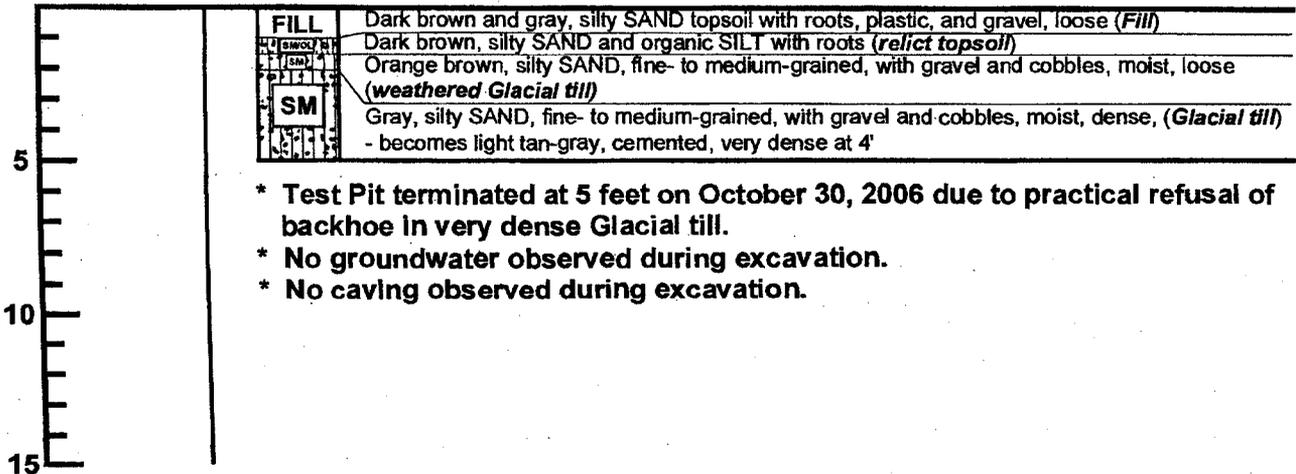
*Description*



## TEST PIT 12

Depth (ft.)  
Moisture  
Content (%)  
Water  
Table  
USCS

*Description*



**TEST PIT LOG**  
SE 64th Street & 120th Avenue SE  
Bellevue, Washington

<b>Job</b>	<b>Date:</b>	<b>Logged by:</b>	<b>Plate:</b>
06387	Nov. 2006	GB	8

# CRITICAL AREAS REPORT

---

## Newport View – Bellevue, WA

Prepared for:

Jeff Fransen  
Triad Development  
2801 Alaskan Way #107  
Seattle, WA 98121

Prepared by:



750 Sixth Street South  
Kirkland . WA 98033

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November 2015

**The Watershed Company**  
**Reference Number:**  
070301

**The Watershed Company Contact Person:**  
Kenny Booth

**Cite this document as:**  
The Watershed Company. November 2015. Critical Areas Report: Newport View, Bellevue, WA. Prepared for Triad Development.

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Appendix A: Restoration Plan

# LIST OF EXHIBITS

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# CRITICAL AREAS REPORT

---

## NEWPORT VIEW – BELLEVUE, WA

# 1 INTRODUCTION

---

## 1.1 Background and Purpose

The purpose of this report is to document potential critical area and critical area buffer impacts associated with the proposed residential development project located on two parcels in the City of Bellevue, Washington (Figure 1). Both lots are currently undeveloped.

It is proposed that the parcels be subdivided into a total of 14 residential lots. Subdivision will require the modification of portions of steep slopes and steep slope buffers. Bellevue Land Use Code (LUC) 20.25H.230 requires compliance with specific critical areas report criteria as part of any modification to a critical area or buffer. This report fulfills these criteria. Further, pursuant to LUC 20.25H.250(C)(1), this report has been prepared in conjunction with a geotechnical analysis report by ABPB Consulting, LLC. The majority of technical geological hazard discussion can be found in their report. Conversely, this report presents a detailed discussion of the habitat and vegetation on-site and how the proposed development can be achieved with no net loss of on-site or off-site critical area functions and values.

## 1.2 Description of Project Area

The project area is approximately 4.03 acres and includes two tax parcels; 3343301725 and 3343301726. It is located at the northeast corner of the intersection of SE 64<sup>th</sup> Street and 120<sup>th</sup> Avenue SE in the City of Bellevue. Both parcels are vacant and undeveloped. There is an existing gravel trail (old logging road), at the midpoint of the site's frontage on 120<sup>th</sup> Avenue SE. It is believed that the road is approximately 25 years old, at which time the site was logged. The site is bounded by SE 64<sup>th</sup> Street (unimproved) to the south, 120<sup>th</sup> Avenue SE to the west, undeveloped lots as well as a church to the north, and existing single-family homes to the east. The site slopes from east to west at approximately 10-30 percent, declining towards 120<sup>th</sup> Avenue SE. Some limited areas, located adjacent to the existing logging road, exceed 40 percent. The site is currently partially forested and vegetated with scrub-shrubs and invasive species. The site has four areas that meet the City definition of a steep slope and are therefore considered critical areas. A large portion of the steep slope areas are a result of prior grading. No wetlands or streams were noted on the parcels or within the vicinity, nor do publicly available data indicate the presence of these areas.

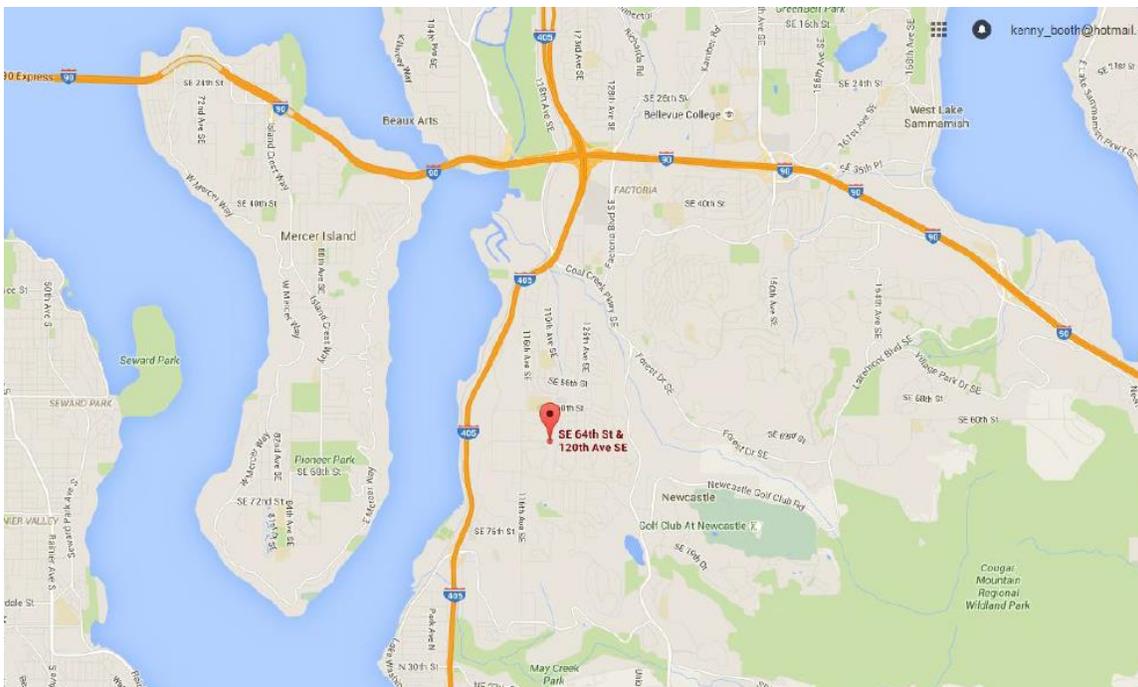


Figure 1. Vicinity Map.

### Vegetation

The parcels can be separated generally into three types of plant communities: young mixed coniferous-deciduous forest with scattered mature trees, pole/sapling mixed forest, and scrub-shrub with patches of low-growth vegetation. Douglas-fir and Pacific madrone are the dominant tree species in the forested areas. According to the arborist report, a large portion of the mature trees on site suffer from disease including several fatal root infections (report by Creative Landscape Solutions). On roughly the eastern third of the parcels, these species create a canopy that ranges from nearly closed at the east property boundary to dense with openings in the remainder of the young forest area. The understory is sparse in the most mature sections of forest along the east edge of the property. In this area, the understory is nearly limited to sword fern and English ivy.

The pole/sapling forest is sparsely treed with an understory that varies from typical western Washington native shrubs and ferns to dense patches of invasive species. A mosaic of scrub-shrub patches concentrated in the western portion of this area includes an open grassy area, dense Himalayan blackberry, and Scotch broom mixed with native species, in addition to the small areas of almost exclusively native shrubs. Additional information on vegetation and habitat conditions (including species of local importance) can be found in the separately prepared Habitat Assessment.

Soils

According to the USDA Natural Resource Conservation Service (NRCS) Web Soil Survey maps, the soils across the site are mapped as Alderwood gravelly sandy loam, 8 to 15 percent slopes (AgC).

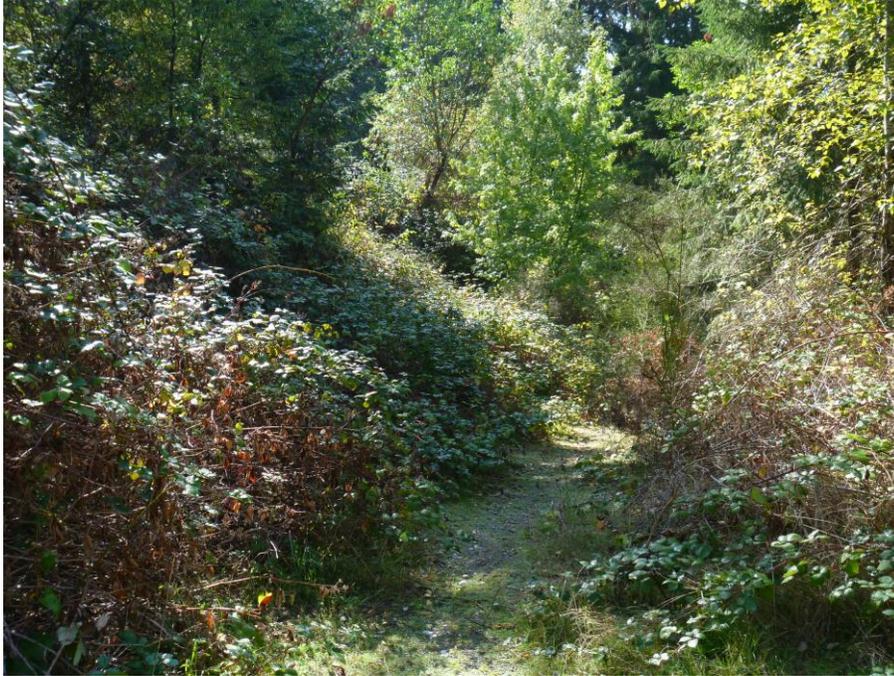


Figure 2: Existing gravel road with encroaching invasive plants.



Figure 3: Existing Douglas-fir and Pacific madrone trees.



Figure 4: Existing steep slope to be enhanced invasive species removal and installation of native trees and shrubs.



Figure 5: View south on 120<sup>th</sup> Avenue SE where frontage improvements will occur.

## 2 LOCAL REGULATIONS

---

In Bellevue, steep slope critical areas are governed by Critical Areas Ordinance No. 5680. According to LUC 20.25H.120(A)(2), slopes of 40 percent or more that have a rise of at least 10 feet and exceed 1,000 square feet in area are designated as geologic hazard areas and therefore subject to the regulations of LUC 20.25H.120 through 20.25H.125.

According to LUC 20.25H.120(B)(1)(b), steep slope critical areas require a top-of-slope buffer of 50 feet. Further, pursuant to LUC 20.25H.120(C)(2), steep slopes require a toe-of-slope setback of 75 feet. ABPB Consulting, LLC has previously determined that the on-site steep slopes do not require toe-of-slope setbacks. Therefore, for the purposes of this report, it is assumed that setbacks are not present.

New roadways are an allowed use within steep slopes and their buffers. However, any additional modifications, including for new created lots, can only be accomplished through an approved critical areas report. The applicant must demonstrate that the modifications to the critical area or buffer combined with any restoration efforts, will result in equivalent or better protection of critical area functions and values than would result from adhering to the standard application of the regulations (LUC 20.25H.230). Restoration may involve restoring degraded portions of the buffer, removing invasive plant species, and/or planting native vegetation within the critical area and/or buffer. An approved restoration plan would require monitoring and maintenance in accordance with LUC 20.25H.220.

## 3 PROJECT DESCRIPTION

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The proposed project consists of a 14-lot conservation subdivision for a single-family residential development. The project includes access to the lots via a new private road connection to 120<sup>th</sup> Avenue SE. The proposed roadway generally follows the established logging road. The planned roadway includes 24 feet of paving width with sidewalk, and a retaining wall on one side. The proposed project would also provide required frontage improvements including road widening and a sidewalk on 120<sup>th</sup> Avenue SE.

Sanitary sewer service will be extended into the site from an existing sanitary sewer main located within 120<sup>th</sup> Avenue SE. Stormwater will be collected, treated and detained on-site, then released to the existing stormwater system located within 120<sup>th</sup> Avenue SE. On-site stormwater treatment and detention will be provided by two proposed stormwater vaults. Water service will also be extended into the site from both 120<sup>th</sup> and 121<sup>st</sup> Avenue SE.

Project Purpose

The site is zoned R-5 within the City of Bellevue. This zone allows for single-family development on lots with a minimum average size of 7,200 square feet. However, as a result of the steep slopes onsite, a conservation subdivision is required which provides for reduced lot sizes and other modified standards in order to provide flexibility and reduce impacts to critical areas. Density calculations for the site result in 18 units, however, minimum lot size requirements together with critical area / native growth protection requirements result in the proposed 14-lot conservation subdivision. The conservation subdivision provides for structure setbacks in this zone as follows: 10-foot front yard setback, 15-foot rear yard setback, and 5-foot side yard setbacks.

Mitigation Sequencing

Pursuant to LUC 20.25H.215, attempts to avoid and minimize impacts to the on-site steep slope and buffer have been taken.

**Avoidance:** As previously mentioned, the proposed roadway that will provide access to the 14 lots has been positioned in the general area of the existing logging road. This results in near complete avoidance of direct steep slope impacts. It also centers the roadway in the area of fewest significant trees.

**Minimization:** Minimization techniques were utilized during the design process in order to limit impacts to the standard steep slope buffer. Minimization measures included positioning residential lots to avoid steep slope and buffer impacts to the greatest extent feasible. No residential lots will impact steep slopes; however, buffer modifications will be necessary for several of the lots. However, lot layout, sizes, and roadway placement were designed to minimize impacts to buffers. All told, only three of the fourteen lots will partially impact steep slope buffers.

**Mitigation:** As mitigation for modifying the standard steep slope buffers, 13,941 square feet of steep slope and steep buffer/adjacent area will be enhanced. This includes 2,680 square feet on steep slopes and 11,261 within steep slope buffers and areas immediately adjacent to steep slopes. Enhancement will consist of planting native trees, shrubs and groundcover. Enhancement is to occur in areas currently occupied by non-native vegetation and devoid of significant native species. Proposed species for planting include Douglas maple, shore pine, western white pine, Scouler's willow, western serviceberry, beaked hazelnut, oceanspray, red elderberry, salal, dull Oregon-grape, sword fern, baldhip rose, and snowberry. The proposed restoration will provide an additional level of protection for the steep slope and buffer and will offset the proposed reduction in the standard buffer. Overall, a net improvement in critical area and critical area buffer functions is proposed.

## 4 IMPACT ASSESSMENT / LIFT ANALYSIS

As mentioned in the previous section, impacts to portions of the steep slope and standard top-of-slope buffer will occur. Impacts result from the newly created roadway and several of the residential lots. Table 1 below details the extent of the four areas of steep slope and each corresponding buffer. In addition, impacts and proposed mitigation measures are summarized.

**Table 1. Impact/Mitigation Assessment**

	Existing Area (SF)	Steep Slope Impact (SF)	Buffer Impact (SF)	Steep Slope Enhancement (SF)	Buffer Enhancement (SF) <sup>1</sup>
<b>Steep Slope Area A</b>	2,105	4	0	936	787
<b>Steep Slope Area B</b>	10,804	4	5,665	1,059	4,011
<b>Steep Slope Area C</b>	1,299	0	7,959	409	1,499
<b>Steep Slope Area D</b>	1,188	0	0	276	4,964
<b>Total</b>	<b>15,396</b>	<b>8</b>	<b>13,624</b>	<b>2,680</b>	<b>11,261</b>

1. Includes areas directly adjacent to steep slopes.

As can be seen in the above table, buffer area will be reduced by 13,624 square feet. However, 13,941 square feet of combined steep slope/buffer enhancement will occur. Enhancement has been focused on continuous areas of steep slope and adjacent areas that are covered within invasive species or lacking in native vegetation. Proposed native vegetation is intended to improve the overall functions and values of the on-site critical areas and buffers. An analysis of the specific functions and values provided by the existing site and the post-project site is provided in Table 2.

**Table 2. Functional Lift Analysis**

Critical Area/ Buffer Functions	Existing Conditions	Proposed Conditions	Functional Improvement?
<b>Water Quality</b>	Most of the existing steep slope and adjacent buffer areas area composed of native trees with non-native/invasive shrubs and groundcovers in the understory. Many of the existing trees are diseased.	Remove non-native and invasive species and replace with native trees and shrubs. In-fill native plantings in areas void of significant native vegetation.	Water quality will be maintained. New native plantings will help to filter storm prior to it reaching on-site detention facilities.
<b>Slope Stability</b>	Per the Geotechnical	Remove non-native	The proposed native

	Report, the existing slope is stable under current conditions. However, areas of existing invasive species on the slopes do not offer maximum stability.	and invasive species and replace with native trees and shrubs.	plantings that will replace the non-native and invasive species will provide a much deeper root system that will increase slope stability and will improve absorbing/slowing precipitation.
<b>Habitat</b>	The steep slopes and adjacent areas contain non-native vegetation areas that do not provide significant cover or forage opportunities.	Remove non-native and invasive species and replace with native trees and shrubs.	Forage and cover opportunities for wildlife will be improved by replacing non-native and invasive species on the slopes and adjacent areas with a native tree and shrub community.
<b>Net Condition</b>	Existing steep slopes and adjacent area are degraded with non-native and invasive species. The existing condition provides low levels of function for protecting water quality, slope stability, and habitat.	Areas dominated by non-native shrubs and trees and/or invasive shrub species will be replaced with a native tree and shrub community.	The proposed steep slope and buffer modifications, combined with the proposed slope enhancement plan will represent an improvement of critical area functions. While the buffer width will be reduced in areas, the proposed conditions will increase vegetative cover and diversity in the existing degraded slopes and adjacent areas.

While the area of standard buffer will be reduced, the functions of the steep slopes and buffers will be improved. The critical areas will be better suited to provide slope stability and water quality functions, than under the existing condition. In addition, habitat will be improved by providing a greater mix of flowering, fruiting and seeding plants that will provide forage over a longer yearly timespan than the relatively existing non-native species present. Wildlife species of the Pacific Northwest are also better adapted to forage provided by native plants than non-native and ornamental species.

## 5 CRITICAL AREAS REPORT CRITERIA

As previously mentioned, steep slope critical area buffers may be modified pursuant to LUC 20.25H.230. The Director may approve modifications if it can be shown that, through restoration or enhancement, the modification will result in equivalent or better protection of critical area and buffer functions and values. The existing project area

contains areas of low functioning steep slope and steep slope buffer. Non-native vegetation occupies a significant portion of the steep slope critical area, while the buffer offers a similar existing condition. The proposal includes restoration of the primary steep slope areas and associated buffer areas with native plantings. These restoration actions will serve as mitigation for the loss of 13,624 square feet of steep slope buffer. The planting layout incorporates a diversity of native plant species. The restoration plan will provide for substantially improved critical area and buffer functions and values relative to the existing condition. A monitoring and maintenance plan for the proposed mitigation area is also included in this report.

Per the LUC, the critical areas report must meet specific decision criteria in order for the Director to approve a proposal to modify the regulated steep slope critical area or buffer. Compliance with the relevant critical areas report criteria listed in LUC 20.25H.250(B) is addressed below.

1. *Identification of each regulation or standard of this code proposed to be modified.*

The subject site contains areas of steep slope, as defined by LUC 20.25H.120(A)(2). Pursuant to LUC 20.25H.120(B)(1)(b), a 50-foot top-of-slope buffer is required. In addition, each slope includes a 75-foot toe-of-slope setback. Setbacks for each of the steep slope areas have been eliminated at the recommendation of the project geologist. The proposal includes modifications to the steep slopes and buffers in order to permit a 14-lot conservation subdivision. The proposal complies with the remaining regulations and standards of this code.

3. *A habitat assessment consistent with the requirements of LUC 20.25H.165.*

1. *Detailed description of vegetation and habitat on and adjacent to the site;*

See separately prepared Habitat Assessment.

2. *Identification of any species of local importance that have a primary association with habitat on or adjacent to the site and assessment of potential project impacts to the use of the site by the species;*

See separately prepared Habitat Assessment.

3. *A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site;*

See separately prepared Habitat Assessment.

4. *A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;*

See separately prepared Habitat Assessment and Table 2. Water quality is expected to be maintained through the enhancement of steep slope areas and buffers, and through implementation of appropriate stormwater measures associated with the subdivision. This includes collection, treatment, and detention of all on-site runoff within two stormwater vaults.

5. *A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC [20.25H.215](#); and*

See Section 3 for mitigation sequencing and Section 4 and the separately prepared Habitat Assessment for habitat restoration details.

6. *A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.*

See Section 6.

4. *An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development.*

Indirect and cumulative impacts can be addressed insofar as land use of the surrounding landscape can be expected to change over time. The lots surrounding the property to the west, east, and south are zoned R-5, with nearly all appearing to be built out. However, it is possible that the church property to the north of the project area could be developed at some point in the future. Therefore, it is possible that additional development in the vicinity may occur. In the event that the adjacent, undeveloped forest is fragmented further, the restored areas of the property may gain “refuge” value. Small and/or isolated forested patches within a developed landscape act as refuges to traveling wildlife and are extremely important for keeping wildlife within urban and suburban areas, as well as for facilitating movement through and within such areas. Thus, the increase in habitat complexity associated with the restoration plan for the parcels may improve future refuge value of the site in the event that nearby properties are further developed.

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;*

See Table 2.

*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;*

The strict application of the regulations and standards of LUC 20.25H would not allow for placement of the proposed roadway while still complying with the maximum allowable grade for a public road. Therefore, the roadway has been configured to meet grade requirements while partially impacting portions of the top-of-slope buffer. Without proper placement of the roadway, the proposed 14-lot subdivision is not feasible. Under this scenario, the on-site steep slopes and buffer areas would remain in their existing degraded condition. Therefore, no new native vegetation would be added to the site and ecological conditions would not improve within the critical areas or buffers.

Instead, the proposed project will result in the addition of substantial native vegetation within the steep slope critical area and buffer. The native plantings will increase stormwater infiltration and provide increased species and structural habitat diversity within the steep slope critical area and buffer, as well as improved slope stability. [See also Table 2.]

*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; and*

By requesting a critical area modification pursuant to LUC 20.25H.230, the applicant is provided the opportunity to restore portions of the on-site steep slope critical area and buffer. A restoration plan has been prepared (see Appendix A) that details the area proposed for restoration. This plan mitigates for the proposed steep slope and buffer modifications. Restoration will involve the enhancement of 13,941 square feet of the site through the planting of native vegetation within the steep slope critical area and buffer. The planting layout incorporates a diversity of native plant species. Proposed plantings include trees, shrubs, and groundcover. A

monitoring and maintenance plan for the proposed mitigation is also included in this report. Overall, a net gain in critical area and buffer functions is proposed. Therefore, modification of the on-site critical areas and buffers, and subsequent restoration, will provide a substantially higher level of protection than provided through the application of the regulations of LUC 20.25H. [See also Table 2]

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.*

See separately prepared Habitat Assessment.

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.*

The proposed restoration plan has been developed in accordance with the standards of LUC 20.25H.210 through 20.25H.225. The project applicant proceeded through the design of the proposed project by first attempting to avoid impacts to the on-site critical areas and buffers. Avoidance of impacts to the critical area was essentially achieved (8 square feet of steep slope impact will occur). However, because strict application of LUC 20.25H would result in an inability to provide an adequate layout and lot configuration for the subdivision, the applicant proceeded with an alternative design that provides for the proposed roadway and 14-lot layout. A monitoring and maintenance plan for the proposed restoration area has also been prepared and is included in this report. The plan includes the components required by LUC 20.25H.220.

To allow a steep slope critical area and buffer modification through an approved critical areas report, the Director must also find compliance with the decision criteria established in LUC 20.25H.255(A) and (B). Compliance with the relevant sections listed in LUC 20.25H.255(A) and (B) is addressed below.

1. *The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code.*

A restoration plan that details the areas proposed for restoration as a result of the critical area and buffer modification has been prepared. The plan mitigates for steep slope and buffer modifications. Restoration will involve the planting of native vegetation (trees, shrubs, and groundcover) within the critical area and buffer. The overall planting layout incorporates a diversity of native plant species.

Proposed native plantings will increase species diversity, providing a variety of foraging resources for wildlife. An increase in structural diversity over existing conditions will also result, providing more suitable year-round cover conditions for wildlife, particularly songbirds. The proposed native plantings will also maintain stormwater functions on the slopes, allowing filtration of stormwater and by helping to remove pollutants from stormwater entering the slope.

Overall, the restoration plan will provide for improved critical area and buffer functions and values relative to the existing condition. The monitoring and maintenance plan will ensure long-term success of the mitigation. [See also Table 2.]

2. *Adequate resources to ensure completion of any required mitigation and monitoring efforts.*

A comprehensive five-year maintenance and monitoring plan is included in the mitigation plan (See Appendix A). The plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring. This will ensure that restoration plantings will be maintained, monitored, and successfully established within the first five years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the five-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to site development.

3. *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.*

Restoration of significant portions of the on-site steep slope and buffer areas will provide maintained water quality, improved erosion control, and slope stability. Substantial portions of the steep slope buffer are currently degraded with non-natives species or lacking in native diversity. Shallow root systems that are present do little to help stabilize the slopes. The native trees and shrubs included in the restoration plan will provide a more complex and deeper root system, improving slope stabilization. The coniferous trees, in particular, will reduce the potential for heavy precipitation to cause erosion on the slopes by capturing substantial amounts of rainfall before reaching the ground surface. The dense vegetation will also help to reduce storm water velocities and filter associated sediments. Furthermore, restoration of the on-site slope and buffer will increase the overall habitat function of the critical area.

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

The proposed conservation subdivision will be compatible with adjacent properties and surrounding development within the same land use district (Single Family R-5). Lot sizes and layout will be comparable to existing adjacent development.

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 preceding paragraphs and Table 2.

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.*

The most significant function provided by the vegetation and condition of steep slopes and their associated buffer is the protection of slope stability and reduction of erosion potential. Much of the existing steep slope buffer is sparsely vegetated and includes areas of non-native species. The shallow root systems present do not sufficiently maintain slope stability. With the implementation of the proposed restoration plan, a combination of trees and shrubs on the steep slope buffer will provide deeper and stronger root systems, increasing slope stability and limiting erosion potential.

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

The proposed native plantings will improve stormwater functions adjacent to and within the slope, allowing filtration of stormwater and by helping to remove pollutants from stormwater on the slope. Combined with proposed stormwater measures, including on-site collection, treatment, and detention, an overall net gain in stormwater quality function is proposed.

Modification of a critical area or buffer requires the applicant to apply for and receive a Critical Areas Land Use Permit. Before issuing a Critical Areas Land Use Permit, the Director must find that the project meets specific decision criteria. Compliance with the applicable Critical Areas Land Use Permit decision criteria listed in LUC 20.30P.140 is addressed below.

- A. *The proposal obtains all other permits required by the Land Use Code.*

The project applicant has applied for a Critical Areas Land Use Permit (LO) to modify the on-site steep slope critical area and buffers. Additional permits necessary to authorize the conservation subdivision and to extend utilities have also been submitted. Building Permit applications will follow approval of all land use permits.

- 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.*

As mitigation for impacts associated with the steep slope and buffer modification, existing degraded areas of steep slope critical area and buffer will be restored. The applicant has used the best available design and development techniques to design the subdivision. The design allows for continuity with the surrounding neighborhood while providing adequate area for restoration.

- C. *The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable.*

See below for steep slope performance standard compliance (per LUC 20.25H.125).

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

The proposed project will be served by adequate public facilities. One new street will be constructed to provide access to the development. New utilities for each lot will also be provided. Additionally, fire and police protection are currently available.

- 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.*

A mitigation and restoration plan has been prepared in accordance with the requirements of LUC 20.25H.210. See Section 6 and Appendix A.

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

The proposed project complies with all other applicable City of Bellevue Land Use Codes.

Modification of a geologic hazard area or buffer requires the applicant to show compliance with the specific performance standards for steep slopes as set forth in LUC 20.25H.125. Compliance with the applicable criteria listed in LUC 20.25H.125 is addressed 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;*

See ABPB Consulting, LLC. geotechnical report.

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

See ABPB Consulting, LLC. geotechnical report.

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

See ABPB Consulting, LLC. geotechnical report.

- 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;*

See ABPB Consulting, LLC. geotechnical report.

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

See ABPB Consulting, LLC. geotechnical report.

- 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;*

See ABPB Consulting, LLC. geotechnical report.

- 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;*

See ABPB Consulting, LLC. geotechnical report.

- 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;*

See ABPB Consulting, LLC. geotechnical report.

- 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*

See ABPB Consulting, LLC. geotechnical report.

- 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](#).*

See ABPB Consulting, LLC. geotechnical report. In addition, a restoration plan has been developed, pursuant to LUC 20.25H.120, and is included in Appendix A. The plan will mitigate for areas of steep slope and buffer modification and restore areas of temporary buffer disturbance.

Finally, modifications to steep slopes and buffers can only be approved if the Director determines that compliance with LUC 20.25H.145 has occurred. Compliance with the applicable decision criteria listed in LUC 20.25H.145 is addressed below.

- A. *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;*

See ABPB Consulting, LLC. geotechnical report.

- B. *Will not adversely impact other critical areas;*

See ABPB Consulting, LLC. geotechnical report.

- C. *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;*

See ABPB Consulting, LLC. geotechnical report.

- D. *Is certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington;*

See ABPB Consulting, LLC. geotechnical report.

- E. *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 ABPB Consulting, LLC. geotechnical report.

- F. *Any modification complies with recommendations of the geotechnical support with respect to best management practices, construction techniques or other recommendations; and*

See ABPB Consulting, LLC. geotechnical report.

- G. *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 separately prepared Habitat Assessment.

## 6 RESTORATION PLAN

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### 6.1 Summary

The Newport View project consists of a plan to establish 14 single-family residential lots as part of a conservation subdivision. Slopes exceeding 40 percent and greater than 10 feet in height occur in several areas of the property and impacts total 8 square feet in these area. In addition, 13,624 square feet of steep slope buffer impact will occur. The mitigation areas are intended to mitigate for lost function in the steep slope and buffer impact areas.

#### 6.1.1 Goals

Enhance 2,680 square feet of steep slope critical area and 11,261 square feet of steep slope buffer area.

#### 6.1.2 Objectives

1. Remove and prevent the re-establishment of invasive species.
2. Create a diverse, native plant community including trees, shrubs, and groundcovers within the mitigation areas.
3. Monitor the mitigation areas for 5 years.

4. Maintain health and viability of the enhancement plantings and continue to maintain mitigation areas free of non-native, invasive species.

## **6.2 Performance Standards**

### **6.2.1 Survival**

1. Achieve 100% survival of all installed plants by the end of year one. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
2. Achieve 60% survival of all installed plants by the end of year two. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
3. Survival beyond year two is difficult to track. Therefore, a species richness standard (below) is proposed for years three through five.

Species Richness: Establish at least two tree species and six shrub/groundcover species at the end of years three and five.

### **6.2.2 Cover**

1. Achieve at least 50% cover of native, woody species by the end of year three. Native volunteer species may count towards this standard.
2. Achieve at least 80% cover of native, woody species by the end of year five. Native volunteer species may count towards this standard.
3. No more than 10% cover by non-native, invasive species in any monitoring year. Invasive species include all species listed as Class A, B, or C (regulated and non-regulated) on the King County Noxious Weed List.

Note that native volunteers included in survival, richness, and cover estimates must not account for more than 10% of individuals or cover.

### **6.2.3 Monitoring Methods**

An as-built plan will be prepared following mitigation installation. The as-built plan will be a mark-up of the planting plan included in this plan set. The mark-up will document any differences in plant placement or other components from the proposed plan.

Monitoring will take place four times, once each in years one, two, three, and five. First-year monitoring will commence in the first late summer or early fall, subsequent to plant installation (ideally before deciduous leaves begin to drop). Line-intercept transects will be established in mitigation areas. The following will be recorded and reported in an annual monitoring report to be submitted to the City of Bellevue.

1. Visual estimation of installed plants survival by species.
2. Visual estimate of non-native and invasive weed cover.
3. Estimate of native plant cover using line transects.
4. Photographic documentation from fixed reference points.
5. Intrusions into the planting areas, vandalism, or other actions that impair the intended functions of the planted areas.
6. Recommendations for maintenance or repair of the planted areas.

#### 6.2.4 General Work Sequence

A **restoration specialist** will make site visits to verify the following project milestones:

- Clearing inspection
  - Snagging inspection
  - Slope amendment and mulch inspection
  - Plant material inspection
    - o Plant material inspection
    - o 50% plant installation inspection
    - o 100% plant installation inspection
1. Clear the site of all invasive vegetation including, but not limited to, Himalayan blackberry, Scotch broom, and English ivy.
  2. Install a blanket application of **wood strand mulch** across all mitigation areas.
  3. Native plant installation will occur during the dormant season (October 15 through March 1) in frost-free periods only.
  4. Layout plant material per plan for inspection by the **restoration specialist**. Plant substitutions will not be allowed without prior approval of the **restoration specialist**.
  5. Install plants per planting detail: adjust to avoid damage to existing native plants and disturbance to steep slope areas.
  6. Water each plant thoroughly to remove air pockets.
  7. Install a temporary irrigation system capable of delivering one inch of water per week to the entire planting area from June 1 through September 30.
  8. One year after initial planting, apply a slow-release, phosphorous free granular **fertilizer** to each installed plant.

## Material Specifications and Definitions

1. **Wood strand mulch:** Wood manufactured into approximately 1.6 to 6.3-inch strands approximately 0.125 mm thick by 0.24 inches wide. Use WSDOT approved vendor- may require advanced planning with manufacturer for availability.
2. **Fertilizer:** Slow release, granular fertilizer such as Perfect Blend Organic 4-4-4 or Osmocote™ or equal product. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Most retail nurseries carry this product. Note that fertilizer is to be applied only in years two through five, and not in the first year.
3. **Restoration specialist:** Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects.
4. **Temporary irrigation system:** System capable of supplying a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. This system can be run off of hoses run from the house water supply with enough sprinkler heads to cover the planted area.

### 6.2.5 Maintenance

The mitigation areas will be maintained for five years following installation. Specifications for items in **bold** can be found above under “Material Specifications and Definitions.”

1. Replace each plant found dead in the summer monitoring visits during the first fall dormant season (October 15 to March 1) after initial installation.
2. Invasive species maintenance plan:
  - a. Twice yearly, the site should be inspected for encroachment of blackberry, ivy, Scotch broom, and other invasive species. Canes and vines moving into the mitigation areas from outside the enhancement areas should be cut back to well beyond the mitigation area boundary. All invasive plants should be removed from the mitigation areas by hand.
  - b. Re-sprouting blackberry and Scotch broom will likely reemerge in removal areas. New shoots should be treated with herbicide by a licensed applicator at least once per year throughout the five-year period (or until no longer sprouting), or more frequently if directed by the City. Herbicide should be applied to the ends of cuts.
3. Remove weeds from beneath each installed plant to a distance of 18 inches from the main plant stem. Weeding should occur at least twice yearly.

Frequent weeding will result in lower mortality and lower plant replacement costs.

4. Operate the **irrigation system** to supply a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. More watering may be necessary during very hot and dry weather. Less watering may be warranted during unseasonable summer rainfall.
5. Apply slow release granular **fertilizer** annually in the spring (by June 1) of years two through five.
6. Mulch the mitigation area with **wood strand mulch** as necessary to maintain a 2-inch thick mulch layer and keep down weeds.
7. Do not weed area with string-trimmer (weed whacker/weed eater). Native plants are easily damaged and killed and weeds easily recover after string-trimming.

### **Performance Bond**

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.

### **Contingencies**

If there is a significant problem with the mitigation areas meeting performance standards, the Bond-holder will work with the City of Bellevue to develop a Contingency Plan. Contingency Plans can include, but are not limited to: soil amendment; additional plant installation; erosion control; and plant substitutions of type, size, quantity, and location.

### **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 will be identified in the plans approved with the Critical Areas Land Use Permit or allowed use or development, and will 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 will be no greater than 10 feet around the perimeter of the existing structure. Proposals involving areas of greater disturbance will 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 will 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 will 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 will impose a condition requiring monitoring of the restored area and additional restoration to achieve existing conditions, provided that the Director may reduce the monitoring period to not less than one year from completion of the original restoration.

## 7 SUMMARY

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Implementation of the proposed conservation subdivision will include impacts to steep slopes and steep slope buffers. A total of eight square feet of steep slope impacts will occur, while 13,624 square feet of steep slope buffer impacts will occur. As mitigation for the critical area and buffer impacts, the proposal includes the enhancement of 2,680 square feet of steep slope and 11,261 square feet of steep slope buffer and adjacent areas. Areas of enhancement will include the removal of non-native vegetation and the planting of native trees, shrubs, and groundcover in a naturalistic fashion. Native species include Douglas maple, shore pine, western white pine, Scouler's willow, western serviceberry, beaked hazelnut, oceanspray, red elderberry, salal, dull Oregon-grape, sword fern, baldhip rose, and snowberry.

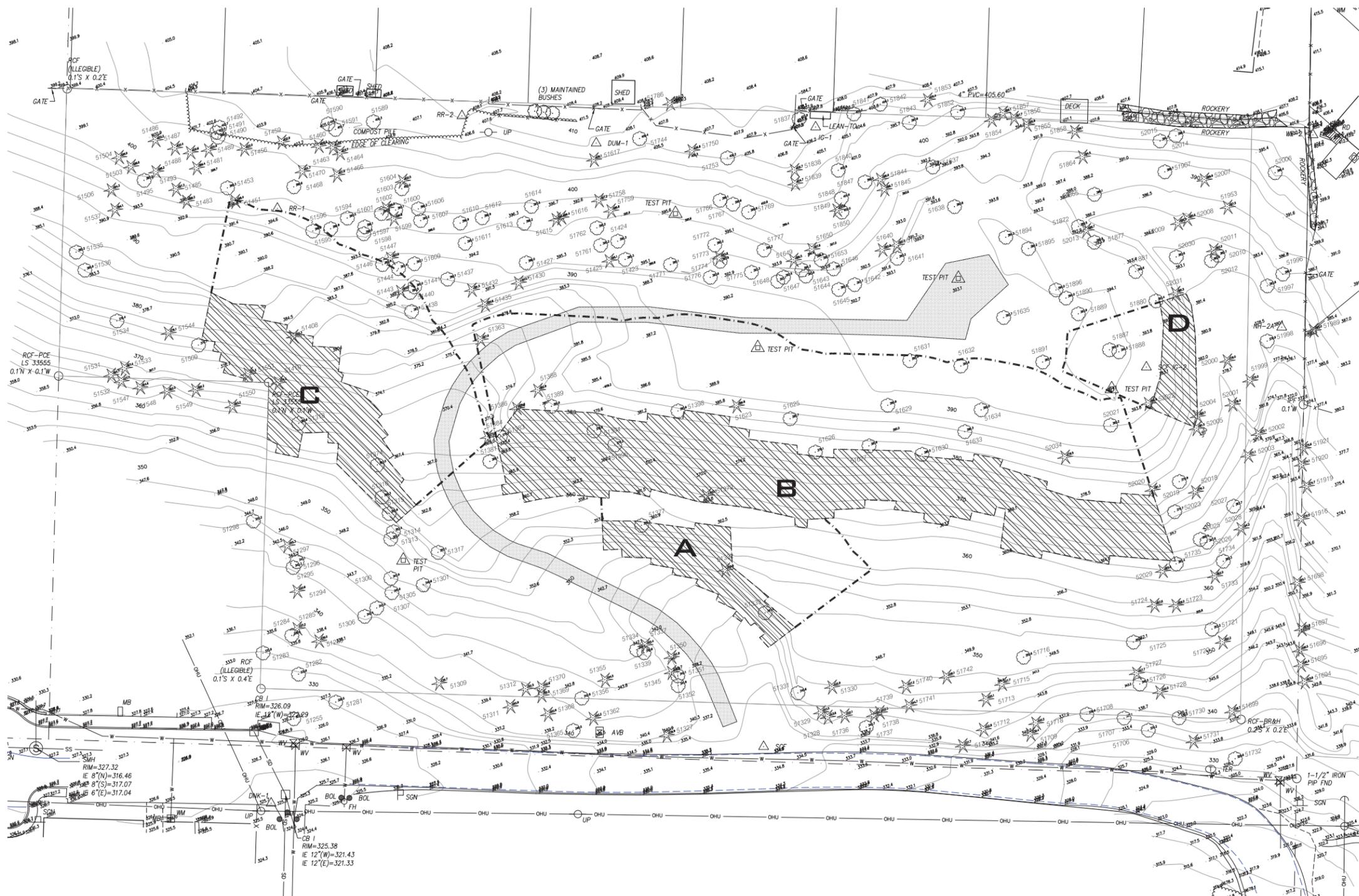
The planting layout incorporates a diversity of native plant species. The restoration plan will provide significantly better protection of those critical area and buffer functions and values than would be provided by the standard application of the geologic hazard area regulations. Therefore, an overall net gain in critical area buffer functions and values is proposed.

**APPENDIX A**

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**Restoration Plan**

# NEWPORT VIEW MITIGATION PLAN



VICINITY MAPS

**SHEET INDEX**

W1	EXISTING CONDITIONS
W2	IMPACTS AND MITIGATION PLAN
W3	PLANTING AREA PREPARATION AND TESC PLAN AND NOTES
W4	PLANT INSTALLATION TYPICAL LAYOUT, DETAILS AND SPECIFICATIONS
W5	MITIGATION NOTES AND DETAILS

**EXISTING CONDITIONS**  
SCALE 1"=30'



Know what's below.  
Call before you dig.

**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
**PROJECT LOCATION:**  
**PARCELS 33433017-25 & 33433017-26**  
**BELLEVUE, WA**

**SUBMITTALS & REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	02-26-14	REVIEW SET	MD
2	10-21-14	REVIEW SET	MSF
3	10-30-15	REVIEW SET	MSF

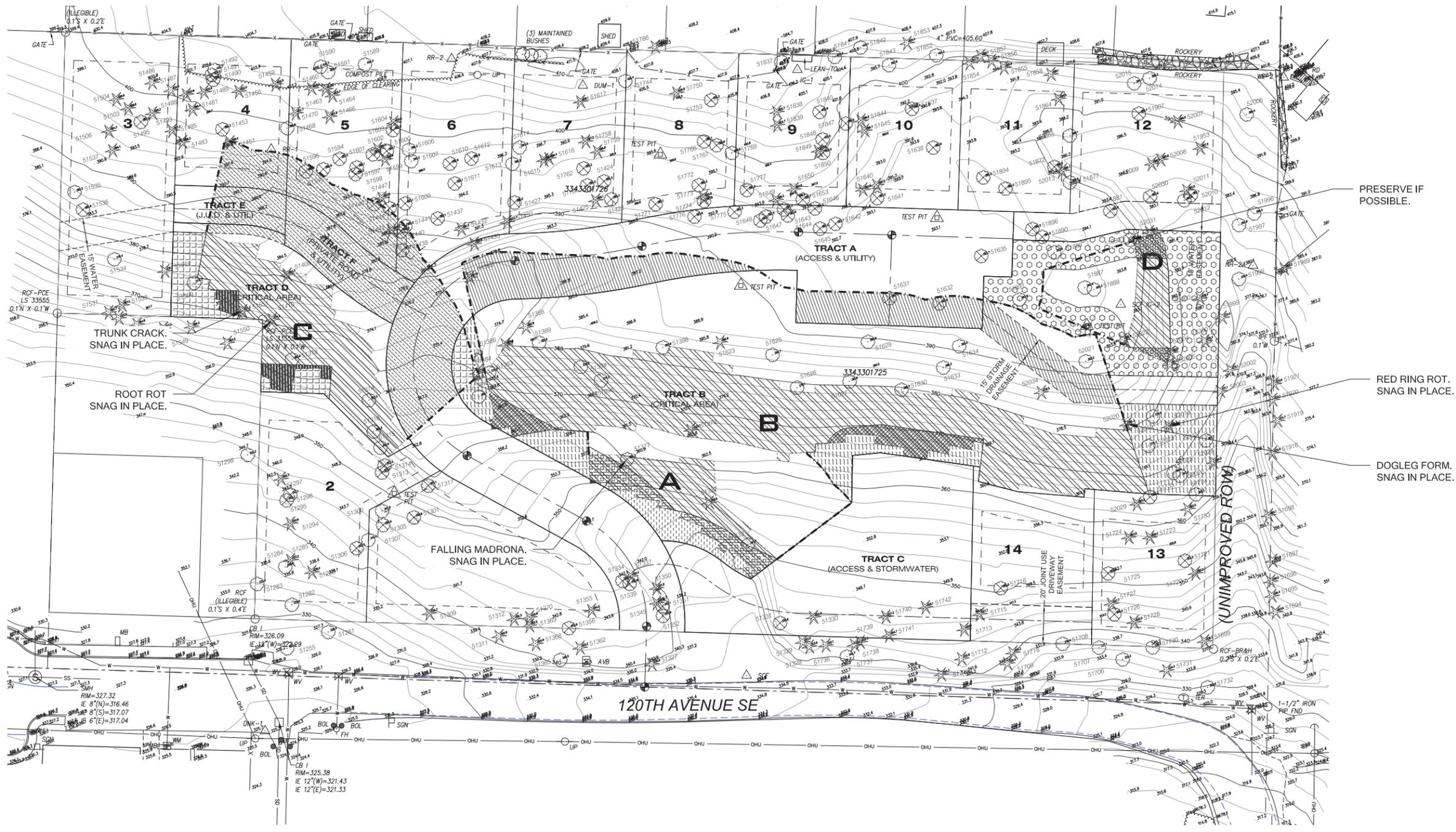
**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

**PROJECT MANAGER:** KB  
**DESIGNED:** MSF  
**DRAFTED:** MSF  
**CHECKED:** KB  
**JOB NUMBER:** 070301  
**SHEET NUMBER:** W1 OF 5

**IMPACTS AND MITIGATION**

<b>STEEP SLOPE AREA A</b>		<b>STEEP SLOPE AREA A</b>	
■ SLOPE IMPACT AREA	4 SF	▨ SLOPE ENHANCEMENT	936 SF
▨ BUFFER IMPACT AREA	0	▨ BUFFER ENHANCEMENT <sup>1</sup>	787 SF
<b>STEEP SLOPE AREA B</b>		<b>STEEP SLOPE AREA B</b>	
■ SLOPE IMPACT AREA	4 SF	▨ SLOPE ENHANCEMENT	1,059 SF
▨ BUFFER IMPACT AREA	5,665 SF	▨ BUFFER ENHANCEMENT <sup>1</sup>	4,011 SF
<b>STEEP SLOPE AREA C</b>		<b>STEEP SLOPE AREA C</b>	
■ SLOPE IMPACT AREA	0	▨ SLOPE ENHANCEMENT	409 SF
▨ BUFFER IMPACT AREA	7,959 SF	▨ BUFFER ENHANCEMENT <sup>1</sup>	1,499 SF
<b>STEEP SLOPE AREA D</b>		<b>STEEP SLOPE AREA D</b>	
■ SLOPE IMPACT AREA	0	▨ SLOPE ENHANCEMENT	276 SF
▨ BUFFER IMPACT AREA	0	▨ BUFFER ENHANCEMENT <sup>1</sup>	4,964 SF
<b>TOTALS</b>		<b>TOTALS</b>	
SLOPE IMPACTS	8 SF	SLOPE ENHANCEMENTS	2,680 SF
BUFFER IMPACTS	13,624 SF	BUFFER ENHANCEMENTS <sup>1</sup>	11,261 SF

1. Includes area directly adjacent to the steep slope



**IMPACTS AND MITIGATION PLAN**  
SCALE 1"=30'



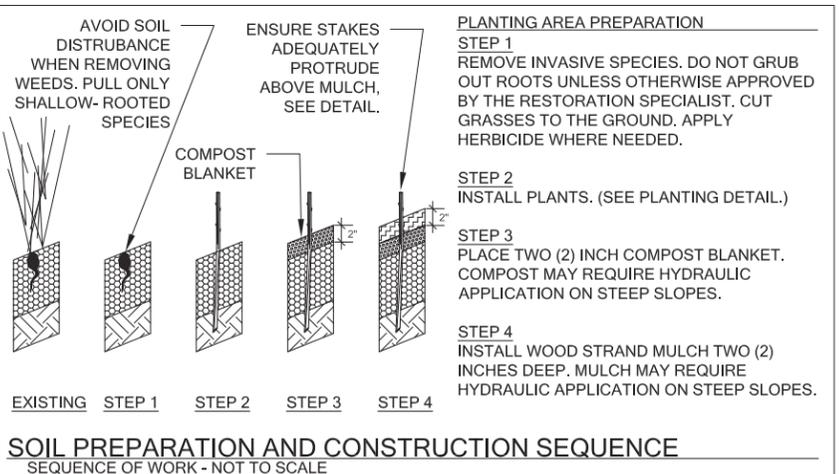
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**PROJECT MANAGER:** KB  
**DESIGNED:** MSF  
**DRAFTED:** MSF  
**CHECKED:** KB

**JOB NUMBER:** 070301  
**SHEET NUMBER:** W2 OF 5



**SOIL PREPARATION AND CONSTRUCTION SEQUENCE**  
SEQUENCE OF WORK - NOT TO SCALE

**DEMO & TESC NOTES**  
**CONSTRUCTION ACCESS**  
LIMIT ACCESS POINTS TO THE MITIGATION AREAS. CONSTRUCTION ACCESS OR STAGING SHALL AVOID STEEP SLOPE AREAS, AND AVOID OR MINIMIZE DAMAGE TO EXISTING RETAINED VEGETATION AND ROOT ZONES. UPON COMPLETION, ACCESS AND STAGING AREAS, OR ANY OVERCleared AREAS WHICH DISTURBED EXISTING RETAINED VEGETATION SHALL BE RESTORED TO ORIGINAL CONDITION.

**CONSTRUCTION EQUIPMENT**  
NEARLY ALL MITIGATION PLANTING AREAS INCLUDE CRITICAL ROOT ZONES OF EXISTING TREES WHICH ARE TO REMAIN. NO CONSTRUCTION EQUIPMENT SHALL BE USED WITHIN THE MITIGATION AREA, OR THE STEEP SLOPE AREAS, UNLESS APPROVED BY THE RESTORATION SPECIALIST OR GEOTECHNICAL ENGINEER.

**OVERCLEARING**  
IF CRITICAL AREA BUFFER IS OVERCleared, EXTEND PLANTING AREA AND REPLICATE PLANTING AREA LAYOUT AND SOIL PREPARATION SEQUENCE OF WORK.

**GENERAL SOIL PREPARATION FOLLOWING DEMO WORK**  
AFTER REMOVAL OF NON-NATIVE MATERIAL HAS OCCURRED, REPLACE ANY SOIL LOST THROUGH DEBRIS REMOVAL WITH APPROVED TOPSOIL SO THAT GRADES ARE CONSISTENT WITH ADJACENT AREAS AND THERE ARE NO DIVOTS. SEE CITY OF BELLEVUE STANDARD NOTE #9 THIS SHEET REGARDING EXPOSED SOILS. IF AREA IS NOT PLANTED IMMEDIATELY AFTER SOIL PREP, COVER SITE WITH WOOD STRAND MULCH BLANKET PER PLAN.

**TREE SNAGGING NOTES**  
SEE ARBORIST REPORT FOR MORE DETAIL  
TREES MARKED FOR REMOVAL IN MITIGATION AREAS, AND ESPECIALLY ON STEEP SLOPE AREAS, SHALL BE SNAGGED IN PLACE WHEN POSSIBLE IN ORDER TO REDUCE SOIL DISTURBANCE, EQUIPMENT ACCESS, AND MAINTAIN HABITAT VALUE. WHEN WORKING WITH A DISEASED TREE, THE CONTRACTOR SHALL TAKE CARE TO PROPERLY GIRDLING THE TREE IF IT IS STILL ALIVE. WHILE SNAGGING THE TREE THE CONTRACTOR SHALL TAKE CARE NOT TO DISTRIBUTE BARK OR BRANCHES ELSEWHERE ON THE SITE. ANY WOOD PIECES REMOVED DURING THE SNAGGING PROCESS SHALL BE PROPERLY DISPOSED OF OFFSITE. SEE SNAGGING DETAIL FOR MORE INFORMATION.

**STEEP SLOPE NOXIOUS WEED REMOVAL & CONTROL**  
REMOVE ENGLISH IVY:

- PHYSICALLY REMOVE ALL ENGLISH IVY VINES AND ROOTS FROM THE PLANTING AREA.
- SHALLOW ROOTED IVY SHALL BE GRUBBED OUT BY HAND TO MINIMIZE DISRUPTION TO SLOPE AND ADJACENT ROOTS.
- IVY SHALL BE CUT AROUND THE BASE OF EACH TREE, TO PREVENT THE IVY FROM GIRDLING THE TREES. REMOVE STANDING VINES FROM THE FIRST 8' OF EVERY TREE TRUNK THAT CONTAINS ANY IVY.
- AFTER IVY HAS BEEN REMOVED, AREA SHOULD BE MULCHED AND OR PLANTED PER PLAN.
- DISPOSE OF REMOVED MATERIAL OFF SITE.

REMOVE HIMALAYAN/EVERGREEN BLACKBERRY:

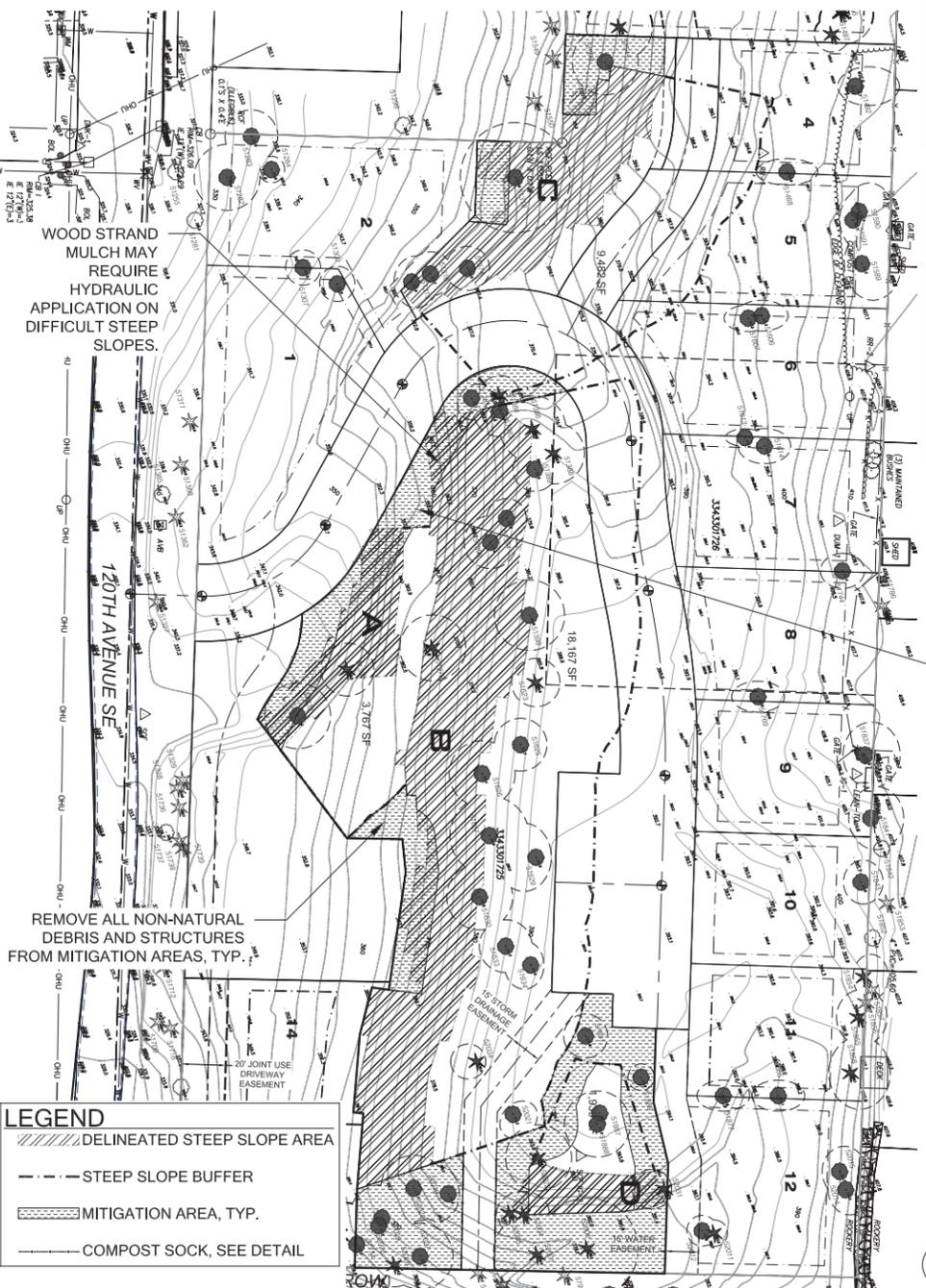
- CUT ABOVE GROUND PORTION OF BLACKBERRY AND REMOVE OFFSITE. ENSURE THAT NO NATIVE PLANTS ARE REMOVED.
- CANES SHALL BE REMOVED FROM CANOPY OF EXISTING VEGETATION TO REMAIN TO THE EXTENT FEASIBLE AS DETERMINED BY THE RESTORATION SPECIALIST.
- DO NOT DIG UP OR PULL THE REMAINING ROOT BALL. APPLY SELECTIVE HERBICIDE WITH A TARGETED METHOD PER MANUFACTURER'S RECOMMENDATIONS.
- ALL CANES SHALL BE CUT BACK AND REMOVED WITHIN THE TEN (10) FEET ADJACENT TO THE PLANTING AREA, INCLUDING TREE CANOPY. CANES SHALL BE PULLED AND REMOVED OFF-SITE.
- AFTER REMOVAL, PLANT AND MULCH PER PLAN.
- MONITOR SITE THROUGHOUT GROWING SEASON FOR EMERGING CANES AND FOLLOW-UP WITH HERBICIDE APPLICATIONS AS NEEDED. CONTINUE TO CUT BACK CANES TEN (10) FEET FROM THE PLANTING AREA.

REMOVE SCOTCH BROOM:

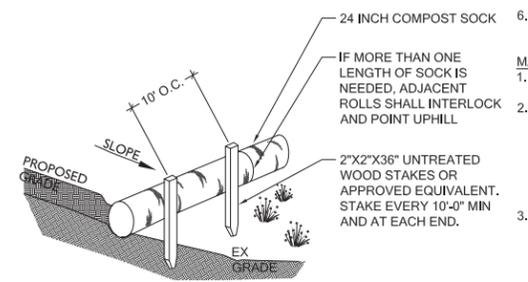
- CUT STEMS AS CLOSE TO THE GROUND AS POSSIBLE. IT IS BEST TO CUT THE PLANTS WHEN THEY ARE STRESSED DURING THE SUMMER DROUGHT IN LATE JULY TO AUGUST, BUT BEFORE THE SEED PODS MATURE.
- MONITOR FOR RE-GROWTH AND CUT AGAIN. RE-SPROUTING PLANTS SHOULD BE CUT BETWEEN FLOWERING AND SEED POD MATURATION TO PREVENT SEED SPREAD.
- FOLLOW CUTTING WITH SPOT SPRAYING HERBICIDE APPLICATION. HERBICIDE SHOULD ONLY BE APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS.
- DO NOT MOW OR CUT AFTER AN HERBICIDE APPLICATION UNTIL HERBICIDE HAS HAD A CHANCE TO MOVE THROUGHOUT THE PLANT.
- PROPERLY DISPOSE OF PLANTS. DO NOT PUT SEED PODS IN COMPOST OR YARD WASTE.

**STANDARD NOTES FOR EROSION CONTROL PLANS**

- ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENTS. ANY VARIANCE FROM ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF BELLEVUE DEVELOPMENT SERVICES (DSD) PRIOR TO CONSTRUCTION.  
IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB.
- APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- A COPY OF THE APPROVED PLANS AND DRAWINGS MUST BE ON-SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- CLEARING SHALL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1<sup>ST</sup> THROUGH APRIL 30<sup>TH</sup>. FROM MAY 1<sup>ST</sup> THROUGH SEPTEMBER 30<sup>TH</sup>, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.
- AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR MUST MAINTAIN A SWEEPER ON SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH A VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIAL MUST BE APPROVED BY THE CLEARING AND GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPIILING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM 5% SLOPE, PER THE INTERNATIONAL RESIDENTIAL CODE (IRC) R401.3.



AFTER SITE PREP, ALL AREAS SHALL BE PLANTED, TOP-DRESSED WITH COMPOST, BLANKETED IN MULCH, AND SET-UP WITH TEMPORARY IRRIGATION COVERAGE.



**COMPOST SOCK DETAIL**  
NTS

- NOTES**
- FILL SOCK WITH "COMPOSTED MATERIAL" PER WAC 173-350-220. BIODEGRADABLE MESH NETTING IS PREFERRED.
  - PLACE COMPOST SOCK ALONG A CONTOUR PERPENDICULAR TO SHEET FLOW.
  - NO TRENCHING IS REQUIRED, DO NOT DISTURB SOIL.
  - ANCHORING: PLACE STAKES ON THE DOWNSLOPE SIDE OF THE SOCK OR THROUGH THE CENTER OF THE SOCK. THE SOCK ENDS SHOULD BE STAKED AND DIRECTED UPSLOPE TO PREVENT WATER FROM RUNNING AROUND THE END OF THE SOCK. IF STAKING IS NOT POSSIBLE, RESTORATION CONSULTANT SHALL APPROVE AN ALTERNATIVE MEANS OF STABILIZATION.
  - HEAVY VEGETATION AND EXTREMELY UNEVEN SURFACES SHOULD BE AVOIDED TO ENSURE THAT THE COMPOST FILTER SOCK UNIFORMLY CONTACTS THE GROUND SURFACE. PLACEMENT MAY BE MODIFIED FROM THE PLAN WITH APPROVAL FROM THE RESTORATION CONSULTANT.
  - LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE SOCK TO FILL THE SEAM BETWEEN THE SOIL SURFACE AND THE SOCK.
- MAINTENANCE STANDARDS:**
- INSPECT SOCKS REGULARLY, AND AFTER EACH RAINFALL EVENT, TO ENSURE THEY ARE INTACT AND THE AREA BEHIND THE SOCK IS NOT FILLED WITH SEDIMENT.
  - IF THERE IS EXCESSIVE PONDING BEHIND THE SOCK OR ACCUMULATED SEDIMENTS REACH THE TOP OF THE SOCK, NOTIFY THE RESTORATION CONSULTANT TO VERIFY WHETHER:
    - AN ADDITIONAL SOCK SHOULD BE ADDED ON TOP OR IN FRONT OF THE EXISTING SOCK IN THESE AREAS, WITHOUT DISTURBING THE ACCUMULATED SEDIMENT, OR
    - IF SEDIMENT SHOULD BE REMOVED.
  - ONCE THE AREA HAS BEEN STABILIZED, VERIFY WITH THE RESTORATION CONSULTANT:
    - WHETHER THE SOCK IS TO BE LEFT IN PLACE OR REMOVED,
    - IF ANY SEDIMENT BUILDUP IN FRONT OF THE SOCK SHOULD BE REMOVED,
    - IF RE-VEGETATION OF SITE IS NECESSARY.

**PLANTING AREA PREPARATION AND TESC PLAN AND NOTES**

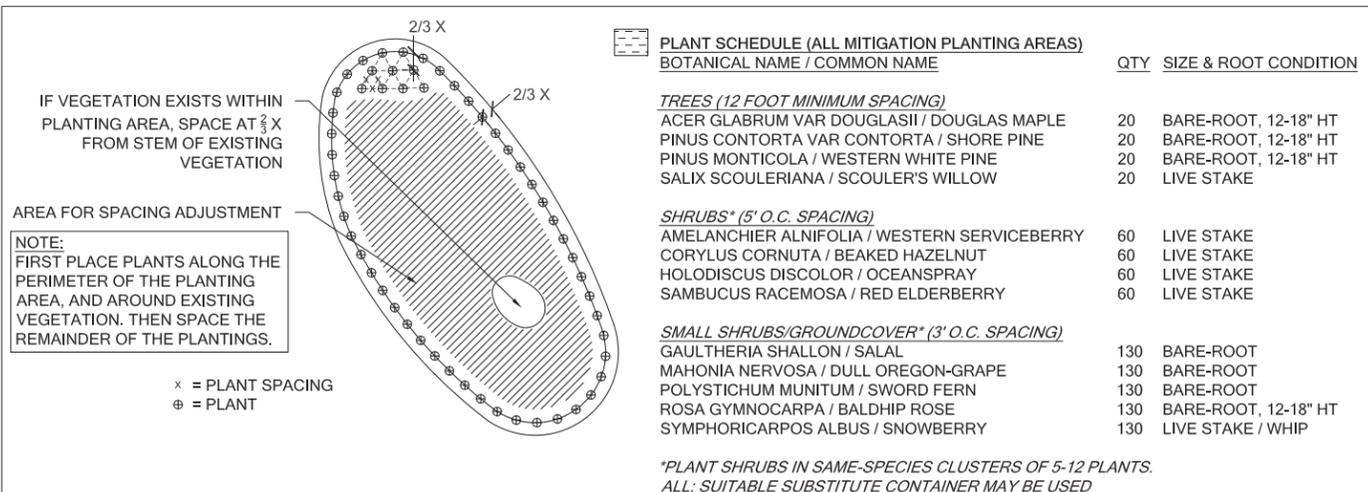


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SHEET NUMBER: W3 OF 5



**PLANTING AREA TYPICAL LAYOUT, TYPICAL SPACING, & SCHEDULE**

**PLANT INSTALLATION SPECIFICATIONS**

**GENERAL NOTES**

**QUALITY ASSURANCE**

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

**DEFINITIONS**

- PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

**SUBSTITUTIONS**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION SPECIALIST.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE SPECIALIST AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

**INSPECTION**

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION SPECIALIST FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS

**OF THE WORK.**

- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE RESTORATION SPECIALIST MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION SPECIALIST MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

**MEASUREMENT OF PLANTS**

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

**SUBMITTALS**

**PROPOSED PLANT SOURCES**

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

**PRODUCT CERTIFICATES**

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO SPECIALIST AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH SPECIALIST AT TIME OF SUBMISSION.
- HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

**DELIVERY, HANDLING, & STORAGE**

**NOTIFICATION**

- CONTRACTOR MUST NOTIFY SPECIALIST 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT SPECIALIST MAY ARRANGE FOR INSPECTION.

**PLANT MATERIALS**

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE

EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.

- SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

**WARRANTY**

PLANT WARRANTY  
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

**REPLACEMENT**

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE SPECIALIST'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

**PLANT MATERIAL**

**GENERAL**

- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

**QUANTITIES**

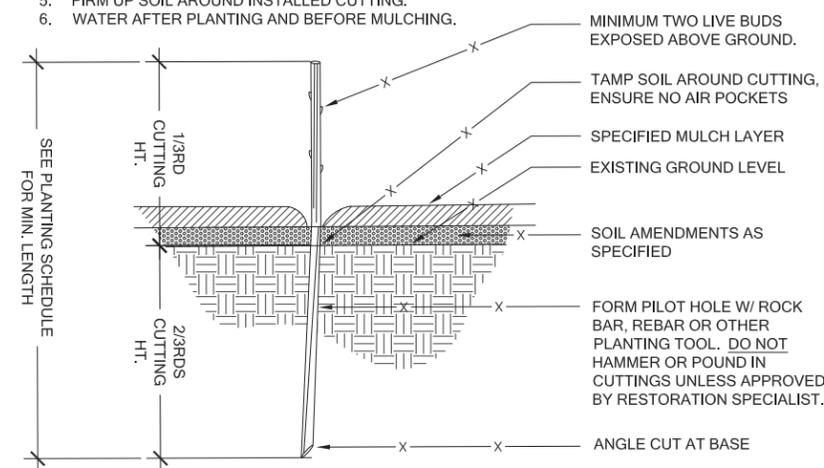
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

**ROOT TREATMENT**

- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

**NOTES:**

- INSTALL HARDWOOD CUTTINGS DURING THEIR DORMANCY. DO NOT ALLOW THEM TO DRY OUT.
- CUTTINGS SHALL BE 3/4" TO 1" IN DIAMETER OR APPROVED EQUIVALENT.
- INSTALL TO MIN. 2/3RDS DEPTH INTO SOIL. USE TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR SPACING.
- INSURE THAT BUDS ARE POINTING UP.
- FIRM UP SOIL AROUND INSTALLED CUTTING.
- WATER AFTER PLANTING AND BEFORE MULCHING.

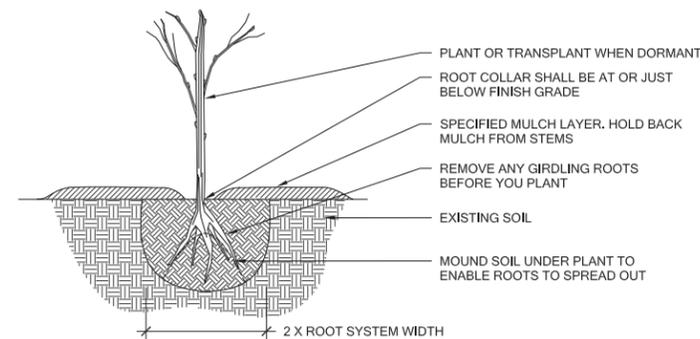


**1 LIVE CUTTING PLANTING DETAIL**

Scale: NTS

**NOTES:**

- UNPACK BARE ROOT PLANTS REMOVING ALL PACKAGING AND CAREFULLY UNTANGLING THE ROOTS. DO NOT ALLOW ROOTS TO DRY OUT. DISCARD UNHEALTHY PLANTS: DARK MOLDS, SERIOUSLY DAMAGED ROOTS OR SHOOTS, OR WRINKLED, WATER-SOAKED BARK.
- DIG HOLE WIDE ENOUGH TO ACCEPT ALL ROOTS.
- INSTALL BARE ROOT UPRIGHT AND AT THE SAME DEPTH AS IT STOOD IN THE NURSERY/FIELD.
- PARTIALLY FILL THE HOLE AND LIGHTLY FIRM UP SOIL AROUND THE LOWER ROOTS.
- SHOVEL IN REMAINING SOIL SO THAT IT IS FIRMLY BUT NOT TIGHTLY PACKED.
- THOROUGHLY WATER AFTER PLANTING AND BEFORE MULCHING. IF SETTLING OCCURS, ADD MORE SOIL AND WATER.



**2 BARE ROOT PLANTING DETAIL**

Scale: NTS

**PLANT INSTALLATION TYPICAL LAYOUT, DETAILS AND SPECIFICATIONS**

SCALE AS NOTED

SUBMITTALS & REVISIONS		BY	DATE	DESCRIPTION
1	02-26-14	MD	REVIEW SET	
2	10-21-14	MD	REVIEW SET	
3	10-30-15	MSF	REVIEW SET	

**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

PROJECT MANAGER: KB  
DESIGNED: MSF  
DRAFTED: MSF  
CHECKED: KB  
JOB NUMBER:

070301  
SHEET NUMBER:  
**W4 OF 5**

**1.1 Summary**

The Newport View project consists of a plan to establish 14 single-family residential lots as part of a conservation subdivision. Slopes exceeding 40 percent and greater than 10 feet in height occur in several areas of the property and impacts total 8 square feet in these areas. In addition, 13,624 square feet of steep slope buffer impact will occur. The mitigation areas are intended to mitigate for lost function in the steep slope and buffer impact areas.

**1.1.1 Goals**

Enhance 2,680 square feet of steep slope critical area and 11,261 square feet of steep slope buffer area.

**1.1.2 Objectives**

1. Remove and prevent the re-establishment of invasive species.
2. Create a diverse, native plant community including trees, shrubs, and groundcovers within the mitigation areas.
3. Monitor the mitigation areas for 5 years.
4. Maintain health and viability of the enhancement plantings and continue to maintain mitigation areas free of non-native, invasive species.

**1.2 Performance Standards**

**1.2.1 Survival**

1. Achieve 100% survival of all installed plants by the end of year one. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
2. Achieve 60% survival of all installed plants by the end of year two. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
3. Survival beyond year two is difficult to track. Therefore, a species richness standard (below) is proposed for years three through five.
 

Species Richness: Establish at least two tree species and six shrub/ groundcover species at the end of years three and five.

**1.2.2 Cover**

1. Achieve at least 50% cover of native, woody species by the end of year three. Native volunteer species may count towards this standard.
2. Achieve at least 80% cover of native, woody species by the end of year five. Native volunteer species may count towards this standard.
3. No more than 10% cover by non-native, invasive species in any monitoring year. Invasive species include all species listed as Class A, B, or C (regulated and non-regulated) on the King County Noxious Weed List.
 

Note that native volunteers included in survival, richness, and cover estimates must not account for more than 10% of individuals or cover.

**1.2.3 Monitoring Methods**

An as-built plan will be prepared following mitigation installation. The as-built plan will be a mark-up of the planting plan included in this plan set. The mark-up will document any differences in plant placement or other components from the proposed plan.

Monitoring will take place four times, once each in years one, two, three, and five. First-year monitoring will commence in the first late summer or early fall, subsequent to plant installation (ideally before deciduous leaves begin to drop). Line-intercept transects will be established in mitigation areas. The following will be recorded and reported in an annual monitoring report to be submitted to the City of Bellevue.

1. Visual estimation of installed plants survival by species.
2. Visual estimate of non-native and invasive weed cover.
3. Estimate of native plant cover using line transects.
4. Photographic documentation from fixed reference points.
5. Intrusions into the planting areas, vandalism, or other actions that impair the intended functions of the planted areas.
6. Recommendations for maintenance or repair of the planted areas.

**1.2.4 General Work Sequence**

A **restoration specialist** will make site visits to verify the following project milestones:

- Clearing inspection
  - Snagging inspection
  - Slope amendment and mulch inspection
  - Plant material inspection
    - o Plant material inspection
    - o 50% plant installation inspection
    - o 100% plant installation inspection
1. Clear the site of all invasive vegetation including, but not limited to, Himalayan blackberry, Scotch broom, and English ivy.
  2. Install a blanket application of **wood strand mulch** across all mitigation areas.
  3. Native plant installation will occur during the dormant season (October 15 through March 1) in frost-free periods only.
  4. Layout plant material per plan for inspection by the **restoration specialist**. Plant substitutions will not be allowed without prior approval of the **restoration specialist**.
  5. Install plants per planting detail: adjust to avoid damage to existing native plants and disturbance to steep slope areas.
  6. Water each plant thoroughly to remove air pockets.
  7. Install a temporary irrigation system capable of delivering one inch of water per week to the entire planting area from June 1 through September 30.

8. One year after initial planting, apply a slow-release, phosphorous free granular **fertilizer** to each installed plant.

**Material Specifications and Definitions**

1. **Wood strand mulch:** Wood manufactured into approximately 1.6 to 6.3-inch strands approximately 0.125 mm thick by 0.24 inches wide. Use WSDOT approved vendor- may require advanced planning with manufacturer for availability.
2. **Fertilizer:** Slow release, granular fertilizer such as Perfect Blend Organic 4-4-4 or Osmocote™ or equal product. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Most retail nurseries carry this product. Note that fertilizer is to be applied only in years two through five, and not in the first year.
3. **Restoration specialist:** Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects.
4. **Temporary irrigation system:** System capable of supplying a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. This system can be run off of hoses run from the house water supply with enough sprinkler heads to cover the planted area.

**1.2.5 Maintenance**

The mitigation areas will be maintained for five years following installation. Specifications for items in **bold** can be found above under "Material Specifications and Definitions."

1. Replace each plant found dead in the summer monitoring visits during the first fall dormant season (October 15 to March 1) after initial installation.
2. Invasive species maintenance plan:
  - a. Twice yearly, the site should be inspected for encroachment of blackberry, ivy, Scotch broom, and other invasive species. Canes and vines moving into the mitigation areas from outside the enhancement areas should be cut back to well beyond the mitigation area boundary. All invasive plants should be removed from the mitigation areas by hand.
  - b. Re-sprouting blackberry and Scotch broom will likely reemerge in removal areas. New shoots should be treated with herbicide by a licensed applicator at least once per year throughout the five-year period (or until no longer sprouting), or more frequently if directed by the City. Herbicide should be applied to the ends of cuts.
3. Remove weeds from beneath each installed plant to a distance of 18 inches from the main plant stem. Weeding should occur at least twice yearly. Frequent weeding will result in lower mortality and lower plant replacement costs.
4. Operate the **irrigation system** to supply a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. More watering may be necessary during very hot and dry weather. Less watering may be warranted during unseasonable summer rainfall.
5. Apply slow release granular **fertilizer** annually in the spring (by June 1) of years two through five.
6. Mulch the mitigation area with **wood strand mulch** as necessary to maintain a 2-inch thick mulch layer and keep down weeds.
7. Do not weed area with string-trimmer (weed whacker/weed eater). Native plants are easily damaged and killed and weeds easily recover after string-trimming.

**Performance Bond**

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.

**Contingencies**

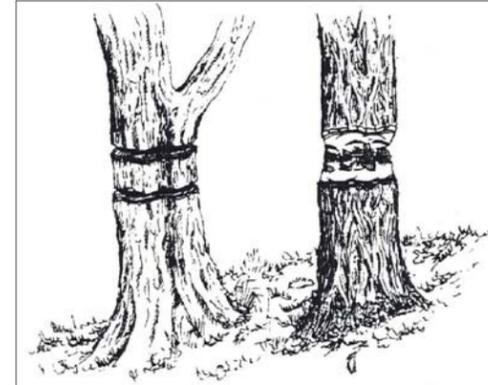
If there is a significant problem with the mitigation areas meeting performance standards, the Bond-holder will work with the City of Bellevue to develop a Contingency Plan. Contingency Plans can include, but are not limited to: soil amendment; additional plant installation; erosion control; and plant substitutions of type, size, quantity, and location.

**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 will be identified in the plans approved with the Critical Areas Land Use Permit or allowed use or development, and will 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 will be no greater than 10 feet around the perimeter of the existing structure. Proposals involving areas of greater disturbance will 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 will 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 will 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 will impose a condition requiring monitoring of the restored area and additional restoration to achieve existing conditions, provided that the Director may reduce the monitoring period to not less than one year from completion of the original restoration.

5.



SNAG NOTES:  
SEE PLANS FOR TREES WHICH ARE TO BE RETAINED AS SNAGS. ALL TREES SHOULD BE:

1. TOPPED TO HEIGHT AS INDIVIDUALLY CONFIRMED IN THE FIELD BY RESTORATION PROFESSIONAL. CUT AT AN ANGLE;
2. AFTER TOPPING, CUT DOWN INTO THE TREE TO CREATE CREVICES AT THE TOP; AND
3. CUT FURTHER BY "BOUNCING" THE CHAIN SAW ON THE TOP TO CREATE MULTIPLE INCISIONS TO ENCOURAGE DECAY AND COLONIZATION BY INSECTS AND FUNGI.
4. RETAIN BRANCHES FOR PERCHES AND HABITAT STRUCTURE- DO NOT LIMB.

LIVE TREES SHOULD BE DEADENED BY CUTTING A 6" WIDE, ANGLED BAND AROUND THE TREE WITH AN AXE OR BY MAKING TWO CUTS AROUND THE TREE WITH A CHAIN SAW TO A DEPTH SUFFICIENT AS DETERMINED BY THE RESTORATION PROFESSIONAL.

(BROWN, TIMOTHY K. 2002. CREATING AND MAINTAINING WILDLIFE, INSECT, AND FISH HABITAT STRUCTURES IN DEAD WOOD. U.S. FOREST SERVICE GEN. TECH. REP. PSW-GTR-181; MISSOURI DEPARTMENT OF CONSERVATION. 1994. FOREST AND WILDLIFE BENEFITS ON PRIVATE LAND, SNAGS AND DEN TREES.)

**3 SNAG CREATION DETAIL**

Scale: NTS



750 Sixth Street South  
Kirkland WA 98033

p 425.822.5242  
www.watershedco.com

Science & Design

**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
**PROJECT LOCATION:**  
**PARCELS 33433017-25 & 33433017-26**  
**BELLEVUE, WA**

SUBMITTALS & REVISIONS		BY	DATE	DESCRIPTION
NO.	DATE	MD	MD	MSF
1	02-26-14			REVIEW SET
2	10-21-14			REVIEW SET
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**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

PROJECT MANAGER: KB  
 DESIGNED: MSF  
 DRAFTED: MSF  
 CHECKED: KB  
 JOB NUMBER:

070301  
 SHEET NUMBER:  
**W5 OF 5**

**MITIGATION NOTES AND DETAILS**

SCALE AS NOTED

## TECHNICAL MEMORANDUM

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Date: November 4, 2015  
To: Jeff Fransen, Triad Development  
c/o Kevin Cleary, Goldsmith Land Development Services  
From: Katy Crandall, revised by Jennifer Creveling  
Project Number: 070301  
Project Name: Newport View

### **Subject: Habitat Assessment 2015 Update**

## Background

In May 2007, The Watershed Company completed a habitat assessment on the subject property, located at the intersection of SE 64<sup>th</sup> Street and 120<sup>th</sup> Avenue SE in the City of Bellevue (parcels 33433017-25 and -26). In 2013, a memo was prepared to update items in the 2007 report in light of subsequent regulatory changes in the City of Bellevue's Land Use Code (LUC). The memo was again updated last year (2014) as a result of site plan changes. Per the City of Bellevue's request, a discussion of off-site habitat and changes to habitat impacts as a result of site plan changes was included. This current 2015 memo addresses further site plan changes.

## General Site Conditions

Forested areas on the site remain generally as described in the 2007 report, with young deciduous forest across much of the west half of the property (Photo 1) and mature madrone/Douglas-fir along the eastern boundary (Photo 2). The young forest matured as expected, and supports many sapling Douglas-fir and madrone, as well as black cottonwood, mountain ash, bigleaf maple, birch, beaked hazelnut, and some ornamental shrubs. Vegetation in the scrub-shrub area in the west-central part of the site has grown substantially, and little area of exclusively low-growing plants remains. The dense patches of invasive species recorded in the 2007 report persist, particularly in the scrub-shrub area and along the trails (Photo 3), and predominant species in these areas are Himalayan blackberry and Scot's broom.

Gravel trails remain on the site, and Himalayan blackberry has grown along the edges, narrowing the trails. Additional recently cut trails radiate from the main trails, perhaps the result of a topographic survey (Photo 4).

According to an arborist study conducted by Creative Landscape Solutions in 2014, a large portion of the mature trees on site suffer from disease including

several fatal root infections. Recommendations are provided for proposed tree retention and replanting to minimize the spread of disease on the subject property and beyond.

## Functional Assessment of On-Site Habitat

The 2013 Functional Assessment form is included with this memo. It was not used to assess the site in the original 2007 study. However, the information on the form represents current conditions and can be used to see the value of specific features and parameters. Habitat function on the site is as described in the 2007 report, with minor changes. Previous areas that did not support shrubs or trees are nearly replaced by Himalayan blackberry and sapling cottonwood seedlings, providing greater structural diversity and some foraging habitat and cover where little existed in 2007. Conversely, cut trails reduced some undergrowth and subsequently some low cover and forage plants. An increase in size of trees in the young deciduous forest has provided a somewhat more dense and diverse midstory, which raises the value of these areas for some common birds using urban landscapes. Habitat features, specifically small snags and downed logs, are more numerous than observed in 2007, slightly increasing the suitability of the site for pileated woodpecker foraging and use by nuthatches, chickadees, and other wildlife species that utilize dead and downed wood.

The tendency for young deciduous stands to exhibit more features of typical Pacific Northwest temperate forest as they mature was noted in the 2007 report. While the recent growth of small trees in the deciduous and open/shrub areas has increased structural diversity, any improvement in habitat value may be offset or tempered by the expanding invasive species infestations, which tend to reduce compositional diversity of native plants. In addition to increased cover by Himalayan blackberry and Scot's broom, a number of ornamental trees and shrubs, including a non-native maple and a cotoneaster, are now present.

Landscape character and features have not changed substantially since they were described in the 2007 report, but are described in more detail in the following section.

## Landscape Habitat Considerations

The subject property is located in an urban landscape that can be described as a Medium-density Zone (Johnson and O'Neil 2001). This zone is characterized as having light industry mixed with high-density residential areas. Patches of habitat in the form of isolated wetlands, stream corridors, open spaces, and greenbelts are present in this zone, though they are often fragmented by roads

and development. In this case, the subject property is located in a fairly narrow greenbelt that is surrounded by urban areas and fragmented by roads and buildings as described in the 2007 report (Figure 1).

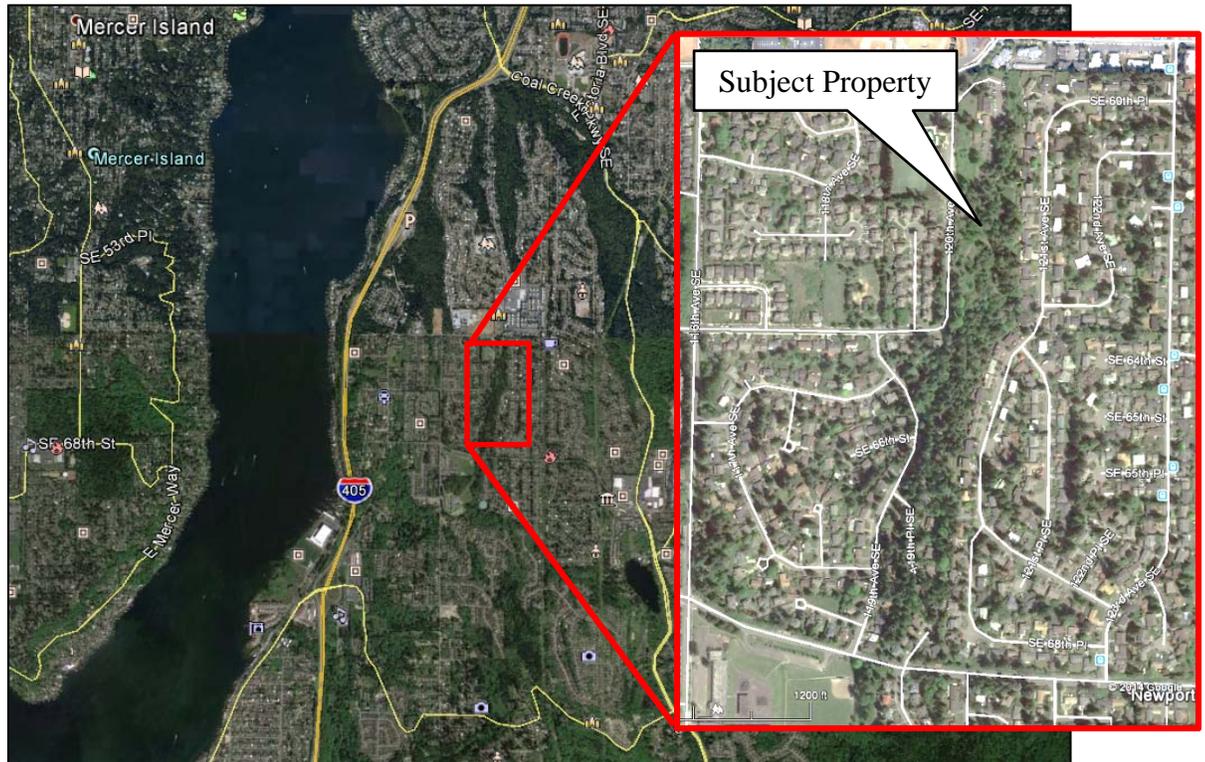


Figure 1. Approximate location of subject property on Google Earth aerial image showing urban areas and green-spaces.

The property is located in a greenbelt that runs north-south. Aerial images show that the greenbelt is approximately  $\frac{1}{2}$  mile in length with large roads at either end which tend to deter mammals and act as barriers to many amphibians and reptiles. Birds cross these barriers more readily than other wildlife. The south end of the greenbelt is fragmented by residential homes and roads; see Figure 1.

Habitat patches outside of the study area are considered as part of the overall landscape and may influence wildlife use of the habitat within the study area. The ability of the study area itself to provide habitat increases when there is potential that the greater vicinity can act as a source for wildlife. The immediate vicinity is dense residential development with some businesses, schools, and parks/open space. The adjacent urban areas are considered to be an insignificant source of wildlife to the habitat on the subject property.

Habitat patches in the greater vicinity that may have the potential to act as sources for wildlife include forested riparian corridors located both north and northwest of the site, Lake Washington to the west, and the Coal Creek corridor to the east. These areas are located approximately ½ mile from the subject property or further. King County maps the Coal Creek corridor as a Wildlife Network; PHS maps the Coal Creek corridor and the riparian corridor north of the site as Biodiversity Areas and Corridors.

In general, the study site is located in a relatively isolated and narrow greenbelt in an urban landscape. The greenbelt likely provides some refuge for urban wildlife species in the area. The habitat located within the greater vicinity of the study area acts as a source for only very mobile wildlife species (mostly birds) and species tolerant of urban environments, based on the amount of disturbance and lack of connectivity between the subject property and the off-site habitat patches. The arborist study also noted that the identified root infections are present in adjacent off-site areas, many of which are also in poor condition.

## Potential Wildlife Use

Foliage height diversity (FHD) calculations made at each of three vegetation classes (scrub-shrub, young deciduous forest, and mature forest) in 2013 were 0.45, 1.08 and 0.81, respectively. The replacement of an open, weedy area of low vegetation by shrubs, albeit primarily invasive species, increased FHD since 2007. Foraging and cover habitat for birds and small mammals is also increased, as Himalayan blackberry provides some value to wildlife. The trails cut since 2007 reduced low cover value and also provided opportunities for aggressive non-native species to invade these areas.

As was noted in the 2007 report, the site does not contain suitable habitat for fish or amphibians. There is no permanent/seasonal water on or directly adjacent to the subject property to provide breeding habitat for amphibians; and although some amphibian species often utilize upland areas as well, fragmentation tends to have detrimental impacts to amphibians and reptiles in urban areas (Johnson and O'Neil 2001). The Pacific chorus frog is known to occur in urban environments, and may occur on or near the subject property; however surrounding roads and development likely prevent significant use of on-site habitat by this species, and other amphibians.

Small mammals, particularly species adjusted to human development, are expected to occur in this urban zone and may use the site for habitat. These species include moles, mice, voles, rabbits, gophers, and red fox. Larger patch sizes generally provide habitat for other mammals including Eastern gray squirrels, raccoons, skunks, and opossums (Johnson and O'Neil 2001); some of

these species may also use the on-site habitat. Additionally, *Myotis* bat species can occur in medium-density urban zones. While on-site snags may provide marginal breeding habitat, no bat species have been documented on-site. More suitable habitat is present east of the subject property where development density decreases. Larger mammals like bobcat, coyote, and deer tend to be found in lower-density urban zones (Johnson and O'Neil 2001); their presence on-site is possible, albeit somewhat unexpected and uncommon.

A variety of birds likely use habitat available on the subject property. Use by species of local importance (LUC 20.25H.150A) remains generally as described in the 2007 report, as conclusions in that report were based largely on the surrounding landscape and proximity of critical areas, and these features have not changed substantially. Pileated woodpecker foraging opportunities have increased somewhat, as new snags are present. The presence of two hatch-year flickers on the site during a 5 August 2013 site visit suggests a nesting cavity suitable for that species is located on or near the property.

## Potential Impacts and Mitigation

The project consists of a plan to establish 14 single-family residential lots as part of a conservation subdivision. Impacts to steep slope critical areas and associated buffers are proposed to occur as detailed in the Critical Areas Report prepared by The Watershed Company.

Ongoing impacts to wildlife as a result of the Newport View development are those typically associated with single-family residential uses, and include the possibility of further invasion by non-native plants, pet harassment of wildlife, litter and yard waste, and noise and light disturbances in addition to habitat loss. Impacts from the proposed site development include a loss of the majority of habitat on the site due to the access road and future house development.

Impacts to mature trees and overall wildlife habitat have been avoided and minimized as possible within the constraints of slope, access, and tree health considerations. Current site plans include retention of 79 trees, 32 percent of existing trees. Trees marked for removal in mitigation areas, and especially on steep slopes, will be snagged in place when possible in order to reduce soil disturbance, equipment access, and maintain habitat value. Some areas placed into developable lots may retain native vegetation, but current plans do not include individual lot development. The removal of trees will have temporal impacts to wildlife. However, retained and created snags in particular will continue to provide habitat value for pileated woodpeckers, other cavity-nesting birds, and small mammals.

Preserved steep slope areas and their buffers are proposed to be enhanced as detailed in the Steep Slope Mitigation Plan prepared by The Watershed Company. The proposal includes the enhancement of 2,680 square feet of steep slope and 11,261 square feet of steep slope buffer and adjacent areas. Mitigation includes removal of noxious weeds including English ivy, Himalayan and evergreen blackberry, and Scotch broom. The enhancement areas will be restored with a variety of native trees, shrubs, and groundcover which will also provide food and cover opportunities and overall wildlife habitat values, particularly over time.

## Literature Cited

Johnson, D.H. and T.A. O'Neil. 2001. *Wildlife-Habitat Relations in Oregon and Washington*. Oregon State University Press. Corvallis, OR.

## Site Photographs

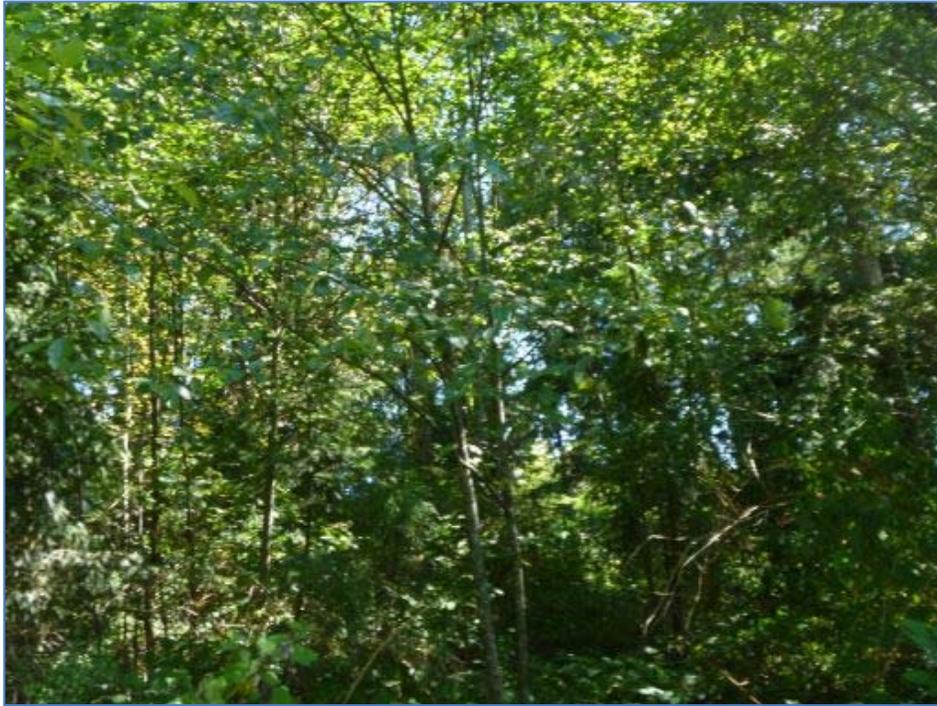


Photo 1: Young deciduous forest (8/5/13)



Photo 2: Douglas-fir trees in mature forest patch (8/5/13)



Photo 3: Main trail bordered by invasive species (8/5/13)

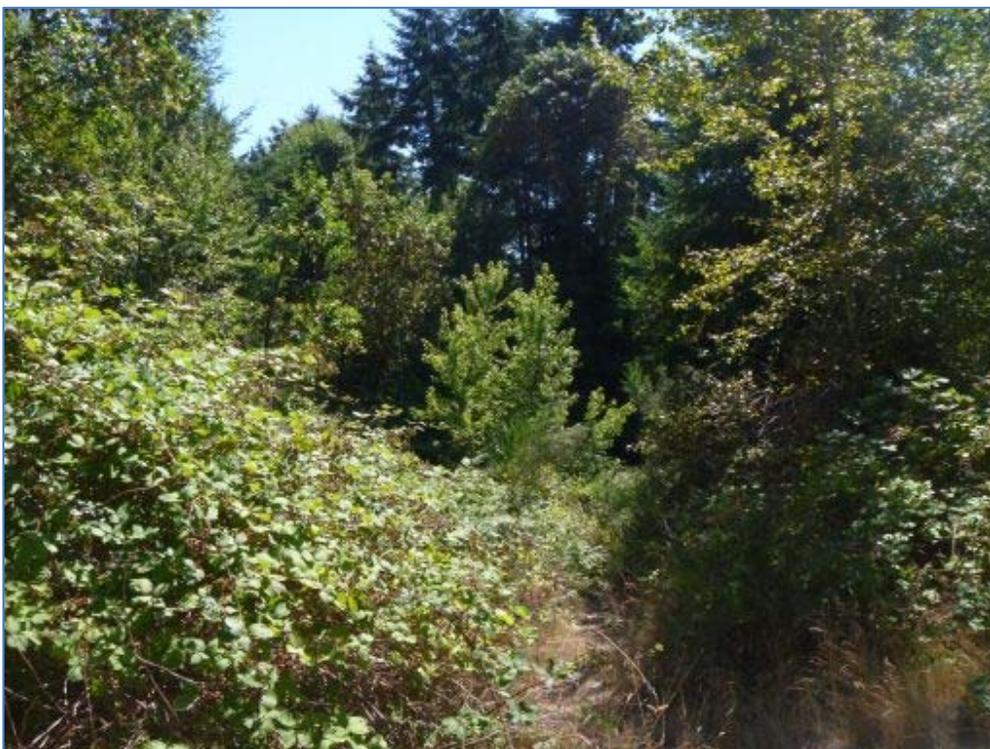


Photo 4: Side trail (8/5/13)

May 3, 2007

Herb Mull  
c/o Jerrit Jolma  
J3ME  
1375 NW Mall Street, Suite 3  
Issaquah, WA 98027  
Via email: jerrit@j3me.net

Re: **Wildlife Habitat Study, Newport View**  
**TWC # 070301**

Dear Herb:

To satisfy the requirements of Bellevue Land Use Code (LUC) 20.25H.165, I have completed a habitat assessment that addresses the existing and potential future conditions on the property known as Newport View (parcels 3343301725 and -26). The subject property is located at the intersection of SE 64<sup>th</sup> Street and 120<sup>th</sup> Avenue SE in the City of Bellevue. This report presents my findings.

### **Methods**

I visited the site on March 7, 2007 to evaluate its present and potential performance as wildlife habitat. I recorded the approximate location of habitat types and listed common vegetative species (see enclosed Habitat Sketch and Table 1, below). I also examined existing resources, including King County and City of Bellevue sensitive areas inventories, Washington Department of Fish and Wildlife Priority Habitat and Species (PHS) data, and U.S. Fish and Wildlife Service critical habitat data.

I evaluated existing conditions using a modified functional assessment model incorporating vegetative structure and composition; habitat interspersion and connectivity; immediate, adjacent and distant land use; special habitat features; use by wildlife species of interest; and cultural, economic, and social functions (see enclosed Upland Habitat Functional Assessment Scoring Form). Rare plants and habitat types were omitted from the analysis because I determined that none are present on the site. The modified model considers study site size, along with the factors listed above, in determining a relative value for upland habitat. Qualitative assessments of each parameter are used to assign a number value, and the resulting score is placed on a scale specific to the site.

Habitat interspersion and connectivity were assessed using 2006 aerial photographs with ground-truthing. Connectivity was defined based on the habits of birds and mammals (e.g., breaks in the corridor were determined by the likelihood that they would deter wildlife crossing, rather than hydrologic breaks). Other aspects of habitat quality were evaluated during a field visit. Potential

wildlife use was assessed for any species I determined could potentially occur in the immediate area, limited to those species on any state or federal list (WDFW Priority Habitats and Species; State sensitive, candidate, threatened, or endangered species; and federal species of concern, threatened, or endangered species). Surrounding land use was determined using the King County iMap on-line information page, and cultural, educational, recreational, commercial, and aesthetic values were qualified after both visiting the site and reviewing available information.

I projected future functional value based on the expected succession of habitat types on the property and available information pertaining to land use in the project vicinity. This was conducted independently of the functional assessment.

### Findings

The subject property can be separated generally into three types of plant communities: young mixed coniferous-deciduous forest with scattered mature trees, pole/sapling mixed forest, and scrub-shrub with patches of low-growth vegetation. Douglas-fir and Pacific madrone are the dominant tree species in the forested areas. On roughly the eastern third of the property, these species create a canopy that ranges from nearly closed at the east property boundary to dense with openings in the remainder of the young forest area. The understory is sparse in the most mature sections of forest along the east edge of the property. In this area, the understory is nearly limited to sword fern and English ivy (Table 1).

Table 1: Common vegetative species identified on the study site.

Common name	Scientific name	Habitat type(s)*	Native	Non-native
Pacific madrone	<i>Arbutus menziesii</i>	YF, PF	X	
Douglas-fir	<i>Pseudotsuga menziesii</i>	YF, PF	X	
Red alder	<i>Alnus rubra</i>	PF, SS	X	
Big-leaf maple	<i>Acer macrophyllum</i>	PF	X	
Black cottonwood	<i>Populus balsamifera</i>	PF	X	
Beaked hazelnut	<i>Corylus cornuta</i>	PF	X	
Vine maple	<i>Acer circinatum</i>	PF	X	
Himalayan blackberry	<i>Rubus armeniacus</i>	PF, SS		X
English ivy	<i>Hedera helix</i>	YF		X
Scot's broom	<i>Cytisus scoparius</i>	PF, SS		X
Salal	<i>Gaultheria shallon</i>	PF	X	
Bracken fern	<i>Pteridium aquilinum</i>	SS	X	
Sword fern	<i>Polystichum munitum</i>	YF, PF	X	
Grass/weeds		PF, SS	X	X

\*YF=young forest; PF=pole/sapling forest; SS=scrub-shrub

The pole/sapling forest is actually sparsely treed with an understory that varies from typical western Washington native shrubs and ferns to dense patches of invasive species. A mosaic of scrub-shrub patches concentrated in the western portion of this area includes an open grassy area, dense Himalayan blackberry, and Scot's broom mixed with native species, in addition to the small areas of almost exclusively native shrubs. The several gravel trails on the site, along with small clearings at the termini, are concentrated in the western half of the site.

Data from the WDFW PHS program do not document occurrences of PHS species on the subject property. A bald eagle buffer management zone is more than 1.0 mile from the site. Priority anadromous and resident fish presence is documented in the Coal Creek riparian area (a PHS Urban Natural Open Space) approximately 0.3 mile north of the site. There is no hydrologic or vegetative connection between the riparian area and the study site. The only other PHS polygons within one mile of the site are the Coal Creek Wetlands, which are separated from the study site by paved roads and development.

Potential wildlife use of the site includes birds and small mammals. The site does not have suitable habitat for fish, amphibians, or large mammals. Habitat for species of local importance (LUC 20.25H.150A) is limited to foraging sites for pileated woodpeckers and red-tailed hawks, and potential perching and nesting sites for other common birds. The likelihood that birds of local importance other than pileated woodpeckers will use the site is low, however. Bald eagles, great blue herons, purple martin, and osprey commonly select perching sites proximate to water and forage in or over aquatic habitats, and the study site is not within easy access of such areas. More suitable perch and forage sites for these species exist closer to water in all directions. The site is in too highly developed a landscape for other species of local importance.

The mix of shrubs and trees on the site provides cover and foraging habitat for common bird and mammal species. Continuity with other vegetated areas makes it likely that mice, voles, squirrels, raccoons, and songbirds would use the site. The shrubby areas provide dense ground cover, and forested areas a higher canopy. Common species nest and forage in both of these strata. Snags also provide nest sites for cavity nesting birds, and the site might support nesting flickers, other woodpeckers, nuthatches, chickadees, and creepers.

Habitat on the study site rates low overall, 38 on a scale of 28 to 84, despite some areas of greater value (see enclosed Functional Assessment Scoring Form). The area of highest value occurs along the eastern edge of the property, which contains the oldest trees and sparsest invasive species. Douglas-fir, Pacific madrone, and red alder form a closed canopy, with a sparse understory of mostly native shrubs and ferns. Coupled with the adjoining younger forest to the west, this area provides two vegetative layers of moderate complexity and is connected to a narrow and broken vegetative corridor extending from Newcastle Way in the south to just short of SE 60<sup>th</sup> Street in the north, a distance of approximately 0.5 mile. It has several snags with signs of woodpecker use, and no structures or paved roads. Farther west on the site, as the young forest gives way to disturbed scrub-shrub, habitat value is lower. Native trees are small and sparse, and gravel trails and roads cover more area and break the north-south corridor.

The site is not typical Puget Sound lowland forest. Because of previous logging and disturbance, much of it remains in early succession. Pockets of native overstory species, if left undisturbed,

would change the site over time to more typical western red cedar/Douglas-fir dominated forest. However, the presence of roads and trails allows access for continued disturbance, such as dumping, and also compacts the soils, preventing proliferation of native species. Highly aggressive non-native species dominate in these areas, and would continue to do so if not deliberately removed. Overall, the eastern third of the site would likely continue as forest, increasing in habitat value as trees became larger and snags were left standing. The highly urban land use of the surrounding area makes it unlikely that the existing narrow corridor would remain intact, however. Presently the corridor is made up mostly of residential yards that have retained a few large trees, but the parcels comprising the corridor are not necessarily afforded regulatory protection from tree removal.

### **Summary**

The Newport View property presently contains a mix of habitat types ranging from highly disturbed scrub-shrub along 120<sup>th</sup> Avenue SE to second- or third-growth madrone/Douglas-fir forest along the eastern property boundary. The eastern third of the property represents the area of highest habitat value, as it supports the most mature and numerous native species, has several snags, has the lowest occurrence of invasive species, and adjoins a narrow band of trees running north-south for approximately 0.5 mile.

Projected succession of the site would likely increase habitat values in the forested area, but is limited by non-native species infestations, accessibility for vandalism and dumping, and compacted soils in the other areas. As well, surrounding land use is intense and likely to have increasing impact on the area and narrow vegetated corridor.

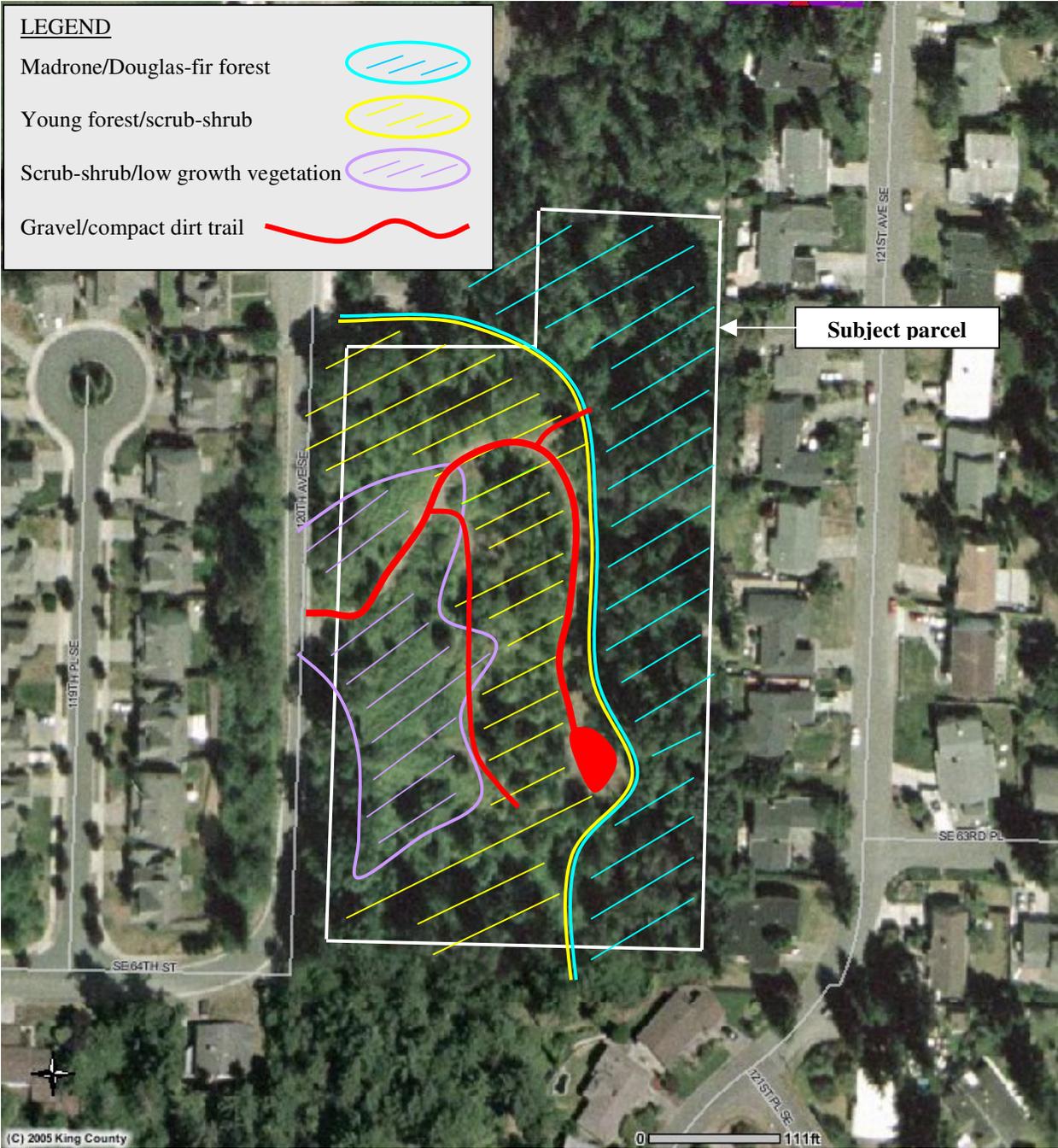
Please note that the findings of this report are subject to verification and agreement by the City of Bellevue. Please let me know if I can provide any further information.

Sincerely,

A handwritten signature in cursive script that reads "Suzanne Tomassi". The signature is written in dark ink and is positioned above the typed name and title.

Suzanne Tomassi, MSc  
Wetland/Wildlife Biologist

Enclosures



Notes: Locations are approximate and not to scale.

**Habitat Sketch**  
**Newport View Project**  
 Prepared for New Concept Homes, Inc.  
 03/08/07



750 Sixth Street South | Kirkland | WA 98033  
 p 425.822.5242 f 425.827.8136  
 watershedco.com

**City of Bellevue**  
**DRAFT FUNCTIONAL ASSESSMENT TOOL**  
**for Upland Habitat**

Property address SE 64<sup>th</sup> Street and 120<sup>th</sup> Ave SE  
 Location Range 05 Township 24 Section 21  
 Parcel number 33433017-25 and -26  
 Property owner \_\_\_\_\_  
 Telephone number (\_\_\_\_) - \_\_\_\_ - \_\_\_\_\_

Project name Newport Heights  
 Project contact Jeff Fransen  
 Telephone number(\_\_\_\_) - \_\_\_\_ - \_\_\_\_\_  
 Address Triad Development

Staff \_\_\_\_\_ Date(s) of site visit(s) \_\_\_\_\_

Washington Department of Fish and Wildlife Priority Habitat and Species (PHS) data obtained? Y/N \_\_\_\_\_

	POINTS →	No points	1	2	3	Additional points	Score
<b>1.0</b>	<b>PROPERTY DESIGNATION</b>	<b>Zone A</b>	<b>Zone B</b>	<b>Zone C</b>	<b>Zone D</b>		
1.1	Existing impervious surface	>90%	50-90%	20-50%	0-20%		--
<b>2.0</b>	<b>LANDSCAPE PARAMETERS</b>						<b>Score</b>
2.1	Land use/development density	Zone A	Zone B	Zone C	Zone D		2
2.2	*Occurrence (number) of habitat types	0	1	2	3+		3
2.3	**Proximity of known critical areas (distance to edge)	>2,500 ft	<2,500 ft	<1,200 ft	<100 ft	+1 point if contiguous with critical area (4 pts)	0
2.4	Habitat connectivity and corridors	No connection to other habitat areas (or connection not fitting other categories)	≥25-foot-wide connection to vegetated areas of at least 5 acres	≥25-foot-wide connection to vegetated areas of at least 50 acres but not listed parks***	≥25-foot-wide connection to King County wildlife network or listed parks*** or ≥100-foot wide to any area of at least 50 acres	+1 point for ≥150-foot-wide connection King County wildlife network or listed parks***	0

**City of Bellevue  
DRAFT FUNCTIONAL ASSESSMENT TOOL  
for upland habitat**

2.5	<b>Patch size</b>	0.- <1.0 ac	1.0-5.0 ac	>5-10 ac	10-25 acres	>25 acres = 4 points	1
2.6	<b>*Interspersion of habitat patches (excluding patches &lt;1 ac in area)</b>	No or isolated patch (no others within 0.5-ac circle)	Low	Moderate	High	+1 point if wildlife network or listed park is included	1
<b>3.0</b>	<b>LOCAL PARAMETERS</b>	<b>No points</b>	<b>1 point</b>	<b>2 points</b>	<b>3 points</b>	<b>Additional points</b>	<b>Score</b>
3.1	<b>Size of native trees on site</b>	No significant trees on site	6-12" dbh tree(s) present	12-20" dbh tree(s) present	>20" dbh tree(s) present	+1 point if tree(s) >30" dbh are present	4
3.2	<b>Coniferous component</b>	No conifers on site	Conifers very sparse or present in understory only	<b>Conifers co- or sub-dominant in overstory of forested areas or dominant and forest is &lt;1 acre</b>	Conifers dominant in forested areas and forested areas make up at least 1 acre	<b>+1 point if conifers &gt;30" dbh are present</b>	3
3.3	<b>Percent cover (sample vegetated areas only)</b>						
	Ground layer (0-2.3 ft) (5-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75% in each sample plot; -1 point if mowed grass is >50%	2 (avg)
	Shrub layer (2.3-25 ft) (10-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	3 (avg)
	Canopy (>25 ft) (30-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	2 (avg)
3.4	<b>Vegetative vertical structural diversity (foliage height diversity)</b>	FHD = 0	FHD < 0.70	FHD = 0.70-0.90 (site avg=0.78)	FHD > 0.90		2 (avg)

**City of Bellevue**  
**DRAFT FUNCTIONAL ASSESSMENT TOOL**  
**for Upland Habitat**

3.5	<b>Vegetative species richness</b>	0-1 species	2-5 species	6-19 species	20+ species		2
3.6	<b>Invasive species component</b>	>75% cover	25-75% cover	10-25%cover	<10% cover		1
3.7	<b>Proximity to year-round water</b>	>1.0 mi or artificial feature with maintained /invasive buffer present within 0.3-1 mi	0.3-1.0 mi or artificial feature with maintained/ invasive buffer present within <0.3 mi	<0.3 mi or artificial feature with maintained/ invasive buffer present within patch	Natural water feature present within patch with native buffer		0
3.8	<b>Snags (≥4 in dbh)</b>	No snags on site	1/ac or fewer	2-6/ac	>7/ac	Add 0.5 point for each >20 in dbh and 1 point for each >30 in dbh	2
3.9	<b>Other habitat features</b>	None	1	2-4	5 or more		1
<b>Landscape parameters points</b>							7
<b>Local parameters points</b>							22
<b>TOTAL POINTS</b>							31

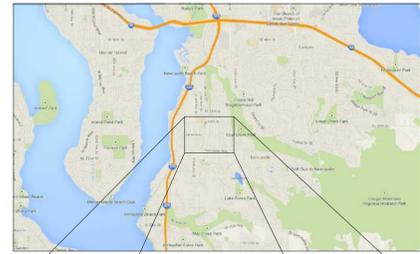
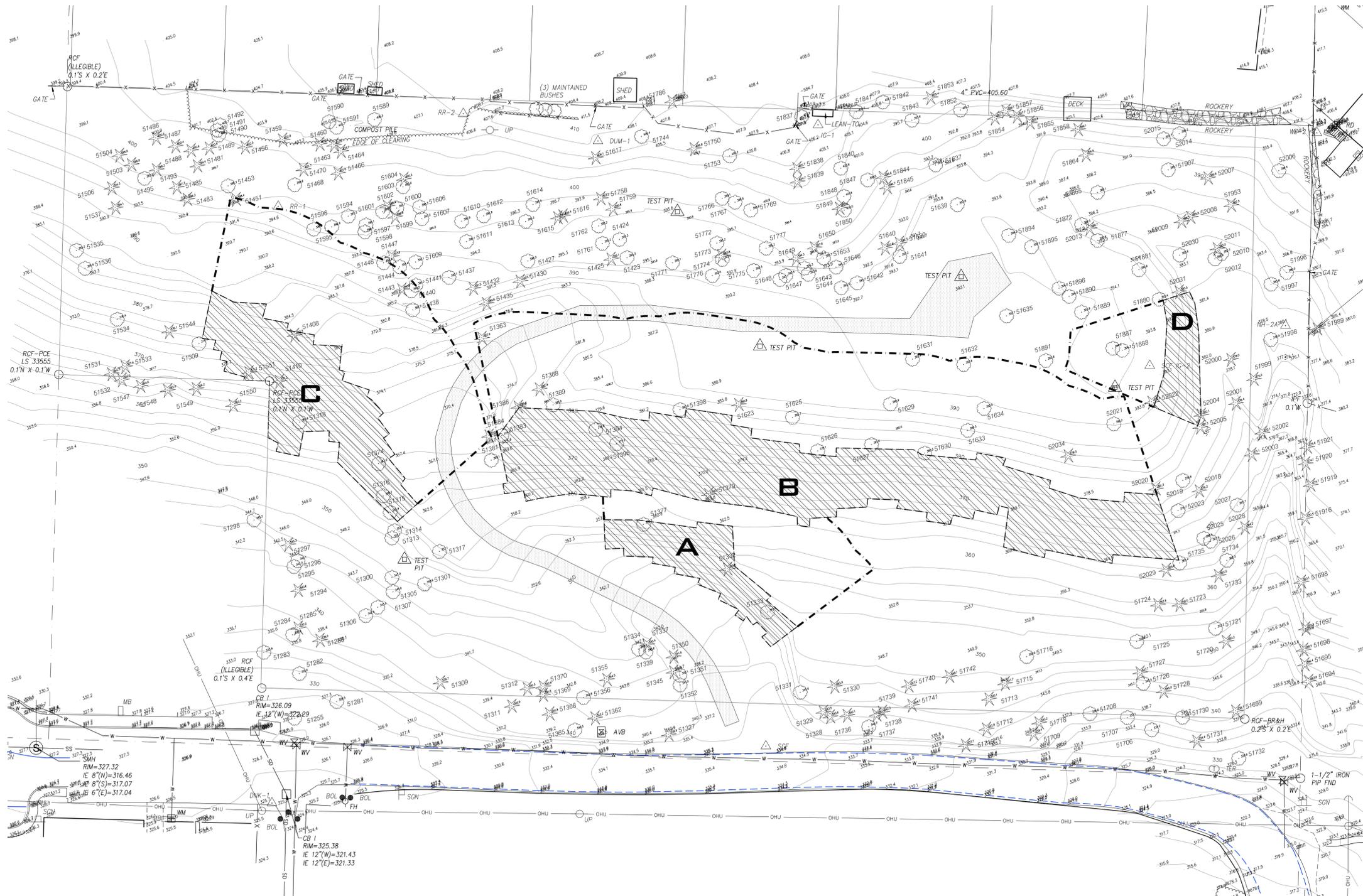
\* Use circle of the appropriate size for the property's zone:

- Zone A – 0.5 ac
- Zone B – 5.0 ac
- Zone C – 100 ac
- Zone D – 250 ac

\*\* PHS data required for sites in Zone D

\*\*\*Parks: Mercer Slough, Phantom Lake wetland complex, Larson Lake wetland complex, Cougar Mountain Regional Wildland Park, Weowna Park; King County wildlife network

# NEWPORT VIEW MITIGATION PLAN



VICINITY MAPS

**SHEET INDEX**

W1	EXISTING CONDITIONS
W2	IMPACTS AND MITIGATION PLAN
W3	PLANTING AREA PREPARATION AND TESC PLAN AND NOTES
W4	PLANT INSTALLATION TYPICAL LAYOUT, DETAILS AND SPECIFICATIONS
W5	MITIGATION NOTES AND DETAILS

**NEWPORT VIEW  
STEEP SLOPE MITIGATION PLAN  
PREPARED FOR JEFF FRANSEN  
PROJECT LOCATION:  
PARCELS 33433017-25 & 33433017-26  
BELLEVUE, WA**

**SUBMITTALS & REVISIONS**

NO.	DATE	DESCRIPTION	BY	MD
1	02-26-14	REVIEW SET	MSF	
2	10-21-14	REVIEW SET	MSF	
3	10-30-15	REVIEW SET	MSF	

**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

**PROJECT MANAGER:** KB  
**DESIGNED:** MSF  
**DRAFTED:** MSF  
**CHECKED:** KB

**JOB NUMBER:** 070301  
**SHEET NUMBER:** W1 OF 5

**EXISTING CONDITIONS**  
SCALE 1"=30'

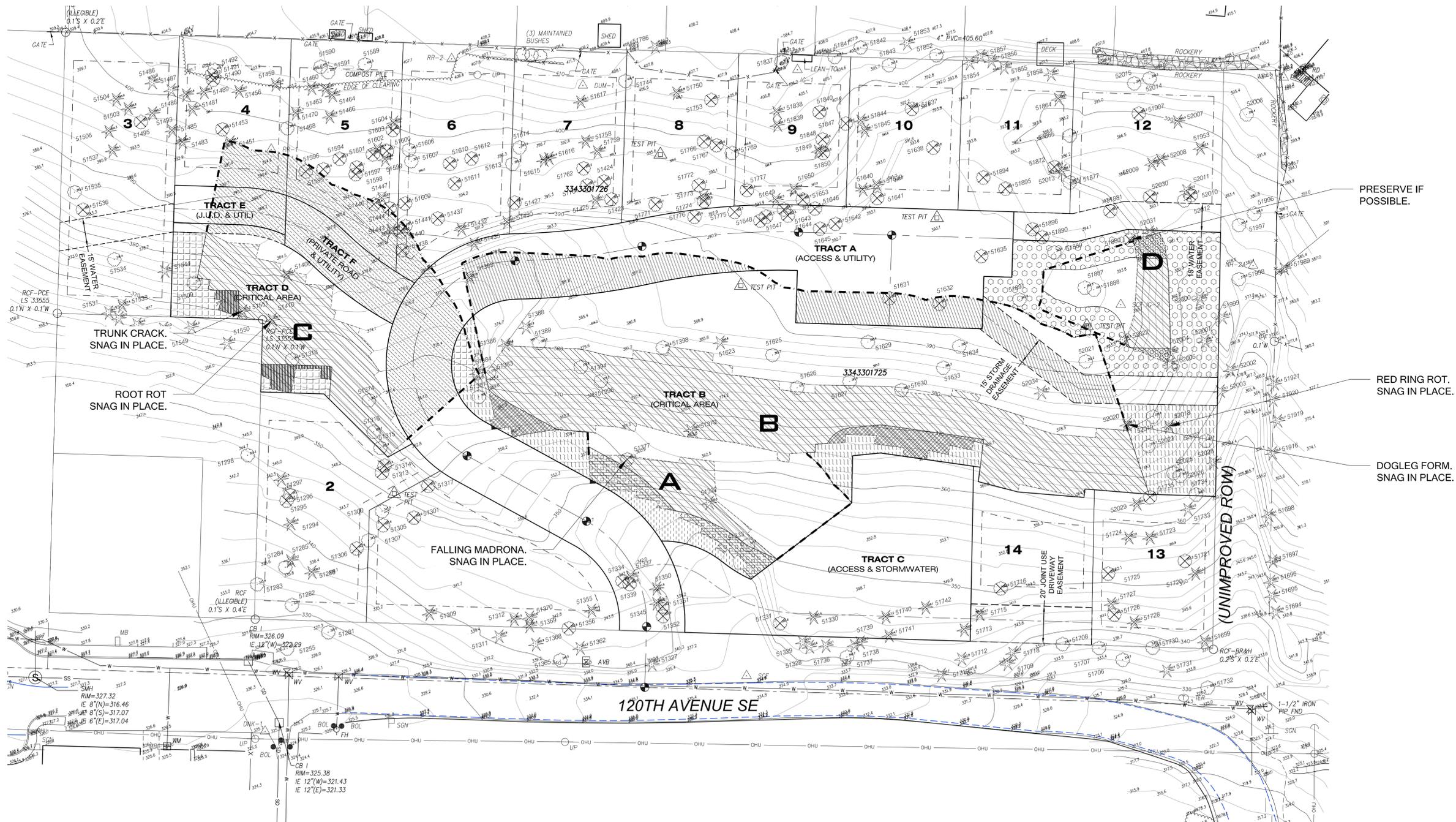


Know what's below.  
Call before you dig.

**IMPACTS AND MITIGATION**

<b>STEEP SLOPE AREA A</b>		<b>STEEP SLOPE AREA A</b>	
■ SLOPE IMPACT AREA	4 SF	▨ SLOPE ENHANCEMENT <sup>1</sup>	936 SF
▨ BUFFER IMPACT AREA	0	▨ BUFFER ENHANCEMENT <sup>1</sup>	787 SF
<b>STEEP SLOPE AREA B</b>		<b>STEEP SLOPE AREA B</b>	
■ SLOPE IMPACT AREA	4 SF	▨ SLOPE ENHANCEMENT	1,059 SF
▨ BUFFER IMPACT AREA	5,665 SF	▨ BUFFER ENHANCEMENT <sup>1</sup>	4,011 SF
<b>STEEP SLOPE AREA C</b>		<b>STEEP SLOPE AREA C</b>	
■ SLOPE IMPACT AREA	0	▨ SLOPE ENHANCEMENT	409 SF
▨ BUFFER IMPACT AREA	7,959 SF	▨ BUFFER ENHANCEMENT <sup>1</sup>	1,499 SF
<b>STEEP SLOPE AREA D</b>		<b>STEEP SLOPE AREA D</b>	
■ SLOPE IMPACT AREA	0	▨ SLOPE ENHANCEMENT	276 SF
▨ BUFFER IMPACT AREA	0	▨ BUFFER ENHANCEMENT <sup>1</sup>	4,964 SF
<b>TOTALS</b>		<b>TOTALS</b>	
■ SLOPE IMPACTS	8 SF	▨ SLOPE ENHANCEMENTS	2,680 SF
▨ BUFFER IMPACTS	13,624 SF	▨ BUFFER ENHANCEMENTS <sup>1</sup>	11,261 SF

1. Includes area directly adjacent to the steep slope



**IMPACTS AND MITIGATION PLAN**

SCALE 1"=30'



**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
**PROJECT LOCATION:**  
**PARCELS 33433017-25 & 33433017-26**  
**BELLEVUE, WA**

SUBMITTALS & REVISIONS	
NO.	DESCRIPTION
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**PROJECT MANAGER:** KB  
**DESIGNED:** MSF  
**DRAFTED:** MSF  
**CHECKED:** KB

**JOB NUMBER:**

070301

**SHEET NUMBER:**

**W2 OF 5**

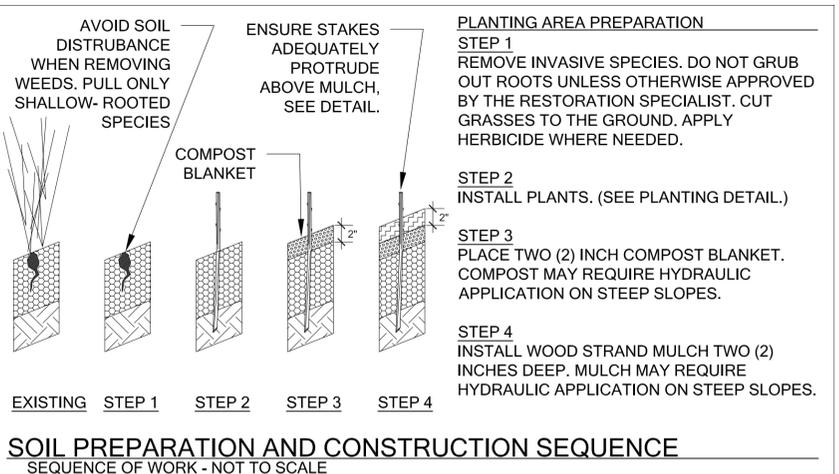
**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
PROJECT LOCATION:  
PARCELS 33433017-25 & 33433017-26  
BELLEVUE, WA

SUBMITTALS & REVISIONS		BY	DATE	DESCRIPTION
NO.	DATE	MD	MSF	
1	02-26-14	MD	MSF	REVIEW SET
2	10-21-14	MD	MSF	REVIEW SET
3	10-30-15	MD	MSF	REVIEW SET

**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

PROJECT MANAGER: KB  
DESIGNED: MSF  
DRAFTED: MSF  
CHECKED: KB

JOB NUMBER: 070301  
SHEET NUMBER: W3 OF 5



**DEMO & TESC NOTES**  
**CONSTRUCTION ACCESS**  
LIMIT ACCESS POINTS TO THE MITIGATION AREAS. CONSTRUCTION ACCESS OR STAGING SHALL AVOID STEEP SLOPE AREAS, AND AVOID OR MINIMIZE DAMAGE TO EXISTING RETAINED VEGETATION AND ROOT ZONES. UPON COMPLETION, ACCESS AND STAGING AREAS, OR ANY OVERCLEARED AREAS WHICH DISTURBED EXISTING RETAINED VEGETATION SHALL BE RESTORED TO ORIGINAL CONDITION.

**CONSTRUCTION EQUIPMENT**  
NEARLY ALL MITIGATION PLANTING AREAS INCLUDE CRITICAL ROOT ZONES OF EXISTING TREES WHICH ARE TO REMAIN. NO CONSTRUCTION EQUIPMENT SHALL BE USED WITHIN THE MITIGATION AREA, OR THE STEEP SLOPE AREAS, UNLESS APPROVED BY THE RESTORATION SPECIALIST OR GEOTECHNICAL ENGINEER.

**OVERCLEARING**  
IF CRITICAL AREA BUFFER IS OVERCLEARED, EXTEND PLANTING AREA AND REPLICATE PLANTING AREA LAYOUT AND SOIL PREPARATION SEQUENCE OF WORK.

**GENERAL SOIL PREPARATION FOLLOWING DEMO WORK**  
AFTER REMOVAL OF NON-NATIVE MATERIAL HAS OCCURRED, REPLACE ANY SOIL LOST THROUGH DEBRIS REMOVAL WITH APPROVED TOPSOIL SO THAT GRADES ARE CONSISTENT WITH ADJACENT AREAS AND THERE ARE NO DIVOTS. SEE CITY OF BELLEVUE STANDARD NOTE #9 THIS SHEET REGARDING EXPOSED SOILS. IF AREA IS NOT PLANTED IMMEDIATELY AFTER SOIL PREP, COVER SITE WITH WOOD STRAND MULCH BLANKET PER PLAN.

**STEEP SLOPE NOXIOUS WEED REMOVAL & CONTROL**  
REMOVE ENGLISH IVY:

- PHYSICALLY REMOVE ALL ENGLISH IVY VINES AND ROOTS FROM THE PLANTING AREA.
- SHALLOW ROOTED IVY SHALL BE GRUBBED OUT BY HAND TO MINIMIZE DISRUPTION TO SLOPE AND ADJACENT ROOTS.
- IVY SHALL BE CUT AROUND THE BASE OF EACH TREE, TO PREVENT THE IVY FROM GIRDLING THE TREES. REMOVE STANDING VINES FROM THE FIRST 8' OF EVERY TREE TRUNK THAT CONTAINS ANY IVY.
- AFTER IVY HAS BEEN REMOVED, AREA SHOULD BE MULCHED AND OR PLANTED PER PLAN.
- DISPOSE OF REMOVED MATERIAL OFF SITE.

REMOVE HIMALAYAN/EVERGREEN BLACKBERRY:

- CUT ABOVE GROUND PORTION OF BLACKBERRY AND REMOVE OFFSITE. ENSURE THAT NO NATIVE PLANTS ARE REMOVED.
- CANES SHALL BE REMOVED FROM CANOPY OF EXISTING VEGETATION TO REMAIN TO THE EXTENT FEASIBLE AS DETERMINED BY THE RESTORATION SPECIALIST.
- DO NOT DIG UP OR PULL THE REMAINING ROOT BALL. APPLY SELECTIVE HERBICIDE WITH A TARGETED METHOD PER MANUFACTURER'S RECOMMENDATIONS.
- ALL CANES SHALL BE CUT BACK AND REMOVED WITHIN THE TEN (10) FEET ADJACENT TO THE PLANTING AREA, INCLUDING TREE CANOPY. CANES SHALL BE PULLED AND REMOVED OFF-SITE.
- AFTER REMOVAL, PLANT AND MULCH PER PLAN.
- MONITOR SITE THROUGHOUT GROWING SEASON FOR EMERGING CANES AND FOLLOW-UP WITH HERBICIDE APPLICATIONS AS NEEDED. CONTINUE TO CUT BACK CANES TEN (10) FEET FROM THE PLANTING AREA.

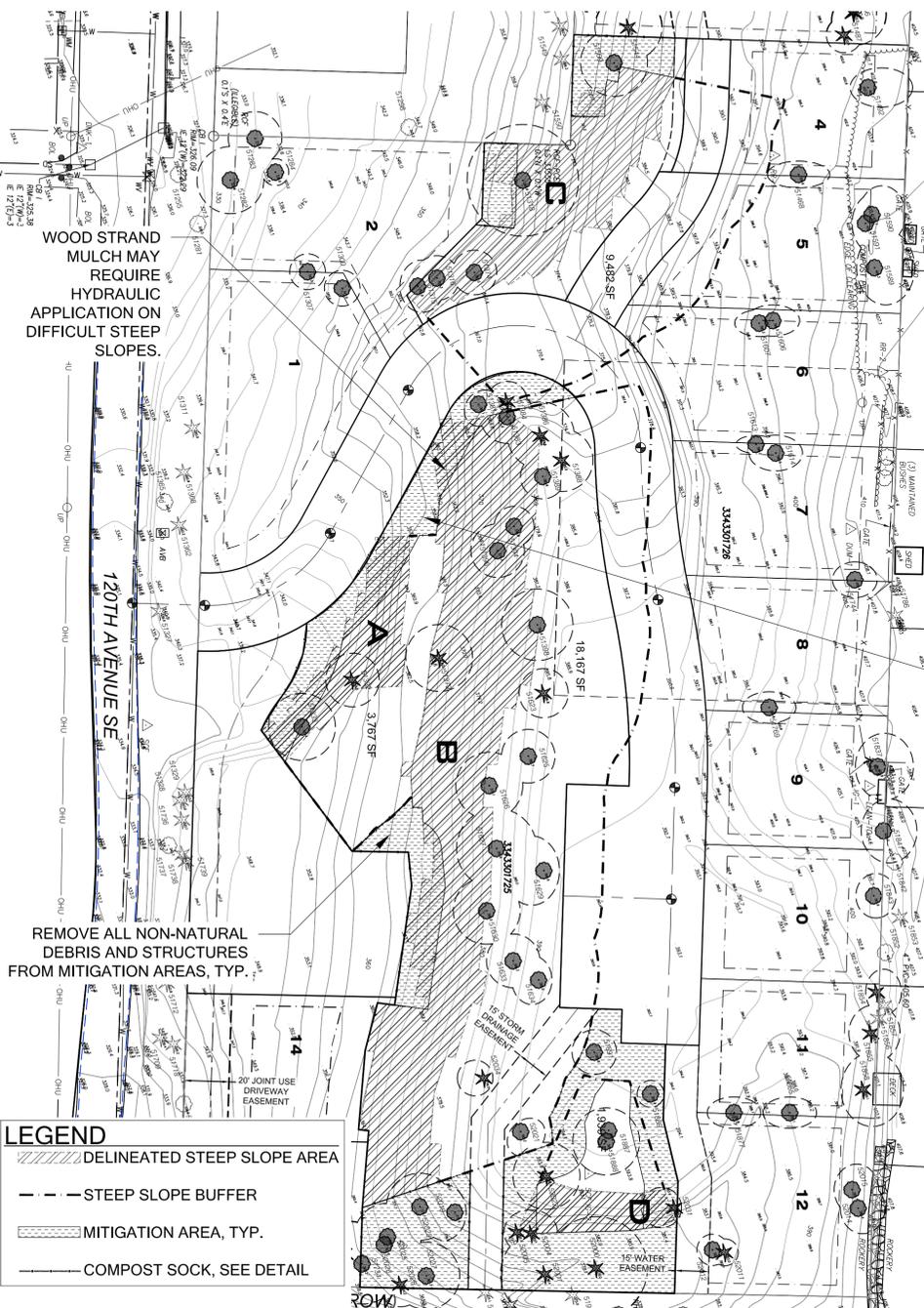
REMOVE SCOTCH BROOM:

- CUT STEMS AS CLOSE TO THE GROUND AS POSSIBLE. IT IS BEST TO CUT THE PLANTS WHEN THEY ARE STRESSED DURING THE SUMMER DROUGHT IN LATE JULY TO AUGUST, BUT BEFORE THE SEED PODS MATURE.
- MONITOR FOR RE-GROWTH AND CUT AGAIN. RE-SPROUTING PLANTS SHOULD BE CUT BETWEEN FLOWERING AND SEED POD MATURATION TO PREVENT SEED SPREAD.
- FOLLOW CUTTING WITH SPOT SPRAYING HERBICIDE APPLICATION. HERBICIDE SHOULD ONLY BE APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS.
- DO NOT MOW OR CUT AFTER AN HERBICIDE APPLICATION UNTIL HERBICIDE HAS HAD A CHANCE TO MOVE THROUGHOUT THE PLANT.
- PROPERLY DISPOSE OF PLANTS. DO NOT PUT SEED PODS IN COMPOST OR YARD WASTE.

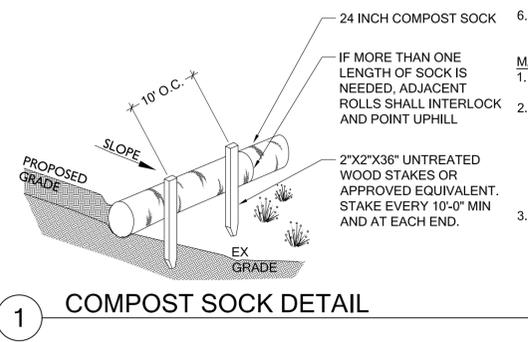
**STANDARD NOTES FOR EROSION CONTROL PLANS**

- ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENTS. ANY VARIANCE FROM ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF BELLEVUE DEVELOPMENT SERVICES (DSD) PRIOR TO CONSTRUCTION.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB.
- APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- A COPY OF THE APPROVED PLANS AND DRAWINGS MUST BE ON-SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- CLEARING SHALL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1<sup>ST</sup> THROUGH APRIL 30<sup>TH</sup>. FROM MAY 1<sup>ST</sup> THROUGH SEPTEMBER 30<sup>TH</sup>, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.
- AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR MUST MAINTAIN A SWEEPER ON SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH A VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIAL MUST BE APPROVED BY THE CLEARING AND GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPIILING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM 5% SLOPE, PER THE INTERNATIONAL RESIDENTIAL CODE (IRC) R401.3.

**TREE SNAGGING NOTES**  
SEE ARBORIST REPORT FOR MORE DETAIL  
TREES MARKED FOR REMOVAL IN MITIGATION AREAS, AND ESPECIALLY ON STEEP SLOPE AREAS, SHALL BE SNAGGED IN PLACE WHEN POSSIBLE IN ORDER TO REDUCE SOIL DISTURBANCE, EQUIPMENT ACCESS, AND MAINTAIN HABITAT VALUE.  
WHEN WORKING WITH A DISEASED TREE, THE CONTRACTOR SHALL TAKE CARE TO PROPERLY GIRDLING THE TREE IF IT IS STILL ALIVE. WHILE SNAGGING THE TREE THE CONTRACTOR SHALL TAKE CARE NOT TO DISTRIBUTE BARK OR BRANCHES ELSEWHERE ON THE SITE. ANY WOOD PIECES REMOVED DURING THE SNAGGING PROCESS SHALL BE PROPERLY DISPOSED OF OFFSITE.  
SEE SNAGGING DETAIL FOR MORE INFORMATION.



AFTER SITE PREP, ALL AREAS SHALL BE PLANTED, TOP-DRESSED WITH COMPOST, BLANKETED IN MULCH, AND SET-UP WITH TEMPORARY IRRIGATION COVERAGE.



**NOTES**

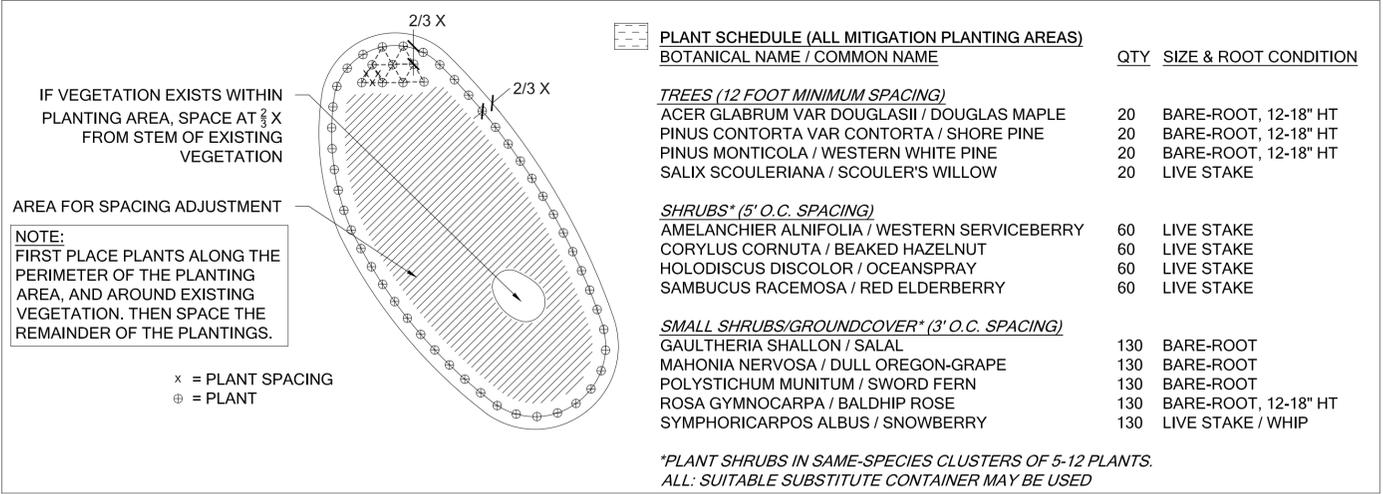
- FILL SOCK WITH "COMPOSTED MATERIAL" PER WAC 173-350-220. BIODEGRADABLE MESH NETTING IS PREFERRED.
- PLACE COMPOST SOCK ALONG A CONTOUR PERPENDICULAR TO SHEET FLOW.
- NO TRENCHING IS REQUIRED, DO NOT DISTURB SOIL.
- ANCHORING: PLACE STAKES ON THE DOWNSLOPE SIDE OF THE SOCK OR THROUGH THE CENTER OF THE SOCK. THE SOCK ENDS SHOULD BE STAKED AND DIRECTED UPSLOPE TO PREVENT WATER FROM RUNNING AROUND THE END OF THE SOCK. IF STAKING IS NOT POSSIBLE, RESTORATION CONSULTANT SHALL APPROVE AN ALTERNATIVE MEANS OF STABILIZATION.
- HEAVY VEGETATION AND EXTREMELY UNEVEN SURFACES SHOULD BE AVOIDED TO ENSURE THAT THE COMPOST FILTER SOCK UNIFORMLY CONTACTS THE GROUND SURFACE. PLACEMENT MAY BE MODIFIED FROM THE PLAN WITH APPROVAL FROM THE RESTORATION CONSULTANT.
- LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE SOCK TO FILL THE SEAM BETWEEN THE SOIL SURFACE AND THE SOCK.

**MAINTENANCE STANDARDS:**

- INSPECT SOCKS REGULARLY, AND AFTER EACH RAINFALL EVENT, TO ENSURE THEY ARE INTACT AND THE AREA BEHIND THE SOCK IS NOT FILLED WITH SEDIMENT.
- IF THERE IS EXCESSIVE PONDING BEHIND THE SOCK OR ACCUMULATED SEDIMENTS REACH THE TOP OF THE SOCK, NOTIFY THE RESTORATION CONSULTANT TO VERIFY WHETHER:
  - AN ADDITIONAL SOCK SHOULD BE ADDED ON TOP OR IN FRONT OF THE EXISTING SOCK IN THESE AREAS, WITHOUT DISTURBING THE ACCUMULATED SEDIMENT, OR
  - IF SEDIMENT SHOULD BE REMOVED.
- ONCE THE AREA HAS BEEN STABILIZED, VERIFY WITH THE RESTORATION CONSULTANT:
  - WHETHER THE SOCK IS TO BE LEFT IN PLACE OR REMOVED,
  - IF ANY SEDIMENT BUILDUP IN FRONT OF THE SOCK SHOULD BE REMOVED.
  - IF RE-VEGETATION OF SITE IS NECESSARY.

**PLANTING AREA PREPARATION AND TESC PLAN AND NOTES**





**PLANTING AREA TYPICAL LAYOUT, TYPICAL SPACING, & SCHEDULE**

**PLANT INSTALLATION SPECIFICATIONS**

**GENERAL NOTES**

**QUALITY ASSURANCE**

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

**DEFINITIONS**

- PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BARERoot PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

**SUBSTITUTIONS**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION SPECIALIST.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE SPECIALIST AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

**INSPECTION**

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION SPECIALIST FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS

**OF THE WORK.**

- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE RESTORATION SPECIALIST MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION SPECIALIST MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

**MEASUREMENT OF PLANTS**

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

**SUBMITTALS**

**PROPOSED PLANT SOURCES**

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

**PRODUCT CERTIFICATES**

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO SPECIALIST AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH SPECIALIST AT TIME OF SUBMISSION.
- HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

**DELIVERY, HANDLING, & STORAGE**

**NOTIFICATION**

CONTRACTOR MUST NOTIFY SPECIALIST 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT SPECIALIST MAY ARRANGE FOR INSPECTION.

**PLANT MATERIALS**

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE

**EXTREMES, BREAKAGE AND DRYING.** PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.

- SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BARERoot PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

**WARRANTY**

**PLANT WARRANTY**

PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

**REPLACEMENT**

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE SPECIALIST'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

**PLANT MATERIAL**

**GENERAL**

- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

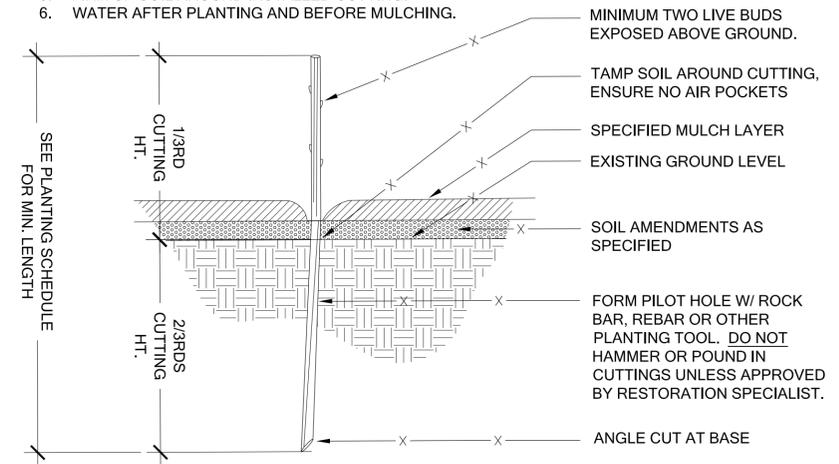
**QUANTITIES**

SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

**ROOT TREATMENT**

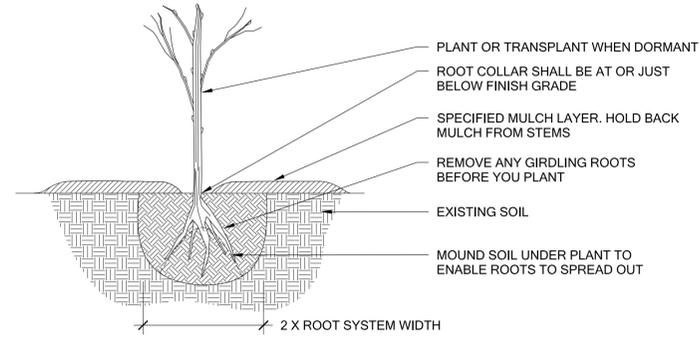
- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

- NOTES:**
- INSTALL HARDWOOD CUTTINGS DURING THEIR DORMANCY. DO NOT ALLOW THEM TO DRY OUT.
  - CUTTINGS SHALL BE 3/4" TO 1" IN DIAMETER OR APPROVED EQUIVALENT.
  - INSTALL TO MIN. 2/3RDS DEPTH INTO SOIL. USE TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR SPACING.
  - INSURE THAT BUDS ARE POINTING UP.
  - FIRM UP SOIL AROUND INSTALLED CUTTING.
  - WATER AFTER PLANTING AND BEFORE MULCHING.



**1 LIVE CUTTING PLANTING DETAIL** Scale: NTS

- NOTES:**
- UNPACK BARE ROOT PLANTS REMOVING ALL PACKAGING AND CAREFULLY UNTANGLING THE ROOTS. DO NOT ALLOW ROOTS TO DRY OUT. DISCARD UNHEALTHY PLANTS, DARK MOLDS, SERIOUSLY DAMAGED ROOTS OR SHOOTS, OR WRINKLED, WATER-SOAKED BARK.
  - DIG HOLE WIDE ENOUGH TO ACCEPT ALL ROOTS.
  - INSTALL BARE ROOT UPRIGHT AND AT THE SAME DEPTH AS IT STOOD IN THE NURSERY/FIELD.
  - PARTIALLY FILL THE HOLE AND LIGHTLY FIRM UP SOIL AROUND THE LOWER ROOTS.
  - SHOVEL IN REMAINING SOIL SO THAT IT IS FIRMLY BUT NOT TIGHTLY PACKED.
  - THOROUGHLY WATER AFTER PLANTING AND BEFORE MULCHING. IF SETTLING OCCURS, ADD MORE SOIL AND WATER.



**2 BARE ROOT PLANTING DETAIL** Scale: NTS

**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
**PROJECT LOCATION:**  
**PARCELS 33433017-25 & 33433017-26**  
**BELLEVUE, WA**

SUBMITTALS & REVISIONS		BY	DATE	DESCRIPTION
NO.	DATE	BY	DATE	DESCRIPTION
1	02-26-14	MSF	10-21-14	REVIEW SET
2	10-21-14	MSF	10-30-15	REVIEW SET
3	10-30-15	MSF		

**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

**PROJECT MANAGER:** KB  
**DESIGNED:** MSF  
**DRAFTED:** MSF  
**CHECKED:** KB  
**JOB NUMBER:** 070301

**SHEET NUMBER:** W4 OF 5

**PLANT INSTALLATION TYPICAL LAYOUT, DETAILS AND SPECIFICATIONS**  
SCALE AS NOTED

**1.1 Summary**

The Newport View project consists of a plan to establish 14 single-family residential lots as part of a conservation subdivision. Slopes exceeding 40 percent and greater than 10 feet in height occur in several areas of the property and impacts total 8 square feet in these areas. In addition, 13,624 square feet of steep slope buffer impact will occur. The mitigation areas are intended to mitigate for lost function in the steep slope and buffer impact areas.

**1.1.1 Goals**

Enhance 2,680 square feet of steep slope critical area and 11,261 square feet of steep slope buffer area.

**1.1.2 Objectives**

1. Remove and prevent the re-establishment of invasive species.
2. Create a diverse, native plant community including trees, shrubs, and groundcovers within the mitigation areas.
3. Monitor the mitigation areas for 5 years.
4. Maintain health and viability of the enhancement plantings and continue to maintain mitigation areas free of non-native, invasive species.

**1.2 Performance Standards**

**1.2.1 Survival**

1. Achieve 100% survival of all installed plants by the end of year one. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
2. Achieve 60% survival of all installed plants by the end of year two. This standard can be met through survival or replanting as necessary. Native volunteers may count towards satisfying this standard.
3. Survival beyond year two is difficult to track. Therefore, a species richness standard (below) is proposed for years three through five.
  - Species Richness: Establish at least two tree species and six shrub/ groundcover species at the end of years three and five.

**1.2.2 Cover**

1. Achieve at least 50% cover of native, woody species by the end of year three. Native volunteer species may count towards this standard.
2. Achieve at least 80% cover of native, woody species by the end of year five. Native volunteer species may count towards this standard.
3. No more than 10% cover by non-native, invasive species in any monitoring year. Invasive species include all species listed as Class A, B, or C (regulated and non-regulated) on the King County Noxious Weed List.
  - Note that native volunteers included in survival, richness, and cover estimates must not account for more than 10% of individuals or cover.

**1.2.3 Monitoring Methods**

An as-built plan will be prepared following mitigation installation. The as-built plan will be a mark-up of the planting plan included in this plan set. The mark-up will document any differences in plant placement or other components from the proposed plan.

Monitoring will take place four times, once each in years one, two, three, and five. First-year monitoring will commence in the first late summer or early fall, subsequent to plant installation (ideally before deciduous leaves begin to drop). Line-intercept transects will be established in mitigation areas. The following will be recorded and reported in an annual monitoring report to be submitted to the City of Bellevue.

1. Visual estimation of installed plants survival by species.
2. Visual estimate of non-native and invasive weed cover.
3. Estimate of native plant cover using line transects.
4. Photographic documentation from fixed reference points.
5. Intrusions into the planting areas, vandalism, or other actions that impair the intended functions of the planted areas.
6. Recommendations for maintenance or repair of the planted areas.

**1.2.4 General Work Sequence**

A **restoration specialist** will make site visits to verify the following project milestones:

- Clearing inspection
  - Snagging inspection
  - Slope amendment and mulch inspection
  - Plant material inspection
    - o Plant material inspection
    - o 50% plant installation inspection
    - o 100% plant installation inspection
1. Clear the site of all invasive vegetation including, but not limited to, Himalayan blackberry, Scotch broom, and English ivy.
  2. Install a blanket application of **wood strand mulch** across all mitigation areas.
  3. Native plant installation will occur during the dormant season (October 15 through March 1) in frost-free periods only.
  4. Layout plant material per plan for inspection by the **restoration specialist**. Plant substitutions will not be allowed without prior approval of the **restoration specialist**.
  5. Install plants per planting detail: adjust to avoid damage to existing native plants and disturbance to steep slope areas.
  6. Water each plant thoroughly to remove air pockets.
  7. Install a temporary irrigation system capable of delivering one inch of water per week to the entire planting area from June 1 through September 30.

8. One year after initial planting, apply a slow-release, phosphorous free granular **fertilizer** to each installed plant.

**Material Specifications and Definitions**

1. **Wood strand mulch:** Wood manufactured into approximately 1.6 to 6.3-inch strands approximately 0.125 mm thick by 0.24 inches wide. Use WSDOT approved vendor- may require advanced planning with manufacturer for availability.
2. **Fertilizer:** Slow release, granular fertilizer such as Perfect Blend Organic 4-4-4 or Osmocote™ or equal product. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Most retail nurseries carry this product. Note that fertilizer is to be applied only in years two through five, and not in the first year.
3. **Restoration specialist:** Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects.
4. **Temporary irrigation system:** System capable of supplying a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. This system can be run off of hoses run from the house water supply with enough sprinkler heads to cover the planted area.

**1.2.5 Maintenance**

The mitigation areas will be maintained for five years following installation. Specifications for items in **bold** can be found above under "Material Specifications and Definitions."

1. Replace each plant found dead in the summer monitoring visits during the first fall dormant season (October 15 to March 1) after initial installation.
2. Invasive species maintenance plan:
  - a. Twice yearly, the site should be inspected for encroachment of blackberry, ivy, Scotch broom, and other invasive species. Canes and vines moving into the mitigation areas from outside the enhancement areas should be cut back to well beyond the mitigation area boundary. All invasive plants should be removed from the mitigation areas by hand.
  - b. Re-sprouting blackberry and Scotch broom will likely reemerge in removal areas. New shoots should be treated with herbicide by a licensed applicator at least once per year throughout the five-year period (or until no longer sprouting), or more frequently if directed by the City. Herbicide should be applied to the ends of cuts.
3. Remove weeds from beneath each installed plant to a distance of 18 inches from the main plant stem. Weeding should occur at least twice yearly. Frequent weeding will result in lower mortality and lower plant replacement costs.
4. Operate the **irrigation system** to supply a minimum of 2 inches of water per week from June 1 through September 30 for the first two years following installation. More watering may be necessary during very hot and dry weather. Less watering may be warranted during unseasonable summer rainfall.
5. Apply slow release granular **fertilizer** annually in the spring (by June 1) of years two through five.
6. Mulch the mitigation area with **wood strand mulch** as necessary to maintain a 2-inch thick mulch layer and keep down weeds.
7. Do not weed area with string-trimmer (weed whacker/weed eater). Native plants are easily damaged and killed and weeds easily recover after string-trimming.

**Performance Bond**

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.

**Contingencies**

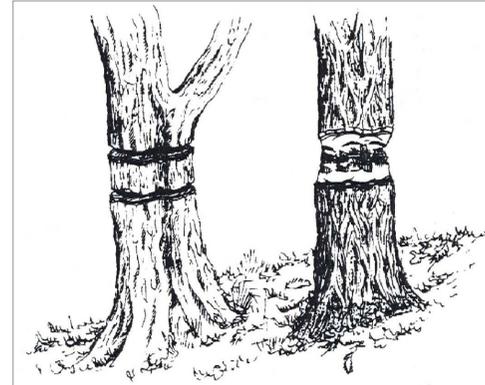
If there is a significant problem with the mitigation areas meeting performance standards, the Bond-holder will work with the City of Bellevue to develop a Contingency Plan. Contingency Plans can include, but are not limited to: soil amendment; additional plant installation; erosion control; and plant substitutions of type, size, quantity, and location.

**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 will be identified in the plans approved with the Critical Areas Land Use Permit or allowed use or development, and will 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 will be no greater than 10 feet around the perimeter of the existing structure. Proposals involving areas of greater disturbance will 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 will 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 will 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 will impose a condition requiring monitoring of the restored area and additional restoration to achieve existing conditions, provided that the Director may reduce the monitoring period to not less than one year from completion of the original restoration.

5.



SNAG NOTES:  
SEE PLANS FOR TREES WHICH ARE TO BE RETAINED AS SNAGS. ALL TREES SHOULD BE:

1. TOPPED TO HEIGHT AS INDIVIDUALLY CONFIRMED IN THE FIELD BY RESTORATION PROFESSIONAL. CUT AT AN ANGLE;
2. AFTER TOPPING, CUT DOWN INTO THE TREE TO CREATE CREVICES AT THE TOP; AND
3. CUT FURTHER BY "BOUNCING" THE CHAIN SAW ON THE TOP TO CREATE MULTIPLE INCISIONS TO ENCOURAGE DECAY AND COLONIZATION BY INSECTS AND FUNGI.
4. RETAIN BRANCHES FOR PERCHES AND HABITAT STRUCTURE- DO NOT LIMB.

LIVE TREES SHOULD BE DEADENED BY CUTTING A 6" WIDE, ANGLED BAND AROUND THE TREE WITH AN AXE OR BY MAKING TWO CUTS AROUND THE TREE WITH A CHAIN SAW TO A DEPTH SUFFICIENT AS DETERMINED BY THE RESTORATION PROFESSIONAL.

(BROWN, TIMOTHY K. 2002. CREATING AND MAINTAINING WILDLIFE, INSECT, AND FISH HABITAT STRUCTURES IN DEAD WOOD. U.S. FOREST SERVICE GEN. TECH. REP. PSW-GTR-181; MISSOURI DEPARTMENT OF CONSERVATION. 1994. FOREST AND WILDLIFE BENEFITS ON PRIVATE LAND, SNAGS AND DEN TREES.)

**3 SNAG CREATION DETAIL**

Scale: NTS



750 Sixth Street South  
Kirkland WA 98033

p 425.822.5242  
www.watershedco.com

Science & Design

**NEWPORT VIEW**  
**STEEP SLOPE MITIGATION PLAN**  
**PREPARED FOR JEFF FRANSEN**  
**PROJECT LOCATION:**  
**PARCELS 33433017-25 & 33433017-26**  
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3	10-30-15	MSF	REVIEW SET	

**SHEET SIZE:**  
ORIGINAL PLAN IS 22" x 34".  
SCALE ACCORDINGLY.

PROJECT MANAGER: KB  
DESIGNED: MSF  
DRAFTED: MSF  
CHECKED: KB

JOB NUMBER:  
**070301**

SHEET NUMBER:  
**W5 OF 5**

DATE: 10/30/2015  
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